

## BAB IV PEMBAHASAN

### 4.1. Kondisi Eksisting Daerah Irigasi Pirang

Daerah Irigasi Pirang dibagi menjadi dua wilayah yaitu Daerah Irigasi Pirang Kiri dan Daerah Irigasi Pirang Kanan. Daerah Irigasi Pirang mencakup 3 kecamatan yaitu Kecamatan Kapas, Kecamatan Bojonegoro dan Kecamatan Dander. Total desa yang tercakup adalah 25 desa dengan rincian : Daerah Irigasi Pirang Kanan seluas 495 Ha mengairi 7 desa. Selanjutnya Daerah Irigasi Pirang Kiri seluas 819 Ha mengairi 17 desa. Adapun rincian nama dan luas per petak tersier pada Daerah Irigasi Pirang Kanan ditunjukkan pada Tabel 4.1 dan Daerah Irigasi Pirang Kiri ditunjukkan pada Tabel 4.2

Tabel 4.1 Luas Areal Daerah Irigasi Pirang Kanan per Petak Tersier

| No                           | Nama Petak | Luas (Ha) | Desa           | Kecamatan |
|------------------------------|------------|-----------|----------------|-----------|
| 1                            | P.ka.1.ki  | 33        | Bendo          | Dander    |
| 2                            | P.ka.2.ki  | 80        | Bendo          | Dander    |
|                              |            |           | Kumpulrejo     | Dander    |
| 3                            | P.ka.2.ka  | 52        | Bendo          | Dander    |
| 4                            | P.ka.3.ki  | 25        | Padang Mentoyo | Dander    |
| 5                            | P.ka.3.ka  | 84        | Padang Mentoyo | Dander    |
| 6                            | P.ka.4.ki  | 3         | Tanjung Harjo  | Kapas     |
| 7                            | P.ka.4.ka  | 9         | Tanjung Harjo  | Kapas     |
| 8                            | P.ka.5.ki  | 27        | Tanjung Harjo  | Kapas     |
|                              |            |           | Wedi           | Kapas     |
| 9                            | P.ka.5.ka  | 26        | Tanjung Harjo  | Kapas     |
| 10                           | P.ka.6.ka  | 87        | Tanjung Harjo  | Kapas     |
| 11                           | P.ka.7.ki  | 61        | Wedi           | Kapas     |
|                              |            |           | Kali Amper     | Kapas     |
| 12                           | P.ka.7.ki  | 8         | Kali Amper     | Kapas     |
|                              |            |           | Tikusan        | Kapas     |
| Total Luas J.I. Pirang Kanan |            | 495       |                |           |

Sumber: UPT Pengelolaan SDA Wilayah Sungai Bengawan Solo

Tabel 4.2 Luas Areal Daerah Irigasi Pirang Kiri per Petak Tersier

| No                          | Nama Petak   | Luas (Ha) | Desa          | Kecamatan |
|-----------------------------|--------------|-----------|---------------|-----------|
| 1                           | P.ki.1.ka    | 4         | Jati Blimbing | Dander    |
| 2                           | P.ki.2.ki    | 57        | Bendo         | Dander    |
| 3                           | P.ki.2.ka    | 11        | Ngraseh       | Dander    |
| 4                           | P.ki.3.ka    | 68        | Bendo         | Dander    |
| 5                           | P.ki.4.ki    | 48        | Mojoarum      | Dander    |
|                             |              |           | Bangilan      | Kapas     |
|                             |              |           | Ngumpak Dalem | Kapas     |
| 6                           | P.ki.4.ka    | 56        | Mojoarum      | Dander    |
|                             |              |           | Bangilan      | Kapas     |
|                             |              |           | Tapelan       | Kapas     |
| 7                           | P.ki.5.ki    | 126       | Bangilan      | Kapas     |
|                             |              |           | Ngumpak Dalem | Kapas     |
|                             |              |           | Sembung       | Kapas     |
|                             |              |           | Pacal         | Kec. Kota |
| 8                           | P.ki.5.ka    | 28        | Bangilan      | Kapas     |
|                             |              |           | Sembung       | Kapas     |
|                             |              |           | Tanjung Harjo | Kapas     |
| 9                           | P.ki.5.ka.2  | 75        | Bangilan      | Kapas     |
|                             |              |           | Sembung       | Kapas     |
|                             |              |           | Tanjung Harjo | Kapas     |
| 10                          | P.ki.6.ka    | 5         | Tanjung Harjo | Kapas     |
| 11                          | P.ki.7.ka    | 84        | Sembung       | Kapas     |
|                             |              |           | Wedi          | Kapas     |
|                             |              |           | Kadipaten     | Kec. Kota |
| 12                          | P.ki.7.ka    | 19        | Pacal         | Kec. Kota |
|                             |              |           | Mojodeso      | Kec. Kota |
|                             |              |           | Kepatihan     | Kec. Kota |
| 13                          | P.ki.8.ka    | 32        | Kepatihan     | Kec. Kota |
| 14                          | P.ki.9.ki    | 3         | Sukerejo      | Kec. Kota |
| 15                          | P.ki.10.ka   | 26        | Sukerejo      | Kec. Kota |
|                             |              |           | Wedi          | Kapas     |
| 16                          | P.ki.11.ka   | 7         | Sukerojo      | Kec. Kota |
|                             |              |           | Ngampel       | Kec. Kota |
| 17                          | P.ki.12.ka   | 33        | Wedi          | Kapas     |
|                             |              |           | Sukerejo      | Kec. Kota |
| 18                          | P.ki.13.ka   | 35        | Sukerejo      | Kec. Kota |
|                             |              |           | Ngampel       | Kec. Kota |
| 19                          | P.ki.14.ki   | 11        | Sukerejo      | Kec. Kota |
|                             |              |           | Ngrowo        | Kec. Kota |
| 20                          | P.ki.14.ka   | 6         | Sukerejo      | Kec. Kota |
| 21                          | P.ki.15.ka   | 54        | Sukerejo      | Kec. Kota |
|                             |              |           | Ngampel       | Kec. Kota |
| 22                          | P.ki.16.ka   | 22        | Ngerowo       | Kec. Kota |
| 23                          | P.ki.16.ka.2 | 9         | Ngampel       | Kec. Kota |
| Total Luas J.I. Pirang Kiri |              | 819       |               |           |

Sumber: UPT Pengelolaan SDA Wilayah Sungai Bengawan Solo

## 4.2. Perhitungan Debit Andalan Jaringan Irigasi Pirang

Data debit yang digunakan untuk menghitung debit andalan data pencatatan debit yang masuk ke dalam intake Saluran Sekunder Pirang Kiri dan Saluran Sekunder Pirang Kanan periode 10 harian mulai tahun 2008 – 2012. Metode yang digunakan untuk perhitungan debit andalan adalah Metode Bulan Dasar Perencanaan. Umumnya, di bidang irigasi dipakai debit dengan keandalan 80%. Metode ini paling sering dipakai karena keandalan debit dihitung mulai Bulan Januari sampai dengan Bulan Desember, jadi lebih bisa menggambarkan keandalan pada musim kemarau dan musim penghujan.

Debit minimum yang digunakan dalam perhitungan ini debit yang diambil dari debit minimum yang masuk ke intake berdasarkan tingkat kebutuhan air di petak sawah tiap periode. Contoh perhitungan  $Q_{80}$  pada Bulan Januari Periode I dari tahun 2008-2012 adalah:

- $m = 1 ; n = 5$   
 $P = (m/n+1) \times 100\% = (1/6) \times 100\% = 16,667\%$
- $m = 2 ; n = 5$   
 $P = (m/n+1) \times 100\% = (2/6) \times 100\% = 33,333\%$
- $m = 3 ; n = 5$   
 $P = (m/n+1) \times 100\% = (3/6) \times 100\% = 50\%$
- $m = 4 ; n = 5$   
 $P = (m/n+1) \times 100\% = (4/6) \times 100\% = 66,667\%$
- $m = 5 ; n = 5$   
 $P = (m/n+1) \times 100\% = (5/6) \times 100\% = 83,333\%$
- Yang menunjukkan nilai  $Q_{80}$  adalah nilai P antara 66,676 dan 83,333. Hasil interpolasi menghasilkan nilai 348
- Jadi  $Q_{80}$  pada Bulan Januari Periode I adalah 348 liter/detik

Hasil perhitungan Metode Bulan Dasar Perencanaan ( $Q_{80}$ ) Pirang Kiri dan Pirang Kanan ditunjukkan pada Tabel 4.4 dan Tabel 4.6



Tabel 4.3 Data Debit Intake Pirang Kiri (2008-2012) dalam liter/detik

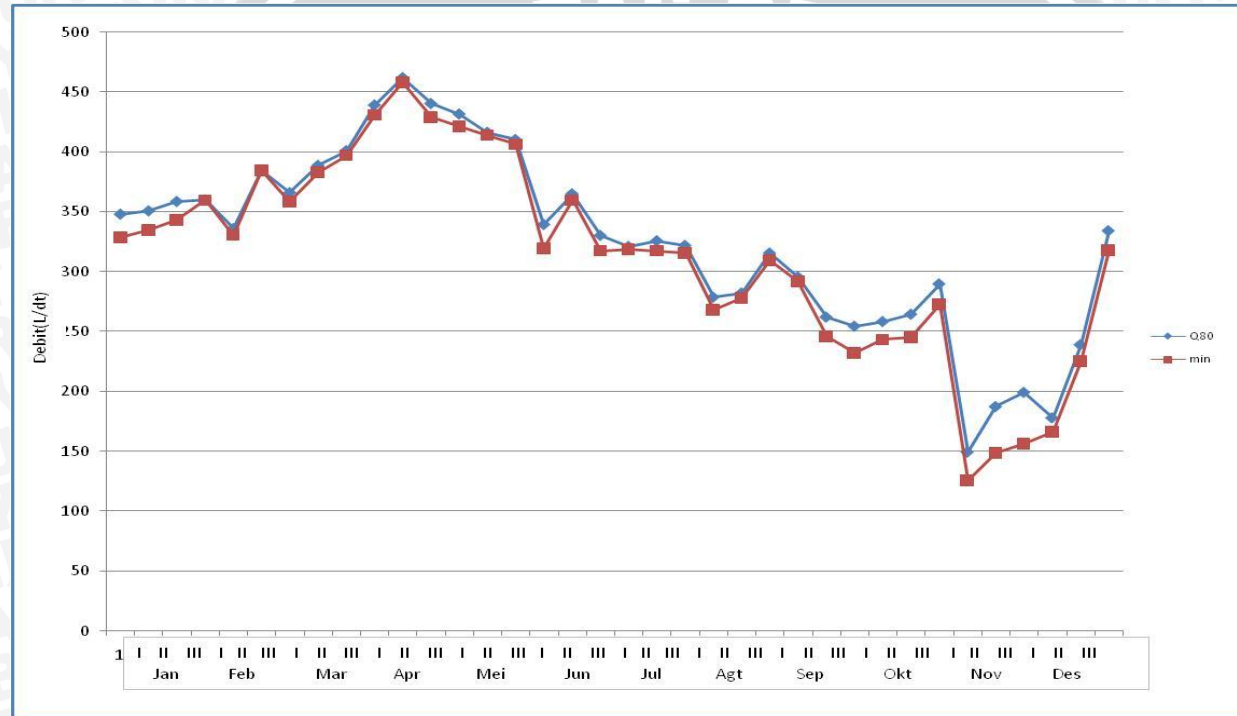
| Tahun     | Bulan   |     |     |          |     |     |        |       |       |       |       |       |       |       |       |       |       |       |       |       |        |         |       |        |           |     |       |         |       |       |          |       |       |          |       |       |
|-----------|---------|-----|-----|----------|-----|-----|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|---------|-------|--------|-----------|-----|-------|---------|-------|-------|----------|-------|-------|----------|-------|-------|
|           | Januari |     |     | Februari |     |     | Maret  |       |       | April |       |       | Mei   |       |       | Juni  |       |       | Juli  |       |        | Agustus |       |        | September |     |       | Oktober |       |       | November |       |       | Desember |       |       |
|           | I       | II  | III | I        | II  | III | I      | II    | III   | I     | II    | III   | I     | II    | III   | I     | II    | III   | I     | II    | III    | I       | II    | III    | I         | II  | III   | I       | II    | III   | I        | II    | III   |          |       |       |
| 2008      | 590     | 565 | 602 | 583      | 593 | 613 | 567    | 568   | 572   | 565   | 568   | 565   | 565   | 565   | 564   | 472   | 462   | 459   | 416   | 359   | 315    | 268     | 278   | 340    | 319       | 327 | 345   | 476     | 445   | 381   | 332      | 365   | 402   | 226      | 225   | 424   |
| 2009      | 592     | 607 | 589 | 598      | 608 | 418 | 585    | 613   | 582   | 678   | 643   | 662   | 687   | 653   | 701   | 692   | 587   | 472   | 423   | 378   | 378    | 371     | 358   | 367    | 358       | 358 | 358   | 358     | 342   | 358   | 125      | 148   | 156   | 166      | 294   | 318   |
| 2010      | 328     | 335 | 343 | 360      | 431 | 385 | 358    | 383   | 416   | 431   | 458   | 429   | 421   | 414   | 406   | 419   | 385   | 393   | 419   | 391   | 388    | 342     | 331   | 340    | 398       | 357 | 345   | 319     | 427   | 427   | 429      | 442   | 429   | 442      | 456   | 439   |
| 2011      | 442     | 424 | 439 | 360      | 357 | 385 | 395    | 412   | 489,3 | 503   | 500   | 486   | 472   | 425   | 425   | 319   | 385   | 317   | 330   | 317   | 373    | 385     | 429   | 416    | 292       | 344 | 344   | 372     | 373   | 446   | 472      | 476   | 429   | 411      | 411   | 398   |
| 2012      | 427     | 414 | 421 | 398      | 330 | 398 | 459    | 518   | 397   | 472   | 476   | 501   | 482   | 472   | 489   | 446   | 360   | 381   | 319   | 385   | 347    | 320     | 298   | 309    | 310       | 246 | 232   | 243     | 245   | 272   | 244      | 342   | 372   | 418      | 434   | 459   |
| Jmlh Data | 5       | 5   | 5   | 5        | 5   | 5   | 5      | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5      | 5       | 5     | 5      | 5         | 5   | 5     | 5       | 5     | 5     | 5        | 5     | 5     | 5        | 5     | 5     |
| Rata-rata | 476     | 469 | 479 | 460      | 464 | 440 | 472,95 | 498,6 | 491   | 529,8 | 528,9 | 528,5 | 525,4 | 505,9 | 517,2 | 469,6 | 435,8 | 404,5 | 381,5 | 366,1 | 360,38 | 337,3   | 338,8 | 354,53 | 335,6     | 326 | 324,7 | 353,7   | 366,2 | 376,8 | 320,4    | 354,8 | 357,5 | 332      | 363,9 | 407,8 |
| Max       | 592     | 607 | 602 | 598      | 608 | 613 | 585,27 | 612,7 | 581,5 | 678,1 | 642,6 | 661,9 | 686,9 | 653,2 | 701,2 | 691,8 | 587,1 | 471,8 | 423,2 | 390,8 | 388,31 | 385,2   | 428,8 | 415,73 | 398,3     | 358 | 358,4 | 476,2   | 445   | 445,7 | 471,8    | 476,2 | 428,8 | 442      | 455,6 | 458,7 |
| Min       | 328     | 335 | 343 | 360      | 330 | 385 | 358,39 | 382,7 | 397   | 430,7 | 458,1 | 428,8 | 421,3 | 413,9 | 406,4 | 319,1 | 359,6 | 317,3 | 318,5 | 317,3 | 315,38 | 268     | 278   | 309,15 | 291,7     | 246 | 231,9 | 243,1   | 245   | 272,4 | 125,3    | 148,3 | 155,8 | 166      | 225   | 317,9 |

Sumber :UPT Pengelolaan SDA Wilayah Sungai Bengawan Solo

Tabel 4.4 Perhitungan Debit Andalan Intake Pirang Kiri dalam liter/detik

| No              | Peluang (%) | Bulan (lt/dtk) |     |     |          |     |     |       |     |     |       |     |     |     |     |     |      |     |     |      |     |     |         |     |     |           |     |     |         |     |     |          |     |     |          |     |     |
|-----------------|-------------|----------------|-----|-----|----------|-----|-----|-------|-----|-----|-------|-----|-----|-----|-----|-----|------|-----|-----|------|-----|-----|---------|-----|-----|-----------|-----|-----|---------|-----|-----|----------|-----|-----|----------|-----|-----|
|                 |             | Januari        |     |     | Februari |     |     | Maret |     |     | April |     |     | Mei |     |     | Juni |     |     | Juli |     |     | Agustus |     |     | September |     |     | Oktober |     |     | November |     |     | Desember |     |     |
|                 |             | I              | II  | III | I        | II  | III | I     | II  | III | I     | II  | III | I   | II  | III | I    | II  | III | I    | II  | III | I       | II  | III | I         | II  | III | I       | II  | III | I        | II  | III |          |     |     |
| 1               | 16,667      | 592            | 607 | 602 | 598      | 608 | 613 | 585   | 613 | 582 | 678   | 643 | 662 | 687 | 653 | 701 | 692  | 587 | 459 | 423  | 391 | 388 | 385     | 429 | 416 | 398       | 358 | 358 | 476     | 445 | 446 | 472      | 476 | 429 | 442      | 456 | 459 |
| 2               | 33,333      | 590            | 565 | 589 | 583      | 593 | 418 | 567   | 568 | 572 | 565   | 568 | 565 | 565 | 565 | 564 | 472  | 462 | 472 | 419  | 385 | 378 | 371     | 358 | 367 | 358       | 357 | 345 | 372     | 427 | 427 | 429      | 442 | 429 | 411      | 434 | 439 |
| 3               | 50,000      | 442            | 424 | 439 | 398      | 431 | 398 | 459   | 518 | 489 | 503   | 500 | 501 | 482 | 472 | 489 | 446  | 385 | 393 | 416  | 378 | 373 | 342     | 331 | 340 | 319       | 344 | 345 | 358     | 373 | 381 | 332      | 365 | 402 | 418      | 411 | 424 |
| 4               | 66,667      | 427            | 414 | 421 | 360      | 357 | 385 | 395   | 412 | 416 | 472   | 476 | 486 | 472 | 425 | 425 | 419  | 385 | 381 | 330  | 359 | 347 | 320     | 298 | 340 | 310       | 327 | 344 | 319     | 342 | 358 | 244      | 342 | 372 | 226      | 294 | 398 |
| 5               | 83,333      | 328            | 335 | 343 | 360      | 330 | 385 | 358   | 383 | 397 | 431   | 458 | 429 | 421 | 414 | 406 | 319  | 360 | 317 | 319  | 317 | 315 | 268     | 278 | 309 | 292       | 246 | 232 | 243     | 245 | 272 | 125      | 148 | 156 | 166      | 225 | 318 |
| Q <sub>80</sub> |             | 348            | 351 | 358 | 360      | 336 | 385 | 366   | 389 | 401 | 439   | 462 | 440 | 431 | 416 | 410 | 339  | 365 | 330 | 321  | 326 | 322 | 278     | 282 | 315 | 295       | 262 | 254 | 258     | 264 | 290 | 149      | 187 | 199 | 178      | 239 | 334 |

Sumber : Hasil Perhitungan



Gambar 4.1 Grafik Nilai Q Minimum &  $Q_{80}$  Intake Pirang Kiri

Sumber : Hasil Analisa

Tabel 4.5 Data Debit Intake Pirang Kanan (2008-2012) dalam liter/detik

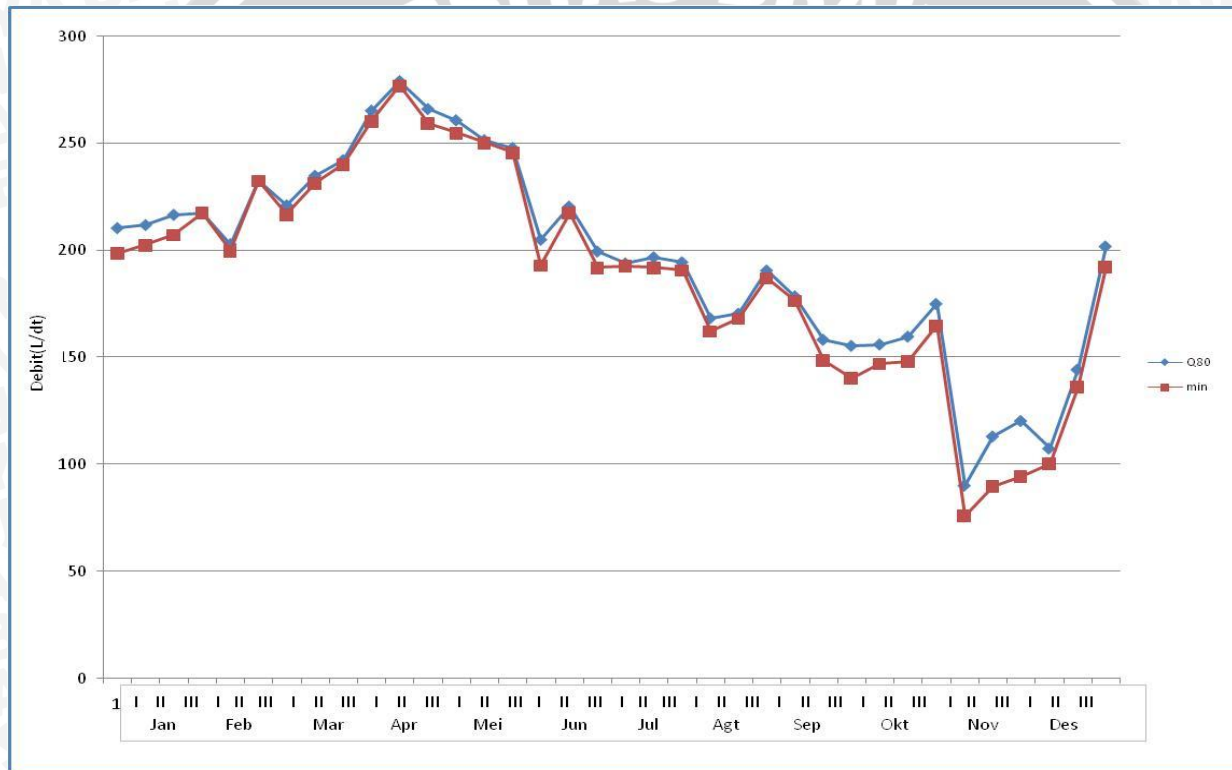
| Tahun     | Bulan   |     |     |          |     |     |        |       |       |       |       |       |       |       |       |       |       |       |       |       |        |         |       |        |           |     |       |         |       |       |          |       |       |          |       |       |
|-----------|---------|-----|-----|----------|-----|-----|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|---------|-------|--------|-----------|-----|-------|---------|-------|-------|----------|-------|-------|----------|-------|-------|
|           | Januari |     |     | Februari |     |     | Maret  |       |       | April |       |       | Mei   |       |       | Juni  |       |       | Juli  |       |        | Agustus |       |        | September |     |       | Oktober |       |       | November |       |       | Desember |       |       |
|           | I       | II  | III | I        | II  | III | I      | II    | III   | I     | II    | III   | I     | II    | III   | I     | II    | III   | I     | II    | III    | I       | II    | III    | I         | II  | III   | I       | II    | III   | I        | II    | III   |          |       |       |
| 2008      | 356     | 341 | 364 | 352      | 358 | 370 | 343    | 343   | 345   | 342   | 343   | 342   | 342   | 342   | 341   | 285   | 279   | 277   | 251   | 217   | 191    | 162     | 168   | 206    | 193       | 198 | 208   | 288     | 269   | 230   | 200      | 221   | 243   | 136      | 136   | 257   |
| 2009      | 358     | 367 | 356 | 362      | 368 | 253 | 354    | 370   | 351   | 410   | 388   | 400   | 415   | 395   | 424   | 418   | 355   | 285   | 256   | 229   | 229    | 224     | 217   | 222    | 217       | 217 | 217   | 217     | 206   | 217   | 76       | 90    | 94    | 100      | 177   | 192   |
| 2010      | 199     | 202 | 207 | 217      | 260 | 232 | 217    | 231   | 251   | 260   | 277   | 259   | 255   | 250   | 246   | 254   | 233   | 238   | 254   | 236   | 235    | 207     | 200   | 206    | 241       | 216 | 208   | 193     | 258   | 258   | 259      | 267   | 259   | 267      | 275   | 266   |
| 2011      | 267     | 256 | 266 | 217      | 216 | 233 | 239    | 249   | 296   | 304   | 302   | 293   | 285   | 257   | 257   | 193   | 233   | 192   | 200   | 192   | 225    | 233     | 259   | 251    | 176       | 208 | 208   | 225     | 225   | 269   | 285      | 288   | 259   | 249      | 249   | 241   |
| 2012      | 258     | 250 | 254 | 241      | 200 | 241 | 277    | 313   | 240   | 285   | 288   | 303   | 291   | 285   | 296   | 269   | 217   | 231   | 193   | 233   | 210    | 194     | 180   | 187    | 188       | 148 | 140   | 147     | 148   | 165   | 148      | 207   | 225   | 252      | 262   | 277   |
| Jmlh Data | 5       | 5   | 5   | 5        | 5   | 5   | 5      | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5      | 5       | 5     | 5      | 5         | 5   | 5     | 5       | 5     | 5     | 5        | 5     | 5     | 5        | 5     | 5     |
| Rata-rata | 288     | 283 | 289 | 278      | 280 | 266 | 285,85 | 301,4 | 296,8 | 320,2 | 319,7 | 319,5 | 317,6 | 305,7 | 312,6 | 283,8 | 263,4 | 244,5 | 230,5 | 221,3 | 217,82 | 203,9   | 204,8 | 214,27 | 202,8     | 197 | 196,3 | 213,7   | 221,4 | 227,8 | 193,6    | 214,4 | 216,1 | 201      | 219,9 | 246,4 |
| Max       | 358     | 367 | 364 | 362      | 368 | 370 | 353,73 | 370,3 | 351,5 | 409,9 | 388,4 | 400,1 | 415,1 | 394,8 | 423,8 | 418,2 | 354,9 | 285,2 | 255,8 | 236,2 | 234,69 | 232,8   | 259,2 | 251,27 | 240,7     | 217 | 216,6 | 287,8   | 269   | 269,3 | 285,2    | 287,8 | 259,2 | 267      | 275,4 | 277,3 |
| Min       | 199     | 202 | 207 | 217      | 200 | 232 | 216,61 | 231,3 | 240   | 260,3 | 276,9 | 259,2 | 254,7 | 250,1 | 245,6 | 192,9 | 217,4 | 191,7 | 192,5 | 191,7 | 190,62 | 162     | 168   | 186,85 | 176,3     | 148 | 140,1 | 146,9   | 148   | 164,6 | 75,72    | 89,66 | 94,18 | 100      | 136   | 192,1 |

Sumber :UPT Pengelolaan SDA Wilayah Sungai Bengawan Solo

Tabel 4.6 Perhitungan Debit Andalan Intake Pirang Kanan dalam liter/detik

| No              | Peluang (%) | Bulan (lt/dtk) |     |     |          |     |     |       |     |     |       |     |     |     |     |     |      |     |     |      |     |     |         |     |     |           |     |     |         |     |     |          |     |     |          |     |     |
|-----------------|-------------|----------------|-----|-----|----------|-----|-----|-------|-----|-----|-------|-----|-----|-----|-----|-----|------|-----|-----|------|-----|-----|---------|-----|-----|-----------|-----|-----|---------|-----|-----|----------|-----|-----|----------|-----|-----|
|                 |             | Januari        |     |     | Februari |     |     | Maret |     |     | April |     |     | Mei |     |     | Juni |     |     | Juli |     |     | Agustus |     |     | September |     |     | Oktober |     |     | November |     |     | Desember |     |     |
|                 |             | I              | II  | III | I        | II  | III | I     | II  | III | I     | II  | III | I   | II  | III | I    | II  | III | I    | II  | III | I       | II  | III | I         | II  | III | I       | II  | III | I        | II  | III |          |     |     |
| 1               | 16,667      | 358            | 367 | 364 | 362      | 368 | 370 | 354   | 370 | 351 | 410   | 388 | 400 | 415 | 395 | 424 | 418  | 355 | 285 | 256  | 236 | 235 | 233     | 259 | 251 | 241       | 217 | 208 | 288     | 269 | 269 | 285      | 288 | 259 | 267      | 275 | 277 |
| 2               | 33,333      | 356            | 341 | 356 | 352      | 358 | 253 | 343   | 343 | 345 | 342   | 343 | 342 | 342 | 342 | 341 | 285  | 279 | 277 | 254  | 233 | 229 | 224     | 217 | 222 | 217       | 216 | 208 | 225     | 258 | 258 | 259      | 267 | 259 | 252      | 262 | 266 |
| 3               | 50,000      | 267            | 256 | 266 | 241      | 260 | 241 | 277   | 313 | 296 | 304   | 302 | 303 | 291 | 285 | 296 | 269  | 233 | 238 | 251  | 229 | 225 | 207     | 200 | 206 | 193       | 208 | 208 | 217     | 225 | 230 | 200      | 221 | 243 | 249      | 249 | 257 |
| 4               | 66,667      | 258            | 250 | 254 | 217      | 216 | 233 | 239   | 249 | 251 | 285   | 288 | 293 | 285 | 257 | 257 | 254  | 233 | 231 | 200  | 217 | 210 | 194     | 180 | 206 | 188       | 198 | 217 | 193     | 206 | 217 | 148      | 207 | 225 | 136      | 177 | 241 |
| 5               | 83,333      | 199            | 202 | 207 | 217      | 200 | 232 | 217   | 231 | 240 | 260   | 277 | 259 | 255 | 250 | 246 | 193  | 217 | 192 | 193  | 192 | 191 | 162     | 168 | 187 | 176       | 148 | 140 | 147     | 148 | 165 | 76       | 90  | 94  | 100      | 136 | 192 |
| Q <sub>80</sub> |             | 210            | 212 | 217 | 217      | 203 | 233 | 221   | 235 | 242 | 265   | 279 | 266 | 261 | 251 | 248 | 205  | 220 | 200 | 194  | 197 | 194 | 168     | 170 | 191 | 179       | 158 | 155 | 156     | 160 | 175 | 90       | 113 | 120 | 107      | 144 | 202 |

Sumber : Hasil Perhitungan



Gambar 4.2 Grafik Nilai Q Minimum &  $Q_{80}$  Intake Pirang Kanan  
 Sumber : Hasil Analisa



### 4.3. Evaluasi Kondisi Eksisting

#### 4.3.1. Evaluasi Pola Tanam

Evaluasi Pola Tanam dan Intensitas Tanam mulai tahun 2008 sampai dengan 2012 dapat dilihat pada Tabel 4.7- Tabel 4.11

Tabel 4.7 Pola Tanam dan Intensitas Tanam Eksisting Tahun 2007/2008

| Musim<br>Tanam | Jenis Tanaman           |      | Nov   |    |     | Des |    |     | Jan |    |     | Feb |    |     | Mar |    |     | Apr |    |     | Mei |    |     | Juni |    |     | Jul |    |     | Agt          |                |                | Sep     |        |  | Okt |  |  | Intensitas Tanam (%) |  |
|----------------|-------------------------|------|-------|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|------|----|-----|-----|----|-----|--------------|----------------|----------------|---------|--------|--|-----|--|--|----------------------|--|
|                | Luas Baku Sawah 1347 Ha |      | I     | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I    | II | III | I   | II | III | I            | II             | III            | Rencana | Real   |  |     |  |  |                      |  |
| MH             | Padi                    | Renc | 1347  |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |              |                |                | 100     |        |  |     |  |  |                      |  |
|                |                         | Real | 1.344 |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |              |                |                |         | 99,777 |  |     |  |  |                      |  |
|                | Palawija dll            | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |              |                |                | 0       | 0      |  |     |  |  |                      |  |
|                |                         | Real | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |              |                |                | 0       | 0      |  |     |  |  |                      |  |
|                | Tembakau                | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |              |                |                | 0       | 0      |  |     |  |  |                      |  |
|                |                         | Real | 3     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |              |                |                | 0       | 0,223  |  |     |  |  |                      |  |
| Tebu           | Renc                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |              |                | 0              | 0       |        |  |     |  |  |                      |  |
|                | Real                    | 3    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |              |                | 0              | 0,223   |        |  |     |  |  |                      |  |
| MK I           | Padi                    | Renc | 500   |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |              |                | 37,120         |         |        |  |     |  |  |                      |  |
|                |                         | Real | 1.270 |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |              |                |                | 94,284  |        |  |     |  |  |                      |  |
|                | Palawija dll            | Renc | 847   |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |              |                | 62,880         | 0,000   |        |  |     |  |  |                      |  |
|                |                         | Real | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |              |                | 0              | 0,000   |        |  |     |  |  |                      |  |
|                | Tembakau                | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |              |                | 0              | 0       |        |  |     |  |  |                      |  |
|                |                         | Real | 3     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |              |                | 0              | 0,223   |        |  |     |  |  |                      |  |
| Tebu           | Renc                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |              | 0              | 0              |         |        |  |     |  |  |                      |  |
|                | Real                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |              | 0              | 0              |         |        |  |     |  |  |                      |  |
| MK II          | Padi                    | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |              | 0              | 0              |         |        |  |     |  |  |                      |  |
|                |                         | Real | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |              | 0              | 0              |         |        |  |     |  |  |                      |  |
|                | Palawija dll            | Renc | 670   |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |              | 49,740         | 91,166         |         |        |  |     |  |  |                      |  |
|                |                         | Real | 1.228 |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |              | 0              | 0,223          |         |        |  |     |  |  |                      |  |
|                | Tembakau                | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |              | 0              | 0              |         |        |  |     |  |  |                      |  |
|                |                         | Real | 3     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |              | 0              | 0,223          |         |        |  |     |  |  |                      |  |
| Tebu           | Renc                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     | 0            | 0              |                |         |        |  |     |  |  |                      |  |
|                | Real                    | 3    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     | 0            | 0,223          |                |         |        |  |     |  |  |                      |  |
|                |                         |      |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     | <b>Total</b> | <b>249,740</b> | <b>286,340</b> |         |        |  |     |  |  |                      |  |

Sumber : Dinas Pengairan Bojonegoro

Keterangan :

|   |             |   |            |   |          |
|---|-------------|---|------------|---|----------|
|  | Pembibitan  |  | Masa Tanam |  | Tembakau |
|  | Garap Tanah |  | Palawija   |  | Tebu     |

Tabel 4.8 Pola Tanam dan Intensitas Tanam Eksisting Tahun 2008/2009

| Musim<br>Tanam | Jenis Tanaman           |      | Nov   |    |     | Des |    |     | Jan |    |     | Feb |    |     | Mar |    |     | Apr |    |     | Mei |    |     | Juni |    |     | Jul |    |              | Agt            |                |        | Sep     |      |  | Okt |  |  | Intensitas Tanam (%) |  |
|----------------|-------------------------|------|-------|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|------|----|-----|-----|----|--------------|----------------|----------------|--------|---------|------|--|-----|--|--|----------------------|--|
|                | Luas Baku Sawah 1314 Ha |      | I     | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I    | II | III | I   | II | III          | I              | II             | III    | Rencana | Real |  |     |  |  |                      |  |
| MH             | Padi                    | Renc | 1314  |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |              |                | 100            |        |         |      |  |     |  |  |                      |  |
|                |                         | Real | 1.311 |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |              |                |                |        | 99,772  |      |  |     |  |  |                      |  |
|                | Palawija dll            | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |              |                |                | 0      | 0       |      |  |     |  |  |                      |  |
|                |                         | Real | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |              |                |                | 0      | 0       |      |  |     |  |  |                      |  |
|                | Tembakau                | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |              |                |                | 0      | 0       |      |  |     |  |  |                      |  |
|                |                         | Real | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |              |                |                | 0      | 0       |      |  |     |  |  |                      |  |
| Tebu           | Renc                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |              |                | 0              | 0      |         |      |  |     |  |  |                      |  |
|                | Real                    | 3    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |              |                | 0              | 0,228  |         |      |  |     |  |  |                      |  |
| MK I           | Padi                    | Renc | 500   |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |              |                | 38,052         |        |         |      |  |     |  |  |                      |  |
|                |                         | Real | 1.134 |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |              |                |                | 86,301 |         |      |  |     |  |  |                      |  |
|                | Palawija dll            | Renc | 847   |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |              |                | 64,460         | 0      |         |      |  |     |  |  |                      |  |
|                |                         | Real | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |              |                | 0              | 0      |         |      |  |     |  |  |                      |  |
|                | Tembakau                | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |              |                | 0              | 0      |         |      |  |     |  |  |                      |  |
|                |                         | Real | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |              |                | 0              | 0      |         |      |  |     |  |  |                      |  |
| Tebu           | Renc                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |              | 0              | 0              |        |         |      |  |     |  |  |                      |  |
|                | Real                    | 3    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |              | 0              | 0,228          |        |         |      |  |     |  |  |                      |  |
| MK II          | Padi                    | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |              | 0              | 0              |        |         |      |  |     |  |  |                      |  |
|                |                         | Real | 5     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |              | 0              | 0,381          |        |         |      |  |     |  |  |                      |  |
|                | Palawija dll            | Renc | 670   |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |              | 50,989         | 98,402         |        |         |      |  |     |  |  |                      |  |
|                |                         | Real | 1.293 |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |              | 0              | 0,228          |        |         |      |  |     |  |  |                      |  |
|                | Tembakau                | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |              | 0              | 0              |        |         |      |  |     |  |  |                      |  |
|                |                         | Real | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |              | 0              | 0              |        |         |      |  |     |  |  |                      |  |
| Tebu           | Renc                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    | 0            | 0              |                |        |         |      |  |     |  |  |                      |  |
|                | Real                    | 3    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    | 0            | 0,228          |                |        |         |      |  |     |  |  |                      |  |
|                |                         |      |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    | <b>Total</b> | <b>253,501</b> | <b>285,540</b> |        |         |      |  |     |  |  |                      |  |

Sumber : Dinas Pengairan Bojonegoro

Keterangan :

|   |             |   |            |   |          |
|---|-------------|---|------------|---|----------|
|  | Pembibitan  |  | Masa Tanam |  | Tembakau |
|  | Garap Tanah |  | Palawija   |  | Tebu     |

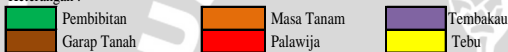


Tabel 4.9 Pola Tanam dan Intensitas Tanam Eksisting Tahun 2009/2010

| Musim Tanam | Jenis Tanaman           |      | Nov   |    |     | Des |    |     | Jan |    |     | Feb |    |     | Mar |    |     | Apr |    |     | Mei |    |     | Juni |    |     | Jul |    |     | Agt |    |     | Sep |         |         | Okt     |      |  | Intensitas Tanam (%) |  |
|-------------|-------------------------|------|-------|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|------|----|-----|-----|----|-----|-----|----|-----|-----|---------|---------|---------|------|--|----------------------|--|
|             | Luas Baku Sawah 1314 Ha |      | I     | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I    | II | III | I   | II | III | I   | II | III | I   | II      | III     | Rencana | Real |  |                      |  |
| MH          | Padi                    | Renc | 1314  | ■  |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     | 100     |         |         |      |  |                      |  |
|             |                         | Real | 1.311 | ■  |     | ■   |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     |         |         | 99,772  |      |  |                      |  |
|             | Palawija dll            | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     |         | 0       | 0       |      |  |                      |  |
|             |                         | Real | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     |         | 0       | 0       |      |  |                      |  |
|             | Tembakau                | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     |         | 0       | 0       |      |  |                      |  |
|             |                         | Real | 3     |    |     |     |    |     |     |    |     |     |    |     | ■   | ■  |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     |         | 0,228   |         |      |  |                      |  |
| Tebu        | Renc                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     | 0       | 0       |         |      |  |                      |  |
|             | Real                    | 3    | ■     | ■  |     | ■   | ■  |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     | 0,228   |         |         |      |  |                      |  |
| MK I        | Padi                    | Renc | 500   |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     | 38,052  |         |         |      |  |                      |  |
|             |                         | Real | 1.311 |    |     |     |    |     |     |    |     |     |    |     | ■   | ■  | ■   | ■   | ■  | ■   | ■   | ■  | ■   | ■    | ■  | ■   | ■   | ■  | ■   | ■   | ■  | ■   | ■   | 99,772  |         |         |      |  |                      |  |
|             | Palawija dll            | Renc | 847   |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     | 64,460  | 0       |         |      |  |                      |  |
|             |                         | Real | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     | 0       | 0       |         |      |  |                      |  |
|             | Tembakau                | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     |         | 0       | 0       |      |  |                      |  |
|             |                         | Real | 3     |    |     |     |    |     |     |    |     |     |    |     | ■   | ■  | ■   | ■   | ■  | ■   | ■   | ■  | ■   | ■    | ■  | ■   | ■   | ■  | ■   | ■   | ■  | ■   | ■   | 0,228   |         |         |      |  |                      |  |
| Tebu        | Renc                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     | 0       | 0       |         |      |  |                      |  |
|             | Real                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     | 0       | 0       |         |      |  |                      |  |
| MK II       | Padi                    | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     | 0       | 0       |         |      |  |                      |  |
|             |                         | Real | 65    |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     | 4,947   |         |         |      |  |                      |  |
|             | Palawija dll            | Renc | 670   |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     | 50,989  | 0       |         |      |  |                      |  |
|             |                         | Real | 1.055 |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     | 80,289  | 0       |         |      |  |                      |  |
|             | Tembakau                | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     | 0       | 0       |         |      |  |                      |  |
|             |                         | Real | 3     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     | 0,228   |         |         |      |  |                      |  |
| Tebu        | Renc                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     | 0       | 0       |         |      |  |                      |  |
|             | Real                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     | 0       | 0       |         |      |  |                      |  |
| Total       |                         |      |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     | 253,501 | 285,693 |         |      |  |                      |  |

Sumber : Dinas Pengairan Bojonegoro

Keterangan :



Tabel 4.10 Pola Tanam dan Intensitas Tanam Eksisting Tahun 2010/2011

| Musim Tanam | Jenis Tanaman           |      | Nov   |    |     | Des |    |     | Jan |    |     | Feb |    |     | Mar |    |     | Apr |    |     | Mei |    |     | Juni |    |     | Jul |    |     | Agt |       |        | Sep     |         |        | Okt     |      |  | Intensitas Tanam (%) |  |
|-------------|-------------------------|------|-------|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|------|----|-----|-----|----|-----|-----|-------|--------|---------|---------|--------|---------|------|--|----------------------|--|
|             | Luas Baku Sawah 1314 Ha |      | I     | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I    | II | III | I   | II | III | I   | II    | III    | I       | II      | III    | Rencana | Real |  |                      |  |
| MH          | Padi                    | Renc | 1314  | ■  |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |       |        | 100     |         |        |         |      |  |                      |  |
|             |                         | Real | 1.311 | ■  |     | ■   |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |       |        |         |         | 99,772 |         |      |  |                      |  |
|             | Palawija dll            | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |       |        |         | 0       | 0      |         |      |  |                      |  |
|             |                         | Real | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |       |        |         | 0       | 0      |         |      |  |                      |  |
|             | Tembakau                | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |       |        |         | 0       | 0      |         |      |  |                      |  |
|             |                         | Real | 3     |    |     |     |    |     |     |    |     |     |    |     | ■   | ■  | ■   | ■   | ■  | ■   | ■   | ■  | ■   | ■    | ■  | ■   | ■   | ■  | ■   | ■   | ■     | ■      | 0,228   |         |        |         |      |  |                      |  |
| Tebu        | Renc                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |       |        | 0       | 0       |        |         |      |  |                      |  |
|             | Real                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |       |        | 0       | 0       |        |         |      |  |                      |  |
| MK I        | Padi                    | Renc | 500   |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |       |        | 38,052  |         |        |         |      |  |                      |  |
|             |                         | Real | 1.311 |    |     |     |    |     |     |    |     |     |    |     | ■   | ■  | ■   | ■   | ■  | ■   | ■   | ■  | ■   | ■    | ■  | ■   | ■   | ■  | ■   | ■   | ■     | ■      | 99,772  |         |        |         |      |  |                      |  |
|             | Palawija dll            | Renc | 847   |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |       |        | 64,460  | 0       |        |         |      |  |                      |  |
|             |                         | Real | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |       |        | 0       | 0       |        |         |      |  |                      |  |
|             | Tembakau                | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |       |        | 0       | 0       |        |         |      |  |                      |  |
|             |                         | Real | 3     |    |     |     |    |     |     |    |     |     |    |     | ■   | ■  | ■   | ■   | ■  | ■   | ■   | ■  | ■   | ■    | ■  | ■   | ■   | ■  | ■   | ■   | ■     | 0,228  |         |         |        |         |      |  |                      |  |
| Tebu        | Renc                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |       | 0      | 0       |         |        |         |      |  |                      |  |
|             | Real                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |       | 0      | 0       |         |        |         |      |  |                      |  |
| MK II       | Padi                    | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |       | 0      | 0       |         |        |         |      |  |                      |  |
|             |                         | Real | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |       | 0      | 0       |         |        |         |      |  |                      |  |
|             | Palawija dll            | Renc | 670   |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |       | 50,989 | 0       |         |        |         |      |  |                      |  |
|             |                         | Real | 1.279 |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |       | 94,952 | 0       |         |        |         |      |  |                      |  |
|             | Tembakau                | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |       | 0      | 0       |         |        |         |      |  |                      |  |
|             |                         | Real | 3     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     | 2,227 |        |         |         |        |         |      |  |                      |  |
| Tebu        | Renc                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     | 0     | 0      |         |         |        |         |      |  |                      |  |
|             | Real                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     | 0     | 0      |         |         |        |         |      |  |                      |  |
| Total       |                         |      |       |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |       |        | 253,501 | 297,179 |        |         |      |  |                      |  |

Sumber : Dinas Pengairan Bojonegoro

Keterangan :

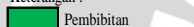







Tabel 4.11 Pola Tanam dan Intensitas Tanam Eksisting Tahun 2011/2012

| Musim Tanam | Jenis Tanaman           |      | Nov   |    |     | Des |    |     | Jan |    |     | Feb |    |     | Mar |    |              | Apr |    |         | Mei |         |     | Juni   |    |     | Jul    |    |     | Agt    |    |     | Sep |    |     | Okt     |      |  | Intensitas Tanam (%) |  |
|-------------|-------------------------|------|-------|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|--------------|-----|----|---------|-----|---------|-----|--------|----|-----|--------|----|-----|--------|----|-----|-----|----|-----|---------|------|--|----------------------|--|
|             | Luas Baku Sawah 1314 Ha |      | I     | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III          | I   | II | III     | I   | II      | III | I      | II | III | I      | II | III | I      | II | III | I   | II | III | Rencana | Real |  |                      |  |
| MH          | Padi                    | Renc | 1314  |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         |     |        |    |     |        |    |     |        |    |     | 100 |    |     |         |      |  |                      |  |
|             |                         | Real | 1.311 |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         |     |        |    |     |        |    |     | 99,772 |    |     |     |    |     |         |      |  |                      |  |
|             | Palawija dll            | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         |     |        |    |     |        |    |     | 0      |    |     |     |    |     |         |      |  |                      |  |
|             |                         | Real | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         |     |        |    |     | 0      |    |     |        |    |     |     |    |     |         |      |  |                      |  |
|             | Tembakau                | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         |     |        |    |     | 0      |    |     |        |    |     |     |    |     |         |      |  |                      |  |
|             |                         | Real | 3     |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         |     | 0,228  |    |     |        |    |     |        |    |     |     |    |     |         |      |  |                      |  |
| Tebu        | Renc                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         | 0   |        |    |     |        |    |     |        |    |     |     |    |     |         |      |  |                      |  |
|             | Real                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         | 0   |        |    |     |        |    |     |        |    |     |     |    |     |         |      |  |                      |  |
| MK I        | Padi                    | Renc | 500   |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         |     |        |    |     |        |    |     | 38,052 |    |     |     |    |     |         |      |  |                      |  |
|             |                         | Real | 1.311 |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         |     |        |    |     | 99,772 |    |     |        |    |     |     |    |     |         |      |  |                      |  |
|             | Palawija dll            | Renc | 847   |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         |     |        |    |     | 64,460 |    |     |        |    |     |     |    |     |         |      |  |                      |  |
|             |                         | Real | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         |     | 0      |    |     |        |    |     |        |    |     |     |    |     |         |      |  |                      |  |
|             | Tembakau                | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         |     |        |    |     | 0      |    |     |        |    |     |     |    |     |         |      |  |                      |  |
|             |                         | Real | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         |     | 0      |    |     |        |    |     |        |    |     |     |    |     |         |      |  |                      |  |
| Tebu        | Renc                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         | 0   |        |    |     |        |    |     |        |    |     |     |    |     |         |      |  |                      |  |
|             | Real                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         | 0   |        |    |     |        |    |     |        |    |     |     |    |     |         |      |  |                      |  |
| MK II       | Padi                    | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         |     |        |    |     | 0      |    |     |        |    |     |     |    |     |         |      |  |                      |  |
|             |                         | Real | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         |     | 0      |    |     |        |    |     |        |    |     |     |    |     |         |      |  |                      |  |
|             | Palawija dll            | Renc | 670   |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         |     |        |    |     | 50,989 |    |     |        |    |     |     |    |     |         |      |  |                      |  |
|             |                         | Real | 1271  |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         |     | 94,358 |    |     |        |    |     |        |    |     |     |    |     |         |      |  |                      |  |
|             | Tembakau                | Renc | 0     |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         |     | 0      |    |     |        |    |     |        |    |     |     |    |     |         |      |  |                      |  |
|             |                         | Real | 3     |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         |     | 0,228  |    |     |        |    |     |        |    |     |     |    |     |         |      |  |                      |  |
| Tebu        | Renc                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         | 0   |        |    |     |        |    |     |        |    |     |     |    |     |         |      |  |                      |  |
|             | Real                    | 0    |       |    |     |     |    |     |     |    |     |     |    |     |     |    |              |     |    |         |     |         | 0   |        |    |     |        |    |     |        |    |     |     |    |     |         |      |  |                      |  |
|             |                         |      |       |    |     |     |    |     |     |    |     |     |    |     |     |    | <b>Total</b> |     |    | 253,501 |     | 294,358 |     |        |    |     |        |    |     |        |    |     |     |    |     |         |      |  |                      |  |

Sumber : Dinas Pengairan Bojonegoro

Keterangan :

|   |   |   |
|---|---|---|
|  Pembibitan  |  Masa Tanam Palawija |  Tembakau Tebu |
|  Garap Tanah |  Palawija            |  Tebu          |

Didapat Rekapitulasi Pencapaian Intensitas Tanam selama 5 tahun (2008-2012) ditunjukkan pada Tabel 4.12

Tabel 4.12 Rekapitulasi Pencapaian Intensitas Tanam Tahun 2008-2012

| TAHUN     |       | INTENSITAS TANAM RERATA (%) |       |          |          | TOTAL   |
|-----------|-------|-----------------------------|-------|----------|----------|---------|
|           |       | PADI                        | TEBU  | PALAWIJA | TEMBAKAU |         |
| 2007/2008 | MH    | 99,777                      | 0,223 | -        | 0,223    | 100,223 |
|           | MK I  | 94,284                      | -     | -        | 0,223    | 94,507  |
|           | MK II | -                           | 0,223 | 91,166   | 0,223    | 91,611  |
|           | TOTAL | 194,061                     | 0,445 | 91,166   | 0,669    | 286,341 |
| 2008/2009 | MH    | 99,772                      | 0,228 | -        | -        | 100,000 |
|           | MK I  | 86,301                      | 0,228 | -        | -        | 86,530  |
|           | MK II | 0,381                       | 0,228 | 98,402   | -        | 99,011  |
|           | TOTAL | 186,454                     | 0,685 | 98,402   | -        | 285,540 |
| 2009/2010 | MH    | 99,772                      | 0,228 | -        | 0,228    | 100,228 |
|           | MK I  | 99,772                      | -     | -        | 0,228    | 100,000 |
|           | MK II | 4,947                       | -     | 80,289   | 0,228    | 85,464  |
|           | TOTAL | 204,490                     | 0,228 | 80,289   | 0,685    | 285,693 |
| 2010/2011 | MH    | 99,772                      | -     | -        | 0,228    | 100,000 |
|           | MK I  | 99,772                      | -     | -        | 0,228    | 100,000 |
|           | MK II | -                           | -     | 94,952   | 2,227    | 97,179  |
|           | TOTAL | 199,543                     | -     | 94,952   | 2,684    | 297,179 |
| 2011/2012 | MH    | 99,772                      | -     | -        | 0,228    | 100,000 |
|           | MK I  | 99,772                      | -     | -        | -        | 99,772  |
|           | MK II | -                           | -     | 94,358   | 0,228    | 94,586  |
|           | TOTAL | 199,543                     | -     | 94,358   | 0,457    | 294,358 |

Sumber : Hasil Analisa

Tabel 4.13 Pencapaian Rerata Intensitas Tanam dibandingkan dengan RTTG

| Jenis Tanaman         | Intensitas Tanam (%) |         |         |        |         |        | Jumlah (%) |         |
|-----------------------|----------------------|---------|---------|--------|---------|--------|------------|---------|
|                       | MH                   |         | MK I    |        | MK II   |        | Rencana    | Real    |
|                       | Rencana              | Real    | Rencana | Real   | Rencana | Real   |            |         |
| Padi                  | 100                  | 99,773  | 37,120  | 96,0   | 0       | 1,776  | 137,120    | 197,529 |
| Palawija dll          | 0                    | 0       | 62,880  | 0      | 49,740  | 91,833 | 112,621    | 91,833  |
| Tembakau              | 0                    | 0,227   | 0       | 0,227  | 0       | 0,727  | 0          | 1,180   |
| Tebu                  | 0                    | 0,226   | 0       | 0,228  | 0       | 0,226  | 0          | 0,680   |
| Intensitas Tanam      | 100                  | 100,226 | 100     | 96,435 | 49,740  | 94,561 | 249,740    | 291,222 |
| Intensitas Tanam Padi | 100                  | 99,773  | 37,120  | 95,980 | 0       | 1,776  | 137,120    | 197,529 |

Sumber : Hasil Analisa

Dapat diketahui bahwa selama 5 tahun terakhir (2008-2012) periode tanam J.I. Pirang, rerata intensitas tanam padi kondisi real mencapai 197,529%. Sedangkan, intensitas tanam padi rencana hanya 137,120%. Hal ini disebabkan karena para petani menanam padi gadu tidak ijin pada musim kemarau. Dan dari analisa di atas menunjukkan adanya tanaman tembakau dan tebu, sementara di RTTG tidak ada. Hal tersebut menunjukkan bahwa RTTG tidak terlaksana dengan baik.

#### 4.3.2. Evaluasi Kebutuhan Air Irigasi (Eksisting)

Kebutuhan air irigasi tergantung pada Pola Tanam dan jenis tanaman. Untuk pemanfaatan air secara optimal perlu dilakukan penyesuaian Pola Tanam sehingga didapatkan luas tanam yang optimal. Pola tanam yang diterapkan oleh petani pada lokasi penelitian adalah Padi+Palawija+Tebu – Padi+Palawija/tanaman lain-lain+Tembakau+Tebu dengan awal tanam pada bulan November dan Desember. Berikut contoh perhitungan kebutuhan air eksisting rata-rata pada tahun 2008, Musim Tanam I, Pembibitan;

- Debit rata-rata : 789 lt/dt (data)
- Luas rata-rata Pembibitan : 59,667 Ha (data)
- Nilai LPR : Luas tanam x Koefisien Pemanding LPR

Tabel 4.14 Koefisien Pemanding LPR

| Jenis Tanaman                 | Koefisien Pemanding      |
|-------------------------------|--------------------------|
| Palawija                      | 1                        |
| Padi Rendeng                  |                          |
| a. Persemaian / pembibitan    | 20                       |
| b. Garap / pengolahan tanah   | 6                        |
| c. Pertumbuhan / pemeliharaan | 4                        |
| Padi Gadu ijin                | Sama dengan padi rendeng |
| Padi Gadu tidak ijin          | 1                        |
| Tebu                          |                          |



|                                 |     |
|---------------------------------|-----|
| a. Bibit / muda                 | 1,5 |
| b. Tua                          | 0   |
| Tembakau / Rosela               | 1   |
| Pengisian tambak (sawah tambak) | 3   |

Sumber :DPU Tingkat I Jawa Timur, 1997

$$\begin{aligned} \text{LPR Pembibitan} &= 59,667 \times 20 \\ &= 1193,333 \end{aligned}$$

- Keb. Air Irigasi Pembibitan  $= \frac{LPR_{\text{tanaman}}}{LPR_{\text{total}}} \times Q$   
 $= \frac{1193,333}{10695,697} \times 789$   
 $= 88,010 \text{ lt/dt}$

- Keb. Air Irigasi Pembibitan per Hektar  $= \frac{88,010}{\text{Luas Tanam}}$   
 $= \frac{88,010}{59,667}$   
 $= 1,475 \text{ lt/dt/Ha}$

- Tinggi Genangan dihitung dengan persamaan  
 Kebutuhan air  $= 1,475 \text{ lt/dt/Ha}$  maka,  
 Kebutuhan harian air (Q)  $= 1,475 \text{ lt/dt} = 1,475 \cdot 10^{-3} \text{ m}^3/\text{det} = 127,435 \text{ m}^3/\text{Hari}$   
 Luas (A)  $= 1 \text{ Ha}$   
 Interval pemberian air (T)  $= 12 \text{ jam} = 0,5 \text{ Hari}$

$$Q_1 = \frac{H \times A}{T} \times 10.000$$

$$127,435 = \frac{H \times 1}{0,5} \times 10.000$$

$$H = \frac{127,435 \times 0,5}{10000} = 6,372 \cdot 10^{-3} \text{ m/Hari} = 6,372 \text{ mm/Hari}$$

Untuk lebih mudah, perbandingan satuan kebutuhan air ialah sebagai berikut:

| lt/dt/Ha | cm/Hari | mm/Hari | m <sup>3</sup> /Hari/Ha |
|----------|---------|---------|-------------------------|
| 1,00     | 0,864   | 8,64    | 86,4                    |
| 1,16     | 1,00    | 10,00   | 100,00                  |

- Tinggi Genangan untuk 10 hari  
 $6,372 \text{ mm/Hari} \times 10 = 63,721 \text{ mm/ 10Hari}$

- Rerata kebutuhan pembibitan dalam 1 tahun =  $\frac{1,475 + 1,438 + 1,438}{3}$   
1,450 lt/dt/Ha

Untuk perhitungan selanjutnya dapat dilihat dalam Tabel 4.15 –Tabel 4.19



Tabel 4.15 Rata-rata Kebutuhan Air Nyata Berdasarkan OP Eksisting Tahun 2007/2008

| Musim Tanam                   | Debit (lt/dt) | Luas Tanam Rata-Rata      |          | LPR Rata-rata | Kebutuhan Air Irigasi |          | Tinggi Genangan (mm) |             | Rerata Kebutuhan Air Dalam Satu Tahun (lt/dt/Ha) |                                      |
|-------------------------------|---------------|---------------------------|----------|---------------|-----------------------|----------|----------------------|-------------|--|--------------------------------------|
|                               |               | Uraian                    | (Ha)     |               | lt/dt                 | lt/dt/ha | Per Hari             | Per 10 Hari |  |                                      |
| [1]                           |               | [3]                       | [4]      | [5]           | [6]                   | [7]      | [8]                  | [9]         | [10]   |                                      |
| MH                            | 789           | <b>Padi Rendeng</b>       |          |               |                       |          |                      |             |  |                                      |
|                               |               | Pembibitan                | 59,667   | 1193,333      | 88,010                | 1,475    | 6,372                | 63,721      | Pembibitan<br>1,450                              |                                      |
|                               |               | Garap Tanah               | 341,000  | 2046,000      | 150,896               | 0,443    | 1,912                | 19,116      |  |                                      |
|                               |               | Tanam Padi :              |          |               |                       |          |                      |             |  |                                      |
|                               |               | Fase Vegetatif            | 856,250  | 3425,000      | 252,599               | 0,295    | 1,274                | 12,744      | Garap Tanah<br>0,437                             |                                      |
|                               |               | Fase Generatif            | 1007,091 | 4028,364      | 297,098               | 0,295    | 1,274                | 12,744      |  |                                      |
|                               |               | <b>Palawija</b>           | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       | 0,000  | Tanam Padi Fase Vegetatif :<br>0,218 |
|                               |               | <b>Tembakau</b>           | 3,000    | 3,000         | 0,221                 | 0,074    | 0,319                | 3,186       |  |                                      |
| <b>Tebu Tua</b>               | 3,000         | 0,000                     | 0,000    | 0,000         | 0,000                 | 0,000    |                      |             |  |                                      |
|                               |               |                           |          |               |                       |          |                      |             |  |                                      |
| MK I                          | 767           | <b>Padi Gadu Ijin</b>     |          |               |                       |          |                      |             | Tanam Padi Fase Generatif :<br>0,218             |                                      |
|                               |               | Pembibitan                | 33,250   | 665,000       | 47,798                | 1,438    | 6,210                | 62,101      |  |                                      |
|                               |               | Garap Tanah               | 220,250  | 1321,500      | 94,985                | 0,431    | 1,863                | 18,630      | Palawija<br>0,599                                |                                      |
|                               |               | Tanam Padi :              |          |               |                       |          |                      |             |  |                                      |
|                               |               | Fase Vegetatif            | 956,500  | 3826,000      | 274,999               | 0,288    | 1,242                | 12,420      | Tembakau<br>0,248                                |                                      |
|                               |               | Fase Generatif            | 992,889  | 3971,556      | 285,461               | 0,288    | 1,242                | 12,420      |  |                                      |
|                               |               | <b>Padi Gadu Tak Ijin</b> |          |               |                       |          |                      |             |  |                                      |
|                               |               | Pembibitan                | 23,000   | 460,000       | 33,063                | 1,438    | 6,210                | 62,101      | Tebu<br>0,898                                    |                                      |
|                               |               | Garap Tanah               | 46,000   | 276,000       | 19,838                | 0,431    | 1,863                | 18,630      |  |                                      |
|                               |               | Tanam Padi :              |          |               |                       |          |                      |             |  |                                      |
|                               |               | Fase Vegetatif            | 8,000    | 8,000         | 0,575                 | 0,072    | 0,311                | 3,105       |  |                                      |
|                               |               | Fase Generatif            | 141,667  | 141,667       | 10,183                | 0,072    | 0,311                | 3,105       |  |                                      |
|                               |               | <b>Palawija</b>           | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |  |                                      |
|                               |               | <b>Tembakau</b>           | 3,000    | 3,000         | 0,216                 | 0,072    | 0,311                | 3,105       |  |                                      |
| <b>Cemplon&amp; Tebu Muda</b> | 0,000         | 0,000                     | 0,000    | 0,000         | 0,000                 | 0,000    |                      |             |  |                                      |
|                               |               |                           |          |               |                       |          |                      |             |  |                                      |
| MK II                         | 584           | <b>Padi Gadu Ijin</b>     |          |               |                       |          |                      |             |  |                                      |
|                               |               | Pembibitan                | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |  |                                      |
|                               |               | Garap Tanah               | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |  |                                      |
|                               |               | Tanam Padi :              |          |               |                       |          |                      |             |  |                                      |
|                               |               | Fase Vegetatif            | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |  |                                      |
|                               |               | Fase Generatif            | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |  |                                      |
|                               |               | <b>Padi Gadu Tak Ijin</b> |          |               |                       |          |                      |             |  |                                      |
|                               |               | Pembibitan                | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |  |                                      |
|                               |               | Garap Tanah               | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |  |                                      |
|                               |               | Tanam Padi :              |          |               |                       |          |                      |             |  |                                      |
|                               |               | Fase Vegetatif            | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |  |                                      |
|                               |               | Fase Generatif            | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |  |                                      |
|                               |               | <b>Palawija</b>           | 967,200  | 967,200       | 579,048               | 0,599    | 2,586                | 25,863      |  |                                      |
|                               |               | <b>Tembakau</b>           | 3,000    | 3,000         | 1,796                 | 0,599    | 2,586                | 25,863      |  |                                      |
| <b>Cemplon&amp; Tebu Muda</b> | 3,000         | 4,500                     | 2,694    | 0,898         | 3,879                 | 38,795   |                      |             |  |                                      |

Sumber : Hasil Analisa

Keterangan :

[1] : Musim Tanam

[2] : Debit Rata2 Tiap Musim Tanam

[3] : Fase penanaman

[4] : Data Luas Tanam Rata-rata

[5] : [4] x koefisien pembeding LPR

[6] : ([5]/total LPR) x [2]

[7] : [6]/[4]

[8] : [7] x 8,64 X 0.5

[9] : [8] x 10 hari

[10] : rerata keb. air dalam satu tahun



Tabel 4.16 Rata-rata Kebutuhan Air Nyata Berdasarkan OP Eksisting Tahun 2008/2009

| Musim Tanam                  | Debit (lt/dt) | Luas Tanam Rata-Rata      |          | LPR Rata-rata | Kebutuhan Air Irigasi |          | Tinggi Genangan (mm) |             | Rerata Kebutuhan Air Dalam Satu Tahun |
|------------------------------|---------------|---------------------------|----------|---------------|-----------------------|----------|----------------------|-------------|---------------------------------------|
|                              |               | Uraian                    | (Ha)     |               | lt/dt                 | lt/dt/ha | Per Hari             | Per 10 Hari |                                       |
| [1]                          | [2]           | [3]                       | [4]      | [5]           | [6]                   | [7]      | [8]                  | [9]         | [10]                                  |
| MH                           | 816           | <b>Padi Rendeng</b>       |          |               |                       |          |                      |             |                                       |
|                              |               | Pembibitan                | 59,667   | 1193,333      | 83,413                | 1,398    | 6,039                | 60,393      | Pembibitan<br>1,136                   |
|                              |               | Garap Tanah               | 341,000  | 2046,000      | 143,013               | 0,419    | 1,812                | 18,118      |                                       |
|                              |               | Tanam Padi :              |          |               |                       |          |                      |             |                                       |
|                              |               | Fase Vegetatif            | 957,133  | 3828,533      | 267,610               | 0,280    | 1,208                | 12,079      | Garap Tanah<br>0,448                  |
|                              |               | Fase Generatif            | 1149,750 | 4599,000      | 321,465               | 0,280    | 1,208                | 12,079      |                                       |
|                              |               | <b>Palawija</b>           | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
|                              |               | <b>Tembakau</b>           | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
| <b>Tebu Tua</b>              | 3,000         | 0,000                     | 0,000    | 0,000         | 0,000                 | 0,000    |                      |             |                                       |
| MK I                         | 958           | <b>Padi Gadu Ijin</b>     |          |               |                       |          |                      |             |                                       |
|                              |               | Pembibitan                | 48,200   | 964,000       | 74,715                | 1,550    | 6,696                | 66,964      | Tanam Padi Fase Vegetatif :<br>0,295  |
|                              |               | Garap Tanah               | 416,750  | 2500,500      | 193,801               | 0,465    | 2,009                | 20,089      |                                       |
|                              |               | Tanam Padi :              |          |               |                       |          |                      |             |                                       |
|                              |               | Fase Vegetatif            | 657,250  | 2629,000      | 203,760               | 0,310    | 1,339                | 13,393      | Tanam Padi Fase Generatif :<br>0,295  |
|                              |               | Fase Generatif            | 1311,000 | 5244,000      | 406,435               | 0,310    | 1,339                | 13,393      |                                       |
|                              |               | <b>Padi Gadu Tak Ijin</b> |          |               |                       |          |                      |             |                                       |
|                              |               | Pembibitan                | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
|                              |               | Garap Tanah               | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
|                              |               | Tanam Padi :              |          |               |                       |          |                      |             |                                       |
|                              |               | Fase Vegetatif            | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
|                              |               | Fase Generatif            | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
|                              |               | <b>Palawija</b>           | 1013,000 | 1013,000      | 78,512                | 0,078    | 0,335                | 3,348       | Palawija<br>0,268                     |
|                              |               | <b>Tembakau</b>           | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
| <b>Cemplon&amp;Tebu Muda</b> | 3,000         | 4,500                     | 0,349    | 0,116         | 0,502                 | 5,022    |                      |             |                                       |
| MK II                        | 590           | <b>Padi Gadu Ijin</b>     |          |               |                       |          |                      |             |                                       |
|                              |               | Pembibitan                | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       | Tembakau<br>0,000                     |
|                              |               | Garap Tanah               | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
|                              |               | Tanam Padi :              |          |               |                       |          |                      |             |                                       |
|                              |               | Fase Vegetatif            | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
|                              |               | Fase Generatif            | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
|                              |               | <b>Padi Gadu Tak Ijin</b> |          |               |                       |          |                      |             |                                       |
|                              |               | Pembibitan                | 1,000    | 1,000         | 0,459                 | 0,459    | 1,983                | 19,827      | Tebu<br>0,402                         |
|                              |               | Garap Tanah               | 5,000    | 5,000         | 2,295                 | 0,459    | 1,983                | 19,827      |                                       |
|                              |               | Tanam Padi :              |          |               |                       |          |                      |             |                                       |
|                              |               | Fase Vegetatif            | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
|                              |               | Fase Generatif            | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
|                              |               | <b>Palawija</b>           | 1274,111 | 1274,111      | 584,764               | 0,459    | 1,983                | 19,827      |                                       |
|                              |               | <b>Tembakau</b>           | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
| <b>Cemplon&amp;Tebu Muda</b> | 3,000         | 4,500                     | 2,065    | 0,688         | 2,974                 | 29,741   |                      |             |                                       |

Sumber : Hasil Analisa

Keterangan :

[1] : Musim Tanam

[2] : Debit Rata2 Tiap Musim Tanam

[3] : Fase penanaman

[4] : Data Luas Tanam Rata-rata

[5] : [4] x koefisien pembeding LPR

[6] : ([5]/total LPR) x [2]

[7] : [6]/[4]

[8] : [7] x 8,64 X 0.5

[9] : [8] x 10 hari

[10] : rerata keb. air dalam satu tahun

Tabel 4.17 Rata-rata Kebutuhan Air Nyata Berdasarkan OP Eksisting Tahun 2009/2010

| Musim Tanam                  | Debit<br>(lt/dt) | Luas Tanam Rata-rata      |         | LPR Rata-rata | Kebutuhan Air Irigasi |          | Tinggi Genangan (mm) |                   | Rerata Kebutuhan Air Dalam Satu Tahun |                                      |
|------------------------------|------------------|---------------------------|---------|---------------|-----------------------|----------|----------------------|-------------------|---------------------------------------|--------------------------------------|
|                              |                  | Uraian                    | (Ha)    |               | lt/dt                 | lt/dt/ha | Per Hari             | Per 10 Hari       |                                       |                                      |
| [1]                          | [2]              | [3]                       | [4]     | [5]           | [6]                   | [7]      | [8]                  | [9]               | [10]                                  |                                      |
| MH                           | 513              | <b>Padi Rendeng</b>       |         |               |                       |          |                      |                   |                                       |                                      |
|                              |                  | Pembibitan                | 43,000  | 860,000       | 75,169                | 1,748    | 7,552                | 75,518            | Pembibitan<br>1,946                   |                                      |
|                              |                  | Garap Tanah               | 203,750 | 1222,500      | 106,853               | 0,524    | 2,266                | 22,656            |                                       |                                      |
|                              |                  | Tanam Padi :              |         |               |                       |          |                      |                   |                                       |                                      |
|                              |                  | Fase Vegetatif            | 158,000 | 632,000       | 55,240                | 0,350    | 1,510                | 15,104            | Garap Tanah<br>0,584                  |                                      |
|                              |                  | Fase Generatif            | 787,250 | 3149,000      | 275,240               | 0,350    | 1,510                | 15,104            |                                       |                                      |
|                              |                  | <b>Palawija</b>           | 0,000   | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000             | 0,000                                 | Tanam Padi Fase Vegetatif :<br>0,847 |
|                              |                  | <b>Tembakau</b>           | 3,000   | 3,000         | 0,262                 | 0,087    | 0,378                | 3,776             |                                       |                                      |
| <b>Tebu Tua</b>              | 3,000            | 0,000                     | 0,000   | 0,000         | 0,000                 | 0,000    | 0,000                |                   |                                       |                                      |
|                              |                  |                           |         |               |                       |          |                      |                   |                                       |                                      |
| MK I                         | 639              | <b>Padi Gadu Ijin</b>     |         |               |                       |          |                      |                   |                                       |                                      |
|                              |                  | Pembibitan                | 32,143  | 642,857       | 68,910                | 2,144    | 9,261                | 92,615            | Tanam Padi Fase Vegetatif :<br>0,847  |                                      |
|                              |                  | Garap Tanah               | 146,714 | 880,286       | 94,360                | 0,643    | 2,778                | 27,784            |                                       |                                      |
|                              |                  | Tanam Padi :              |         |               |                       |          |                      |                   |                                       |                                      |
|                              |                  | Fase Vegetatif            | 168,750 | 675,000       | 72,355                | 0,429    | 1,852                | 18,523            | Tanam Padi Fase Generatif :<br>0,847  |                                      |
|                              |                  | Fase Generatif            | 914,167 | 3656,667      | 391,968               | 0,429    | 1,852                | 18,523            |                                       |                                      |
|                              |                  | <b>Padi Gadu Tak Ijin</b> |         |               |                       |          |                      |                   |                                       |                                      |
|                              |                  | Pembibitan                | 3,333   | 3,333         | 0,357                 | 0,107    | 0,463                | 4,631             | Palawija<br>0,625                     |                                      |
|                              |                  | Garap Tanah               | 18,667  | 18,667        | 2,001                 | 0,107    | 0,463                | 4,631             |                                       |                                      |
|                              |                  | Tanam Padi :              |         |               |                       |          |                      |                   |                                       |                                      |
|                              |                  | Fase Vegetatif            | 39,333  | 39,333        | 4,216                 | 0,107    | 0,463                | 4,631             | Tembakau<br>0,273                     |                                      |
|                              |                  | Fase Generatif            | 39,333  | 39,333        | 4,216                 | 0,107    | 0,463                | 4,631             |                                       |                                      |
|                              |                  | <b>Palawija</b>           | 0,000   | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000             | 0,000                                 | Tebu<br>0,000                        |
|                              |                  | <b>Tembakau</b>           | 3,000   | 3,000         | 0,322                 | 0,107    | 0,463                | 4,631             |                                       |                                      |
| <b>Cemplon&amp;Tebu Muda</b> | 0,000            | 0,000                     | 0,000   | 0,000         | 0,000                 | 0,000    | 0,000                |                   |                                       |                                      |
|                              |                  |                           |         |               |                       |          |                      |                   |                                       |                                      |
| MK II                        | 600              | <b>Padi Gadu Ijin</b>     |         |               |                       |          |                      |                   |                                       |                                      |
|                              |                  | Pembibitan                | 0,000   | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000             | Tembakau<br>0,273                     |                                      |
|                              |                  | Garap Tanah               | 0,000   | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000             |                                       |                                      |
|                              |                  | Tanam Padi :              |         |               |                       |          |                      |                   |                                       |                                      |
|                              |                  | Fase Vegetatif            | 22,750  | 91,000        | 56,891                | 2,501    | 10,803               | 108,030           | Tebu<br>0,000                         |                                      |
|                              |                  | Fase Generatif            | 49,667  | 198,667       | 124,201               | 2,501    | 10,803               | 108,030           |                                       |                                      |
|                              |                  | <b>Padi Gadu Tak Ijin</b> |         |               |                       |          |                      |                   |                                       |                                      |
|                              |                  | Pembibitan                | 0,000   | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000             | 0,000                                 | Tembakau<br>0,273                    |
|                              |                  | Garap Tanah               | 0,000   | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000             | 0,000                                 |                                      |
|                              |                  | Tanam Padi :              |         |               |                       |          |                      |                   |                                       |                                      |
|                              |                  | Fase Vegetatif            | 0,000   | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000             | 0,000                                 | Tebu<br>0,000                        |
|                              |                  | Fase Generatif            | 0,000   | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000             | 0,000                                 |                                      |
| <b>Palawija</b>              | 666,400          | 666,400                   | 416,616 | 0,625         | 2,701                 | 27,008   | 27,008               | Tembakau<br>0,273 |                                       |                                      |
| <b>Tembakau</b>              | 3,000            | 3,000                     | 1,876   | 0,625         | 2,701                 | 27,008   | 27,008               |                   |                                       |                                      |
| <b>Cemplon&amp;Tebu Muda</b> | 0,000            | 0,000                     | 0,000   | 0,000         | 0,000                 | 0,000    | 0,000                |                   |                                       |                                      |

Sumber : Hasil Analisa

Keterangan :

[1] : Musim Tanam

[2] : Debit Rata2 Tiap Musim Tanam

[3] : Fase penanaman

[4] : Data Luas Tanam Rata-rata

[5] : [4] x koefisien pembeding LPR

[6] : ([5]/total LPR) x [2]

[7] : [6]/[4]

[8] : [7] x 8,64 X 0.5

[9] : [8] x 10 hari

[10] : rerata keb. air dalam satu tahun

Tabel 4.18 Rata-rata Kebutuhan Air Nyata Berdasarkan OP Eksisting Tahun 2010/2011

| Musim Tanam                  | Debit<br>(lt/dt) | Luas Tanam Rata-Rata      |          | LPR Rata-rata | Kebutuhan Air Irigasi |          | Tinggi Genangan (mm) |             | Rerata Kebutuhan Air Dalam Satu Tahun |                   |
|------------------------------|------------------|---------------------------|----------|---------------|-----------------------|----------|----------------------|-------------|---------------------------------------|-------------------|
|                              |                  | Uraian                    | (Ha)     |               | lt/dt                 | lt/dt/ha | Per Hari             | Per 10 Hari |                                       |                   |
| [1]                          | [2]              | [3]                       | [4]      | [5]           | [6]                   | [7]      | [8]                  | [9]         | [10]                                  |                   |
| MH                           | 678              | <b>Padi Rendeng</b>       |          |               |                       |          |                      |             |                                       |                   |
|                              |                  | Pembibitan                | 43,286   | 865,714       | 66,573                | 1,538    | 6,644                | 66,442      | Pembibitan<br>1,361                   |                   |
|                              |                  | Garap Tanah               | 209,833  | 1259,000      | 96,817                | 0,461    | 1,993                | 19,932      |                                       |                   |
|                              |                  | Tanam Padi :              |          |               |                       |          |                      |             |                                       |                   |
|                              |                  | Fase Vegetatif            | 673,917  | 2695,667      | 207,297               | 0,308    | 1,329                | 13,288      | Garap Tanah<br>0,408                  |                   |
|                              |                  | Fase Generatif            | 998,750  | 3995,000      | 307,215               | 0,308    | 1,329                | 13,288      |                                       |                   |
|                              |                  | <b>Palawija</b>           | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |                   |
|                              |                  | <b>Tembakau</b>           | 3,000    | 3,000         | 0,231                 | 0,077    | 0,332                | 3,322       |                                       |                   |
| <b>Tebu Tua</b>              | 0,000            | 0,000                     | 0,000    | 0,000         | 0,000                 | 0,000    |                      |             |                                       |                   |
| MK I                         | 651              | <b>Padi Gadu Ijin</b>     |          |               |                       |          |                      |             |                                       |                   |
|                              |                  | Pembibitan                | 43,833   | 876,667       | 51,895                | 1,184    | 5,114                | 51,145      | Tanam Padi Fase Vegetatif :<br>0,513  |                   |
|                              |                  | Garap Tanah               | 286,200  | 1717,200      | 101,650               | 0,355    | 1,534                | 15,343      |                                       |                   |
|                              |                  | Tanam Padi :              |          |               |                       |          |                      |             |                                       |                   |
|                              |                  | Fase Vegetatif            | 768,500  | 3074,000      | 181,966               | 0,237    | 1,023                | 10,229      | Tanam Padi Fase Generatif :<br>0,513  |                   |
|                              |                  | Fase Generatif            | 1046,571 | 4186,286      | 247,808               | 0,237    | 1,023                | 10,229      |                                       |                   |
|                              |                  | <b>Padi Gadu Tak Ijin</b> |          |               |                       |          |                      |             |                                       |                   |
|                              |                  | Pembibitan                | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       | 0,000                                 | Palawija<br>0,059 |
|                              |                  | Garap Tanah               | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       | 0,000                                 |                   |
|                              |                  | Tanam Padi :              |          |               |                       |          |                      |             |                                       |                   |
|                              |                  | Fase Vegetatif            | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       | 0,000                                 | Tembakau<br>0,068 |
|                              |                  | Fase Generatif            | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       | 0,000                                 |                   |
|                              |                  | <b>Palawija</b>           | 1134,125 | 1134,125      | 67,135                | 0,059    | 0,256                | 2,557       |                                       |                   |
| <b>Tembakau</b>              | 3,000            | 3,000                     | 0,178    | 0,059         | 0,256                 | 2,557    |                      |             |                                       |                   |
| <b>Cemplon&amp;Tebu Muda</b> | 0,000            | 0,000                     | 0,000    | 0,000         | 0,000                 | 0,000    |                      |             |                                       |                   |
| MK II                        | 524              | <b>Padi Gadu Ijin</b>     |          |               |                       |          |                      |             |                                       |                   |
|                              |                  | Pembibitan                | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       | Tembakau<br>0,068                     |                   |
|                              |                  | Garap Tanah               | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |                   |
|                              |                  | Tanam Padi :              |          |               |                       |          |                      |             |                                       |                   |
|                              |                  | Fase Vegetatif            | 263,000  | 1052,000      | 261,627               | 0,995    | 4,297                | 42,974      | Tebu<br>0,000                         |                   |
|                              |                  | Fase Generatif            | 263,000  | 1052,000      | 261,627               | 0,995    | 4,297                | 42,974      |                                       |                   |
|                              |                  | <b>Padi Gadu Tak Ijin</b> |          |               |                       |          |                      |             |                                       |                   |
|                              |                  | Pembibitan                | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       | 0,000                                 | Tebu<br>0,000     |
|                              |                  | Garap Tanah               | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       | 0,000                                 |                   |
|                              |                  | Tanam Padi :              |          |               |                       |          |                      |             |                                       |                   |
|                              |                  | Fase Vegetatif            | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       | 0,000                                 |                   |
|                              |                  | Fase Generatif            | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       | 0,000                                 |                   |
|                              |                  | <b>Palawija</b>           | 0,000    | 0,000         | 0,000                 | 0,000    | 0,000                | 0,000       | 0,000                                 | Tebu<br>0,000     |
| <b>Tembakau</b>              | 3,000            | 3,000                     | 0,746    | 0,249         | 1,074                 | 10,744   |                      |             |                                       |                   |
| <b>Cemplon&amp;Tebu Muda</b> | 0,000            | 0,000                     | 0,000    | 0,000         | 0,000                 | 0,000    |                      |             |                                       |                   |

Sumber : Hasil Analisa

Keterangan :

[1] : Musim Tanam

[2] : Debit Rata2 Tiap Musim Tanam

[3] : Fase penanaman

[4] : Data Luas Tanam Rata-rata

[5] : [4] x koefisien pembanding LPR

[6] : ([5]/total LPR) x [2]

[7] : [6]/[4]

[8] : [7] x 8,64 X 0.5

[9] : [8] x 10 hari

[10] : rerata keb. air dalam satu tahun



Tabel 4.19 Rata-rata Kebutuhan Air Nyata Berdasarkan OP Eksisting Tahun 2011/2012

| Musim Tanam                  | Debit<br>(lt/dt) | Luas Tanam Rata-Rata         |          | LPR Rata-rata         | Kebutuhan Air Irigasi |          | Tinggi Genangan (mm) |             | Rerata Kebutuhan Air Dalam Satu Tahun |
|------------------------------|------------------|------------------------------|----------|-----------------------|-----------------------|----------|----------------------|-------------|---------------------------------------|
|                              |                  | Uraian                       | (Ha)     |                       | lt/dt                 | lt/dt/ha | Per Hari             | Per 10 Hari |                                       |
| [1]                          | [2]              | [3]                          | [4]      | [5]                   | [6]                   | [7]      | [8]                  | [9]         | [10]                                  |
| MH                           | 707              | <b>Padi Rendeng</b>          |          |                       |                       |          |                      |             |                                       |
|                              |                  | Pembibitan                   | 39,571   | 791,429               | 77,154                | 1,950    | 8,423                | 84,228      | Pembibitan<br>1,501                   |
|                              |                  | Garap Tanah                  | 178,429  | 1070,571              | 104,366               | 0,585    | 2,527                | 25,268      |                                       |
|                              |                  | Tanam Padi :                 |          |                       |                       |          |                      |             |                                       |
|                              |                  | Fase Vegetatif               | 307,750  | 1231,000              | 120,006               | 0,390    | 1,685                | 16,846      |                                       |
|                              |                  | Fase Generatif               | 1038,706 | 4154,824              | 405,039               | 0,390    | 1,685                | 16,846      |                                       |
|                              |                  | <b>Palawija</b>              | 0,000    | 0,000                 | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
|                              |                  | <b>Tembakau</b>              | 3,000    | 3,000                 | 0,292                 | 0,097    | 0,421                | 4,211       |                                       |
| <b>Tebu Tua</b>              | 0,000            | 0,000                        | 0,000    | 0,000                 | 0,000                 | 0,000    |                      |             |                                       |
| MK I                         | 636              | <b>Padi Gadu Ijin</b>        |          |                       |                       |          |                      |             | Garap Tanah<br>0,450                  |
|                              |                  | Pembibitan                   | 38,000   | 760,000               | 39,993                | 1,052    | 4,547                | 45,466      |                                       |
|                              |                  | Garap Tanah                  | 286,200  | 1717,200              | 90,363                | 0,316    | 1,364                | 13,640      |                                       |
|                              |                  | Tanam Padi :                 |          |                       |                       |          |                      |             |                                       |
|                              |                  | Fase Vegetatif               | 814,000  | 3256,000              | 171,339               | 0,210    | 0,909                | 9,093       | Tanam Padi Fase Vegetatif :<br>0,300  |
|                              |                  | Fase Generatif               | 1311,000 | 5244,000              | 275,952               | 0,210    | 0,909                | 9,093       |                                       |
|                              |                  | <b>Padi Gadu Tak Ijin</b>    |          |                       |                       |          |                      |             |                                       |
|                              |                  | Pembibitan                   | 0,000    | 0,000                 | 0,000                 | 0,000    | 0,000                | 0,000       | Tanam Padi Fase Generatif :<br>0,300  |
|                              |                  | Garap Tanah                  | 0,000    | 0,000                 | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
|                              |                  | Tanam Padi :                 |          |                       |                       |          |                      |             |                                       |
|                              |                  | Fase Vegetatif               | 0,000    | 0,000                 | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
|                              |                  | Fase Generatif               | 0,000    | 0,000                 | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
|                              |                  | <b>Palawija</b>              | 1098,111 | 1098,111              | 57,785                | 0,053    | 0,227                | 2,273       | Palawija<br>0,053                     |
|                              |                  | <b>Tembakau</b>              | 3,000    | 3,000                 | 0,158                 | 0,053    | 0,227                | 2,273       |                                       |
|                              |                  | <b>Cemplon&amp;Tebu Muda</b> | 0,000    | 0,000                 | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
|                              |                  | MK II                        | 433      | <b>Padi Gadu Ijin</b> |                       |          |                      |             |                                       |
| Pembibitan                   | 0,000            |                              |          | 0,000                 | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
| Garap Tanah                  | 0,000            |                              |          | 0,000                 | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
| Tanam Padi :                 |                  |                              |          |                       |                       |          |                      |             |                                       |
| Fase Vegetatif               | 0,000            |                              |          | 0,000                 | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
| Fase Generatif               | 0,000            |                              |          | 0,000                 | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
| <b>Padi Gadu Tak Ijin</b>    |                  |                              |          |                       |                       |          |                      |             |                                       |
| Pembibitan                   | 0,000            |                              |          | 0,000                 | 0,000                 | 0,000    | 0,000                | 0,000       | Tebu<br>0,000                         |
| Garap Tanah                  | 0,000            |                              |          | 0,000                 | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
| Tanam Padi :                 |                  |                              |          |                       |                       |          |                      |             |                                       |
| Fase Vegetatif               | 0,000            |                              |          | 0,000                 | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
| Fase Generatif               | 0,000            |                              |          | 0,000                 | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
| <b>Palawija</b>              | 0,000            |                              |          | 0,000                 | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
| <b>Tembakau</b>              | 0,000            |                              |          | 0,000                 | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |
| <b>Cemplon&amp;Tebu Muda</b> | 0,000            |                              |          | 0,000                 | 0,000                 | 0,000    | 0,000                | 0,000       |                                       |

Sumber : Hasil Analisa

Keterangan :

[1] : Musim Tanam

[2] : Debit Rata2 Tiap Musim Tanam

[3] : Fase penanaman

[4] : Data Luas Tanam Rata-rata

[5] : [4] x koefisien perbandingan LPR

[6] : ([5]/total LPR) x [2]

[7] : [6]/[4]

[8] : [7] x 8,64 X 0,5

[9] : [8] x 10 hari

[10] : rerata keb. air dalam satu tahun

Tabel 4.20 Rerata Kebutuhan Air Eksisting (2008-2012)

| Musim Tanam        | Uraian             | Tahun 2007/2008     |            |                               |         | FPR   | Tahun 2008/2009     |            |                                  |       | FPR   | Tahun 2009/2010     |            |                                  |       | FPR   | Tahun 2010/2011     |            |                                  |          | FPR   | Tahun 2011/2012 |          |         |       | FPR   |       |       |       |       |  |
|--------------------|--------------------|---------------------|------------|-------------------------------|---------|-------|---------------------|------------|----------------------------------|-------|-------|---------------------|------------|----------------------------------|-------|-------|---------------------|------------|----------------------------------|----------|-------|-----------------|----------|---------|-------|-------|-------|-------|-------|-------|--|
|                    |                    | Rata-rata Luas (Ha) | Rerata LPR | Kebutuhan Air Irigasi (lt/dt) |         |       | Rata-rata Luas (Ha) | Rerata LPR | Kebutuhan Air Irigasi (lt/dt/ha) |       |       | Rata-rata Luas (Ha) | Rerata LPR | Kebutuhan Air Irigasi (lt/dt/ha) |       |       | Rata-rata Luas (Ha) | Rerata LPR | Kebutuhan Air Irigasi (lt/dt/ha) |          |       |                 |          |         |       |       |       |       |       |       |  |
| MH                 | Pembibitan         | 59,667              | 1193,333   | 88,010                        | 1,475   | 0,074 | 59,667              | 1193,333   | 83,413                           | 1,398 | 0,070 | 43,000              | 860,000    | 75,169                           | 1,748 | 0,087 | 43,286              | 865,714    | 66,573                           | 1,538    | 0,077 | 39,571          | 791,429  | 77,154  | 1,950 | 0,097 |       |       |       |       |  |
|                    | Garap Tanah        | 341,000             | 2046,000   | 150,896                       | 0,443   |       | 341,000             | 2046,000   | 143,013                          | 0,419 |       | 203,750             | 1222,500   | 106,853                          | 0,524 |       | 209,833             | 1259,000   | 96,817                           | 0,461    |       | 178,429         | 1070,571 | 104,366 | 0,585 |       |       |       |       |       |  |
|                    | Tanam Padi :       |                     |            |                               |         |       |                     |            |                                  |       |       |                     |            |                                  |       |       |                     |            |                                  |          |       |                 |          |         |       |       |       |       |       |       |  |
|                    | Fase Vegetatif     | 856,250             | 3425,000   | 252,599                       | 0,295   |       | 957,133             | 3828,533   | 267,610                          | 0,280 |       | 158,000             | 632,000    | 55,240                           | 0,350 |       | 998,750             | 3995,000   | 307,215                          | 0,308    |       | 307,750         | 1231,000 | 120,006 | 0,390 |       |       |       |       |       |  |
|                    | Fase Generatif     | 1007,091            | 4028,364   | 297,098                       | 0,295   |       | 1149,750            | 4599,000   | 321,465                          | 0,280 |       | 787,250             | 3149,000   | 275,240                          | 0,350 |       | 673,917             | 2695,667   | 207,297                          | 0,308    |       | 1038,706        | 4154,824 | 405,039 | 0,390 |       |       |       |       |       |  |
|                    | Palawija           | 0,000               | 0,000      | 0,000                         | 0,000   |       | 0,000               | 0,000      | 0,000                            | 0,000 |       | 0,000               | 0,000      | 0,000                            | 0,000 |       | 0,000               | 0,000      | 0,000                            | 0,000    |       | 0,000           | 0,000    | 0,000   | 0,000 |       | 0,000 | 0,000 | 0,000 | 0,000 |  |
|                    | Tembakau           | 3,000               | 3,000      | 0,221                         | 0,074   |       | 0,000               | 0,000      | 0,000                            | 0,000 |       | 0,000               | 0,000      | 0,000                            | 0,262 |       | 0,087               | 3,000      | 3,000                            | 0,231    |       | 0,077           | 3,000    | 3,000   | 0,292 |       | 0,097 |       |       |       |  |
| Tebu Tua           | 3,000              | 0,000               | 0,000      | 0,000                         | 3,000   | 0,000 | 0,000               | 0,000      | 3,000                            | 0,000 | 0,000 | 0,000               | 0,000      | 0,000                            | 0,000 | 0,000 | 0,000               | 0,000      | 0,000                            | 0,000    | 0,000 | 0,000           | 0,000    |         |       |       |       |       |       |       |  |
| MK I               | Padi Gadu Ijin     |                     |            |                               |         | 0,077 |                     |            |                                  |       | 0,078 |                     |            |                                  |       | 0,107 |                     |            |                                  |          | 0,059 |                 |          |         |       | 0,053 |       |       |       |       |  |
|                    | Pembibitan         | 33,250              | 665,000    | 47,798                        | 1,438   |       | 48,200              | 964,000    | 74,715                           | 1,550 |       | 32,143              | 642,857    | 68,910                           | 2,144 |       | 43,833              | 876,667    | 51,895                           | 1,184    |       | 38,000          | 760,000  | 39,993  | 1,052 |       |       |       |       |       |  |
|                    | Garap Tanah        | 220,250             | 1321,500   | 94,985                        | 0,431   |       | 416,750             | 2500,500   | 193,801                          | 0,465 |       | 146,714             | 880,286    | 94,360                           | 0,643 |       | 286,200             | 1717,200   | 101,650                          | 0,355    |       | 286,200         | 1717,200 | 90,363  | 0,316 |       |       |       |       |       |  |
|                    | Tanam Padi :       |                     |            |                               |         |       |                     |            |                                  |       |       |                     |            |                                  |       |       |                     |            |                                  |          |       |                 |          |         |       |       |       |       |       |       |  |
|                    | Fase Vegetatif     | 956,500             | 3826,000   | 274,999                       | 0,288   |       | 657,250             | 2629,000   | 203,760                          | 0,310 |       | 168,750             | 675,000    | 72,355                           | 0,429 |       | 768,500             | 3074,000   | 181,966                          | 0,237    |       | 814,000         | 3256,000 | 171,339 | 0,210 |       |       |       |       |       |  |
|                    | Fase Generatif     | 992,889             | 3971,556   | 285,461                       | 0,288   |       | 1311,000            | 5244,000   | 406,435                          | 0,310 |       | 914,167             | 3656,667   | 391,968                          | 0,429 |       | 1046,571            | 4186,286   | 247,808                          | 0,237    |       | 1311,000        | 5244,000 | 275,952 | 0,210 |       |       |       |       |       |  |
|                    | Padi Gadu Tak Ijin |                     |            |                               |         |       |                     |            |                                  |       |       |                     |            |                                  |       |       |                     |            |                                  |          |       |                 |          |         |       |       |       |       |       |       |  |
|                    | Pembibitan         | 23,000              | 23,000     | 33,063                        | 1,438   |       | 0,000               | 0,000      | 0,000                            | 0,000 |       | 3,333               | 3,333      | 0,357                            | 0,107 |       | 0,000               | 0,000      | 0,000                            | 0,000    |       | 0,000           | 0,000    | 0,000   | 0,000 |       | 0,000 | 0,000 | 0,000 | 0,000 |  |
|                    | Garap Tanah        | 46,000              | 46,000     | 19,838                        | 0,431   |       | 0,000               | 0,000      | 0,000                            | 0,000 |       | 18,667              | 18,667     | 2,001                            | 0,107 |       | 0,000               | 0,000      | 0,000                            | 0,000    |       | 0,000           | 0,000    | 0,000   | 0,000 |       | 0,000 | 0,000 | 0,000 | 0,000 |  |
|                    | Tanam Padi :       |                     |            |                               |         |       |                     |            |                                  |       |       |                     |            |                                  |       |       |                     |            |                                  |          |       |                 |          |         |       |       |       |       |       |       |  |
|                    | Fase Vegetatif     | 8,000               | 8,000      | 0,575                         | 0,072   |       | 0,000               | 0,000      | 0,000                            | 0,000 |       | 39,333              | 39,333     | 4,216                            | 0,107 |       | 0,000               | 0,000      | 0,000                            | 0,000    |       | 0,000           | 0,000    | 0,000   | 0,000 |       | 0,000 | 0,000 | 0,000 | 0,000 |  |
|                    | Fase Generatif     | 141,667             | 141,667    | 10,183                        | 0,072   |       | 0,000               | 0,000      | 0,000                            | 0,000 |       | 39,333              | 39,333     | 4,216                            | 0,107 |       | 0,000               | 0,000      | 0,000                            | 0,000    |       | 0,000           | 0,000    | 0,000   | 0,000 |       | 0,000 | 0,000 | 0,000 | 0,000 |  |
|                    | Palawija           | 0,000               | 0,000      | 0,000                         | 0,000   |       | 1013,000            | 1013,000   | 78,512                           | 0,078 |       | 0,000               | 0,000      | 0,000                            | 0,000 |       | 1134,125            | 1134,125   | 67,135                           | 0,059    |       | 1098,111        | 1098,111 | 57,785  | 0,053 |       |       |       |       |       |  |
| Tembakau           | 3,000              | 3,000               | 0,216      | 0,072                         | 0,000   | 0,000 | 0,000               | 0,000      | 3,000                            | 3,000 | 0,322 | 0,107               | 3,000      | 3,000                            | 0,178 | 0,059 | 3,000               | 3,000      | 0,158                            | 0,053    |       |                 |          |         |       |       |       |       |       |       |  |
| Cemplon& Tebu Muda | 0,000              | 0,000               | 0,000      | 0,000                         | 3,000   | 4,500 | 0,349               | 0,116      | 0,000                            | 0,000 | 0,000 | 0,000               | 0,000      | 0,000                            | 0,000 | 0,000 | 0,000               | 0,000      | 0,000                            | 0,000    | 0,000 | 0,000           | 0,000    |         |       |       |       |       |       |       |  |
| MK II              | Padi Gadu Ijin     |                     |            |                               |         | 0,599 |                     |            |                                  |       | 0,459 |                     |            |                                  |       | 0,625 |                     |            |                                  |          | 0,249 |                 |          |         |       | 0,000 |       |       |       |       |  |
|                    | Pembibitan         | 0,000               | 0,000      | 0,000                         | 0,000   |       | 0,000               | 0,000      | 0,000                            | 0,000 |       | 0,000               | 0,000      | 0,000                            | 0,000 |       | 0,000               | 0,000      | 0,000                            | 0,000    |       | 0,000           | 0,000    | 0,000   | 0,000 |       | 0,000 | 0,000 | 0,000 |       |  |
|                    | Garap Tanah        | 0,000               | 0,000      | 0,000                         | 0,000   |       | 0,000               | 0,000      | 0,000                            | 0,000 |       | 0,000               | 0,000      | 0,000                            | 0,000 |       | 0,000               | 0,000      | 0,000                            | 0,000    |       | 0,000           | 0,000    | 0,000   | 0,000 |       | 0,000 | 0,000 | 0,000 |       |  |
|                    | Tanam Padi :       |                     |            |                               |         |       |                     |            |                                  |       |       |                     |            |                                  |       |       |                     |            |                                  |          |       |                 |          |         |       |       |       |       |       |       |  |
|                    | Fase Vegetatif     | 0,000               | 0,000      | 0,000                         | 0,000   |       | 0,000               | 0,000      | 0,000                            | 0,000 |       | 22,750              | 91,000     | 56,891                           | 2,501 |       | 263,000             | 1052,000   | 263,000                          | 1052,000 |       | 0,000           | 0,000    | 0,000   | 0,000 |       | 0,000 |       |       |       |  |
|                    | Fase Generatif     | 0,000               | 0,000      | 0,000                         | 0,000   |       | 0,000               | 0,000      | 0,000                            | 0,000 |       | 49,667              | 198,667    | 124,201                          | 2,501 |       | 263,000             | 1052,000   | 263,000                          | 1052,000 |       | 0,000           | 0,000    | 0,000   | 0,000 |       | 0,000 |       |       |       |  |
|                    | Padi Gadu Tak Ijin |                     |            |                               |         |       |                     |            |                                  |       |       |                     |            |                                  |       |       |                     |            |                                  |          |       |                 |          |         |       |       |       |       |       |       |  |
|                    | Pembibitan         | 0,000               | 0,000      | 0,000                         | 0,000   |       | 1,000               | 1,000      | 0,459                            | 0,459 |       | 0,000               | 0,000      | 0,000                            | 0,000 |       | 0,000               | 0,000      | 0,000                            | 0,000    |       | 0,000           | 0,000    | 0,000   | 0,000 |       | 0,000 | 0,000 | 0,000 |       |  |
|                    | Garap Tanah        | 0,000               | 0,000      | 0,000                         | 0,000   |       | 5,000               | 5,000      | 2,295                            | 0,459 |       | 0,000               | 0,000      | 0,000                            | 0,000 |       | 0,000               | 0,000      | 0,000                            | 0,000    |       | 0,000           | 0,000    | 0,000   | 0,000 |       | 0,000 | 0,000 | 0,000 |       |  |
|                    | Tanam Padi :       |                     |            |                               |         |       |                     |            |                                  |       |       |                     |            |                                  |       |       |                     |            |                                  |          |       |                 |          |         |       |       |       |       |       |       |  |
|                    | Fase Vegetatif     | 0,000               | 0,000      | 0,000                         | 0,000   |       | 0,000               | 0,000      | 0,000                            | 0,000 |       | 0,000               | 0,000      | 0,000                            | 0,000 |       | 0,000               | 0,000      | 0,000                            | 0,000    |       | 0,000           | 0,000    | 0,000   | 0,000 |       | 0,000 | 0,000 | 0,000 |       |  |
|                    | Fase Generatif     | 0,000               | 0,000      | 0,000                         | 0,000   |       | 0,000               | 0,000      | 0,000                            | 0,000 |       | 0,000               | 0,000      | 0,000                            | 0,000 |       | 0,000               | 0,000      | 0,000                            | 0,000    |       | 0,000           | 0,000    | 0,000   | 0,000 |       | 0,000 | 0,000 | 0,000 |       |  |
|                    | Palawija           | 967,200             | 967,200    | 967,200                       | 579,048 |       | 1274,111            | 1274,111   | 584,764                          | 0,459 |       | 666,400             | 666,400    | 416,616                          | 0,625 |       | 0,000               | 0,000      | 0,000                            | 0,000    |       | 0,000           | 0,000    | 0,000   | 0,000 |       | 0,000 | 0,000 | 0,000 |       |  |
| Tembakau           | 3,000              | 3,000               | 3,000      | 1,796                         | 0,000   | 0,000 | 0,000               | 0,000      | 3,000                            | 3,000 | 1,876 | 0,625               | 3,000      | 3,000                            | 3,000 | 3,000 | 0,000               | 0,000      | 0,000                            | 0,000    |       |                 |          |         |       |       |       |       |       |       |  |
| Cemplon& Tebu Muda | 3,000              | 4,500               | 4,500      | 2,694                         | 3,000   | 4,500 | 2,065               | 0,688      | 0,000                            | 0,000 | 0,000 | 0,000               | 0,000      | 0,000                            | 0,000 | 0,000 | 0,000               | 0,000      | 0,000                            |          |       |                 |          |         |       |       |       |       |       |       |  |

Sumber : Hasil Perhitungan

Tabel 4.21 Rekapitulasi Rerata Kebutuhan Air Eksisting (2008-2012)

| Musim Tanam                   | Uraian                    | Rata-rata Luas (Ha) | Rerata LPR | Keb. Air Rata-rata |          | Rerata Tinggi Genangan (mm) |             | Debit Rata-rata (lt/dt) | FPR   | Keb. Air Rerata Dalam Satu Periode Tanam (lt/dt/Ha)   |
|-------------------------------|---------------------------|---------------------|------------|--------------------|----------|-----------------------------|-------------|-------------------------|-------|---|
|                               |                           |                     |            | lt/dt              | lt/dt/Ha | Per Hari                    | Per 10 Hari |                         |       |   |
| [1]                           | [2]                       | [3]                 | [4]        | [5]                | [6]      | [7]                         | [8]         | [9]                     | [10]  | [11]  |
| MH                            | Pembibitan                | 49,038              | 980,762    | 78,064             | 1,622    | 7,006                       | 70,060      | 700,416                 | 0,080 | Pembibitan<br>1,479   |
|                               | Garap Tanah               | 254,802             | 1528,814   | 120,389            | 0,487    | 2,102                       | 21,018      |                         |       |   |
|                               | Tanam Padi :              |                     |            |                    |          |                             |             |                         |       |   |
|                               | Fase Vegetatif            | 655,577             | 2622,307   | 200,534            | 0,324    | 1,401                       | 14,012      |                         |       |   |
|                               | Fase Generatif            | 931,343             | 3725,371   | 301,228            | 0,324    | 1,401                       | 14,012      |                         |       |   |
|                               | <b>Palawija</b>           | 0,000               | 0,000      | 0,000              | 0,000    | 0,000                       | 0,000       |                         |       |   |
|                               | <b>Tembakau</b>           | 3,000               | 3,000      | 0,252              | 0,084    | 0,290                       | 2,899       |                         |       |   |
|                               | <b>Tebu Tua</b>           | 3,000               | 0,000      | 0,000              | 0,000    | 0,000                       | 0,000       |                         |       |   |
| MK I                          | <b>Padi Gadu Ijin</b>     |                     |            |                    |          |                             |             | 729,923                 | 0,075 | Garap Tanah<br>0,465<br><br>Tanam Fase Vegetatif<br>0,435<br><br>Tanam Fase Generatif<br>0,435<br><br>Palawija<br>0,321 |
|                               | Pembibitan                | 39,085              | 781,705    | 56,662             | 1,474    | 6,366                       | 63,658      |                         |       |   |
|                               | Garap Tanah               | 271,223             | 1627,337   | 115,032            | 0,442    | 1,910                       | 19,097      |                         |       |   |
|                               | Tanam Padi :              |                     |            |                    |          |                             |             |                         |       |   |
|                               | Fase Vegetatif            | 673,000             | 2692,000   | 180,884            | 0,295    | 1,273                       | 12,732      |                         |       |   |
|                               | Fase Generatif            | 1115,125            | 4460,502   | 321,525            | 0,295    | 1,273                       | 12,732      |                         |       |   |
|                               | <b>Padi Gadu Tak Ijin</b> |                     |            |                    |          |                             |             |                         |       |   |
|                               | Pembibitan                | 13,167              | 13,167     | 16,710             | 0,772    | 1,335                       | 13,346      |                         |       |   |
|                               | Garap Tanah               | 32,333              | 32,333     | 10,919             | 0,269    | 0,465                       | 4,652       |                         |       |   |
|                               | Tanam Padi :              |                     |            |                    |          |                             |             |                         |       |   |
|                               | Fase Vegetatif            | 23,667              | 23,667     | 2,396              | 0,090    | 0,155                       | 1,547       |                         |       |   |
|                               | Fase Generatif            | 90,500              | 90,500     | 7,199              | 0,090    | 0,155                       | 1,547       |                         |       |   |
|                               | <b>Palawija</b>           | 1081,745            | 1081,745   | 67,811             | 0,063    | 0,164                       | 1,636       |                         |       |   |
|                               | <b>Tembakau</b>           | 3,000               | 3,000      | 0,218              | 0,073    | 0,251                       | 2,513       |                         |       |   |
| <b>Cemplon&amp; Tebu Muda</b> | 3,000                     | 4,500               | 0,349      | 0,116              | 0,100    | 1,004                       |             |                         |       |   |
| MK II                         | <b>Padi Gadu Ijin</b>     |                     |            |                    |          |                             |             | 545,981                 | 0,483 | Tembakau<br>0,160<br><br>Tebu<br>0,433  |
|                               | Pembibitan                | 0,000               | 0,000      | 0,000              | 0,000    | 0,000                       | 0,000       |                         |       |   |
|                               | Garap Tanah               | 0,000               | 0,000      | 0,000              | 0,000    | 0,000                       | 0,000       |                         |       |   |
|                               | Tanam Padi :              |                     |            |                    |          |                             |             |                         |       |   |
|                               | Fase Vegetatif            | 142,875             | 571,500    | 159,945            | 527,250  | 7,550                       | 75,502      |                         |       |   |
|                               | Fase Generatif            | 156,333             | 625,333    | 193,601            | 527,250  | 1,748                       | 7,550       |                         |       |   |
|                               | <b>Padi Gadu Tak Ijin</b> |                     |            |                    |          |                             |             |                         |       |   |
|                               | Pembibitan                | 1,000               | 1,000      | 0,459              | 0,459    | 1,983                       | 19,827      |                         |       |   |
|                               | Garap Tanah               | 5,000               | 5,000      | 2,295              | 0,459    | 1,983                       | 19,827      |                         |       |   |
|                               | Tanam Padi :              |                     |            |                    |          |                             |             |                         |       |   |
|                               | Fase Vegetatif            | 0,000               | 0,000      | 0,000              | 0,000    | 0,000                       | 0,000       |                         |       |   |
|                               | Fase Generatif            | 0,000               | 0,000      | 0,000              | 0,000    | 0,000                       | 0,000       |                         |       |   |
|                               | <b>Palawija</b>           | 969,237             | 969,237    | 656,193            | 193,377  | 2,423                       | 24,233      |                         |       |   |
|                               | <b>Tembakau</b>           | 3,000               | 3,000      | 2,625              | 1,807    | 2,120                       | 21,205      |                         |       |   |
| <b>Cemplon&amp; Tebu Muda</b> | 3,000                     | 4,500               | 3,283      | 1,691              | 3,427    | 34,268                      |             |                         |       |   |

Sumber : Hasil Perhitungan



Dari hasil evaluasi, didapat bahwa kebutuhan air persatuan luas untuk setiap fase pemberian air pada Musim Tanam I (MH) lebih besar bila dibandingkan dengan kebutuhan air pada Musim Tanam II dan III (MK I dan MK II). Tinggi genangan rata-rata pada Musim Tanam I (MH) lebih besar bila dibandingkan dengan tinggi genangan pada MK I dan MK II, hal ini disebabkan oleh curah hujan. Pada Musim Tanam II (MK I) debit rata-rata lebih besar dari Musim Tanam I (MH), hal ini dipengaruhi oleh iklim yang tidak menentu pada daerah studi.

Dari hasil evaluasi kebutuhan air selama kurun waktu 5 tahun terakhir (2008-2012) maka didapat nilai FPR Jaringan Irigasi Pirang pada Tabel 4.22

Tabel 4.22 Nilai FPR Jaringan Irigasi Pirang

| Pedoman          | FPR (l/det) ha. Palawija |             |             |
|------------------|--------------------------|-------------|-------------|
|                  | Air kurang               | Air cukup   | Air memadai |
| Pemberian Air    | <0.06                    | 0.06 - 0.12 | >0.12       |
| Musim Hujan      |                          | 0,080       |             |
| Musim Kemarau I  |                          | 0,075       |             |
| Musim Kemarau II |                          |             | 0,483       |
| Giliran          | Perlu                    | Mungkin     | Tidak       |

Sumber:Hasil Analisa

Dan didapat nilai konversi Faktor K dan FPR untuk pembagian dan pemberian air. Nilai konversi tersebut dapat dilihat pada Tabel 4.21

Tabel 4.23 Nilai Konversi Faktor K dan FPR untuk Pembagian dan Pemberian Air

| No. | Faktor K  | FPR          | Pembagian dan Pemberian Air |             |
|-----|-----------|--------------|-----------------------------|-------------|
|     |           | lt/dt/ha.pol | Faktor K                    | FPR         |
| 1   | >0,75     | >0,06        | Terus menerus               | Air Memadai |
| 2   | 0,25-0,75 | 0,06-0,12    | Gilir di saluran tersier    | Air Cukup   |
| 3   | <0,25     | <0,12        | Gilir di saluran sekunder   | Air Kurang  |

Sumber : Hasil Analisa

Dalam kondisi lapangan, ternyata nilai Koefisien Pembanding LPR tidak sesuai dengan pedoman, adapun hal tersebut dapat dilihat pada Tabel 4.24

Tabel 4.24 Koefisien Pembanding LPR (Eksisting)

| Musim Tanam         | Uraian             | Rata-rata Luas (Ha) | Rerata LPR | Keb. Air Rata-rata (lt/dt) | FPR   | Keadaan Eksisting        |  | Pedoman  |
|---------------------|--------------------|---------------------|------------|----------------------------|-------|--------------------------|--|--|
|                     |                    |                     |            |                            |       | Koefisien Pembanding LPR | Rerata Koefisien Pembanding LPR  |  |
| MH                  | Pembibitan         | 49,038              | 980,762    | 78,064                     | 0,080 | 19,899                   | Pembibitan<br>19,661   | Pembibitan<br>20   |
|                     | Garap Tanah        | 254,802             | 1528,814   | 120,389                    |       | 5,906                    |  |  |
|                     | Tanam Padi :       |                     |            |                            |       |                          |  |  |
|                     | Fase Vegetatif     | 655,577             | 2622,307   | 200,534                    |       | 3,824                    |  |  |
|                     | Fase Generatif     | 931,343             | 3725,371   | 301,228                    |       | 4,043                    |  |  |
|                     | Palawija           | 0,000               | 0,000      | 0,000                      |       | -                        |  |  |
|                     | Tembakau           | 3,000               | 3,000      | 0,252                      |       | 1,049                    |  |  |
| Tebu Tua            | 3,000              | 0,000               | 0,000      | 0,000                      |       |                          |  |  |
| MK I                | Padi Gadu Ijin     |                     |            |                            | 0,075 |                          | Garatp Tanah<br>5,794<br>Tanam Fase Vegetatif<br>3,248<br>Tanam Fase Generatif<br>3,490<br>Palawija<br>1,121<br>Tembakau<br>1,278<br>Tebu<br>1,912 | Garatp Tanah<br>6<br>Tanam Fase Vegetatif<br>4<br>Tanam Fase Generatif<br>4<br>Palawija<br>1<br>Tembakau<br>1<br>Tebu<br>1,5 |
|                     | Pembibitan         | 39,085              | 781,705    | 56,662                     |       | 19,423                   |  |  |
|                     | Garap Tanah        | 271,223             | 1627,337   | 115,032                    |       | 5,683                    |  |  |
|                     | Tanam Padi :       |                     |            |                            |       |                          |  |  |
|                     | Fase Vegetatif     | 673,000             | 2692,000   | 180,884                    |       | 3,601                    |  |  |
|                     | Fase Generatif     | 1115,125            | 4460,502   | 321,525                    |       | 3,863                    |  |  |
|                     | Padi Gadu Tak Ijin |                     |            |                            |       |                          |  |  |
|                     | Pembibitan         | 13,167              | 13,167     | 16,710                     |       | 17,004                   |  |  |
|                     | Garap Tanah        | 32,333              | 32,333     | 10,919                     |       | 4,525                    |  |  |
|                     | Tanam Padi :       |                     |            |                            |       |                          |  |  |
|                     | Fase Vegetatif     | 23,667              | 23,667     | 2,396                      |       | 1,356                    |  |  |
|                     | Fase Generatif     | 90,500              | 90,500     | 7,199                      |       | 1,066                    |  |  |
|                     | Palawija           | 1081,745            | 1081,745   | 67,811                     |       | 0,840                    |  |  |
| Tembakau            | 3,000              | 3,000               | 0,218      | 0,974                      |       |                          |  |  |
| Cemplon & Tebu Muda | 3,000              | 4,500               | 0,349      | 1,558                      |       |                          |  |  |
| MK II               | Padi Gadu Ijin     |                     |            |                            | 0,483 |                          | Palawija<br>1,121<br>Tembakau<br>1,278<br>Tebu<br>1,912  | Palawija<br>1<br>Tembakau<br>1<br>Tebu<br>1,5  |
|                     | Pembibitan         | 0,000               | 0,000      | 0,000                      |       | -                        |  |  |
|                     | Garap Tanah        | 0,000               | 0,000      | 0,000                      |       | -                        |  |  |
|                     | Tanam Padi :       | 0,000               | 0,000      | 0,000                      |       | -                        |  |  |
|                     | Fase Vegetatif     | 142,875             | 571,500    | 159,945                    |       | 2,318                    |  |  |
|                     | Fase Generatif     | 156,333             | 625,333    | 193,601                    |       | 2,565                    |  |  |
|                     | Padi Gadu Tak Ijin |                     |            |                            |       |                          |  |  |
|                     | Pembibitan         | 1,000               | 1,000      | 0,459                      |       | 0,950                    |  |  |
|                     | Garap Tanah        | 5,000               | 5,000      | 2,295                      |       | 0,950                    |  |  |
|                     | Tanam Padi :       |                     |            |                            |       |                          |  |  |
|                     | Fase Vegetatif     | 0,000               | 0,000      | 0,000                      |       | -                        |  |  |
|                     | Fase Generatif     | 0,000               | 0,000      | 0,000                      |       | -                        |  |  |
|                     | Palawija           | 969,237             | 969,237    | 656,193                    |       | 1,402                    |  |  |
| Tembakau            | 3,000              | 3,000               | 2,625      | 1,812                      |       |                          |  |  |
| Cemplon & Tebu Muda | 3,000              | 4,500               | 3,283      | 2,266                      |       |                          |  |  |

Sumber : Hasil Analisa

### 4.3.3. Neraca Air

Neraca air Daerah Irigasi Pirang dihitung berdasarkan hasil perhitungan ketersediaan air dan kebutuhan air yaitu dengan cara membandingkan antara ketersediaan air berupa debit andalan yang ada dengan kebutuhan air yang diperlukan serta sesuai dengan LPR kondisi eksisting. Dalam operasi sistem jaringan irigasi, ketersediaan air dan kebutuhan air dalam bentuk neraca air ini merupakan salah satu dasar pengambilan keputusan untuk pedoman pengelolaan air irigasi, yang berhubungan dengan pola rotasi tanam maupun pola tata guna air irigasi, baik untuk kegiatan pemberian air tanaman maupun pembagian air irigasinya. Berikut contoh perhitungan Neraca Air Jaringan Irigasi Pirang :



- Tahun : 2007
- Bulan : November
- Periode : I
- FPR Eksisting (Data) : 0,06
- Keb.Air Irigasi Padi Rendeng :  $((116 \times 19,661) + (595 \times 5,794) + (33 \times 3,248)) \times 0,06$   
= 362,677 lt/dt
- Padi Gadu : 0 lt/dt
- Padi Gadu Tidak Ijin : 0 lt/dt
- Palawija : 0 lt/dt
- Tebu : 0 lt/dt
- Tembakau : 0 lt/dt
- Total Keb.Air Irigasi : 362,677 lt/dt
- Q min (Data) : 201 lt/dt
- Faktor K :  $\frac{201}{362,677} = 0,554 \geq 1$  maka Rotasi
- $Q_{80}$  (Data) : 239 lt/dt
- Faktor K :  $\frac{239}{362,677} = 0,660 \geq 1$  maka Rotasi

Perhitungan selanjutnya dapat dilihat pada Tabel 4.25 s/d Tabel 4.29 yang menunjukkan neraca air eksistng Jaringan Irigasi Pirang

Tabel 4.25 Neraca Air dan Pembagian Air Kondisi Eksisting Tahun 2008

| Bulan | Periode | FPR  | Kebutuhan Air (lt/dt) |           |                      |          |       |          | Total Keb. Air | Q Minimum | Evaluasi Pembagian Air |                   | Q80  | Evaluasi Pembagian Air |                   |
|-------|---------|------|-----------------------|-----------|----------------------|----------|-------|----------|----------------|-----------|------------------------|-------------------|------|------------------------|-------------------|
|       |         |      | Padi Rendeng          | Padi Gadu | Padi Gadu Tidak Ijin | Palawija | Tebu  | Tembakau |                |           | Faktor K               | Kriteria Faktor K |      | Faktor K               | Kriteria Faktor K |
| [1]   | [2]     | [3]  | [4]                   | [5]       | [6]                  | [7]      | [8]   | [9]      | [10]           | [11]      | [12]                   | [13]              | [14] | [15]                   | [16]              |
| Nov   | I       | 0,06 | 362,675               | 0,000     | 0,000                | 0,000    | 0,000 | 0,000    | 362,675        | 201       | 0,554                  | Rotasi            | 239  | 0,660                  | Rotasi            |
|       | II      | 0,09 | 497,809               | 0,000     | 0,000                | 0,000    | 0,000 | 0,000    | 497,809        | 238       | 0,478                  | Rotasi            | 300  | 0,603                  | Rotasi            |
|       | III     | 0,09 | 456,769               | 0,000     | 0,000                | 0,000    | 0,000 | 0,000    | 456,769        | 250       | 0,547                  | Rotasi            | 319  | 0,699                  | Rotasi            |
| Des   | I       | 0,06 | 271,494               | 0,000     | 0,000                | 0,000    | 0,000 | 0,000    | 271,494        | 670       | 2,468                  | Terus menerus     | 285  | 1,050                  | Terus menerus     |
|       | II      | 0,06 | 291,479               | 0,000     | 0,000                | 0,000    | 0,000 | 0,000    | 291,479        | 696       | 2,388                  | Terus menerus     | 383  | 1,314                  | Terus menerus     |
|       | III     | 0,13 | 594,547               | 0,000     | 0,000                | 0,000    | 0,000 | 0,000    | 594,547        | 736       | 1,238                  | Terus menerus     | 536  | 0,901                  | Rotasi            |
| Jan   | I       | 0,13 | 526,564               | 0,000     | 0,000                | 0,000    | 0,000 | 0,497    | 527,062        | 527       | 1,000                  | Rotasi            | 559  | 1,060                  | Terus menerus     |
|       | II      | 0,13 | 526,564               | 0,000     | 0,000                | 0,000    | 0,000 | 0,497    | 697,447        | 527       | 0,756                  | Rotasi            | 667  | 1,161                  | Terus menerus     |
|       | III     | 0,19 | 791,568               | 0,000     | 0,000                | 0,000    | 0,000 | 0,748    | 792,315        | 550       | 0,694                  | Rotasi            | 575  | 0,726                  | Rotasi            |
| Feb   | I       | 0,16 | 728,999               | 0,000     | 0,000                | 0,000    | 0,000 | 0,607    | 729,605        | 577       | 0,791                  | Rotasi            | 577  | 0,791                  | Rotasi            |
|       | II      | 0,16 | 728,999               | 0,000     | 0,000                | 0,000    | 0,000 | 0,607    | 836,983        | 577       | 0,689                  | Rotasi            | 539  | 0,766                  | Rotasi            |
|       | III     | 0,15 | 702,760               | 0,000     | 0,000                | 0,000    | 0,000 | 0,575    | 703,335        | 617       | 0,877                  | Rotasi            | 617  | 0,878                  | Rotasi            |
| Mar   | I       | 0,20 | 0,000                 | 663,637   | 6,412                | 0,000    | 0,000 | 0,768    | 670,818        | 575       | 0,857                  | Rotasi            | 587  | 0,875                  | Rotasi            |
|       | II      | 0,20 | 0,000                 | 663,637   | 6,412                | 0,000    | 0,000 | 0,768    | 824,578        | 575       | 0,697                  | Rotasi            | 623  | 1,042                  | Terus menerus     |
|       | III     | 0,12 | 182,329               | 604,908   | 0,000                | 0,000    | 0,000 | 0,453    | 787,690        | 637       | 0,809                  | Rotasi            | 643  | 0,816                  | Rotasi            |
| April | I       | 0,11 | 87,659                | 449,085   | 0,000                | 0,000    | 0,000 | 0,416    | 537,160        | 691       | 1,286                  | Terus menerus     | 704  | 1,311                  | Terus menerus     |
|       | II      | 0,11 | 87,659                | 472,220   | 0,000                | 0,000    | 0,000 | 0,416    | 626,822        | 691       | 1,102                  | Terus menerus     | 741  | 1,229                  | Terus menerus     |
|       | III     | 0,08 | 0,000                 | 392,446   | 0,000                | 0,000    | 0,000 | 0,317    | 392,763        | 688       | 1,752                  | Terus menerus     | 706  | 1,798                  | Terus menerus     |
| Mei   | I       | 0,19 | 0,000                 | 771,624   | 9,842                | 0,000    | 0,000 | 0,740    | 782,207        | 676       | 0,864                  | Rotasi            | 692  | 0,885                  | Rotasi            |
|       | II      | 0,19 | 0,000                 | 771,624   | 9,842                | 0,000    | 0,000 | 0,740    | 895,842        | 676       | 0,755                  | Rotasi            | 668  | 0,850                  | Rotasi            |
|       | III     | 0,49 | 0,000                 | 2074,016  | 0,000                | 0,000    | 0,000 | 1,880    | 2075,895       | 652       | 0,314                  | Rotasi            | 544  | 0,262                  | Rotasi            |
| Jun   | I       | 0,12 | 0,000                 | 519,367   | 0,000                | 0,000    | 0,000 | 0,000    | 519,367        | 512       | 0,986                  | Rotasi            | 585  | 1,127                  | Terus menerus     |
|       | II      | 0,12 | 0,000                 | 519,367   | 0,000                | 0,000    | 0,000 | 0,000    | 596,313        | 512       | 0,859                  | Rotasi            | 530  | 1,194                  | Terus menerus     |
|       | III     | 0,12 | 0,000                 | 520,377   | 0,000                | 1,800    | 0,000 | 0,000    | 522,177        | 509       | 0,975                  | Rotasi            | 515  | 0,986                  | Rotasi            |



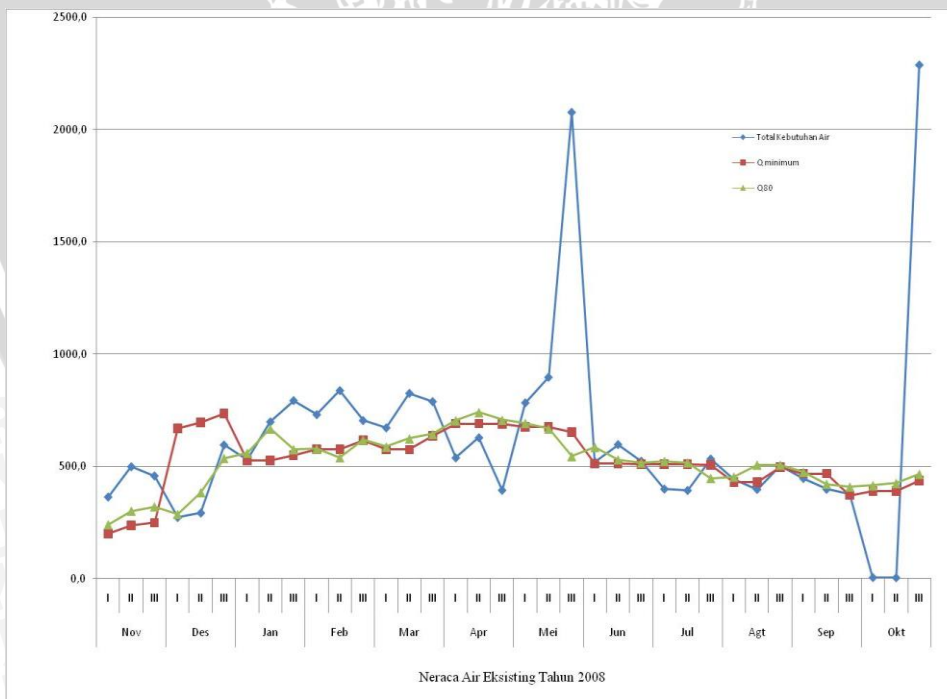
Lanjutan Tabel 4.25

| Bulan | Periode | FPR  | Kebutuhan Air (lt/dt) |           |                      |          |       |          | Total Keb. Air | Q Minimum | Evaluasi Pembagian Air |                   | Q80    | Evaluasi Pembagian Air |                   |
|-------|---------|------|-----------------------|-----------|----------------------|----------|-------|----------|----------------|-----------|------------------------|-------------------|--------|------------------------|-------------------|
|       |         |      | Padi Rendeng          | Padi Gadu | Padi Gadu Tidak Ijin | Palawija | Tebu  | Tembakau |                |           | Faktor K               | Kriteria Faktor K |        | Faktor K               | Kriteria Faktor K |
| [1]   | [2]     | [3]  | [4]                   | [5]       | [6]                  | [7]      | [8]   | [9]      | [10]           | [11]      | [12]                   | [13]              | [14]   | [15]                   | [16]              |
| Jul   | I       | 0,23 | 0,000                 | 123,828   | 41,858               | 232,576  | 0,000 | 0,000    | 398,262        | 511       | 1,283                  | Terus menerus     | 522    | 1,312                  | Terus menerus     |
|       | II      | 0,23 | 0,000                 | 123,828   | 41,858               | 232,576  | 0,000 | 0,000    | 392,103        | 511       | 1,303                  | Terus menerus     | 516    | 1,663                  | Terus menerus     |
|       | III     | 0,37 | 0,000                 | 0,000     | 20,436               | 511,467  | 0,000 | 0,000    | 531,902        | 506       | 0,951                  | Rotasi            | 447    | 0,840                  | Rotasi            |
| Agt   | I       | 0,32 | 0,000                 | 0,000     | 2,562                | 440,794  | 0,000 | 0,000    | 443,356        | 430       | 0,970                  | Rotasi            | 452    | 1,020                  | Terus menerus     |
|       | II      | 0,32 | 0,000                 | 0,000     | 2,562                | 440,794  | 0,000 | 0,000    | 396,748        | 430       | 1,084                  | Terus menerus     | 506    | 1,401                  | Terus menerus     |
|       | III     | 0,36 | 0,000                 | 0,000     | 0,000                | 500,176  | 0,000 | 0,000    | 500,176        | 496       | 0,992                  | Rotasi            | 506    | 1,012                  | Terus menerus     |
| Sep   | I       | 0,32 | 0,000                 | 0,000     | 0,000                | 443,532  | 1,848 | 0,000    | 445,380        | 468       | 1,051                  | Terus menerus     | 474    | 1,064                  | Terus menerus     |
|       | II      | 0,32 | 0,000                 | 0,000     | 0,000                | 443,532  | 1,848 | 0,000    | 397,118        | 468       | 1,178                  | Terus menerus     | 420    | 1,265                  | Terus menerus     |
|       | III     | 0,73 | 0,000                 | 0,000     | 0,000                | 374,562  | 0,000 | 0,000    | 374,562        | 372       | 0,993                  | Rotasi            | 408    | 1,089                  | Terus menerus     |
| Okt   | I       | 0,72 | 0,000                 | 0,000     | 0,000                | 0,000    | 4,130 | 0,000    | 4,130          | 390       | 94,441                 | Terus menerus     | 414    | 100,301                | Terus menerus     |
|       | II      | 0,72 | 0,000                 | 0,000     | 0,000                | 0,000    | 4,130 | 0,000    | 3,240          | 390       | 120,370                | Terus menerus     | 424    | 159,259                | Terus menerus     |
|       | III     | 0,16 | 2285,695              | 0,000     | 0,000                | 0,000    | 0,000 | 0,929    | 0,000          | 2286,624  | 437                    | 0,191             | Rotasi | 465                    | 0,203             |

Sumber : Hasil Perhitungan

Keterangan:

- |                  |                 |                            |                          |
|------------------|-----------------|----------------------------|--------------------------|
| [1] : Bulan      | [5] : LPR x FPR | [9] : LPR x FPR            | [13] : Kriteria Faktor K |
| [2] : Periode    | [6] : LPR x FPR | [10] : [5]+[6]+[7]+[8]+[9] | [14] : Q80               |
| [3] : FPR (Data) | [7] : LPR x FPR | [11] : Q minimum           | [15] : [14]/[10]         |
| [4] : LPR x FPR  | [8] : LPR x FPR | [12] : [11]/[10]           | [16] : Kriteria Faktor K |



Gambar 4.3 Grafik Neraca Air Tahun 2008

Sumber : Hasil Analisa

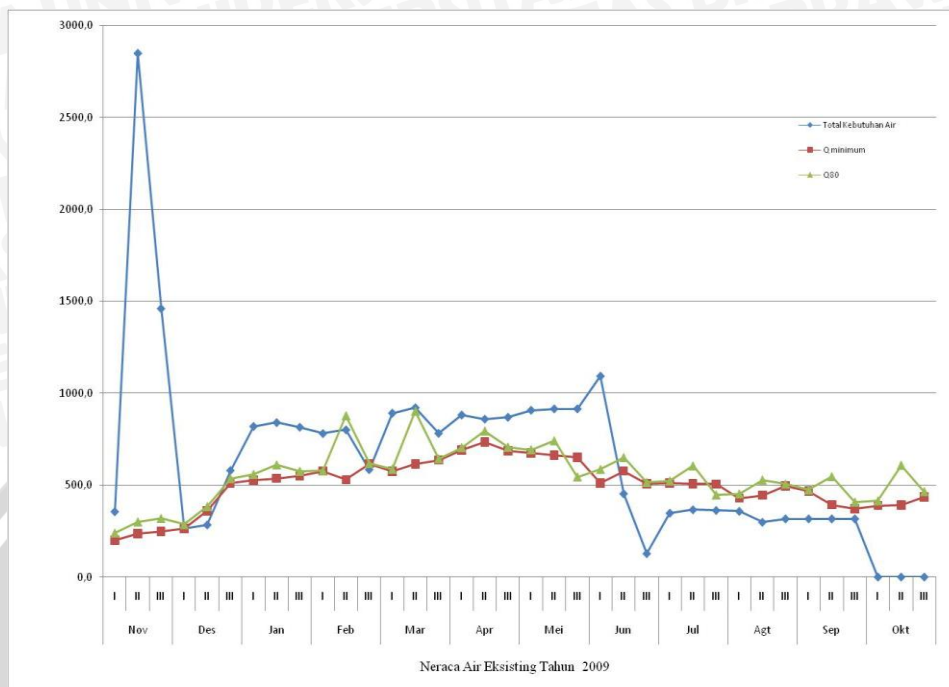
Tabel 4.26 Neraca Air dan Pembagian Air Kondisi Eksisting Tahun 2009

| Bulan | Periode | FPR  | Kebutuhan Air (lt/dt) |           |                      |          |       |          |          | Total Keb. Air | Q Minimum | Evaluasi Pembagian Air |          | Q80     | Evaluasi Pembagian Air |  |
|-------|---------|------|-----------------------|-----------|----------------------|----------|-------|----------|----------|----------------|-----------|------------------------|----------|---------|------------------------|--|
|       |         |      | Padi Rendeng          | Padi Gadu | Padi Gadu Tidak Ijin | Palawija | Tebu  | Tembakau | Faktor K |                |           | Kriteria Faktor K      | Faktor K |         | Kriteria Faktor K      |  |
| [1]   | [2]     | [3]  | [4]                   | [5]       | [6]                  | [7]      | [8]   | [9]      | [10]     | [11]           | [12]      | [13]                   | [14]     | [15]    | [16]                   |  |
| Nov   | I       | 0,06 | 356,016               | 0,000     | 0,000                | 0,000    | 0,000 | 0,000    | 356,016  | 201            | 0,565     | Rotasi                 | 239      | 0,672   | Rotasi                 |  |
|       | II      | 0,09 | 2847,762              | 0,000     | 0,000                | 0,000    | 0,000 | 0,000    | 2847,762 | 238            | 0,084     | Rotasi                 | 300      | 0,105   | Rotasi                 |  |
|       | III     | 0,09 | 1460,001              | 0,000     | 0,000                | 0,000    | 0,000 | 0,000    | 1460,001 | 250            | 0,171     | Rotasi                 | 319      | 0,219   | Rotasi                 |  |
| Des   | I       | 0,06 | 264,828               | 0,000     | 0,000                | 0,000    | 0,000 | 0,000    | 264,828  | 266            | 1,004     | Terus menerus          | 285      | 1,077   | Terus menerus          |  |
|       | II      | 0,06 | 284,323               | 0,000     | 0,000                | 0,000    | 0,000 | 0,000    | 284,323  | 361            | 1,270     | Terus menerus          | 383      | 1,347   | Terus menerus          |  |
|       | III     | 0,13 | 579,948               | 0,000     | 0,000                | 0,000    | 0,000 | 0,000    | 579,948  | 510            | 0,879     | Rotasi                 | 536      | 0,924   | Rotasi                 |  |
| Jan   | I       | 0,18 | 818,538               | 0,000     | 0,000                | 0,000    | 1,027 | 0,000    | 819,566  | 527            | 0,643     | Rotasi                 | 559      | 0,682   | Rotasi                 |  |
|       | II      | 0,18 | 839,217               | 0,000     | 0,000                | 0,000    | 1,053 | 0,000    | 840,270  | 537            | 0,639     | Rotasi                 | 610      | 0,726   | Rotasi                 |  |
|       | III     | 0,18 | 814,230               | 0,000     | 0,000                | 0,000    | 1,022 | 0,000    | 815,252  | 550            | 0,675     | Rotasi                 | 575      | 0,705   | Rotasi                 |  |
| Feb   | I       | 0,17 | 779,931               | 0,000     | 0,000                | 0,000    | 0,979 | 0,000    | 780,910  | 577            | 0,739     | Rotasi                 | 577      | 0,739   | Rotasi                 |  |
|       | II      | 0,20 | 799,702               | 0,000     | 0,000                | 0,000    | 1,128 | 0,000    | 800,830  | 530            | 0,662     | Rotasi                 | 878      | 1,096   | Terus menerus          |  |
|       | III     | 0,31 | 515,870               | 67,238    | 0,000                | 0,000    | 1,783 | 0,000    | 584,892  | 617            | 1,055     | Terus menerus          | 617      | 1,055   | Terus menerus          |  |
| Mar   | I       | 0,14 | 70,779                | 820,382   | 0,000                | 0,000    | 0,798 | 0,000    | 891,958  | 575            | 0,645     | Rotasi                 | 587      | 0,658   | Rotasi                 |  |
|       | II      | 0,12 | 43,981                | 876,579   | 0,000                | 0,000    | 0,703 | 0,000    | 921,262  | 614            | 0,666     | Rotasi                 | 902      | 0,979   | Rotasi                 |  |
|       | III     | 0,17 | 0,000                 | 780,932   | 0,000                | 0,000    | 0,946 | 0,000    | 781,879  | 637            | 0,815     | Rotasi                 | 643      | 0,822   | Rotasi                 |  |
| April | I       | 0,17 | 0,000                 | 880,574   | 0,000                | 0,000    | 0,971 | 0,000    | 881,546  | 691            | 0,784     | Rotasi                 | 704      | 0,799   | Rotasi                 |  |
|       | II      | 0,19 | 0,000                 | 858,185   | 0,000                | 0,000    | 1,077 | 0,000    | 859,262  | 735            | 0,855     | Rotasi                 | 794      | 0,924   | Rotasi                 |  |
|       | III     | 0,19 | 0,000                 | 868,305   | 0,000                | 0,000    | 1,090 | 0,000    | 869,395  | 688            | 0,791     | Rotasi                 | 706      | 0,812   | Rotasi                 |  |
| Mei   | I       | 0,20 | 906,423               | 0,000     | 0,000                | 0,000    | 1,138 | 0,000    | 907,561  | 676            | 0,745     | Rotasi                 | 692      | 0,763   | Rotasi                 |  |
|       | II      | 0,20 | 914,006               | 0,000     | 0,000                | 0,000    | 1,147 | 0,000    | 915,153  | 664            | 0,726     | Rotasi                 | 741      | 0,809   | Rotasi                 |  |
|       | III     | 0,20 | 914,006               | 0,000     | 0,000                | 0,000    | 1,147 | 0,000    | 915,153  | 652            | 0,712     | Rotasi                 | 544      | 0,595   | Rotasi                 |  |
| Jun   | I       | 0,19 | 874,544               | 0,000     | 0,000                | 217,303  | 1,098 | 0,000    | 1092,944 | 512            | 0,468     | Rotasi                 | 585      | 0,535   | Rotasi                 |  |
|       | II      | 0,24 | 451,898               | 0,000     | 0,000                | 0,000    | 1,382 | 0,000    | 453,280  | 577            | 1,273     | Terus menerus          | 650      | 1,434   | Terus menerus          |  |
|       | III     | 0,28 | 126,217               | 0,000     | 0,000                | 0,000    | 1,610 | 0,000    | 127,827  | 509            | 3,982     | Terus menerus          | 515      | 4,027   | Terus menerus          |  |
| Jul   | I       | 0,26 | 0,000                 | 0,000     | 0,000                | 346,645  | 1,507 | 0,000    | 348,152  | 511            | 1,468     | Terus menerus          | 522      | 1,500   | Terus menerus          |  |
|       | II      | 0,25 | 0,000                 | 0,000     | 1,516                | 363,563  | 1,449 | 0,000    | 366,528  | 509            | 1,389     | Terus menerus          | 605      | 1,650   | Terus menerus          |  |
|       | III     | 0,25 | 0,000                 | 0,000     | 1,500                | 359,832  | 1,434 | 0,000    | 362,766  | 506            | 1,395     | Terus menerus          | 447      | 1,232   | Terus menerus          |  |
| Agt   | I       | 0,25 | 0,000                 | 0,000     | 0,000                | 356,449  | 1,411 | 0,000    | 357,859  | 430            | 1,202     | Terus menerus          | 452      | 1,264   | Terus menerus          |  |
|       | II      | 0,21 | 0,000                 | 0,000     | 0,000                | 297,399  | 1,177 | 0,000    | 298,575  | 446            | 1,494     | Terus menerus          | 528      | 1,768   | Terus menerus          |  |
|       | III     | 0,22 | 0,000                 | 0,000     | 0,000                | 315,924  | 1,259 | 0,000    | 317,183  | 496            | 1,564     | Terus menerus          | 506      | 1,595   | Terus menerus          |  |
| Sep   | I       | 0,22 | 0,000                 | 0,000     | 0,000                | 315,924  | 1,259 | 0,000    | 317,183  | 468            | 1,475     | Terus menerus          | 474      | 1,494   | Terus menerus          |  |
|       | II      | 0,22 | 0,000                 | 0,000     | 0,000                | 315,924  | 1,259 | 0,000    | 317,183  | 394            | 1,242     | Terus menerus          | 546      | 0,000   | Rotasi                 |  |
|       | III     | 0,22 | 0,000                 | 0,000     | 0,000                | 315,924  | 1,259 | 0,000    | 317,183  | 372            | 1,173     | Terus menerus          | 408      | 0,000   | Rotasi                 |  |
| Okt   | I       | 0,15 | 0,000                 | 0,000     | 0,000                | 0,000    | 0,860 | 0,000    | 0,860    | 390            | 453,316   | Terus menerus          | 414      | 481,445 | Terus menerus          |  |
|       | II      | 0,15 | 0,000                 | 0,000     | 0,000                | 0,000    | 0,860 | 0,000    | 0,860    | 393            | 456,803   | Terus menerus          | 608      | 706,708 | Terus menerus          |  |
|       | III     | 0,15 | 0,000                 | 0,000     | 0,000                | 0,000    | 0,860 | 0,000    | 0,860    | 437            | 507,946   | Terus menerus          | 465      | 540,027 | Terus menerus          |  |

Sumber : Hasil Perhitungan

Keterangan:

- |                  |                 |                            |                          |
|------------------|-----------------|----------------------------|--------------------------|
| [1] : Bulan      | [5] : LPR x FPR | [9] : LPR x FPR            | [13] : Kriteria Faktor K |
| [2] : Periode    | [6] : LPR x FPR | [10] : [5]+[6]+[7]+[8]+[9] | [14] : Q80               |
| [3] : FPR (Data) | [7] : LPR x FPR | [11] : Q minimum           | [15] : [14]/[10]         |
| [4] : LPR x FPR  | [8] : LPR x FPR | [12] : [11]/[10]           | [16] : Kriteria Faktor K |



Gambar 4.4 Grafik Neraca Air Tahun 2009  
Sumber : Hasil Analisa

Tabel 4.27 Neraca Air dan Pembagian Air Kondisi Eksisting Tahun 2010

| Bulan | Periode | FPR  | Kebutuhan Air (lt/dt) |           |                      |          |       |          | Total Keb. Air | Q Minimum | Evaluasi Pembagian Air |                   | Q80  | Evaluasi Pembagian Air |                   |
|-------|---------|------|-----------------------|-----------|----------------------|----------|-------|----------|----------------|-----------|------------------------|-------------------|------|------------------------|-------------------|
|       |         |      | Padi Rendeng          | Padi Gadu | Padi Gadu Tidak Ijin | Palawija | Tebu  | Tembakau |                |           | Faktor K               | Kriteria Faktor K |      | Faktor K               | Kriteria Faktor K |
| [1]   | [2]     | [3]  | [4]                   | [5]       | [6]                  | [7]      | [8]   | [9]      | [10]           | [11]      | [12]                   | [13]              | [14] | [15]                   | [16]              |
| Nov   | I       | 0,24 | 147,772               | 0,000     | 0,000                | 0,000    | 1,400 | 0,000    | 149,172        | 201       | 1,347                  | Terus menerus     | 239  | 1,604                  | Terus menerus     |
|       | II      | 0,15 | 169,028               | 0,000     | 0,000                | 0,000    | 0,840 | 0,000    | 169,868        | 238       | 1,401                  | Terus menerus     | 300  | 1,767                  | Terus menerus     |
|       | III     | 0,06 | 193,801               | 0,000     | 0,000                | 0,000    | 0,326 | 0,000    | 194,127        | 250       | 1,288                  | Terus menerus     | 319  | 1,645                  | Terus menerus     |
| Des   | I       | 0,03 | 171,619               | 0,000     | 0,000                | 0,000    | 0,175 | 0,000    | 171,794        | 266       | 1,548                  | Terus menerus     | 285  | 1,660                  | Terus menerus     |
|       | II      | 0,05 | 210,014               | 0,000     | 0,000                | 0,000    | 0,286 | 0,000    | 210,300        | 361       | 1,717                  | Terus menerus     | 383  | 1,821                  | Terus menerus     |
|       | III     | 0,08 | 394,089               | 0,000     | 0,000                | 0,000    | 0,468 | 0,000    | 394,558        | 510       | 1,293                  | Terus menerus     | 536  | 1,358                  | Terus menerus     |
| Jan   | I       | 0,27 | 427,420               | 0,000     | 0,000                | 0,000    | 1,549 | 0,000    | 428,969        | 527       | 1,229                  | Terus menerus     | 559  | 1,302                  | Terus menerus     |
|       | II      | 0,09 | 65,065                | 0,000     | 0,000                | 0,000    | 0,516 | 0,000    | 65,581         | 537       | 8,188                  | Terus menerus     | 610  | 9,299                  | Terus menerus     |
|       | III     | 0,10 | 457,003               | 0,000     | 0,000                | 0,000    | 0,574 | 0,000    | 457,576        | 550       | 1,202                  | Terus menerus     | 575  | 1,257                  | Terus menerus     |
| Feb   | I       | 0,10 | 457,003               | 0,000     | 0,000                | 0,000    | 0,574 | 0,000    | 457,576        | 577       | 1,261                  | Terus menerus     | 577  | 1,261                  | Terus menerus     |
|       | II      | 0,10 | 457,003               | 0,000     | 0,000                | 0,000    | 0,574 | 0,000    | 457,576        | 530       | 1,158                  | Terus menerus     | 878  | 1,918                  | Terus menerus     |
|       | III     | 0,10 | 457,003               | 0,000     | 0,000                | 0,000    | 0,574 | 0,000    | 457,576        | 617       | 1,348                  | Terus menerus     | 617  | 1,349                  | Terus menerus     |
| Mar   | I       | 0,11 | 388,818               | 72,171    | 0,000                | 0,000    | 0,000 | 0,422    | 461,411        | 575       | 1,246                  | Terus menerus     | 587  | 1,272                  | Terus menerus     |
|       | II      | 0,10 | 336,739               | 147,404   | 0,000                | 0,000    | 0,000 | 0,384    | 484,526        | 614       | 1,267                  | Terus menerus     | 902  | 1,862                  | Terus menerus     |
|       | III     | 0,10 | 229,721               | 276,630   | 0,000                | 0,000    | 0,000 | 0,384    | 506,735        | 637       | 1,257                  | Terus menerus     | 643  | 1,269                  | Terus menerus     |
| April | I       | 0,10 | 133,510               | 346,619   | 0,000                | 0,000    | 0,000 | 0,384    | 480,513        | 691       | 1,438                  | Terus menerus     | 704  | 1,466                  | Terus menerus     |
|       | II      | 0,09 | 11,922                | 464,527   | 0,000                | 0,000    | 0,000 | 0,345    | 476,794        | 735       | 1,542                  | Terus menerus     | 794  | 1,666                  | Terus menerus     |
|       | III     | 0,10 | 0,000                 | 486,633   | 0,000                | 0,000    | 0,000 | 0,384    | 487,016        | 688       | 1,413                  | Terus menerus     | 706  | 1,450                  | Terus menerus     |
| Mei   | I       | 0,10 | 0,000                 | 464,393   | 0,000                | 0,000    | 0,000 | 0,384    | 464,776        | 676       | 1,454                  | Terus menerus     | 692  | 1,489                  | Terus menerus     |
|       | II      | 0,11 | 0,000                 | 502,703   | 0,000                | 0,000    | 0,000 | 0,422    | 503,125        | 664       | 1,320                  | Terus menerus     | 741  | 1,472                  | Terus menerus     |
|       | III     | 0,10 | 0,000                 | 457,003   | 0,000                | 0,000    | 0,000 | 0,384    | 457,386        | 652       | 1,425                  | Terus menerus     | 544  | 1,190                  | Terus menerus     |





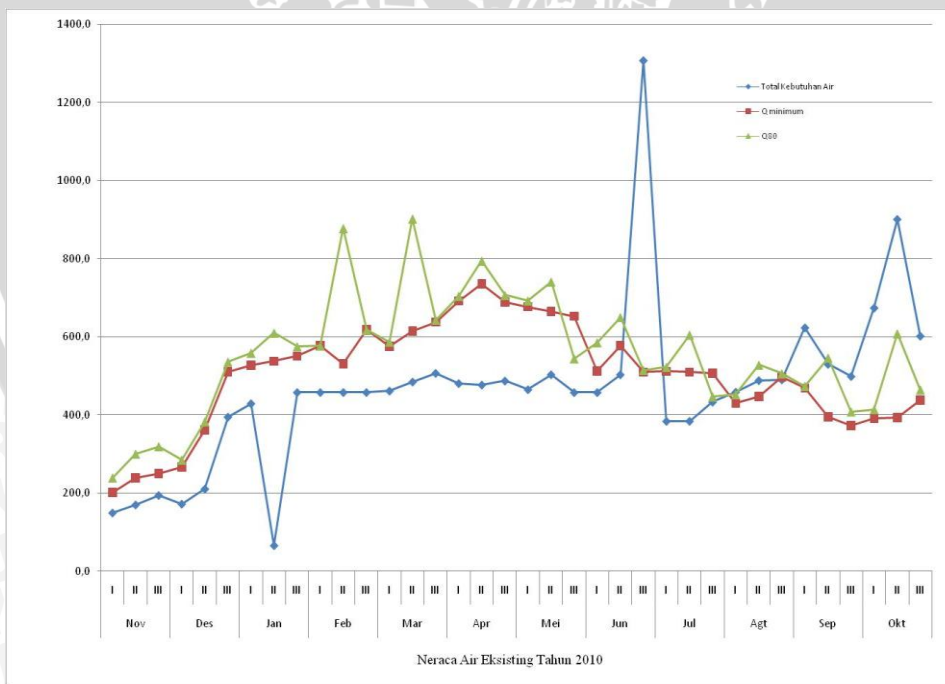
Lanjutan Tabel 4.27

| Bulan | Periode | FPR  | Kebutuhan Air (l/dt) |           |                      |          |       |          | Total Keb. Air | Q Minimum | Evaluasi Pembagian Air |                   | Q80  | Evaluasi Pembagian Air |                   |
|-------|---------|------|----------------------|-----------|----------------------|----------|-------|----------|----------------|-----------|------------------------|-------------------|------|------------------------|-------------------|
|       |         |      | Padi Rendeng         | Padi Gadu | Padi Gadu Tidak Ijin | Palawija | Tebu  | Tembakau |                |           | Faktor K               | Kriteria Faktor K |      | Faktor K               | Kriteria Faktor K |
| [1]   | [2]     | [3]  | [4]                  | [5]       | [6]                  | [7]      | [8]   | [9]      | [10]           | [11]      | [12]                   | [13]              | [14] | [15]                   | [16]              |
| Jun   | I       | 0,10 | 0,000                | 457,003   | 0,000                | 0,000    | 0,000 | 0,384    | 457,386        | 512       | 1,119                  | Terus menerus     | 585  | 1,279                  | Terus menerus     |
|       | II      | 0,11 | 0,000                | 502,703   | 0,000                | 0,000    | 0,000 | 0,422    | 503,125        | 577       | 1,147                  | Terus menerus     | 650  | 1,292                  | Terus menerus     |
|       | III     | 0,32 | 0,000                | 1306,240  | 0,000                | 0,000    | 0,000 | 1,227    | 1307,468       | 509       | 0,389                  | Rotasi            | 515  | 0,394                  | Rotasi            |
| Jul   | I       | 0,12 | 0,000                | 371,877   | 0,000                | 11,568   | 0,000 | 0,460    | 383,906        | 511       | 1,331                  | Terus menerus     | 522  | 1,361                  | Terus menerus     |
|       | II      | 0,17 | 0,000                | 309,340   | 0,000                | 73,939   | 0,000 | 0,652    | 383,931        | 509       | 1,326                  | Terus menerus     | 605  | 1,575                  | Terus menerus     |
|       | III     | 0,43 | 0,000                | 209,852   | 1,720                | 219,800  | 0,000 | 1,649    | 433,021        | 506       | 1,169                  | Terus menerus     | 447  | 1,032                  | Terus menerus     |
| Agt   | I       | 0,42 | 0,000                | 7,320     | 18,900               | 430,789  | 0,000 | 1,611    | 458,620        | 430       | 0,938                  | Rotasi            | 452  | 0,986                  | Rotasi            |
|       | II      | 0,39 | 0,000                | 0,000     | 25,350               | 461,223  | 0,000 | 1,496    | 488,069        | 446       | 0,914                  | Rotasi            | 528  | 1,082                  | Terus menerus     |
|       | III     | 0,39 | 0,000                | 0,000     | 27,300               | 461,223  | 0,000 | 1,496    | 490,019        | 496       | 1,012                  | Terus menerus     | 506  | 1,033                  | Terus menerus     |
| Sep   | I       | 0,60 | 0,000                | 60,655    | 0,000                | 560,261  | 0,000 | 2,301    | 623,217        | 468       | 0,751                  | Rotasi            | 474  | 0,761                  | Rotasi            |
|       | II      | 0,51 | 0,000                | 51,557    | 0,000                | 476,222  | 0,000 | 1,956    | 529,735        | 394       | 0,744                  | Rotasi            | 546  | 0,000                  | Rotasi            |
|       | III     | 0,48 | 0,000                | 48,524    | 0,000                | 448,209  | 0,000 | 1,841    | 498,574        | 372       | 0,746                  | Rotasi            | 408  | 0,000                  | Rotasi            |
| Okt   | I       | 0,27 | 371,595              | 65,884    | 0,000                | 235,404  | 0,000 | 1,035    | 673,918        | 390       | 0,579                  | Rotasi            | 414  | 0,615                  | Rotasi            |
|       | II      | 0,15 | 865,822              | 34,511    | 0,000                | 0,000    | 0,000 | 0,575    | 900,908        | 393       | 0,436                  | Rotasi            | 608  | 0,675                  | Rotasi            |
|       | III     | 0,10 | 578,503              | 23,007    | 0,000                | 0,000    | 0,000 | 0,384    | 601,893        | 437       | 0,726                  | Rotasi            | 465  | 0,772                  | Rotasi            |

Sumber : Hasil Perhitungan

Keterangan:

- [1] : Bulan
- [2] : Periode
- [3] : FPR (Data)
- [4] : LPR x FPR
- [5] : LPR x FPR
- [6] : LPR x FPR
- [7] : LPR x FPR
- [8] : LPR x FPR
- [9] : LPR x FPR
- [10] : [5]+[6]+[7]+[8]+[9]
- [11] : Q minimum
- [12] : [11]/[10]
- [13] : Kriteria Faktor K
- [14] : Q80
- [15] : [14]/[10]
- [16] : Kriteria Faktor K



Gambar 4.5 Grafik Neraca Air Tahun 2010

Sumber : Hasil Analisa

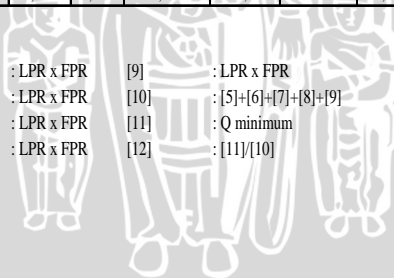
Tabel 4.28 Neraca Air dan Pembagian Air Kondisi Eksisting Tahun 2011

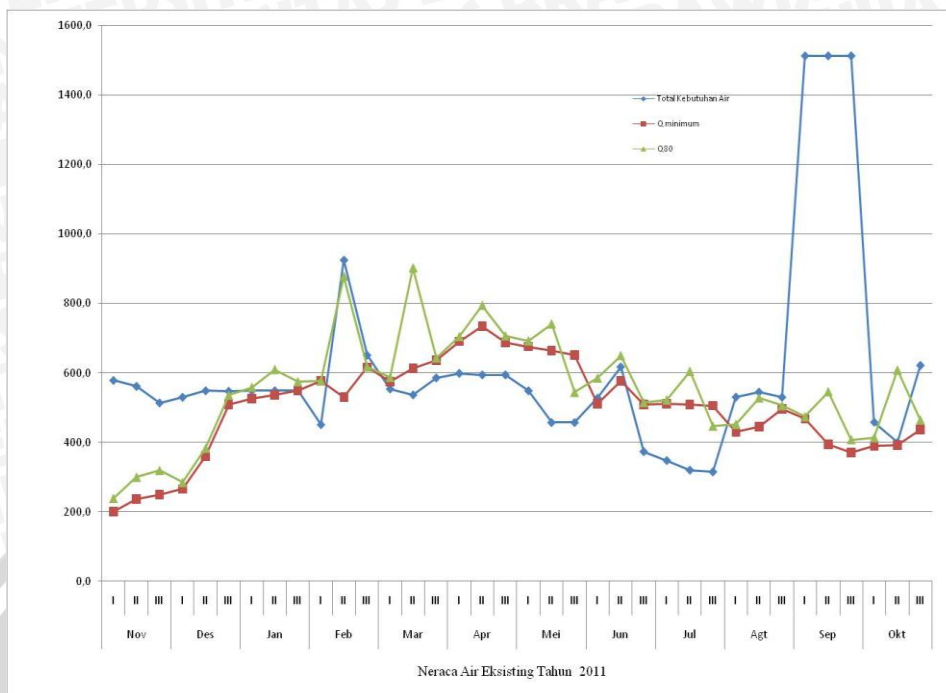
| Bulan | Periode | FPR  | Kebutuhan Air (lt/dt) |           |                      |          |       |          |          | Total Keb. Air | Q Minimum | Evaluasi Pembagian Air |          | Q80   | Evaluasi Pembagian Air |  |
|-------|---------|------|-----------------------|-----------|----------------------|----------|-------|----------|----------|----------------|-----------|------------------------|----------|-------|------------------------|--|
|       |         |      | Padi Rendeng          | Padi Gadu | Padi Gadu Tidak Ijin | Palawija | Tebu  | Tembakau | Faktor K |                |           | Kriteria Faktor K      | Faktor K |       | Kriteria Faktor K      |  |
| [1]   | [2]     | [3]  | [4]                   | [5]       | [6]                  | [7]      | [8]   | [9]      | [10]     | [11]           | [12]      | [13]                   | [14]     | [15]  | [16]                   |  |
| Nov   | I       | 0,12 | 551,250               | 26,880    | 0,000                | 0,000    | 0,000 | 0,460    | 578,590  | 201            | 0,347     | Rotasi                 | 239      | 0,413 | Rotasi                 |  |
|       | II      | 0,13 | 542,947               | 18,200    | 0,000                | 0,000    | 0,000 | 0,499    | 561,646  | 238            | 0,424     | Rotasi                 | 300      | 0,535 | Rotasi                 |  |
|       | III     | 0,12 | 511,011               | 2,400     | 0,000                | 0,000    | 0,000 | 0,460    | 513,871  | 250            | 0,487     | Rotasi                 | 319      | 0,622 | Rotasi                 |  |
| Des   | I       | 0,12 | 529,688               | 0,000     | 0,000                | 0,000    | 0,000 | 0,460    | 530,148  | 266            | 0,502     | Rotasi                 | 285      | 0,538 | Rotasi                 |  |
|       | II      | 0,12 | 548,403               | 0,000     | 0,000                | 0,000    | 0,000 | 0,460    | 548,864  | 361            | 0,658     | Rotasi                 | 383      | 0,698 | Rotasi                 |  |
|       | III     | 0,12 | 547,148               | 0,000     | 0,000                | 0,000    | 0,000 | 0,460    | 547,609  | 510            | 0,931     | Rotasi                 | 536      | 0,978 | Rotasi                 |  |
| Jan   | I       | 0,12 | 548,403               | 0,000     | 0,000                | 0,000    | 0,000 | 0,460    | 548,864  | 527            | 0,960     | Rotasi                 | 559      | 1,018 | Terus menerus          |  |
|       | II      | 0,12 | 548,403               | 0,000     | 0,000                | 0,000    | 0,000 | 0,460    | 548,864  | 537            | 0,978     | Rotasi                 | 610      | 1,111 | Terus menerus          |  |
|       | III     | 0,12 | 548,403               | 0,000     | 0,000                | 0,000    | 0,000 | 0,460    | 548,864  | 550            | 1,002     | Terus menerus          | 575      | 1,048 | Terus menerus          |  |
| Feb   | I       | 0,18 | 450,519               | 0,000     | 0,000                | 0,000    | 0,000 | 0,690    | 451,209  | 577            | 1,279     | Terus menerus          | 577      | 1,279 | Terus menerus          |  |
|       | II      | 0,39 | 371,145               | 552,084   | 0,000                | 0,000    | 0,000 | 1,496    | 924,724  | 530            | 0,573     | Rotasi                 | 878      | 0,949 | Rotasi                 |  |
|       | III     | 0,29 | 478,162               | 171,826   | 0,000                | 0,000    | 0,000 | 1,112    | 651,101  | 617            | 0,948     | Rotasi                 | 617      | 0,948 | Rotasi                 |  |
| Mar   | I       | 0,07 | 42,702                | 511,050   | 0,000                | 0,000    | 0,000 | 0,268    | 554,021  | 575            | 1,038     | Terus menerus          | 587      | 1,059 | Terus menerus          |  |
|       | II      | 0,10 | 53,683                | 482,899   | 0,000                | 0,000    | 0,000 | 0,384    | 536,966  | 614            | 1,143     | Terus menerus          | 902      | 1,680 | Terus menerus          |  |
|       | III     | 0,12 | 1,673                 | 583,701   | 0,000                | 0,000    | 0,000 | 0,460    | 585,834  | 637            | 1,087     | Terus menerus          | 643      | 1,098 | Terus menerus          |  |
| April | I       | 0,12 | 0,000                 | 598,537   | 0,000                | 0,000    | 0,000 | 0,460    | 598,997  | 691            | 1,154     | Terus menerus          | 704      | 1,176 | Terus menerus          |  |
|       | II      | 0,13 | 0,000                 | 594,104   | 0,000                | 0,000    | 0,000 | 0,499    | 594,602  | 735            | 1,236     | Terus menerus          | 794      | 1,336 | Terus menerus          |  |
|       | III     | 0,13 | 0,000                 | 594,104   | 0,000                | 0,000    | 0,000 | 0,499    | 594,602  | 688            | 1,157     | Terus menerus          | 706      | 1,188 | Terus menerus          |  |
| Mei   | I       | 0,12 | 0,000                 | 548,403   | 0,000                | 0,000    | 0,000 | 0,460    | 548,864  | 676            | 1,232     | Terus menerus          | 692      | 1,261 | Terus menerus          |  |
|       | II      | 0,10 | 0,000                 | 457,003   | 0,000                | 0,000    | 0,000 | 0,384    | 457,386  | 664            | 1,452     | Terus menerus          | 741      | 1,620 | Terus menerus          |  |
|       | III     | 0,10 | 0,000                 | 457,003   | 0,000                | 0,000    | 0,000 | 0,384    | 457,386  | 652            | 1,425     | Terus menerus          | 544      | 1,190 | Terus menerus          |  |
| Jun   | I       | 0,18 | 0,000                 | 397,812   | 0,000                | 128,934  | 0,000 | 0,690    | 527,436  | 512            | 0,971     | Rotasi                 | 585      | 1,110 | Terus menerus          |  |
|       | II      | 0,36 | 0,000                 | 171,925   | 0,000                | 444,308  | 0,000 | 1,381    | 617,614  | 577            | 0,934     | Rotasi                 | 650      | 1,052 | Terus menerus          |  |
|       | III     | 0,30 | 0,000                 | 0,000     | 0,000                | 372,947  | 0,000 | 0,900    | 373,847  | 509            | 1,362     | Terus menerus          | 515      | 1,377 | Terus menerus          |  |
| Jul   | I       | 0,28 | 0,000                 | 0,000     | 0,000                | 348,084  | 0,000 | 0,000    | 348,084  | 511            | 1,468     | Terus menerus          | 522      | 1,501 | Terus menerus          |  |
|       | II      | 0,23 | 0,000                 | 0,000     | 0,000                | 320,474  | 0,000 | 0,000    | 320,474  | 509            | 1,588     | Terus menerus          | 605      | 1,887 | Terus menerus          |  |
|       | III     | 0,22 | 0,000                 | 0,000     | 0,000                | 315,419  | 0,000 | 0,000    | 315,419  | 506            | 1,604     | Terus menerus          | 447      | 1,417 | Terus menerus          |  |
| Agt   | I       | 0,37 | 0,000                 | 0,000     | 0,000                | 529,233  | 0,000 | 1,419    | 530,652  | 430            | 0,810     | Rotasi                 | 452      | 0,853 | Rotasi                 |  |
|       | II      | 0,38 | 0,000                 | 0,000     | 0,000                | 543,536  | 0,000 | 1,457    | 544,994  | 446            | 0,818     | Rotasi                 | 528      | 0,969 | Rotasi                 |  |
|       | III     | 0,41 | 0,000                 | 0,000     | 0,000                | 528,538  | 0,000 | 1,572    | 530,110  | 496            | 0,936     | Rotasi                 | 506      | 0,955 | Rotasi                 |  |
| Sep   | I       | 1,65 | 0,000                 | 1512,711  | 0,000                | 0,000    | 0,000 | 0,000    | 1512,711 | 468            | 0,309     | Rotasi                 | 474      | 0,313 | Rotasi                 |  |
|       | II      | 1,65 | 0,000                 | 1512,711  | 0,000                | 0,000    | 0,000 | 0,000    | 1512,711 | 394            | 0,260     | Rotasi                 | 546      | 0,000 | Rotasi                 |  |
|       | III     | 1,65 | 0,000                 | 1512,711  | 0,000                | 0,000    | 0,000 | 0,000    | 1512,711 | 372            | 0,246     | Rotasi                 | 408      | 0,000 | Rotasi                 |  |
| Okt   | I       | 0,83 | 455,196               | 0,000     | 0,000                | 0,000    | 0,000 | 3,183    | 458,379  | 390            | 0,851     | Rotasi                 | 414      | 0,904 | Rotasi                 |  |
|       | II      | 0,69 | 397,035               | 0,000     | 0,000                | 0,000    | 0,000 | 2,646    | 399,681  | 393            | 0,983     | Rotasi                 | 608      | 1,521 | Terus menerus          |  |
|       | III     | 0,22 | 620,992               | 0,000     | 0,000                | 0,000    | 0,000 | 0,844    | 621,836  | 437            | 0,703     | Rotasi                 | 465      | 0,747 | Rotasi                 |  |

Sumber : Hasil Perhitungan

Keterangan:

- |     |              |     |             |      |                       |      |                     |
|-----|--------------|-----|-------------|------|-----------------------|------|---------------------|
| [1] | : Bulan      | [5] | : LPR x FPR | [9]  | : LPR x FPR           | [13] | : Kriteria Faktor K |
| [2] | : Periode    | [6] | : LPR x FPR | [10] | : [5]+[6]+[7]+[8]+[9] | [14] | : Q80               |
| [3] | : FPR (Data) | [7] | : LPR x FPR | [11] | : Q minimum           | [15] | : [14]/[10]         |
| [4] | : LPR x FPR  | [8] | : LPR x FPR | [12] | : [11]/[10]           | [16] | : Kriteria Faktor K |





Gambar 4.6 Grafik Neraca Air Tahun 2011  
Sumber : Hasil Analisa

Tabel 4.29 Neraca Air dan Pembagian Air Kondisi Eksisting Tahun 2012

| Bulan | Periode | FPR  | Kebutuhan Air (l/dt) |           |                      |          |       |          | Total Keb. Air | Q Minimum | Evaluasi Pembagian Air |                   |      |          |                   |
|-------|---------|------|----------------------|-----------|----------------------|----------|-------|----------|----------------|-----------|------------------------|-------------------|------|----------|-------------------|
|       |         |      | Padi Rendeng         | Padi Gadu | Padi Gadu Tidak Ijin | Palawija | Tebu  | Tembakau |                |           | Faktor K               | Kriteria Faktor K | Q80  | Faktor K | Kriteria Faktor K |
| [1]   | [2]     | [3]  | [4]                  | [5]       | [6]                  | [7]      | [8]   | [9]      | [10]           | [11]      | [12]                   | [13]              | [14] | [15]     | [16]              |
| Nov   | I       | 0,11 | 612,569              | 0,000     | 0,000                | 0,000    | 0,000 | 0,000    | 612,569        | 201       | 0,328                  | Rotasi            | 239  | 0,390    | Rotasi            |
|       | II      | 0,10 | 564,803              | 0,000     | 0,000                | 0,000    | 0,000 | 0,000    | 564,803        | 238       | 0,421                  | Rotasi            | 300  | 0,532    | Rotasi            |
|       | III     | 0,11 | 511,919              | 0,000     | 0,000                | 0,000    | 0,000 | 0,000    | 511,919        | 250       | 0,488                  | Rotasi            | 319  | 0,624    | Rotasi            |
| Des   | I       | 0,12 | 539,685              | 0,000     | 0,000                | 0,000    | 0,000 | 0,000    | 539,685        | 266       | 0,493                  | Rotasi            | 285  | 0,528    | Rotasi            |
|       | II      | 0,12 | 549,658              | 0,000     | 0,000                | 0,000    | 0,000 | 0,000    | 549,658        | 361       | 0,657                  | Rotasi            | 383  | 0,697    | Rotasi            |
|       | III     | 0,11 | 503,853              | 0,000     | 0,000                | 0,000    | 0,000 | 0,000    | 503,853        | 510       | 1,012                  | Terus menerus     | 536  | 1,063    | Terus menerus     |
| Jan   | I       | 0,11 | 502,703              | 0,000     | 0,000                | 0,000    | 0,000 | 0,422    | 503,125        | 527       | 1,047                  | Terus menerus     | 559  | 1,110    | Terus menerus     |
|       | II      | 0,11 | 502,703              | 0,000     | 0,000                | 0,000    | 0,000 | 0,422    | 503,125        | 537       | 1,067                  | Terus menerus     | 610  | 1,212    | Terus menerus     |
|       | III     | 0,13 | 582,774              | 0,000     | 0,000                | 0,000    | 0,000 | 0,499    | 583,273        | 550       | 0,943                  | Rotasi            | 575  | 0,986    | Rotasi            |
| Feb   | I       | 0,14 | 555,863              | 0,000     | 0,000                | 0,000    | 0,000 | 0,537    | 556,400        | 577       | 1,037                  | Terus menerus     | 577  | 1,037    | Terus menerus     |
|       | II      | 0,16 | 452,889              | 18,875    | 0,000                | 0,000    | 0,000 | 0,614    | 472,378        | 530       | 1,122                  | Terus menerus     | 878  | 1,858    | Terus menerus     |
|       | III     | 0,16 | 274,411              | 380,684   | 0,000                | 0,000    | 0,000 | 0,614    | 655,708        | 617       | 0,941                  | Rotasi            | 617  | 0,941    | Rotasi            |
| Mar   | I       | 0,09 | 32,001               | 378,777   | 0,000                | 0,000    | 0,000 | 3,835    | 414,613        | 575       | 1,387                  | Terus menerus     | 587  | 1,415    | Terus menerus     |
|       | II      | 0,09 | 0,000                | 494,154   | 0,000                | 0,000    | 0,000 | 0,345    | 494,499        | 614       | 1,242                  | Terus menerus     | 902  | 1,824    | Terus menerus     |
|       | III     | 0,10 | 0,000                | 514,275   | 0,000                | 0,000    | 0,000 | 0,384    | 514,658        | 637       | 1,238                  | Terus menerus     | 643  | 1,249    | Terus menerus     |
| April | I       | 0,13 | 0,000                | 615,719   | 0,000                | 0,000    | 0,000 | 0,499    | 616,217        | 691       | 1,121                  | Terus menerus     | 704  | 1,143    | Terus menerus     |
|       | II      | 0,13 | 0,000                | 594,104   | 0,000                | 0,000    | 0,000 | 0,499    | 594,602        | 735       | 1,236                  | Terus menerus     | 794  | 1,336    | Terus menerus     |
|       | III     | 0,09 | 0,000                | 411,303   | 0,000                | 0,000    | 0,000 | 0,345    | 411,648        | 688       | 1,671                  | Terus menerus     | 706  | 1,716    | Terus menerus     |
| Mei   | I       | 0,11 | 502,703              | 0,000     | 0,000                | 0,370    | 0,000 | 0,000    | 503,073        | 676       | 1,344                  | Terus menerus     | 692  | 1,376    | Terus menerus     |
|       | II      | 0,12 | 548,403              | 0,000     | 0,000                | 0,404    | 0,000 | 0,000    | 548,807        | 664       | 1,210                  | Terus menerus     | 741  | 1,350    | Terus menerus     |
|       | III     | 0,12 | 548,403              | 0,000     | 0,000                | 0,404    | 0,000 | 0,000    | 548,807        | 652       | 1,188                  | Terus menerus     | 544  | 0,992    | Rotasi            |
| Jun   | I       | 0,12 | 548,403              | 0,000     | 0,000                | 0,404    | 0,000 | 0,000    | 548,807        | 512       | 0,933                  | Rotasi            | 585  | 1,066    | Terus menerus     |
|       | II      | 0,14 | 400,183              | 0,000     | 0,000                | 0,471    | 0,000 | 0,000    | 400,653        | 577       | 1,440                  | Terus menerus     | 650  | 1,622    | Terus menerus     |
|       | III     | 0,37 | 212,815              | 0,000     | 0,000                | 375,357  | 0,000 | 0,000    | 588,172        | 509       | 0,865                  | Rotasi            | 515  | 0,875    | Rotasi            |





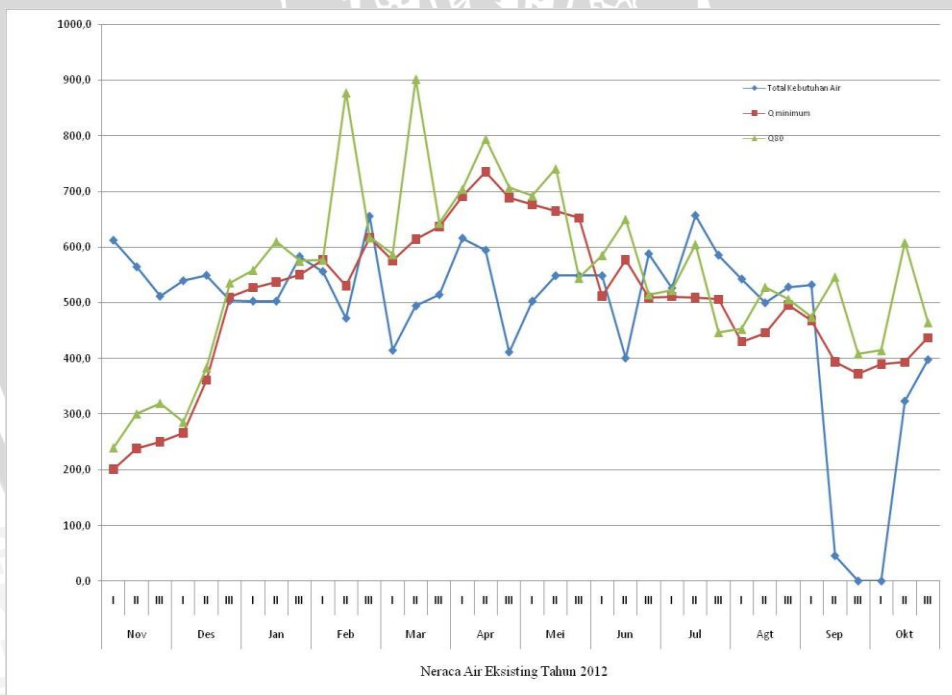
Lanjutan Tabel 4.29

| Bulan | Periode | FPR  | Kebutuhan Air (lt/dt) |           |                      |          |       |          | Total Keb. Air | Q Minimum | Evaluasi Pembagian Air |                   | Q80  | Evaluasi Pembagian Air |                   |
|-------|---------|------|-----------------------|-----------|----------------------|----------|-------|----------|----------------|-----------|------------------------|-------------------|------|------------------------|-------------------|
|       |         |      | Padi Rendeng          | Padi Gadu | Padi Gadu Tidak Ijin | Palawija | Tebu  | Tembakau |                |           | Faktor K               | Kriteria Faktor K |      | Faktor K               | Kriteria Faktor K |
| [1]   | [2]     | [3]  | [4]                   | [5]       | [6]                  | [7]      | [8]   | [9]      | [10]           | [11]      | [12]                   | [13]              | [14] | [15]                   | [16]              |
| Jul   | I       | 0,39 | 0,000                 | 0,000     | 0,000                | 525,052  | 0,000 | 1,496    | 526,547        | 511       | 0,970                  | Rotasi            | 522  | 0,992                  | Rotasi            |
|       | II      | 0,46 | 0,000                 | 0,000     | 0,000                | 655,387  | 0,000 | 1,764    | 657,151        | 509       | 0,775                  | Rotasi            | 605  | 0,920                  | Rotasi            |
|       | III     | 0,41 | 0,000                 | 0,000     | 0,000                | 584,149  | 0,000 | 1,572    | 585,722        | 506       | 0,864                  | Rotasi            | 447  | 0,763                  | Rotasi            |
| Agt   | I       | 0,38 | 0,000                 | 0,000     | 0,000                | 541,406  | 0,000 | 1,457    | 542,864        | 430       | 0,792                  | Rotasi            | 452  | 0,833                  | Rotasi            |
|       | II      | 0,35 | 0,000                 | 0,000     | 0,000                | 498,664  | 0,000 | 1,342    | 500,006        | 446       | 0,892                  | Rotasi            | 528  | 1,056                  | Terus menerus     |
|       | III     | 0,37 | 0,000                 | 0,000     | 0,000                | 527,159  | 0,000 | 1,419    | 528,578        | 496       | 0,938                  | Rotasi            | 506  | 0,957                  | Rotasi            |
| Sep   | I       | 0,41 | 0,000                 | 0,000     | 0,000                | 530,836  | 0,000 | 1,572    | 532,408        | 468       | 0,879                  | Rotasi            | 474  | 0,890                  | Rotasi            |
|       | II      | 0,15 | 0,000                 | 0,000     | 0,000                | 44,895   | 0,000 | 0,575    | 45,470         | 394       | 8,665                  | Terus menerus     | 546  | 12,012                 | Terus menerus     |
|       | III     | 0,00 | 0,000                 | 0,000     | 0,000                | 0,000    | 0,000 | 0,000    | 0,000          | 372       | 0,000                  | Rotasi            | 408  | 0,000                  | Rotasi            |
| Okt   | I       | 0,00 | 0,000                 | 0,000     | 0,000                | 0,000    | 0,000 | 0,000    | 0,000          | 390       | 0,000                  | Rotasi            | 414  | 0,000                  | Rotasi            |
|       | II      | 0,38 | 321,882               | 0,000     | 0,000                | 0,000    | 0,000 | 1,457    | 323,339        | 393       | 1,215                  | Terus menerus     | 608  | 1,880                  | Terus menerus     |
|       | III     | 0,28 | 396,753               | 0,000     | 0,000                | 0,000    | 0,000 | 1,074    | 397,827        | 437       | 1,098                  | Terus menerus     | 465  | 1,168                  | Terus menerus     |

Sumber : Hasil Perhitungan

Keterangan:

- [1] : Bulan
- [2] : Periode
- [3] : FPR (Data)
- [4] : LPR x FPR
- [5] : LPR x FPR
- [6] : LPR x FPR
- [7] : LPR x FPR
- [8] : LPR x FPR
- [9] : LPR x FPR
- [10] : [5]+[6]+[7]+[8]+[9]
- [11] : Q minimum
- [12] : [11]/[10]
- [13] : Kriteria Faktor K
- [14] : Q80
- [15] : [14]/[10]
- [16] : Kriteria Faktor K



Gambar 4.7 Grafik Neraca Air Tahun 2012

Sumber : Hasil Analisa



#### 4.4 Pola Tanam Rencana

Setelah memperhatikan evaluasi kondisi pola tanam eksisting selama 5 tahun (2008-2012) periode tanam, maka pola tanam yang direncanakan adalah meningkatkan intensitas tanam padi rencana dengan mempertimbangkan pola tanam yang sesuai dengan Rencana Tata Tanam Global (RTTG) yaitu Padi - Padi+Palawija - Padi+Palawija, seperti pada Tabel 4.30 untuk Pola Tanam Rencana J.I. Pirang Kiri dan Tabel 4.31 untuk Pola Tanam Rencana J.I. Pirang Kanan

Tabel 4.30 Pola Tanam Rencana Jaringan Irigasi Pirang Kiri

| Musim Tanam                             | Jenis Tanaman | Rencana |        | Nov |    |     | Des |    |     | Jan |    |     | Feb |    |     | Mar |    |     | Apr |    |     | Mei |    |     | Juni |    |     | Jul |    |     | Agt |         |         | Sep  |       |  | Okt    |         |  | Intensitas Tanam (%) |  |
|---|---------------|---------|--------|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|------|----|-----|-----|----|-----|-----|---------|---------|------|-------|--|--------|---------|--|----------------------|--|
|   |               | Ha      | (%)    | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I    | II | III | I   | II | III | I   | II      | III     | Padi | Total |  |        |         |  |                      |  |
| Luas Baku Sawah D.I. Pirang Kiri 819 Ha |               |         |        |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |         |         |      |       |  |        |         |  |                      |  |
| MH                                      | Padi          | 819     | 100,00 | PL  | PL |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |         |         |      |       |  | 100    | 100,000 |  |                      |  |
|   | Palawija dll  | 0       | 0,00   |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |         |         |      |       |  |        |         |  |                      |  |
| MK I                                    | Padi          | 519     | 63,37  |     |    |     |     |    |     |     |    |     | PL  | PL |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |         |         |      |       |  | 63,370 | 100,000 |  |                      |  |
|   | Palawija dll  | 300     | 36,63  |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |         |         |      |       |  |        |         |  |                      |  |
| MK II                                   | Padi          | 119     | 14,53  |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     | PL   | PL |     |     |    |     |     |         |         |      |       |  | 14,530 | 100,000 |  |                      |  |
|   | Palawija dll  | 700     | 85,47  |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |         |         |      |       |  |        |         |  |                      |  |
| Total                                   |               |         |        |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     | 177,900 | 300,000 |      |       |  |        |         |  |                      |  |

Sumber: Hasil Analisa

Keterangan :



Tabel 4.31 Pola Tanam Rencana Jaringan Irigasi Pirang Kanan

| Musim Tanam                              | Jenis Tanaman | Rencana |        | Nov |    |     | Des |    |     | Jan |    |     | Feb |    |     | Mar |    |     | Apr |    |     | Mei |    |     | Juni |    |     | Jul |    |     | Agt |         |         | Sep  |       |  | Okt    |         |  | Intensitas Tanam (%) |         |
|--|---------------|---------|--------|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|------|----|-----|-----|----|-----|-----|---------|---------|------|-------|--|--------|---------|--|----------------------|---------|
|  |               | Ha      | (%)    | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I    | II | III | I   | II | III | I   | II      | III     | Padi | Total |  |        |         |  |                      |         |
| Luas Baku Sawah D.I. Pirang Kanan 495 Ha |               |         |        |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |         |         |      |       |  |        |         |  |                      |         |
| MH                                       | Padi          | 495     | 100,00 | PL  | PL |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |         |         |      |       |  |        |         |  | 100                  | 100,000 |
|  | Palawija dll  | 0       | 0,00   |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |         |         |      |       |  |        |         |  |                      |         |
| MK I                                     | Padi          | 395     | 79,80  |     |    |     |     |    |     |     |    |     | PL  | PL |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |         |         |      |       |  |        |         |  | 79,798               | 100,000 |
|  | Palawija dll  | 100     | 20,20  |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |         |         |      |       |  |        |         |  |                      |         |
| MK II                                    | Padi          | 55      | 11,11  |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     | PL   | PL |     |     |    |     |     |         |         |      |       |  | 11,111 | 100,000 |  |                      |         |
|  | Palawija dll  | 440     | 88,89  |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |         |         |      |       |  |        |         |  |                      |         |
| Total                                    |               |         |        |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     | 190,909 | 300,000 |      |       |  |        |         |  |                      |         |

Sumber: Hasil Analisa

Keterangan :



Dapat dilihat pada Tabel 4.30 dan Tabel 4.31 bahwa rencana intensitas tanam padi ditingkatkan yang semula 197,529% (Tabel 4.13) menjadi 368,809%. Pada pola tanam rencana keduanya, Musim Tanam I (MH) dimulai pada bulan November-Maret, Musim Tanam II (MK I) dimulai pada bulan Maret-Juli II dan Musim Tanam III (MK II) dimulai pada bulan Juli-Oktober.

#### 4.5 Rencana Pembagian Air

Pembagian air irigasi direncanakan dibagi menjadi dua alternatif yaitu sistem penggenangan terus menerus (*Stagnant Constant Level*) dan sistem terputus-putus (*Intermittent Flow Sytem*). Untuk pembagian air secara terputus-putus sendiri yang digunakan adalah Metode SRI (*System of Rice Intensification*).

Pembagian air direncanakan dengan menggunakan dasar perhitungan satuan Faktor Palawija Relatif (FPR) berdasarkan nilai-nilai yang diperoleh sesuai dengan kondisi lokasi penelitian. Fase kegiatan tanam yang direncanakan untuk masing-masing musim tanam adalah sebagai berikut:

- Masa pembibitan dengan perbandingan luas tanaman 5% selama  $\pm 30$  hari.
- Masa pengolahan tanah dengan perbandingan luas tanaman 95% selama  $\pm 30$  hari.
- Masa pemeliharaan tanaman dengan perbandingan luas tanaman 100% selama  $\pm 90$  hari.
- Masa tanam palawija dan tembakau dengan nilai LPR yang sama yaitu  $\pm 90$  hari.

Nilai LPR untuk masing-masing tanaman dapat dilihat pada tabel 4.12, sedangkan nilai FPR rencana merupakan hasil analisa dari evaluasi selama 5 tahun (2008-2012) yaitu sebagai berikut:

- Musim Tanam I = 0,080
- Musim Tanam II = 0,075
- Musim Tanam III = 0,483

Pembagian air direncanakan berdasarkan kriteria faktor K, berikut rumus untuk menghitung faktor K:

$$K = \frac{\text{debit yang tersedia di intake}}{\text{debit yang dibutuhkan}}$$

Pada kondisi air cukup (faktor  $K \geq 1$ ), pembagian dan pemberian air adalah sama dengan rencana pembagian dan pemberian air. Pada saat terjadi kekurangan air ( $K < 1$ ), pembagian dan pemberian air disesuaikan dengan nilai faktor K yang sudah dihitung.



Data yang diperlukan untuk perhitungan faktor K adalah :

- Data rencana tanam 10 harian.
- Data debit andalan periode 10 harian

Tabel 4.32 Kriteria Pembagian Air dengan Faktor K

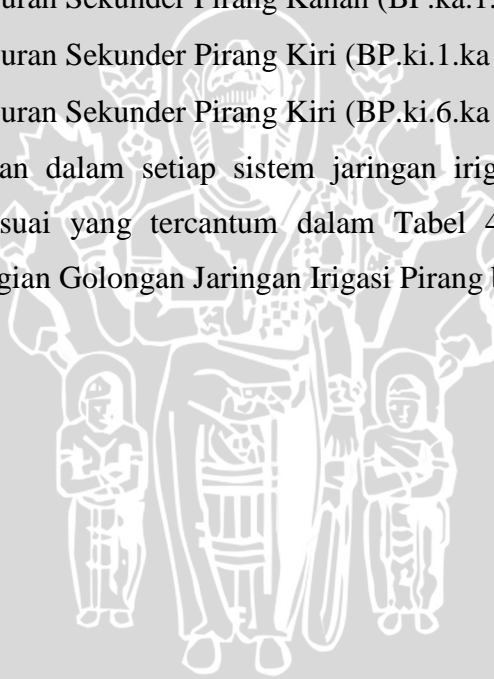
|   |                        |                             |
|---|------------------------|-----------------------------|
| 1 | Faktor K = 0.75 – 1.00 | Terus-menerus               |
| 2 | Faktor K = 0.50 – 0.75 | Giliran di saluran tersier  |
| 3 | Faktor K = 0.25 – 0.50 | Giliran di saluran sekunder |
| 4 | Faktro K < 0.25        | Giliran di saluran Primer   |

Sumber: Kunaifi, 2010

Pembagian blok golongan didasarkan kondisi topografi dan Bangunan Bagi agar memudahkan dalam pembagian dan pemberian air irigasi. Jaringan Irigasi Pirang dibagi menjadi 3 golongan yaitu :

- Golongan I : Saluran Sekunder Pirang Kanan (BP.ka.1.ki s/d BP.ka.7.ki)
- Golongan II : Saluran Sekunder Pirang Kiri (BP.ki.1.ka s/d BP.ki.5.ka.2)
- Golongan III : Saluran Sekunder Pirang Kiri (BP.ki.6.ka s/d BP.ki.16.ka.2)

Pembagian golongan dalam setiap sistem jaringan irigasi melalui bangunan bendung direncanakan sesuai yang tercantum dalam Tabel 4.33 dan seperti pada Gambar 4.8 Skema Pembagian Golongan Jaringan Irigasi Pirang berikut ini:

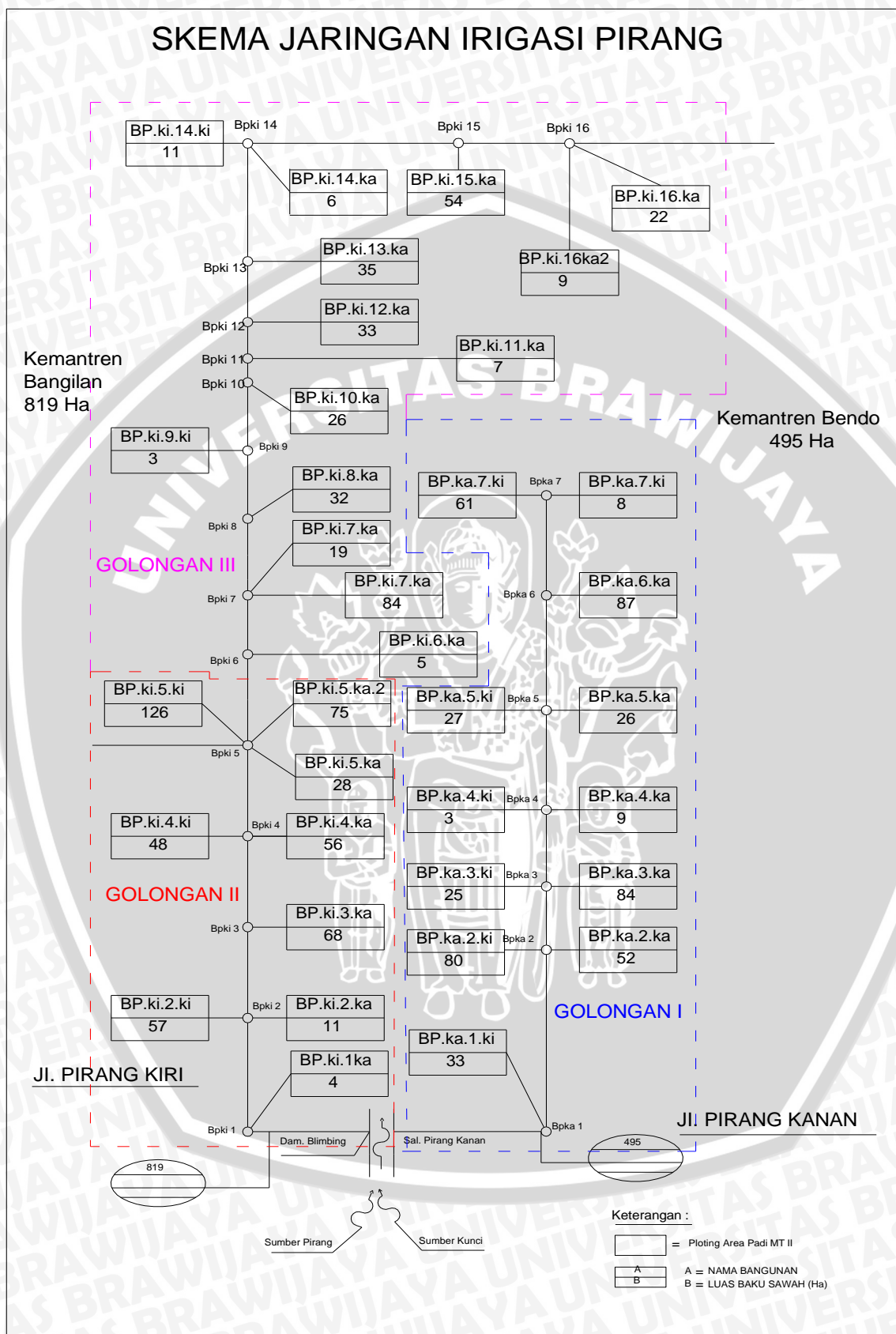


Tabel 4.33 Pembagian Golongan Jaringan Irigasi Pirang

| Golongan                | Saluran                       | Bangunan Sadap | Luas (Ha) | Desa |
|-------------------------|-------------------------------|----------------|-----------|------|
| [1]                     | [2]                           | [3]            | [4]       | [5]  |
| Jaringan Irigasi Pirang |                               |                | 1314      |      |
| I                       | Saluran Sekunder Pirang Kanan | BP.ka.1.ki     | 33        |      |
|                         |                               | BP.ka.2.ki     | 80        |      |
|                         |                               | BP.ka.2.ka     | 52        |      |
|                         |                               | BP.ka.3.ki     | 25        |      |
|                         |                               | BP.ka.3.ka     | 84        |      |
|                         |                               | BP.ka.4.ki     | 3         |      |
|                         |                               | BP.ka.4.ka     | 9         |      |
|                         |                               | BP.ka.5.ki     | 27        |      |
|                         |                               | BP.ka.5.ka     | 26        |      |
|                         |                               | BP.ka.6.ka     | 87        |      |
|                         |                               | BP.ka.7.ki     | 61        |      |
|                         |                               | BP.ka.7.ki     | 8         |      |
| Total Golongan I        |                               |                | 495       |      |
| II                      | Saluran Sekunder Pirang Kiri  | BP.ki.1.ka     | 4         |      |
|                         |                               | BP.ki.2.ki     | 57        |      |
|                         |                               | BP.ki.2.ka     | 11        |      |
|                         |                               | BP.ki.3.ka     | 68        |      |
|                         |                               | BP.ki.4.ki     | 48        |      |
|                         |                               | BP.ki.4.ka     | 56        |      |
|                         |                               | BP.ki.5.ki     | 126       |      |
|                         |                               | BP.ki.5.ka     | 28        |      |
|                         |                               | BP.ki.5.ka.2   | 75        |      |
| Total Golongan II       |                               |                | 473       |      |
| III                     | Saluran Sekunder Pirang Kiri  | BP.ki.6.ka     | 5         |      |
|                         |                               | BP.ki.7.ka     | 84        |      |
|                         |                               | BP.ki.7.ka     | 19        |      |
|                         |                               | BP.ki.8.ka     | 32        |      |
|                         |                               | BP.ki.9.ki     | 3         |      |
|                         |                               | BP.ki.10.ka    | 26        |      |
|                         |                               | BP.ki.11.ka    | 7         |      |
|                         |                               | BP.ki.12.ka    | 33        |      |
|                         |                               | BP.ki.13.ka    | 35        |      |
|                         |                               | BP.ki.14.ki    | 11        |      |
|                         |                               | BP.ki.14.ka    | 6         |      |
|                         |                               | BP.ki.15.ka    | 54        |      |
|                         |                               | BP.ki.16.ka    | 22        |      |
|                         |                               | BP.ki.16.ka.2  | 9         |      |
| Total Golongan III      |                               |                | 346       |      |

Sumber : UPT Pengelolaan SDA Wilayah Sungai Bengawan Solo

Berikut adalah skema pembagian golongan Jaringan Irigasi Pirang :



Gambar 4.8 Skema Pembagian Golongan Jaringan Irigasi Pirang



#### 4.5.1 Alternatif Pola Tanam

Pada rencana pola tanam, penulis membuat dua alternatif. Pada Alternatif I, awal tanam untuk tiap Golongan (I,II,III) dibuat sama yaitu dimulai pada Bulan November. Untuk lebih jelasnya lihat Tabel 4.34

Tabel 4.34 Pola Tanam Rencana Alternatif I

| Uraian   | Golongan   | Nov |    |     | Des |    |     | Jan |    |     | Feb |    |     | Mar |    |     | Apr |    |     | Mei |    |     | Juni |    |     | Jul |    |     | Agt |    |     | Sep |    |     | Okt |  |  |
|--|------------|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|------|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|--|--|
|  |            | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I    | II | III | I   | II | III | I   | II | III | I   | II | III |     |  |  |
| Pola Tanam Rencana I<br>Padi-Padi-Palawija-Padi-Palawija | I, II, III | PL  | PL | PL  |     |    |     |     |    |     |     |    |     | PL  | PL | PL  |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |  |  |
|  |            |     | PL | PL  | PL  |    |     |     |    |     |     |    |     |     | PL | PL  | PL  |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |  |  |
|  |            |     |    | PL  | PL  | PL |     |     |    |     |     |    |     |     |    | PL  | PL  | PL |     |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |  |  |
|  |            |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |  |  |
|  |            |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |  |  |

Sumber: Hasil Analisa

Pada Alternatif II, awal tanam untuk tiap Golongan (I,II,III) dibedakan. Untuk Golongan I awal tanam dimulai Bulan November periode I, untuk Golongan II awal tanam dimulai Bulan November periode III selanjutnya untuk Golongan III awal tanam dimulai Bulan Desember I. Untuk lebih jelasnya lihat Tabel 4.32

Tabel 4.35 Pola Tanam Rencana Alternatif II

| Uraian  | Golongan | Nov |    |     | Des |    |     | Jan |    |     | Feb |    |     | Mar |    |     | Apr |    |     | Mei |    |     | Juni |    |     | Jul |    |     | Agt |    |     | Sep |    |     | Okt |  |  |
|---|----------|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|------|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|--|--|
|   |          | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I    | II | III | I   | II | III | I   | II | III | I   | II | III |     |  |  |
| Pola Tanam Rencana Gol. I<br>Padi-Padi-Palawija-Padi-Palawija | I        | PL  | PL | PL  |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |  |  |
|   |          |     | PL | PL  | PL  |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |  |  |
|   |          |     |    | PL  | PL  | PL |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |  |  |
|   |          |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |  |  |
|   |          |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |  |  |
|   |          |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |  |  |
|   |          |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |  |  |
|   |          |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |  |  |
|   |          |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |  |  |
|   |          |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |  |  |

Sumber: Hasil Analisa

#### 4.5.2 Perhitungan Kebutuhan Air Irigasi dengan Metode Terus-menerus

##### (Konvensional)

Nilai FPR dan LPR dalam perhitungan ini berdasarkan hasil evaluasi kriteria FPR dan LPR pada subbab 4.3.2. Sedangkan rencana pola tanam Jaringan Irigasi Pirang dapat dilihat pada Tabel 4.30 dan Tabel 4.31. Berikut adalah perhitungan pemberian air irigasi dengan Metode Konvensional :

##### 1. Fase Kegiatan Tanaman Padi

- a. Persemaian selama ± 30 hari dengan perbandingan 5% luas lahan = 0,05
- b. Pengolahan tanah selama ± 30 hari dengan perbandingan 95% luas lahan = 0,95
- c. Pemeliharaan tanaman ± 90 hari dengan perbandingan 100% luas lahan = 1

2. Satuan Pengali Palawija Relatif sesuai dengan kondisi eksisting (Tabel 4.24)

- a. Persemaian = 19,661 Ha.Pol
- b. Pengolahan Tanah = 5,7943 Ha.Pol
- c. Pemeliharaan fase vegetatif = 3,248 Ha.Pol
- d. Pemeliharaan fase generatif = 3,490 Ha.Pol
- e. Palawija = 1,121 Ha.Pol

3. Faktor Palawija Relatif

- a. Musim Tanam I : 0,080 ltr/dt/ha.pol
- b. Musim Tanam II : 0,075 ltr/dt/ha.pol
- c. Musim Tanam III : 0,483 ltr/dt/ha.pol

Contoh perhitungan air irigasi rencana dengan menggunakan FPR-LPR adalah sebagai berikut:

- Musim Tanam I, Golongan I = 495 Ha baku sawah
- Rencana tanaman padi 100% luas lahan
  - Rencana pembibitan 5% dari luas tanaman padi
- Kebutuhan air irigasi fase pembibitan
  - = FPR x koef.LPR x Luas area pembibitan
  - = 0,080 x 19,661 x 0,05 x (495 x 100%)
  - = 38,929 lt/dt
- Kebutuhan air irigasi fase garap tanah
  - = FPR x koef.LPR x Luas area garap tanah
  - = 0,080 x 5,7943 x 0,95 x (495 x 100%)
  - = 217,980 lt/dt
- Kebutuhan air irigasi fase vegetatif
  - = FPR x koef.LPR x Luas area tanam padi
  - = 0,080 x 3,248 x 1 x (495 x 100%)
  - = 128,608 lt/dt
- Kebutuhan air irigasi fase generatif
  - = FPR x koef.LPR x Luas area tanam padi
  - = 0,080 x 3,490 x 1 x (495 x 100%)
  - = 138,212 lt/dt
- Kebutuhan air irigasi palawija (tidak ada rencana tanam)

Perhitungan selengkapnya dapat dilihat pada Tabel 4.36 dan Tabel 4.37 berikut ini :

Tabel 4.36 Perhitungan Kebutuhan Air Metode Konvensional J.I. Pirang Kanan

| Musim Tanam                         | Uraian                        | Kebutuhan Air Irigasi (lt/dt) |         |
|-------------------------------------|-------------------------------|-------------------------------|---------|
|                                     |                               | Gol.I                         |         |
| Luas Baku sawah Pirang Kanan 495 Ha |                               | (495 Ha)                      |         |
| I                                   | Padi 100,00 %                 |                               |         |
|                                     | - Pembibitan                  |                               | 38,929  |
|                                     | - Garap Tanah                 |                               | 217,980 |
|                                     | - Pemeliharaan Fase Vegetatif |                               | 128,608 |
|                                     | - Pemeliharaan Fase Generatif |                               | 138,212 |
|                                     | Palawija dll 0,00 %           |                               | 0,000   |
| II                                  | Padi 79,80 %                  |                               |         |
|                                     | - Pembibitan                  |                               | 29,123  |
|                                     | - Garap Tanah                 |                               | 163,072 |
|                                     | - Pemeliharaan Fase Vegetatif |                               | 96,213  |
|                                     | - Pemeliharaan Fase Generatif |                               | 103,398 |
|                                     | Palawija dll 20,20 %          |                               | 8,407   |
| III                                 | Padi 11,11 %                  |                               |         |
|                                     | - Pembibitan                  |                               | 26,115  |
|                                     | - Garap Tanah                 |                               | 146,228 |
|                                     | - Pemeliharaan Fase Vegetatif |                               | 86,275  |
|                                     | - Pemeliharaan Fase Generatif |                               | 92,717  |
|                                     | Palawija dll 88,89 %          |                               | 229,066 |

Sumber : Hasil Perhitungan

Tabel 4.37 Perhitungan Kebutuhan Air Metode Konvensional J.I. Pirang Kiri

| Musim Tanam                        | Uraian                        | Kebutuhan Air Irigasi (lt/dt) |          |
|------------------------------------|-------------------------------|-------------------------------|----------|
|                                    |                               | Gol.II                        | Gol.III  |
| Luas Baku sawah Pirang Kiri 819 Ha |                               | (473 Ha)                      | (346 Ha) |
| I                                  | Padi 100,00 %                 |                               |          |
|                                    | - Pembibitan                  | 37,199                        | 27,211   |
|                                    | - Garap Tanah                 | 208,292                       | 152,366  |
|                                    | - Pemeliharaan Fase Vegetatif | 122,892                       | 89,896   |
|                                    | - Pemeliharaan Fase Generatif | 132,070                       | 96,609   |
|                                    | Palawija dll 0,00 %           | 0,000                         | 0,000    |
| II                                 | Padi 63,37 %                  |                               |          |
|                                    | - Pembibitan                  | 22,100                        | 16,166   |
|                                    | - Garap Tanah                 | 123,745                       | 90,519   |
|                                    | - Pemeliharaan Fase Vegetatif | 73,009                        | 53,407   |
|                                    | - Pemeliharaan Fase Generatif | 78,462                        | 57,395   |
|                                    | Palawija dll 36,63 %          | 14,566                        | 10,655   |
| III                                | Padi 14,53 %                  |                               |          |
|                                    | - Pembibitan                  | 32,632                        | 23,871   |
|                                    | - Garap Tanah                 | 182,723                       | 133,662  |
|                                    | - Pemeliharaan Fase Vegetatif | 107,806                       | 78,861   |
|                                    | - Pemeliharaan Fase Generatif | 115,857                       | 84,750   |
|                                    | Palawija dll 85,47 %          | 218,885                       | 160,115  |

Sumber : Hasil Perhitungan



Untuk perhitungan neraca air, penulis membaginya menjadi dua alternatif seperti yang dijelaskan pada sub bab 4.5.1. Berikut contoh perhitungan neraca air Metode Konvensional Jaringan Irigasi Pirang Kanan :

- Alternatif I

- Bulan : November
- Periode : I
- Golongan : I
- Keb.Air Irigasi (lt/dt) :
  - Padi =  $(2/3 \times \text{Kebutuhan Air Pemeliharaan Fase Generatif MT III}) + (1/3 \times \text{Kebutuhan Air Pembibitan MT I}) + (1/3 \times \text{Kebutuhan Air Garap Tanah MT I})$   
=  $(2/3 \times 92,717) + (1/3 \times 38,929) + (1/3 \times 217,980)$   
= 147,448 lt/dt
  - Palawija = 0
  - Total Keb.air Gol I =  $147,448 + 0 = 147,448$  lt/dt
- $Q_{80}$  November I = 90 (Tabel 4.6)
- Faktor K =  $\frac{90}{147,448}$   
= 0,611 , maka Gilir Tersier

Perhitungan selanjutnya dapat dilihat pada Tabel 4.38 yang menunjukkan neraca air dan pembagian air Metode Konvensional (Alternatif I) dan Tabel 4.39 yang menunjukkan neraca air dan pembagian air Metode Konvensional (Alternatif II)

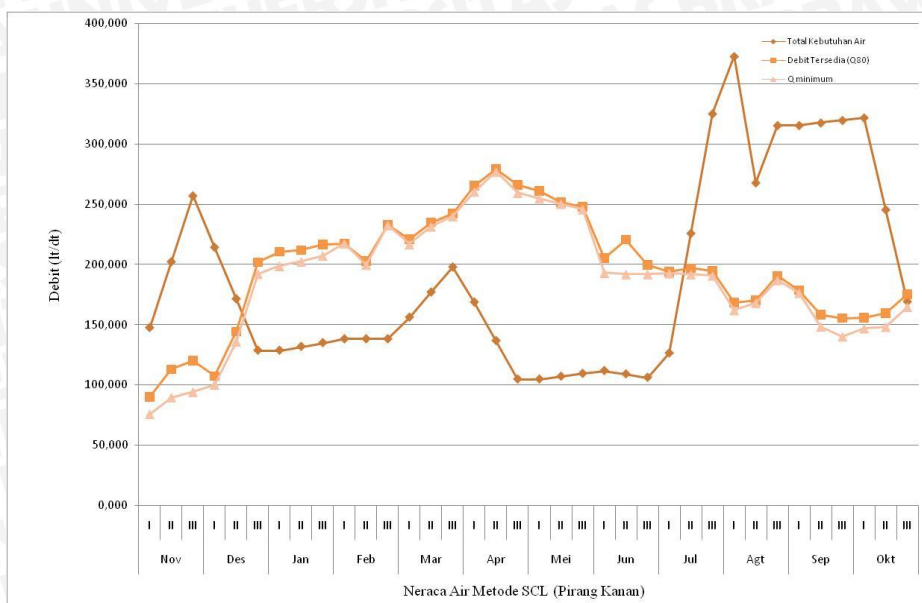
Tabel 4.38 Neraca Air dan Pembagian Air Metode Konvensional (Alternatif I)

| Bulan | Periode | Pola Tanam |     |     | Kebutuhan Air Irigasi Gol. I (lt/dt) |          |         | Evaluasi Pembagian Air |          |                | Kebutuhan Air Irigasi Gol. II (lt/dt) |          |                | Kebutuhan Air Irigasi Gol. III (lt/dt) |          |         | Total   |          | Evaluasi Pembagian Air |          |      | Evaluasi Pembagian Air |                |      |          |                |
|-------|---------|------------|-----|-----|--------------------------------------|----------|---------|------------------------|----------|----------------|---------------------------------------|----------|----------------|--|----------|---------|---------|----------|------------------------|----------|------|------------------------|----------------|------|----------|----------------|
|       |         |            |     |     | Padi                                 | Palawija | Total   | Q                      | Faktor K | Kriteria       | Q80                                   | Faktor K | Kriteria       | Padi                                   | Palawija | Total   | Padi    | Palawija | Total                  | Keb. Air | Q    | Faktor K               | Kriteria       | Q80  | Faktor K | Kriteria       |
|       |         |            |     |     |                                      |          |         |                        |          |                |                                       |          |                |  |          |         |         |          |                        |          |      |                        |                |      |          |                |
| [1]   | [2]     | [3]        | [4] | [5] | [6]                                  | [7]      | [8]     | [9]                    | [10]     | [11]           | [12]                                  | [13]     | [14]           | [15]                                   | [16]     | [17]    | [18]    | [19]     | [20]                   | [21]     | [22] | [23]                   | [24]           | [25] |          |                |
| Nov   | I       | PL         | G   | G   | 147,372                              | -        | 147,372 | 76                     | 0,514    | Gilir Tersier  | 90                                    | 0,611    | Gilir Tersier  | 158,973                                | -        | 158,973 | 116,289 | -        | 116,289                | 275,262  | 125  | 0,455                  | Gilir Sekunder | 149  | 0,542    | Gilir Tersier  |
|       | II      | PL         | PL  | G   | 202,140                              | -        | 202,140 | 90                     | 0,444    | Gilir Sekunder | 113                                   | 0,559    | Gilir Tersier  | 202,232                                | -        | 202,232 | 147,933 | -        | 147,933                | 350,165  | 148  | 0,424                  | Gilir Sekunder | 187  | 0,534    | Gilir Tersier  |
|       | III     | PL         | PL  | PL  | 256,909                              | -        | 256,909 | 94                     | 0,367    | Gilir Sekunder | 120                                   | 0,468    | Gilir Sekunder | 245,491                                | -        | 245,491 | 179,577 | -        | 179,577                | 425,067  | 156  | 0,367                  | Gilir Sekunder | 199  | 0,468    | Gilir Sekunder |
| Des   | I       | V          | PL  | PL  | 214,132                              | -        | 214,132 | 100                    | 0,468    | Gilir Sekunder | 107                                   | 0,502    | Gilir Tersier  | 204,615                                | -        | 204,615 | 149,676 | -        | 149,676                | 354,290  | 166  | 0,468                  | Gilir Sekunder | 178  | 0,502    | Gilir Tersier  |
|       | II      | V          | V   | PL  | 171,354                              | -        | 171,354 | 136                    | 0,794    | Terus menerus  | 144                                   | 0,842    | Terus menerus  | 163,739                                | -        | 163,739 | 119,775 | -        | 119,775                | 283,514  | 225  | 0,794                  | Terus menerus  | 239  | 0,842    | Terus menerus  |
|       | III     | V          | V   | V   | 128,577                              | -        | 128,577 | 192                    | 1,494    | Terus menerus  | 202                                   | 1,570    | Terus menerus  | 122,863                                | -        | 122,863 | 89,874  | -        | 89,874                 | 212,737  | 318  | 1,494                  | Terus menerus  | 334  | 1,570    | Terus menerus  |
| Jan   | I       | V          | V   | V   | 128,577                              | -        | 128,577 | 199                    | 1,544    | Terus menerus  | 210                                   | 1,637    | Terus menerus  | 122,863                                | -        | 122,863 | 89,874  | -        | 89,874                 | 212,737  | 328  | 1,544                  | Terus menerus  | 348  | 1,635    | Terus menerus  |
|       | II      | G          | V   | V   | 131,732                              | -        | 131,732 | 202                    | 1,536    | Terus menerus  | 212                                   | 1,608    | Terus menerus  | 125,877                                | -        | 125,877 | 92,079  | -        | 92,079                 | 217,957  | 335  | 1,536                  | Terus menerus  | 351  | 1,608    | Terus menerus  |
|       | III     | G          | G   | V   | 134,887                              | -        | 134,887 | 207                    | 1,536    | Terus menerus  | 217                                   | 1,606    | Terus menerus  | 128,892                                | -        | 128,892 | 94,285  | -        | 94,285                 | 223,177  | 343  | 1,536                  | Terus menerus  | 358  | 1,606    | Terus menerus  |
| Feb   | I       | G          | G   | G   | 138,042                              | -        | 138,042 | 217                    | 1,575    | Terus menerus  | 217                                   | 1,575    | Terus menerus  | 131,907                                | -        | 131,907 | 96,490  | -        | 96,490                 | 228,397  | 360  | 1,575                  | Terus menerus  | 360  | 1,575    | Terus menerus  |
|       | II      | G          | G   | G   | 138,042                              | -        | 138,042 | 200                    | 1,446    | Terus menerus  | 203                                   | 1,470    | Terus menerus  | 131,907                                | -        | 131,907 | 96,490  | -        | 96,490                 | 228,397  | 330  | 1,446                  | Terus menerus  | 336  | 1,470    | Terus menerus  |
|       | III     | G          | G   | G   | 138,042                              | -        | 138,042 | 232                    | 1,684    | Terus menerus  | 233                                   | 1,684    | Terus menerus  | 131,907                                | -        | 131,907 | 96,490  | -        | 96,490                 | 228,397  | 385  | 1,684                  | Terus menerus  | 385  | 1,684    | Terus menerus  |
| Mar   | I       | PL         | G   | G   | 156,093                              | -        | 156,093 | 217                    | 1,388    | Terus menerus  | 221                                   | 1,416    | Terus menerus  | 136,553                                | -        | 136,553 | 99,888  | -        | 99,888                 | 236,441  | 358  | 1,516                  | Terus menerus  | 366  | 1,547    | Terus menerus  |
|       | II      | PL         | PL  | G   | 174,144                              | 2,802    | 176,946 | 231                    | 1,307    | Terus menerus  | 235                                   | 1,327    | Terus menerus  | 141,198                                | 4,855    | 146,054 | 103,287 | 3,552    | 106,839                | 252,893  | 383  | 1,513                  | Terus menerus  | 389  | 1,536    | Terus menerus  |
|       | III     | PL         | PL  | PL  | 192,195                              | 5,605    | 197,800 | 240                    | 1,213    | Terus menerus  | 242                                   | 1,225    | Terus menerus  | 145,844                                | 9,711    | 155,555 | 106,685 | 7,104    | 113,789                | 269,344  | 397  | 1,474                  | Terus menerus  | 401  | 1,488    | Terus menerus  |
| Apr   | I       | V          | PL  | PL  | 160,193                              | 8,407    | 168,600 | 260                    | 1,544    | Terus menerus  | 265                                   | 1,573    | Terus menerus  | 121,560                                | 14,566   | 136,127 | 88,921  | 10,655   | 99,577                 | 235,703  | 431  | 1,827                  | Terus menerus  | 439  | 1,862    | Terus menerus  |
|       | II      | V          | V   | PL  | 128,191                              | 8,407    | 136,598 | 277                    | 2,027    | Terus menerus  | 279                                   | 2,043    | Terus menerus  | 97,276                                 | 14,566   | 111,842 | 71,158  | 10,655   | 81,813                 | 193,655  | 458  | 2,366                  | Terus menerus  | 462  | 2,384    | Terus menerus  |
|       | III     | V          | V   | V   | 96,189                               | 8,407    | 104,597 | 259                    | 2,478    | Terus menerus  | 266                                   | 2,543    | Terus menerus  | 72,992                                 | 14,566   | 87,558  | 53,394  | 10,655   | 64,049                 | 151,607  | 429  | 2,829                  | Terus menerus  | 440  | 2,903    | Terus menerus  |
| Mei   | I       | V          | V   | V   | 96,189                               | 8,407    | 104,597 | 255                    | 2,435    | Terus menerus  | 261                                   | 2,493    | Terus menerus  | 72,992                                 | 14,566   | 87,558  | 53,394  | 10,655   | 64,049                 | 151,607  | 421  | 2,779                  | Terus menerus  | 431  | 2,846    | Terus menerus  |
|       | II      | G          | V   | V   | 98,550                               | 8,407    | 106,957 | 250                    | 2,339    | Terus menerus  | 251                                   | 2,351    | Terus menerus  | 74,783                                 | 14,566   | 89,349  | 54,704  | 10,655   | 65,359                 | 154,709  | 414  | 2,675                  | Terus menerus  | 416  | 2,690    | Terus menerus  |
|       | III     | G          | G   | V   | 100,910                              | 8,407    | 109,317 | 246                    | 2,247    | Terus menerus  | 248                                   | 2,268    | Terus menerus  | 76,574                                 | 14,566   | 91,140  | 56,014  | 10,655   | 66,669                 | 157,810  | 406  | 2,575                  | Terus menerus  | 410  | 2,599    | Terus menerus  |
| Jun   | I       | G          | G   | G   | 103,270                              | 8,407    | 111,677 | 193                    | 1,727    | Terus menerus  | 205                                   | 1,836    | Terus menerus  | 78,365                                 | 14,566   | 92,931  | 57,324  | 10,655   | 67,979                 | 160,911  | 319  | 1,983                  | Terus menerus  | 339  | 2,108    | Terus menerus  |
|       | II      | G          | G   | G   | 103,270                              | 5,605    | 108,875 | 192                    | 1,761    | Terus menerus  | 220                                   | 2,025    | Terus menerus  | 78,365                                 | 9,711    | 88,076  | 57,324  | 7,104    | 64,428                 | 152,504  | 360  | 2,358                  | Terus menerus  | 365  | 2,392    | Terus menerus  |
|       | III     | G          | G   | G   | 103,270                              | 2,802    | 106,073 | 192                    | 1,808    | Terus menerus  | 200                                   | 1,881    | Terus menerus  | 78,365                                 | 4,855    | 83,220  | 57,324  | 3,552    | 60,876                 | 144,096  | 317  | 2,202                  | Terus menerus  | 330  | 2,291    | Terus menerus  |
| Jul   | I       | PL         | G   | G   | 126,294                              | -        | 126,294 | 193                    | 1,524    | Terus menerus  | 194                                   | 1,536    | Terus menerus  | 124,028                                | -        | 124,028 | 90,727  | -        | 90,727                 | 214,755  | 319  | 1,483                  | Terus menerus  | 321  | 1,494    | Terus menerus  |
|       | II      | PL         | PL  | G   | 149,319                              | 76,355   | 225,674 | 192                    | 0,850    | Terus menerus  | 197                                   | 0,872    | Terus menerus  | 169,692                                | 72,962   | 242,653 | 124,130 | 53,372   | 177,501                | 420,155  | 317  | 0,755                  | Terus menerus  | 326  | 0,775    | Terus menerus  |
|       | III     | PL         | PL  | PL  | 172,343                              | 152,711  | 325,054 | 191                    | 0,586    | Gilir Tersier  | 194                                   | 0,598    | Gilir Tersier  | 215,355                                | 145,924  | 361,279 | 157,532 | 106,743  | 264,276                | 625,554  | 315  | 0,504                  | Gilir Tersier  | 322  | 0,514    | Gilir Tersier  |
| Agt   | I       | V          | PL  | PL  | 143,647                              | 229,066  | 372,713 | 162                    | 0,435    | Gilir Sekunder | 168                                   | 0,452    | Gilir Sekunder | 179,497                                | 218,885  | 398,382 | 131,302 | 160,115  | 291,417                | 689,799  | 268  | 0,389                  | Gilir Sekunder | 278  | 0,404    | Gilir Sekunder |
|       | II      | V          | V   | PL  | 114,950                              | 152,711  | 267,661 | 168                    | 0,628    | Gilir Tersier  | 170                                   | 0,637    | Gilir Tersier  | 143,639                                | 218,885  | 362,524 | 105,072 | 160,115  | 265,187                | 627,711  | 278  | 0,443                  | Gilir Sekunder | 282  | 0,449    | Gilir Sekunder |
|       | III     | V          | V   | V   | 86,254                               | 229,066  | 315,320 | 187                    | 0,593    | Gilir Tersier  | 191                                   | 0,605    | Gilir Tersier  | 107,780                                | 218,885  | 326,666 | 78,842  | 160,115  | 238,956                | 565,622  | 309  | 0,547                  | Gilir Tersier  | 315  | 0,558    | Gilir Tersier  |
| Sep   | I       | V          | V   | V   | 86,254                               | 229,066  | 315,320 | 176                    | 0,559    | Gilir Tersier  | 179                                   | 0,566    | Gilir Tersier  | 107,780                                | 218,885  | 326,666 | 78,842  | 160,115  | 238,956                | 565,622  | 292  | 0,516                  | Gilir Tersier  | 295  | 0,522    | Gilir Tersier  |
|       | II      | G          | V   | V   | 88,370                               | 229,066  | 317,436 | 148                    | 0,468    | Gilir Sekunder | 158                                   | 0,499    | Gilir Sekunder | 110,425                                | 218,885  | 329,310 | 80,776  | 160,115  | 240,891                | 570,201  | 246  | 0,431                  | Gilir Sekunder | 262  | 0,459    | Gilir Sekunder |
|       | III     | G          | G   | V   | 90,487                               | 229,066  | 319,553 | 140                    | 0,439    | Gilir Sekunder | 155                                   | 0,486    | Gilir Sekunder | 113,070                                | 218,885  | 331,955 | 82,711  | 160,115  | 242,826                | 574,781  | 232  | 0,403                  | Gilir Sekunder | 254  | 0,442    | Gilir Sekunder |
| Okt   | I       | G          | G   | G   | 92,603                               | 229,066  | 321,669 | 147                    | 0,457    | Gilir Sekunder | 156                                   | 0,485    | Gilir Sekunder | 115,714                                | 218,885  | 334,600 | 84,645  | 160,115  | 244,760                | 579,360  | 243  | 0,420                  | Gilir Sekunder | 258  | 0,446    | Gilir Sekunder |
|       | II      | G          | G   | G   | 92,603                               | 152,711  | 245,314 | 148                    | 0,604    | Gilir Tersier  | 160                                   | 0,651    | Gilir Tersier  | 115,714                                | 145,924  | 261,638 | 84,645  | 106,743  | 191,388                | 453,026  | 245  | 0,541                  | Gilir Tersier  | 264  | 0,583    | Gilir Tersier  |
|       | III     | G          | G   | G   | 92,603                               | 76,355   | 168,959 | 165                    | 0,974    | Terus menerus  | 175                                   | 1,036    | Terus menerus  | 115,714                                | 72,962   | 188,676 | 84,645  | 53,372   | 138,017                | 326,693  | 272  | 0,834                  | Terus menerus  | 290  | 0,886    | Terus menerus  |

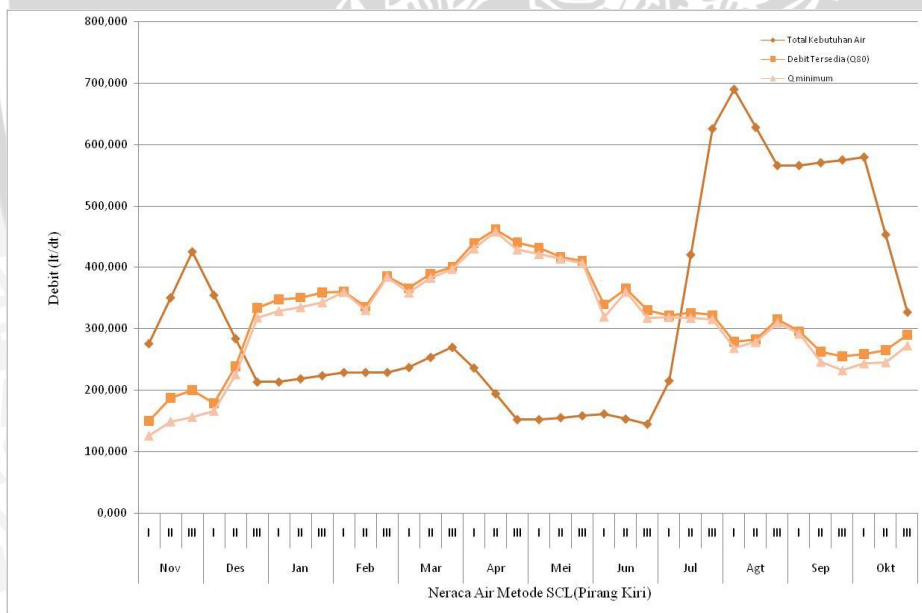
Sumber : Hasil Perhitungan

Keterangan:

- [1] : Bulan
- [2] : Periode
- [3] : Pola Tanam
- [4] : Keb.Air Padi Gol.I
- [5] : Keb.Air Palawija Gol.I
- [6] : [4]+[5]
- [7] : Q min 2008-2012
- [8] : [7]/[6]
- [9] : Kriteria Faktor K
- [10] : Q80 2008-2012
- [11] : [10]/[6]
- [12] : Kriteria Faktor K
- [13] : Keb.Air Padi Gol.II
- [14] : Keb.Air Palawija Gol.II
- [15] : [13]+[14]
- [16] : Keb.Air Padi Gol.III
- [17] : Keb.Air Palawija Gol.III
- [18] : [16]+[17]
- [19] : [15]+[18]
- [20] : Q min 2008-2012
- [21] : [20]/[18]
- [22] : Kriteria Faktor K
- [23] : Q80 2008-2012
- [24] : [23]/[20]
- [25] : Kriteria Faktor K



Gambar 4.9 Neraca Air Metode Konvensional J.I. Pirang Kanan (Alternatif I)  
 Sumber: Hasil Analisa



Gambar 4.10 Neraca Air Metode Konvensional J.I. Pirang Kiri (Alternatif I)  
 Sumber: Hasil Analisa



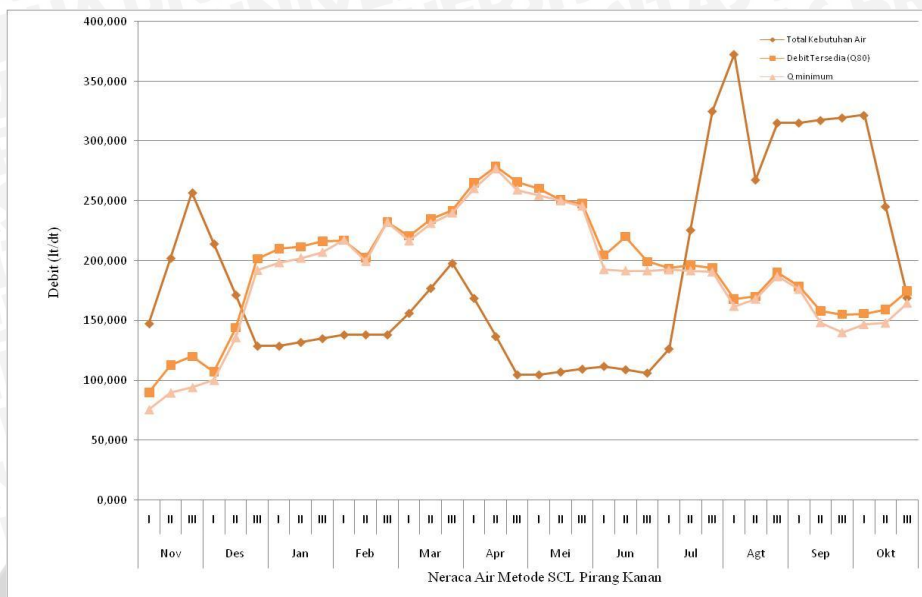


Tabel 4.39 Neraca Air dan Pembagian Air Metode Konvensional (Alternatif II)

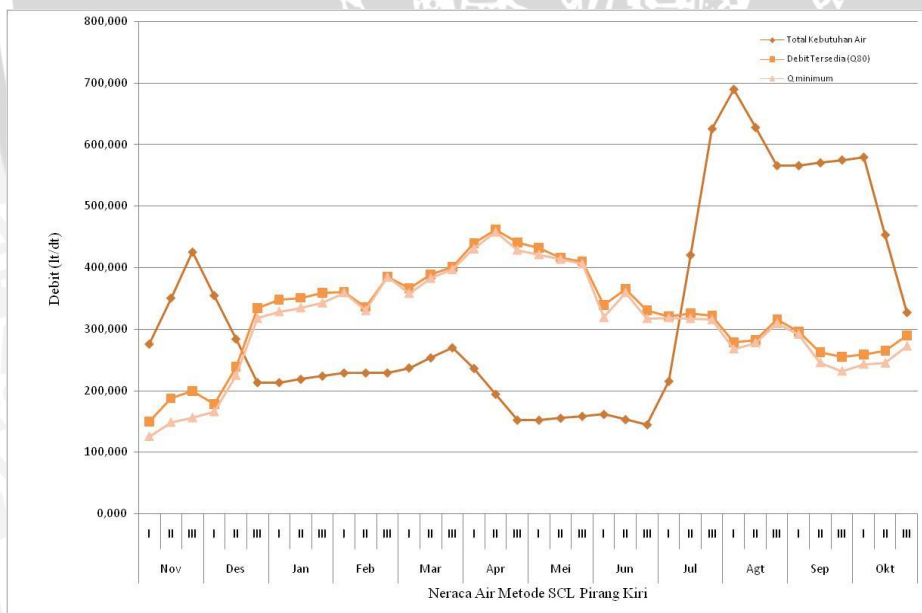
| Bulan | Periode | Pola Tanam Gol. I |     | Kebutuhan Air Irigasi Gol. I (lt/dt) |          | Total Keb. Air (lt/dt) | Q Min (lt/dt) | Evaluasi Pembagian Air |          | Q80 (lt/dt)    | Evaluasi Pembagian Air |          | Kebutuhan Air Irigasi Gol. II (lt/dt) |          |       | Kebutuhan Air Irigasi Gol. III (lt/dt) |          |         | Total Keb. Air (lt/dt) | Q Min (lt/dt) | Evaluasi Pembagian Air |          | Q80 (lt/dt)    | Evaluasi Pembagian Air |          |                |
|-------|---------|-------------------|-----|--------------------------------------|----------|------------------------|---------------|------------------------|----------|----------------|------------------------|----------|---------------------------------------|----------|-------|--|----------|---------|------------------------|---------------|------------------------|----------|----------------|------------------------|----------|----------------|
|       |         |                   |     | Padi                                 | Palawija |                        |               | Faktor K               | Kriteria |                | Faktor K               | Kriteria | Pola Tanam Gol. II                    |          |       | Pola Tanam Gol. III                    |          |         |                        |               | Faktor K               | Kriteria |                | Faktor K               | Kriteria |                |
|       |         |                   |     |                                      |          |                        |               |                        |          |                |                        |          | Padi                                  | Palawija | Total | Padi                                   | Palawija | Total   |                        |               |                        |          |                |                        |          | Padi           |
| [1]   | [2]     | [3]               | [4] | [5]                                  | [6]      | [7]                    | [8]           | [9]                    | [10]     | [11]           | [12]                   | [13]     | [14]                                  | [15]     | [16]  | [17]                                   | [18]     | [19]    | [20]                   | [21]          | [22]                   | [23]     | [24]           | [25]                   | [26]     | [27]           |
| Nov   | I       | PL                | G   | G                                    | 147,372  | -                      | 147,372       | 76                     | 0,514    | Gilir Tersier  | 90                     | 0,611    | Gilir Tersier                         |          |       | 0,000                                  |          |         | 0,000                  | 0,000         | 125                    | -        | -              | 149                    | -        | -              |
|       | II      | PL                | PL  | G                                    | 202,140  | -                      | 202,140       | 90                     | 0,444    | Gilir Sekunder | 113                    | 0,559    | Gilir Tersier                         | PL       | G     | G                                      | 158,973  | -       | 158,973                | 158,973       | 148                    | 0,933    | Terus menerus  | 187                    | 1,177    | Terus menerus  |
|       | III     | PL                | PL  | PL                                   | 256,909  | -                      | 256,909       | 94                     | 0,367    | Gilir Sekunder | 120                    | 0,468    | Gilir Sekunder                        | PL       | PL    | G                                      | 202,232  | -       | 202,232                | 147,933       | 156                    | 0,445    | Gilir Sekunder | 199                    | 0,569    | Gilir Tersier  |
| Des   | I       | V                 | PL  | PL                                   | 214,132  | -                      | 214,132       | 100                    | 0,468    | Gilir Sekunder | 107                    | 0,502    | Gilir Tersier                         | PL       | PL    | PL                                     | 245,491  | -       | 245,491                | 116,289       | 166                    | 0,458    | Gilir Sekunder | 178                    | 0,491    | Gilir Sekunder |
|       | II      | V                 | V   | PL                                   | 171,354  | -                      | 171,354       | 136                    | 0,794    | Terus menerus  | 144                    | 0,842    | Terus menerus                         | V        | PL    | PL                                     | 204,615  | -       | 204,615                | 179,577       | 225                    | 0,586    | Gilir Tersier  | 239                    | 0,621    | Gilir Tersier  |
|       | III     | V                 | V   | V                                    | 128,577  | -                      | 128,577       | 192                    | 1,494    | Terus menerus  | 202                    | 1,570    | Terus menerus                         | V        | V     | PL                                     | 163,739  | -       | 163,739                | 149,676       | 318                    | 1,014    | Terus menerus  | 334                    | 1,066    | Terus menerus  |
| Jan   | I       | V                 | V   | V                                    | 128,577  | -                      | 128,577       | 199                    | 1,544    | Terus menerus  | 210                    | 1,637    | Terus menerus                         | V        | V     | V                                      | 122,863  | -       | 122,863                | 119,775       | 328                    | 1,354    | Terus menerus  | 348                    | 1,433    | Terus menerus  |
|       | II      | G                 | V   | V                                    | 131,732  | -                      | 131,732       | 202                    | 1,536    | Terus menerus  | 212                    | 1,608    | Terus menerus                         | V        | V     | V                                      | 122,863  | -       | 122,863                | 89,874        | 335                    | 1,573    | Terus menerus  | 351                    | 1,648    | Terus menerus  |
|       | III     | G                 | G   | V                                    | 134,887  | -                      | 134,887       | 207                    | 1,536    | Terus menerus  | 217                    | 1,606    | Terus menerus                         | G        | V     | V                                      | 125,877  | -       | 125,877                | 89,874        | 343                    | 1,589    | Terus menerus  | 358                    | 1,661    | Terus menerus  |
| Feb   | I       | G                 | G   | G                                    | 138,042  | -                      | 138,042       | 217                    | 1,575    | Terus menerus  | 217                    | 1,575    | Terus menerus                         | G        | G     | V                                      | 128,892  | -       | 128,892                | 79,024        | 360                    | 1,730    | Terus menerus  | 360                    | 1,730    | Terus menerus  |
|       | II      | G                 | G   | G                                    | 138,042  | -                      | 138,042       | 200                    | 1,446    | Terus menerus  | 203                    | 1,470    | Terus menerus                         | G        | G     | G                                      | 131,907  | -       | 131,907                | 68,174        | 330                    | 1,651    | Terus menerus  | 336                    | 1,678    | Terus menerus  |
|       | III     | G                 | G   | G                                    | 138,042  | -                      | 138,042       | 232                    | 1,684    | Terus menerus  | 233                    | 1,684    | Terus menerus                         | G        | G     | G                                      | 131,907  | -       | 131,907                | 96,490        | 385                    | 1,684    | Terus menerus  | 385                    | 1,684    | Terus menerus  |
| Mar   | I       | PL                | G   | G                                    | 156,093  | -                      | 156,093       | 217                    | 1,388    | Terus menerus  | 221                    | 1,416    | Terus menerus                         | G        | G     | G                                      | 131,907  | -       | 131,907                | 96,490        | 358                    | 1,569    | Terus menerus  | 366                    | 1,601    | Terus menerus  |
|       | II      | PL                | PL  | G                                    | 174,144  | 2,802                  | 176,946       | 231                    | 1,307    | Terus menerus  | 235                    | 1,327    | Terus menerus                         | PL       | G     | G                                      | 136,553  | 4,855   | 141,408                | 96,490        | 383                    | 1,585    | Terus menerus  | 389                    | 1,609    | Terus menerus  |
|       | III     | PL                | PL  | PL                                   | 192,195  | 5,605                  | 197,800       | 240                    | 1,213    | Terus menerus  | 242                    | 1,225    | Terus menerus                         | PL       | PL    | G                                      | 141,198  | 9,711   | 150,909                | 99,888        | 397                    | 1,539    | Terus menerus  | 401                    | 1,554    | Terus menerus  |
| Apr   | I       | V                 | PL  | PL                                   | 160,193  | 8,407                  | 168,600       | 260                    | 1,544    | Terus menerus  | 265                    | 1,573    | Terus menerus                         | PL       | PL    | PL                                     | 145,844  | 14,566  | 160,411                | 103,287       | 431                    | 1,570    | Terus menerus  | 439                    | 1,600    | Terus menerus  |
|       | II      | V                 | V   | PL                                   | 128,191  | 8,407                  | 136,598       | 277                    | 2,027    | Terus menerus  | 279                    | 2,043    | Terus menerus                         | V        | PL    | PL                                     | 121,560  | 14,566  | 136,127                | 35,562        | 462                    | 2,512    | Terus menerus  | 462                    | 2,532    | Terus menerus  |
|       | III     | V                 | V   | V                                    | 96,189   | 8,407                  | 104,597       | 259                    | 2,478    | Terus menerus  | 266                    | 2,543    | Terus menerus                         | V        | V     | PL                                     | 97,276   | 14,566  | 111,842                | 88,921        | 429                    | 2,028    | Terus menerus  | 440                    | 2,082    | Terus menerus  |
| Mei   | I       | V                 | V   | V                                    | 96,189   | 8,407                  | 104,597       | 255                    | 2,435    | Terus menerus  | 261                    | 2,493    | Terus menerus                         | V        | V     | V                                      | 72,992   | 14,566  | 87,558                 | 71,158        | 421                    | 2,488    | Terus menerus  | 431                    | 2,547    | Terus menerus  |
|       | II      | G                 | V   | V                                    | 98,550   | 8,407                  | 106,957       | 250                    | 2,339    | Terus menerus  | 251                    | 2,351    | Terus menerus                         | V        | V     | V                                      | 72,992   | 14,566  | 87,558                 | 53,394        | 414                    | 2,730    | Terus menerus  | 416                    | 2,745    | Terus menerus  |
|       | III     | G                 | G   | V                                    | 100,910  | 8,407                  | 109,317       | 246                    | 2,247    | Terus menerus  | 248                    | 2,268    | Terus menerus                         | G        | V     | V                                      | 74,783   | 14,566  | 89,349                 | 57,324        | 406                    | 2,583    | Terus menerus  | 410                    | 2,607    | Terus menerus  |
| Jun   | I       | G                 | G   | G                                    | 103,270  | 8,407                  | 111,677       | 193                    | 1,727    | Terus menerus  | 205                    | 1,836    | Terus menerus                         | G        | G     | V                                      | 76,574   | 14,566  | 91,140                 | 54,704        | 319                    | 2,039    | Terus menerus  | 339                    | 2,167    | Terus menerus  |
|       | II      | G                 | G   | G                                    | 103,270  | 5,605                  | 108,875       | 192                    | 1,761    | Terus menerus  | 200                    | 2,025    | Terus menerus                         | G        | G     | G                                      | 78,365   | 9,711   | 88,076                 | 56,014        | 360                    | 2,379    | Terus menerus  | 365                    | 2,412    | Terus menerus  |
|       | III     | G                 | G   | G                                    | 103,270  | 2,802                  | 106,073       | 192                    | 1,808    | Terus menerus  | 220                    | 1,881    | Terus menerus                         | G        | G     | G                                      | 78,365   | 4,855   | 83,220                 | 57,324        | 317                    | 2,202    | Terus menerus  | 330                    | 2,291    | Terus menerus  |
| Jul   | I       | PL                | G   | G                                    | 126,294  | -                      | 126,294       | 193                    | 1,524    | Terus menerus  | 194                    | 1,536    | Terus menerus                         | G        | G     | G                                      | 78,365   | -       | 78,365                 | 57,324        | 319                    | 2,347    | Terus menerus  | 321                    | 2,365    | Terus menerus  |
|       | II      | PL                | PL  | G                                    | 149,319  | 76,355                 | 225,674       | 192                    | 0,850    | Terus menerus  | 197                    | 0,872    | Terus menerus                         | PL       | G     | G                                      | 124,028  | 72,962  | 196,990                | 57,324        | 317                    | 1,031    | Terus menerus  | 326                    | 1,058    | Terus menerus  |
|       | III     | PL                | PL  | PL                                   | 172,343  | 152,711                | 325,054       | 191                    | 0,586    | Gilir Tersier  | 194                    | 0,598    | Gilir Tersier                         | PL       | PL    | G                                      | 169,692  | 145,924 | 315,615                | 90,727        | 315                    | 0,615    | Gilir Tersier  | 322                    | 0,627    | Gilir Tersier  |
| Agt   | I       | V                 | PL  | PL                                   | 143,647  | 229,066                | 372,713       | 162                    | 0,435    | Gilir Sekunder | 168                    | 0,452    | Gilir Sekunder                        | PL       | PL    | PL                                     | 215,355  | 218,885 | 434,240                | 124,130       | 268                    | 0,373    | Gilir Sekunder | 278                    | 0,388    | Gilir Sekunder |
|       | II      | V                 | V   | PL                                   | 114,950  | 152,711                | 267,661       | 168                    | 0,628    | Gilir Tersier  | 170                    | 0,637    | Gilir Tersier                         | V        | PL    | PL                                     | 179,497  | 218,885 | 398,382                | 157,532       | 278                    | 0,388    | Gilir Sekunder | 282                    | 0,394    | Gilir Sekunder |
|       | III     | V                 | V   | V                                    | 86,254   | 229,066                | 315,320       | 187                    | 0,593    | Gilir Tersier  | 191                    | 0,605    | Gilir Tersier                         | V        | V     | PL                                     | 143,639  | 218,885 | 362,524                | 131,302       | 309                    | 0,473    | Gilir Sekunder | 315                    | 0,482    | Gilir Sekunder |
| Sep   | I       | V                 | V   | V                                    | 86,254   | 229,066                | 315,320       | 176                    | 0,559    | Gilir Tersier  | 179                    | 0,566    | Gilir Tersier                         | V        | V     | V                                      | 107,780  | 218,885 | 326,666                | 105,072       | 292                    | 0,493    | Gilir Sekunder | 295                    | 0,499    | Gilir Sekunder |
|       | II      | G                 | V   | V                                    | 88,370   | 229,066                | 317,436       | 148                    | 0,468    | Gilir Sekunder | 158                    | 0,499    | Gilir Sekunder                        | V        | V     | V                                      | 107,780  | 218,885 | 326,666                | 78,842        | 246                    | 0,434    | Gilir Sekunder | 262                    | 0,463    | Gilir Sekunder |
|       | III     | G                 | G   | V                                    | 90,487   | 229,066                | 319,553       | 140                    | 0,439    | Gilir Sekunder | 155                    | 0,486    | Gilir Sekunder                        | G        | V     | V                                      | 110,425  | 218,885 | 329,310                | 78,842        | 232                    | 0,408    | Gilir Sekunder | 254                    | 0,448    | Gilir Sekunder |
| Okt   | I       | G                 | G   | G                                    | 92,603   | 229,066                | 321,669       | 147                    | 0,457    | Gilir Sekunder | 156                    | 0,485    | Gilir Sekunder                        | G        | G     | V                                      | 113,070  | 218,885 | 331,955                | 80,776        | 243                    | 0,424    | Gilir Sekunder | 258                    | 0,451    | Gilir Sekunder |
|       | II      | G                 | G   | G                                    | 92,603   | 152,711                | 245,314       | 148                    | 0,604    | Gilir Tersier  | 160                    | 0,651    | Gilir Tersier                         | G        | G     | G                                      | 115,714  | 145,924 | 261,638                | 82,711        | 245                    | 0,543    | Gilir Tersier  | 264                    | 0,586    | Gilir Tersier  |
|       | III     | G                 | G   | G                                    | 92,603   | 76,355                 | 168,959       | 165                    | 0,974    | Terus menerus  | 175                    | 1,036    | Terus menerus                         | G        | G     | G                                      | 115,714  | 72,962  | 188,676                | 84,645        | 272                    | 0,834    | Terus menerus  | 290                    | 0,886    | Terus menerus  |

Sumber : Hasil Perhitungan

- [1] : Bulan
- [2] : Periode
- [3] : Pola Tanam
- [4] : Keb. Air Padi Gol. I
- [5] : Keb. Air Palawija Gol. I
- [6] : [4]+[5]
- [7] : Q min 2008-2012
- [8] : [7]/[6]
- [9] : Kriteria Faktor K
- [10] : Q80 2008-2012
- [11] : [10]/[6]
- [12] : Kriteria Faktor K
- [13] : Pola Tanam Gol. II
- [14] : Keb. Air Padi Gol. II
- [15] : Keb. Air Palawija Gol. II
- [16] : [14]+[15]
- [17] : Pola Tanam Gol. III
- [18] : Keb. Air Padi Gol. III
- [19] : Keb. Air Palawija Gol. III
- [20] : [18]+[19]
- [21] : [16]+[20]
- [22] : Q min 2008-2012
- [23] : [22]/[21]
- [24] : Kriteria Faktor K
- [25] : Q80 2008-2012
- [26] : [25]/[21]
- [27] : Kriteria Faktor K



Gambar 4.11 Neraca Air Metode Konvensional J.I. Pirang Kanan (Alternatif II)  
 Sumber: Hasil Analisa



Gambar 4.12 Neraca Air Metode Konvensional J.I. Pirang Kiri (Alternatif II)  
 Sumber: Hasil Analisa

#### 4.5.3 Perhitungan Kebutuhan Air Irigasi dengan Metode SRI (*System of Rice Intensification*)

SRI (*System Rice Intensification*) adalah teknik budidaya padi yang mampu meningkatkan produktivitas padi dengan cara mengubah pengelolaan tanaman, tanah, air dan unsur hara. Konsep dasar SRI adalah :

- Pindah tanam satu bibit perlubang, usia sangat muda (7-14 hari setelah semai) dengan jarak tanam longgar (30 cm x 30 cm).
- Pemberian air irigasi terputus-putus tanpa penggenangan di petak sawah.
- Air diberikan pada saat tanah cukup kering (batas bawah) sampai genangan dangkal (batas atas). Setelah batas atas tercapai irigasi dihentikan dan genangan air di lahan dibiarkan berkurang hingga batas bawah kembali tercapai. Batas bawah dan batas atas bervariasi tergantung jenis tanah dan karakteristik agroekologi setempat.

Apabila konsep dasar dan metode SRI diterapkan secara benar, maka akan diperoleh panen padi lebih besar walaupun dengan mengurangi input eksternal (air, pupuk kimia dan sebagainya). Hal tersebut dapat menghemat air, benih, serta menuju pada padi organik.

Tanah yang terdapat di daerah studi merupakan tanah dengan tingkat perkolasi sedang atau rendah batas atas dan batas bawah irigasi mengacu pada metode yang biasa dilakukan petani di Jawa Barat seperti dijelaskan pada Bab II. Batas atas irigasi adalah macak-macak (pada fase vegetatif) atau genangan 2 cm (pada fase generatif). Batas bawah irigasi adalah saat kondisi di lahan terlihat retak rambut. Rincian perhitungan pemberian air metode SRI Jaringan Irigasi Pirang Kanan adalah sebagai berikut:

##### 1. Persemaian

Persemaian dilakukan dengan penggunaan wadah berupa kotak/besek/wonca/pipiti hal ini dimaksudkan untuk memudahkan pengangkutan dan penyeleksian benih. Dalam studi ini untuk lahan seluas satu hektar dibutuhkan wadah persemaian dengan ukuran 20 cm x 20 cm sebanyak 500 buah. Pemberian air diasumsikan genangan setinggi 0,5 cm (kondisi macak-macak). Contoh perhitungan persemaian sebagai berikut:

- Musim Tanam I, Golongan 1
- Luas persemaian =  $0,2 \times 0,2 \times 500 = 20 \text{ m}^2 = 0,002 \text{ Ha}$

$$\text{Persentase untuk tiap Hektar} = \frac{0,002}{1} \times 100\% = 0,2\%$$



- Kebutuhan air dihitung menggunakan rumus;

$$Q_1 = \frac{H \times A}{T} \times 10.000$$

$$Q_1 = \frac{0,005 \times 100\% \times 0,002 \times 495}{1} \times 10.000$$

$$Q_1 = 49,500 \text{ m}^3/\text{hari} = 0,573 \text{ lt/det}$$

## 2. Pengolahan Lahan

Untuk mendapat media tumbuh yang baik pengolahan lahan pada metode SRI lahan dioalah seperti tanam biasa (dibajak, digaru kemudian diratakan), tetapi pada saat digaru (pengolahan tanah kedua) dilakukan penaburan pupuk organik. Pada studi ini diberikan genangan setinggi 15 mm/hari (kondisi eksisting). Contoh perhitungan pengolahan lahan sebagai berikut:

- Musim Tanam I, Golongan 1

- Kebutuhan air

$$Q_1 = \frac{0,0015 \times 100\% \times 495}{1} \times 10.000$$

$$Q_1 = 74250,000 \text{ m}^3/\text{hari} = 859,357 \text{ lt/det}$$

## 3. Pemeliharaan

- Fase vegetatif : Tinggi genangan 1,2 cm selama 8 hari

Kebutuhan air

$$Q_1 = \frac{0,012 \times 0,5 \times 100\% \times 495}{8} \times 10.000$$

$$Q_1 = 3712,500 \text{ m}^3/\text{hari} = 42,969 \text{ lt/det}$$

- Fase generatif : Tinggi genangan 1,2 cm selama 10 hari

Kebutuhan air

$$Q_1 = \frac{0,012 \times 0,5 \times 100\% \times 495}{10} \times 10.000$$

$$Q_1 = 2970,000 \text{ m}^3/\text{hari} = 34,375 \text{ lt/det}$$

- 10 hari sebelum panen sawah dibiarkan mengering hal ini bertujuan mempercepat dan menyeragamkan proses pematangan bulir padi

## 4. Palawija

Kebutuhan air pada palawija & tembakau dianggap sama dengan metode SCL, pada studi ini diberikan genangan setinggi 1,5 mm/hari (kondisi eksisting)

- Kebutuhan air palawija

Tidak ada rencana tanam palawija pada Musim Tanam I

Untuk perhitungan kebutuhan air Metode SRI J.I. Pirang Kanan dapat dilihat pada Tabel. 4.40 dan Tabel 4.41 untuk perhitungan kebutuhan air Metode SRI J.I. Pirang Kiri

Tabel 4.40 Perhitungan Kebutuhan Air Metode SRI J.I. Pirang Kanan

| Musim Tanam                         | Uraian                        | Kebutuhan Air Irigasi Gol.I |          |
|-------------------------------------|-------------------------------|-----------------------------|----------|
|                                     |                               | (m3/hari)                   | (lt/dt)  |
| Luas Baku sawah Pirang Kanan 495 Ha |                               | (495 Ha)                    | (495 Ha) |
| I                                   | Padi 100,00 %                 |                             |          |
|                                     | - Persemaian                  | 49,500                      | 0,573    |
|                                     | - Pengolahan Lahan            | 74250,000                   | 859,375  |
|                                     | - Pemeliharaan Fase Vegetatif | 3712,500                    | 42,969   |
|                                     | - Pemeliharaan Fase Generatif | 2970,000                    | 34,375   |
|                                     | Palawija dll 0,00 %           | 0,000                       | 0,000    |
| II                                  | Padi 79,80 %                  |                             |          |
|                                     | - Persemaian                  | 39,500                      | 0,457    |
|                                     | - Pengolahan Lahan            | 59250,000                   | 685,764  |
|                                     | - Pemeliharaan Fase Vegetatif | 2962,500                    | 34,288   |
|                                     | - Pemeliharaan Fase Generatif | 2370,000                    | 27,431   |
|                                     | Palawija dll 20,20 %          | 1500,000                    | 17,361   |
| III                                 | Padi 11,11 %                  |                             |          |
|                                     | - Persemaian                  | 5,500                       | 0,064    |
|                                     | - Pengolahan Lahan            | 8250,000                    | 95,486   |
|                                     | - Pemeliharaan Fase Vegetatif | 412,500                     | 4,774    |
|                                     | - Pemeliharaan Fase Generatif | 330,000                     | 3,819    |
|                                     | Palawija dll 88,89 %          | 6600,000                    | 76,389   |

Sumber : Hasil Perhitungan

Tabel 4.41 Perhitungan Kebutuhan Air Metode SRI J.I. Pirang Kiri

| Musim Tanam                        | Uraian                        | Kebutuhan Air Irigasi (m3/hari) |           | Kebutuhan Air Irigasi (lt/dt) |          |
|------------------------------------|-------------------------------|---------------------------------|-----------|-------------------------------|----------|
|                                    |                               | Gol.II                          | Gol.III   | Gol.II                        | Gol.III  |
| Luas Baku sawah Pirang Kiri 819 Ha |                               | (473 Ha)                        | (346 Ha)  | (473 Ha)                      | (346 Ha) |
| I                                  | Padi 100,00 %                 |                                 |           |                               |          |
|                                    | - Persemaian                  | 47,300                          | 34,600    | 0,547                         | 0,400    |
|                                    | - Pengolahan Lahan            | 70950,000                       | 51900,000 | 821,181                       | 600,694  |
|                                    | - Pemeliharaan Fase Vegetatif | 3547,500                        | 2595,000  | 41,059                        | 30,035   |
|                                    | - Pemeliharaan Fase Generatif | 2838,000                        | 2076,000  | 32,847                        | 24,028   |
|                                    | Palawija dll 0,00 %           | 0,000                           | 0,000     | 0,000                         | 0,000    |
| II                                 | Padi 63,37 %                  |                                 |           |                               |          |
|                                    | - Persemaian                  | 29,974                          | 21,926    | 0,347                         | 0,254    |
|                                    | - Pengolahan Lahan            | 44960,989                       | 32889,011 | 520,382                       | 380,660  |
|                                    | - Pemeliharaan Fase Vegetatif | 2248,049                        | 1644,451  | 26,019                        | 19,033   |
|                                    | - Pemeliharaan Fase Generatif | 1798,440                        | 1315,560  | 20,815                        | 15,226   |
|                                    | Palawija dll 36,63 %          | 2598,901                        | 1901,099  | 30,080                        | 22,003   |
| III                                | Padi 14,53 %                  |                                 |           |                               |          |
|                                    | - Persemaian                  | 6,873                           | 5,027     | 0,080                         | 0,058    |
|                                    | - Pengolahan Lahan            | 10308,974                       | 7541,026  | 119,317                       | 87,280   |
|                                    | - Pemeliharaan Fase Vegetatif | 515,449                         | 377,051   | 5,966                         | 4,364    |
|                                    | - Pemeliharaan Fase Generatif | 412,359                         | 301,641   | 4,773                         | 3,491    |
|                                    | Palawija dll 85,47 %          | 48512,821                       | 4435,897  | 561,491                       | 51,341   |

Sumber : Hasil Perhitungan

Berikut contoh perhitungan neraca air Metode SRI Jaringan Irigasi Pirang Kanan

:

- Alternatif I

• Bulan : November

• Periode : I

• Golongan : I

• Keb.Air Irigasi (lt/dt) :

- Padi =  $(1/3 \times \text{Kebutuhan Air Persemaian Padi MT I}) + (1/3 \times \text{Kebutuhan Air Pengolahan Lahan MT I}) + \text{Fase Kering (dibiarkan kering sampe panen)} + (1/3 \times \text{Kebutuhan Air Pemeliharaan Fase Generatif MT III})$

$$= (1/3 \times 0,573) + (1/3 \times 859,375) + 0 + (1/3 \times 3,819)$$

$$= 287,922 \text{ lt/dt}$$

- Palawija = 0

- Total Keb.air Gol I =  $287,922 + 0 = 287,922 \text{ lt/dt}$

•  $Q_{80}$  November I = 90 (Tabel 4.6)

• Faktor K =  $\frac{90}{287,922}$

= 0,313 maka Gilir Sekunder

Perhitungan selanjutnya dapat dilihat pada Tabel 4.42 yang menunjukkan neraca air dan pembagian air Metode SRI (Alternatif I) dan Tabel 4.43 yang menunjukkan neraca air dan pembagian air Metode SRI (Alternatif II)



Tabel 4.42 Neraca Air Metode SRI (System of Rice Intensification) (Alternatif I)

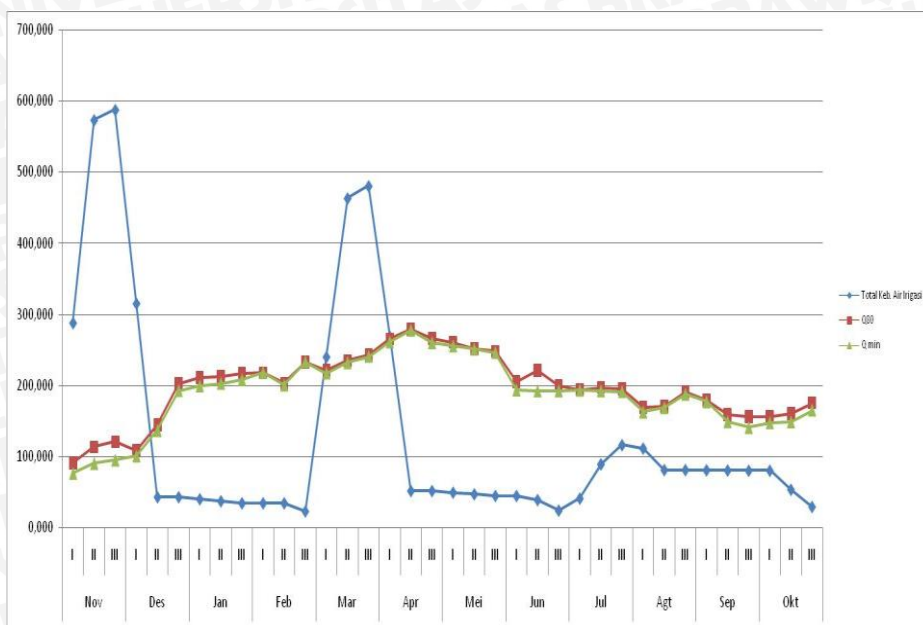
| Bulan | Periode | Pola Tanam |     |       | Kebutuhan Air Irigasi Gol. I (lt/dt) |          |         | Q           |               |                | Evaluasi Pembagian Air |               |                | Kebutuhan Air Irigasi Gol. II (lt/dt) |         |         | Kebutuhan Air Irigasi Gol. III (lt/dt) |        |                  | Total       |          | Evaluasi Pembagian Air |                |          | Q80           |                |          | Evaluasi Pembagian Air |  |  |
|-------|---------|------------|-----|-------|--------------------------------------|----------|---------|-------------|---------------|----------------|------------------------|---------------|----------------|---------------------------------------|---------|---------|--|--------|------------------|-------------|----------|------------------------|----------------|----------|---------------|----------------|----------|------------------------|--|--|
|       |         |            |     |       | Padi                                 | Palawija | Total   | Min (lt/dt) | Faktor K      | Kriteria       | Faktor K               | Kriteria      | Padi           | Palawija                              | Total   | Padi    | Palawija                               | Total  | Keb. Air (lt/dt) | Min (lt/dt) | Faktor K | Kriteria               | Faktor K       | Kriteria | (lt/dt)       | Faktor K       | Kriteria |                        |  |  |
| [1]   | [2]     | [3]        | [4] | [5]   | [6]                                  | [7]      | [8]     | [9]         | [10]          | [11]           | [12]                   | [13]          | [14]           | [15]                                  | [16]    | [17]    | [18]                                   | [19]   | [20]             | [21]        | [22]     | [23]                   | [24]           | [25]     |               |                |          |                        |  |  |
| Nov   | I       | PL         | K   | G     | 287,922                              | -        | 287,922 | 76          | 0,263         | Gilir Sekunder | 90                     | 0,313         | Gilir Sekunder | 275,500                               | -       | 275,500 | 201,529                                | -      | 201,529          | 477,029     | 125      | 0,263                  | Gilir Sekunder | 149      | 0,313         | Gilir Sekunder |          |                        |  |  |
|       | II      | PL         | PL  | K     | 573,299                              | -        | 573,299 | 90          | 0,156         | Gilir Primer   | 113                    | 0,197         | Gilir Primer   | 547,819                               | -       | 547,819 | 400,730                                | -      | 400,730          | 948,549     | 148      | 0,156                  | Gilir Primer   | 187      | 0,197         | Gilir Primer   |          |                        |  |  |
|       | III     | V          | PL  | PL    | 587,622                              | -        | 587,622 | 94          | 0,160         | Gilir Primer   | 120                    | 0,205         | Gilir Primer   | 561,505                               | -       | 561,505 | 410,742                                | -      | 410,742          | 972,247     | 156      | 0,160                  | Gilir Primer   | 199      | 0,205         | Gilir Primer   |          |                        |  |  |
| Des   | I       | V          | V   | PL    | 315,295                              | -        | 315,295 | 100         | 0,318         | Gilir Sekunder | 107                    | 0,341         | Gilir Sekunder | 301,282                               | -       | 301,282 | 220,388                                | -      | 220,388          | 521,670     | 166      | 0,318                  | Gilir Sekunder | 178      | 0,341         | Gilir Sekunder |          |                        |  |  |
|       | II      | V          | V   | V     | 42,969                               | -        | 42,969  | 136         | 3,165         | Terus menerus  | 144                    | 3,358         | Terus menerus  | 41,059                                | -       | 41,059  | 30,035                                 | -      | 30,035           | 71,094      | 225      | 3,165                  | Terus menerus  | 239      | 3,358         | Terus menerus  |          |                        |  |  |
|       | III     | V          | V   | V     | 42,969                               | -        | 42,969  | 192         | 4,471         | Terus menerus  | 202                    | 4,697         | Terus menerus  | 41,059                                | -       | 41,059  | 30,035                                 | -      | 30,035           | 71,094      | 318      | 4,471                  | Terus menerus  | 334      | 4,697         | Terus menerus  |          |                        |  |  |
| Jan   | I       | G          | V   | V     | 40,104                               | -        | 40,104  | 199         | 4,950         | Terus menerus  | 210                    | 5,247         | Terus menerus  | 38,322                                | -       | 38,322  | 28,032                                 | -      | 28,032           | 66,354      | 328      | 4,950                  | Terus menerus  | 348      | 4,950         | Terus menerus  |          |                        |  |  |
|       | II      | G          | G   | V     | 37,240                               | -        | 37,240  | 202         | 5,432         | Terus menerus  | 212                    | 5,689         | Terus menerus  | 35,584                                | -       | 35,584  | 26,030                                 | -      | 26,030           | 61,615      | 335      | 5,432                  | Terus menerus  | 351      | 5,689         | Terus menerus  |          |                        |  |  |
|       | III     | G          | G   | G     | 34,375                               | -        | 34,375  | 207         | 6,027         | Terus menerus  | 217                    | 6,301         | Terus menerus  | 32,847                                | -       | 32,847  | 24,028                                 | -      | 24,028           | 56,875      | 343      | 6,027                  | Terus menerus  | 358      | 6,301         | Terus menerus  |          |                        |  |  |
| Feb   | I       | G          | G   | G     | 34,375                               | -        | 34,375  | 217         | 6,323         | Terus menerus  | 217                    | 6,323         | Terus menerus  | 32,847                                | -       | 32,847  | 24,028                                 | -      | 24,028           | 56,875      | 360      | 6,323                  | Terus menerus  | 360      | 6,323         | Terus menerus  |          |                        |  |  |
|       | II      | G          | G   | G     | 34,375                               | -        | 34,375  | 200         | 5,808         | Terus menerus  | 203                    | 5,902         | Terus menerus  | 32,847                                | -       | 32,847  | 24,028                                 | -      | 24,028           | 56,875      | 330      | 5,808                  | Terus menerus  | 336      | 5,902         | Terus menerus  |          |                        |  |  |
|       | III     | K          | G   | G     | 22,917                               | -        | 22,917  | 232         | 10,142        | Terus menerus  | 233                    | 10,146        | Terus menerus  | 21,898                                | -       | 21,898  | 16,019                                 | -      | 16,019           | 37,917      | 385      | 10,142                 | Terus menerus  | 385      | 10,146        | Terus menerus  |          |                        |  |  |
| Mar   | I       | PL         | K   | G     | 240,199                              | -        | 240,199 | 217         | 0,902         | Terus menerus  | 221                    | 0,920         | Terus menerus  | 184,525                               | -       | 184,525 | 134,980                                | -      | 134,980          | 319,506     | 358      | 1,122                  | Terus menerus  | 366      | 1,145         | Terus menerus  |          |                        |  |  |
|       | II      | PL         | PL  | K     | 457,481                              | 5,787    | 463,268 | 231         | 0,499         | Gilir Sekunder | 235                    | 0,507         | Gilir Tersier  | 347,152                               | 10,027  | 357,179 | 253,942                                | 7,334  | 261,277          | 618,456     | 383      | 0,619                  | Gilir Tersier  | 389      | 0,628         | Gilir Tersier  |          |                        |  |  |
|       | III     | V          | PL  | PL    | 468,910                              | 11,574   | 480,484 | 240         | 0,499         | Gilir Sekunder | 242                    | 0,504         | Gilir Tersier  | 355,826                               | 20,053  | 375,879 | 260,287                                | 14,669 | 274,956          | 650,834     | 397      | 0,610                  | Gilir Tersier  | 401      | 0,616         | Gilir Tersier  |          |                        |  |  |
| Apr   | I       | V          | V   | PL    | 251,599                              | 17,361   | 268,960 | 260         | 0,968         | Terus menerus  | 265                    | 0,986         | Terus menerus  | 190,922                               | 30,080  | 221,002 | 139,660                                | 22,003 | 161,663          | 382,666     | 431      | 1,126                  | Terus menerus  | 439      | 1,147         | Terus menerus  |          |                        |  |  |
|       | II      | V          | V   | V     | 34,288                               | 17,361   | 51,649  | 277         | 5,361         | Terus menerus  | 279                    | 5,403         | Terus menerus  | 26,019                                | 30,080  | 56,099  | 19,033                                 | 22,003 | 41,036           | 97,135      | 458      | 4,716                  | Terus menerus  | 462      | 4,753         | Terus menerus  |          |                        |  |  |
|       | III     | V          | V   | V     | 34,288                               | 17,361   | 51,649  | 259         | 5,018         | Terus menerus  | 266                    | 5,151         | Terus menerus  | 26,019                                | 30,080  | 56,099  | 19,033                                 | 22,003 | 41,036           | 97,135      | 429      | 4,415                  | Terus menerus  | 440      | 4,531         | Terus menerus  |          |                        |  |  |
| Mei   | I       | G          | V   | V     | 32,002                               | 17,361   | 49,363  | 255         | 5,159         | Terus menerus  | 261                    | 5,282         | Terus menerus  | 24,284                                | 30,080  | 54,364  | 17,764                                 | 22,003 | 39,768           | 94,132      | 421      | 4,476                  | Terus menerus  | 431      | 4,583         | Terus menerus  |          |                        |  |  |
|       | II      | G          | G   | V     | 29,716                               | 17,361   | 47,078  | 250         | 5,313         | Terus menerus  | 251                    | 5,342         | Terus menerus  | 22,550                                | 30,080  | 52,630  | 16,495                                 | 22,003 | 38,499           | 91,128      | 414      | 4,542                  | Terus menerus  | 416      | 4,566         | Terus menerus  |          |                        |  |  |
|       | III     | G          | G   | G     | 27,431                               | 17,361   | 44,792  | 246         | 5,484         | Terus menerus  | 248                    | 5,534         | Terus menerus  | 20,815                                | 30,080  | 50,895  | 15,226                                 | 22,003 | 37,230           | 88,125      | 406      | 4,611                  | Terus menerus  | 410      | 4,654         | Terus menerus  |          |                        |  |  |
| Jun   | I       | G          | G   | G     | 27,431                               | 17,361   | 44,792  | 193         | 4,306         | Terus menerus  | 205                    | 4,577         | Terus menerus  | 20,815                                | 30,080  | 50,895  | 15,226                                 | 22,003 | 37,230           | 88,125      | 319      | 3,621                  | Terus menerus  | 339      | 3,849         | Terus menerus  |          |                        |  |  |
|       | II      | G          | G   | G     | 27,431                               | 11,574   | 39,005  | 192         | 4,916         | Terus menerus  | 220                    | 5,652         | Terus menerus  | 20,815                                | 20,053  | 40,869  | 15,226                                 | 14,669 | 29,895           | 70,764      | 360      | 5,082                  | Terus menerus  | 365      | 5,154         | Terus menerus  |          |                        |  |  |
|       | III     | K          | G   | G     | 18,287                               | 5,787    | 24,074  | 192         | 7,965         | Terus menerus  | 200                    | 8,287         | Terus menerus  | 13,877                                | 10,027  | 23,903  | 10,151                                 | 7,334  | 17,485           | 41,389      | 317      | 7,665                  | Terus menerus  | 330      | 7,975         | Terus menerus  |          |                        |  |  |
| Jul   | I       | PL         | K   | G     | 40,993                               | -        | 40,993  | 193         | 4,696         | Terus menerus  | 194                    | 4,731         | Terus menerus  | 46,737                                | -       | 46,737  | 34,188                                 | -      | 34,188           | 80,926      | 319      | 3,936                  | Terus menerus  | 321      | 3,965         | Terus menerus  |          |                        |  |  |
|       | II      | PL         | PL  | K     | 63,700                               | 25,463   | 89,163  | 192         | 2,151         | Terus menerus  | 197                    | 2,207         | Terus menerus  | 79,598                                | 187,164 | 266,761 | 58,226                                 | 17,114 | 75,340           | 342,101     | 317      | 0,927                  | Terus menerus  | 326      | 0,952         | Terus menerus  |          |                        |  |  |
|       | III     | V          | PL  | PL    | 65,291                               | 50,926   | 116,217 | 191         | 1,640         | Terus menerus  | 194                    | 1,673         | Terus menerus  | 81,586                                | 374,327 | 455,914 | 59,680                                 | 34,228 | 93,908           | 549,822     | 315      | 0,574                  | Gilir Tersier  | 322      | 0,585         | Gilir Tersier  |          |                        |  |  |
| Agt   | I       | V          | V   | PL    | 35,033                               | 76,389   | 111,422 | 162         | 1,454         | Terus menerus  | 168                    | 1,511         | Terus menerus  | 43,776                                | 561,491 | 605,267 | 32,022                                 | 51,341 | 83,364           | 688,631     | 268      | 0,389                  | Gilir Sekunder | 278      | 0,404         | Gilir Sekunder |          |                        |  |  |
|       | II      | V          | V   | V     | 4,774                                | 76,389   | 81,163  | 168         | 2,070         | Terus menerus  | 170                    | 2,100         | Terus menerus  | 5,966                                 | 561,491 | 567,457 | 4,364                                  | 51,341 | 55,705           | 623,162     | 278      | 0,446                  | Gilir Sekunder | 282      | 0,452         | Gilir Sekunder |          |                        |  |  |
|       | III     | V          | V   | V     | 4,774                                | 76,389   | 81,163  | 187         | 2,302         | Terus menerus  | 191                    | 2,349         | Terus menerus  | 5,966                                 | 561,491 | 567,457 | 4,364                                  | 51,341 | 55,705           | 623,162     | 309      | 0,496                  | Gilir Sekunder | 315      | 0,506         | Gilir Tersier  |          |                        |  |  |
| Sep   | I       | G          | V   | V     | 4,456                                | 76,389   | 80,845  | 176         | 2,181         | Terus menerus  | 179                    | 2,209         | Terus menerus  | 5,568                                 | 561,491 | 567,059 | 4,073                                  | 51,341 | 55,414           | 622,474     | 292      | 0,469                  | Gilir Sekunder | 295      | 0,475         | Gilir Sekunder |          |                        |  |  |
|       | II      | G          | G   | V     | 4,138                                | 76,389   | 80,527  | 148         | 1,843         | Terus menerus  | 158                    | 1,966         | Terus menerus  | 5,170                                 | 561,491 | 566,661 | 3,782                                  | 51,341 | 55,124           | 621,785     | 246      | 0,395                  | Gilir Sekunder | 262      | 0,421         | Gilir Sekunder |          |                        |  |  |
|       | III     | G          | G   | G     | 3,819                                | 76,389   | 80,208  | 140         | 1,747         | Terus menerus  | 155                    | 1,938         | Terus menerus  | 4,773                                 | 561,491 | 566,264 | 3,491                                  | 51,341 | 54,833           | 621,096     | 232      | 0,373                  | Gilir Sekunder | 254      | 0,409         | Gilir Sekunder |          |                        |  |  |
| Okt   | I       | G          | G   | G     | 3,819                                | 76,389   | 80,208  | 147         | 1,832         | Terus menerus  | 156                    | 1,945         | Terus menerus  | 4,773                                 | 561,491 | 566,264 | 3,491                                  | 51,341 | 54,833           | 621,096     | 243      | 0,391                  | Gilir Sekunder | 258      | 0,416         | Gilir Sekunder |          |                        |  |  |
|       | II      | G          | G   | G     | 2,546                                | 50,926   | 53,472  | 148         | 2,769         | Terus menerus  | 160                    | 2,987         | Terus menerus  | 4,773                                 | 374,327 | 379,100 | 3,491                                  | 34,228 | 37,719           | 416,819     | 245      | 0,588                  | Gilir Tersier  | 264      | 0,634         | Gilir Tersier  |          |                        |  |  |
| III   | K       | G          | G   | 3,819 | 25,463                               | 29,282   | 165     | 5,622       | Terus menerus | 175            | 5,977                  | Terus menerus | 3,182          | 187,164                               | 190,345 | 2,327   | 17,114                                 | 19,441 | 209,787          | 272         | 1,298    | Terus menerus          | 290            | 1,380    | Terus menerus |                |          |                        |  |  |

Sumber : Hasil Perhitungan

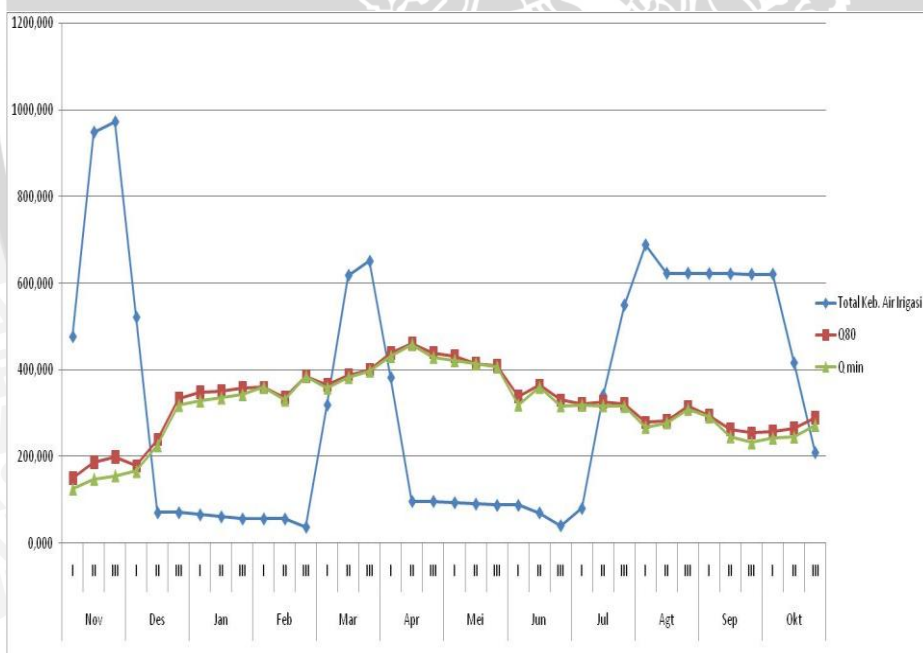
Keterangan:

- [1] : Bulan
- [2] : Periode
- [3] : Pola Tanam
- [4] : Keb.Air Padi Gol.I
- [5] : Keb.Air Palawija Gol.I
- [6] : [4]+[5]
- [7] : Q min 2008-2012
- [8] : [7]/[6]
- [9] : Kriteria Faktor K
- [10] : Q80 2008-2012
- [11] : [10]/[6]
- [12] : Kriteria Faktor K
- [13] : Keb.Air Padi Gol.II
- [14] : Keb.Air Palawija Gol.II
- [15] : [13]+[14]
- [16] : Keb.Air Padi Gol.III
- [17] : Keb.Air Palawija Gol.III
- [18] : [16]+[17]
- [19] : [15]+[18]
- [20] : Q min 2008-2012
- [21] : [20]/[18]
- [22] : Kriteria Faktor K
- [23] : Q80 2008-2012
- [24] : [23]/[20]
- [25] : Kriteria Faktor K

- PL : Persemaian & Pengolahan Lahan
- V : Pemeliharaan fase vegetatif
- G : Pemeliharaan fase generatif
- K : Dibiarkan kering sampai panen



Gambar 4.13 Neraca Air Metode SRI J.I. Pirang Kanan (Alternatif I)  
 Sumber: Hasil Analisa



Gambar 4.14 Neraca Air Metode SRI J.I. Pirang Kiri (Alternatif I)  
 Sumber: Hasil Analisa

Tabel 4.43 Neraca Air Metode SRI (System of Rice Intensification) (Alternatif II)

| Bulan | Periode | Pola Tanam Gol. I | Kebutuhan Air Irigasi Gol. I (lt/dt) |          |         | Q Min (lt/dt) | Evaluasi Pembagian Air |                | Q80 (lt/dt) | Evaluasi Pembagian Air |                |         | Pola Tanam Gol. II | Kebutuhan Air Irigasi Gol. II (lt/dt) |         |         | Pola Tanam Gol. III | Kebutuhan Air Irigasi Gol. III (lt/dt) |         |          | Total Keb. Air (lt/dt) | Q Min (lt/dt)  | Evaluasi Pembagian Air |          | Q80 (lt/dt)    | Evaluasi Pembagian Air |   |
|-------|---------|-------------------|--------------------------------------|----------|---------|---------------|------------------------|----------------|-------------|------------------------|----------------|---------|--------------------|---------------------------------------|---------|---------|---------------------|--|---------|----------|------------------------|----------------|------------------------|----------|----------------|------------------------|---|
|       |         |                   | Padi                                 | Palawija | Total   |               | Faktor K               | Kriteria       |             | Faktor K               | Kriteria       | Padi    |                    | Palawija                              | Total   | Padi    |                     | Palawija                               | Total   | Faktor K |                        |                | Kriteria               | Faktor K |                | Kriteria               |   |
| [1]   | [2]     | [3]               | [4]                                  | [5]      | [6]     | [7]           | [8]                    | [9]            | [10]        | [11]                   | [12]           | [13]    | [14]               | [15]                                  | [16]    | [17]    | [18]                | [19]                                   | [20]    | [21]     | [22]                   | [23]           | [24]                   | [25]     | [26]           | [27]                   |   |
| Nov   | I       | PL K G            | 287,922                              | -        | 287,922 | 76            | 0,263                  | Gilir Sekunder | 90          | 0,313                  | Gilir Sekunder | -       | -                  | 0,000                                 | -       | -       | 0,000               | 0,000                                  | 125     | -        | -                      | -              | -                      | -        | -              | -                      | - |
|       | II      | PL PL K           | 573,299                              | -        | 573,299 | 90            | 0,156                  | Gilir Primer   | 113         | 0,197                  | Gilir Primer   | PL K G  | 275,500            | -                                     | 275,500 | -       | -                   | 0,000                                  | 275,500 | 148      | 0,538                  | Gilir Tersier  | 187                    | 0,679    | Gilir Tersier  |                        |   |
|       | III     | V PL PL           | 587,622                              | -        | 587,622 | 94            | 0,160                  | Gilir Primer   | 120         | 0,205                  | Gilir Primer   | PL PL K | 547,819            | -                                     | 547,819 | PL K G  | 201,529             | 201,529                                | 749,347 | 156      | 0,208                  | Gilir Primer   | 199                    | 0,266    | Gilir Sekunder |                        |   |
| Des   | I       | V V PL            | 315,295                              | -        | 315,295 | 100           | 0,318                  | Gilir Sekunder | 107         | 0,341                  | Gilir Sekunder | V PL PL | 561,505            | -                                     | 561,505 | PL PL K | 400,730             | 400,730                                | 962,235 | 166      | 0,172                  | Gilir Primer   | 178                    | 0,185    | Gilir Primer   |                        |   |
|       | II      | V V V             | 42,969                               | -        | 42,969  | 136           | 3,165                  | Terus menerus  | 144         | 3,358                  | Terus menerus  | V V PL  | 301,282            | -                                     | 301,282 | V PL PL | 410,742             | 410,742                                | 712,024 | 225      | 0,316                  | Gilir Sekunder | 239                    | 0,335    | Gilir Sekunder |                        |   |
|       | III     | V V V             | 42,969                               | -        | 42,969  | 192           | 4,471                  | Terus menerus  | 202         | 4,697                  | Terus menerus  | V V V   | 41,059             | -                                     | 41,059  | V V PL  | 220,388             | 220,388                                | 261,447 | 318      | 1,216                  | Terus menerus  | 334                    | 1,277    | Terus menerus  |                        |   |
| Jan   | I       | G V V             | 40,104                               | -        | 40,104  | 199           | 4,950                  | Terus menerus  | 210         | 5,247                  | Terus menerus  | V V V   | 41,059             | -                                     | 41,059  | V V V   | 30,035              | 30,035                                 | 71,094  | 328      | 4,620                  | Terus menerus  | 348                    | 4,892    | Terus menerus  |                        |   |
|       | II      | G G V             | 37,240                               | -        | 37,240  | 202           | 5,432                  | Terus menerus  | 212         | 5,689                  | Terus menerus  | G V V   | 38,322             | -                                     | 38,322  | V V V   | 30,035              | 30,035                                 | 68,356  | 335      | 4,896                  | Terus menerus  | 351                    | 5,128    | Terus menerus  |                        |   |
|       | III     | G G G             | 34,375                               | -        | 34,375  | 207           | 6,027                  | Terus menerus  | 217         | 6,301                  | Terus menerus  | G G V   | 35,584             | -                                     | 35,584  | G V V   | 28,032              | 28,032                                 | 63,617  | 343      | 5,389                  | Terus menerus  | 358                    | 5,634    | Terus menerus  |                        |   |
| Feb   | I       | G G G             | 34,375                               | -        | 34,375  | 217           | 6,323                  | Terus menerus  | 217         | 6,323                  | Terus menerus  | G G G   | 32,847             | -                                     | 32,847  | G G V   | 26,030              | 26,030                                 | 58,877  | 360      | 6,108                  | Terus menerus  | 360                    | 6,108    | Terus menerus  |                        |   |
|       | II      | G G G             | 34,375                               | -        | 34,375  | 200           | 5,808                  | Terus menerus  | 203         | 5,902                  | Terus menerus  | G G G   | 32,847             | -                                     | 32,847  | G G G   | 24,028              | 24,028                                 | 56,875  | 330      | 5,808                  | Terus menerus  | 336                    | 5,902    | Terus menerus  |                        |   |
|       | III     | K G G             | 22,917                               | -        | 22,917  | 232           | 10,142                 | Terus menerus  | 233         | 10,146                 | Terus menerus  | G G G   | 32,847             | -                                     | 32,847  | G G G   | 24,028              | 24,028                                 | 56,875  | 385      | 6,762                  | Terus menerus  | 385                    | 6,762    | Terus menerus  |                        |   |
| Mar   | I       | PL K G            | 240,199                              | -        | 240,199 | 217           | 0,902                  | Terus menerus  | 221         | 0,920                  | Terus menerus  | K G G   | 21,898             | -                                     | 21,898  | G G G   | 24,028              | 24,028                                 | 45,926  | 358      | 7,804                  | Terus menerus  | 366                    | 7,964    | Terus menerus  |                        |   |
|       | II      | PL PL K           | 457,481                              | 5,787    | 463,268 | 231           | 0,499                  | Gilir Sekunder | 235         | 0,507                  | Gilir Tersier  | PL K G  | 184,525            | 10,027                                | 194,552 | K G G   | 16,019              | 7,334                                  | 233,553 | 383      | 1,756                  | Terus menerus  | 389                    | 1,783    | Terus menerus  |                        |   |
|       | III     | V PL PL           | 468,910                              | 11,574   | 480,484 | 240           | 0,499                  | Gilir Sekunder | 242         | 0,504                  | Gilir Tersier  | PL PL K | 347,152            | 20,053                                | 367,206 | PL K G  | 134,980             | 14,669                                 | 516,855 | 397      | 0,768                  | Terus menerus  | 401                    | 0,775    | Terus menerus  |                        |   |
| Apr   | I       | V V PL            | 251,599                              | 17,361   | 268,960 | 260           | 0,968                  | Terus menerus  | 265         | 0,986                  | Terus menerus  | V PL PL | 355,826            | 30,080                                | 385,905 | PL PL K | 253,942             | 22,003                                 | 275,946 | 431      | 0,651                  | Gilir Tersier  | 439                    | 0,663    | Gilir Tersier  |                        |   |
|       | II      | V V V             | 34,288                               | 17,361   | 51,649  | 277           | 5,361                  | Terus menerus  | 279         | 5,403                  | Terus menerus  | V V PL  | 190,922            | 30,080                                | 221,002 | V PL PL | 260,287             | 22,003                                 | 282,290 | 458      | 0,910                  | Terus menerus  | 462                    | 0,917    | Terus menerus  |                        |   |
|       | III     | V V V             | 34,288                               | 17,361   | 51,649  | 259           | 5,018                  | Terus menerus  | 266         | 5,151                  | Terus menerus  | V V V   | 26,019             | 30,080                                | 56,099  | V V PL  | 139,660             | 22,003                                 | 161,663 | 429      | 1,969                  | Terus menerus  | 440                    | 2,021    | Terus menerus  |                        |   |
| Mei   | I       | G V V             | 32,002                               | 17,361   | 49,363  | 255           | 5,159                  | Terus menerus  | 251         | 5,282                  | Terus menerus  | V V V   | 26,019             | 30,080                                | 56,099  | V V V   | 19,033              | 22,003                                 | 41,036  | 497      | 1,352                  | Terus menerus  | 431                    | 4,442    | Terus menerus  |                        |   |
|       | II      | G G V             | 29,716                               | 17,361   | 47,078  | 250           | 5,313                  | Terus menerus  | 261         | 5,342                  | Terus menerus  | G V V   | 24,284             | 30,080                                | 54,364  | V V V   | 19,033              | 22,003                                 | 41,036  | 414      | 4,338                  | Terus menerus  | 416                    | 4,362    | Terus menerus  |                        |   |
|       | III     | G G G             | 27,431                               | 17,361   | 44,792  | 246           | 5,484                  | Terus menerus  | 248         | 5,534                  | Terus menerus  | G G V   | 22,550             | 30,080                                | 52,630  | G V V   | 17,764              | 22,003                                 | 39,768  | 406      | 4,398                  | Terus menerus  | 410                    | 4,439    | Terus menerus  |                        |   |
| Jun   | I       | G G G             | 27,431                               | 17,361   | 44,792  | 193           | 4,306                  | Terus menerus  | 205         | 4,577                  | Terus menerus  | G G G   | 20,815             | 30,080                                | 50,895  | G G V   | 16,495              | 22,003                                 | 38,499  | 319      | 3,570                  | Terus menerus  | 339                    | 3,794    | Terus menerus  |                        |   |
|       | II      | G G G             | 27,431                               | 11,574   | 39,005  | 192           | 4,916                  | Terus menerus  | 220         | 5,652                  | Terus menerus  | G G G   | 20,815             | 20,053                                | 40,869  | G G G   | 15,226              | 14,669                                 | 29,895  | 360      | 5,082                  | Terus menerus  | 365                    | 5,154    | Terus menerus  |                        |   |
|       | III     | K G G             | 18,287                               | 5,787    | 24,074  | 192           | 7,965                  | Terus menerus  | 200         | 8,287                  | Terus menerus  | G G G   | 20,815             | 10,027                                | 30,842  | G G G   | 15,226              | 7,334                                  | 22,561  | 317      | 5,941                  | Terus menerus  | 330                    | 6,181    | Terus menerus  |                        |   |
| Jul   | I       | PL K G            | 40,993                               | -        | 40,993  | 193           | 4,696                  | Terus menerus  | 194         | 4,731                  | Terus menerus  | K G G   | 13,877             | -                                     | 13,877  | G G G   | 15,226              | -                                      | 15,226  | 29,103   | 319                    | 10,944         | Terus menerus          | 321      | 11,025         | Terus menerus          |   |
|       | II      | PL PL K           | 63,700                               | 25,463   | 89,163  | 192           | 2,151                  | Terus menerus  | 197         | 2,207                  | Terus menerus  | PL K G  | 46,737             | 187,164                               | 233,901 | K G G   | 10,151              | 17,114                                 | 27,265  | 317      | 1,215                  | Terus menerus  | 326                    | 1,247    | Terus menerus  |                        |   |
|       | III     | V PL PL           | 65,291                               | 50,926   | 116,217 | 191           | 1,640                  | Terus menerus  | 194         | 1,673                  | Terus menerus  | PL PL K | 79,598             | 374,327                               | 453,925 | PL K G  | 34,188              | 34,228                                 | 68,416  | 315      | 0,604                  | Gilir Tersier  | 322                    | 0,616    | Gilir Tersier  |                        |   |
| Agt   | I       | V V PL            | 35,033                               | 76,389   | 111,422 | 162           | 1,454                  | Terus menerus  | 168         | 1,511                  | Terus menerus  | V PL PL | 81,586             | 561,491                               | 643,077 | PL PL K | 58,226              | 51,341                                 | 109,567 | 268      | 0,356                  | Gilir Sekunder | 278                    | 0,370    | Gilir Sekunder |                        |   |
|       | II      | V V V             | 4,774                                | 76,389   | 81,163  | 168           | 2,070                  | Terus menerus  | 170         | 2,100                  | Terus menerus  | V V PL  | 43,776             | 561,491                               | 605,267 | V PL PL | 59,680              | 51,341                                 | 111,022 | 278      | 0,388                  | Gilir Sekunder | 282                    | 0,394    | Gilir Sekunder |                        |   |
|       | III     | V V V             | 4,774                                | 76,389   | 81,163  | 187           | 2,302                  | Terus menerus  | 191         | 2,349                  | Terus menerus  | V V V   | 5,966              | 561,491                               | 567,457 | V V PL  | 33,090              | 51,341                                 | 84,431  | 309      | 0,474                  | Gilir Sekunder | 315                    | 0,484    | Gilir Sekunder |                        |   |
| Sep   | I       | G V V             | 4,456                                | 76,389   | 80,845  | 176           | 2,181                  | Terus menerus  | 179         | 2,209                  | Terus menerus  | V V V   | 5,966              | 561,491                               | 567,457 | V V V   | 4,364               | 51,341                                 | 55,705  | 292      | 0,468                  | Gilir Sekunder | 295                    | 0,474    | Gilir Sekunder |                        |   |
|       | II      | G G V             | 4,138                                | 76,389   | 80,527  | 148           | 1,843                  | Terus menerus  | 158         | 1,966                  | Terus menerus  | G V V   | 5,568              | 561,491                               | 567,059 | V V V   | 4,364               | 51,341                                 | 55,705  | 246      | 0,394                  | Gilir Sekunder | 262                    | 0,421    | Gilir Sekunder |                        |   |
|       | III     | G G G             | 3,819                                | 76,389   | 80,208  | 140           | 1,747                  | Terus menerus  | 155         | 1,938                  | Terus menerus  | G G V   | 5,170              | 561,491                               | 566,661 | G V V   | 4,073               | 51,341                                 | 55,414  | 232      | 0,373                  | Gilir Sekunder | 254                    | 0,409    | Gilir Sekunder |                        |   |
| Okt   | I       | G G G             | 3,819                                | 76,389   | 80,208  | 147           | 1,832                  | Terus menerus  | 156         | 1,945                  | Terus menerus  | G G G   | 4,773              | 561,491                               | 566,264 | G V V   | 3,782               | 51,341                                 | 55,124  | 243      | 0,391                  | Gilir Sekunder | 258                    | 0,415    | Gilir Sekunder |                        |   |
|       | II      | G G G             | 2,546                                | 50,926   | 53,472  | 148           | 2,769                  | Terus menerus  | 160         | 2,987                  | Terus menerus  | G G G   | 4,773              | 374,327                               | 379,100 | G G G   | 3,491               | 34,228                                 | 37,719  | 245      | 0,588                  | Gilir Tersier  | 264                    | 0,634    | Gilir Tersier  |                        |   |
|       | III     | K G G             | 3,819                                | 25,463   | 29,282  | 165           | 5,622                  | Terus menerus  | 175         | 5,977                  | Terus menerus  | G G G   | 4,773              | 187,164                               | 191,936 | G G G   | 3,491               | 17,114                                 | 20,605  | 272      | 1,282                  | Terus menerus  | 290                    | 1,362    | Terus menerus  |                        |   |

Sumber : Hasil Perhitungan

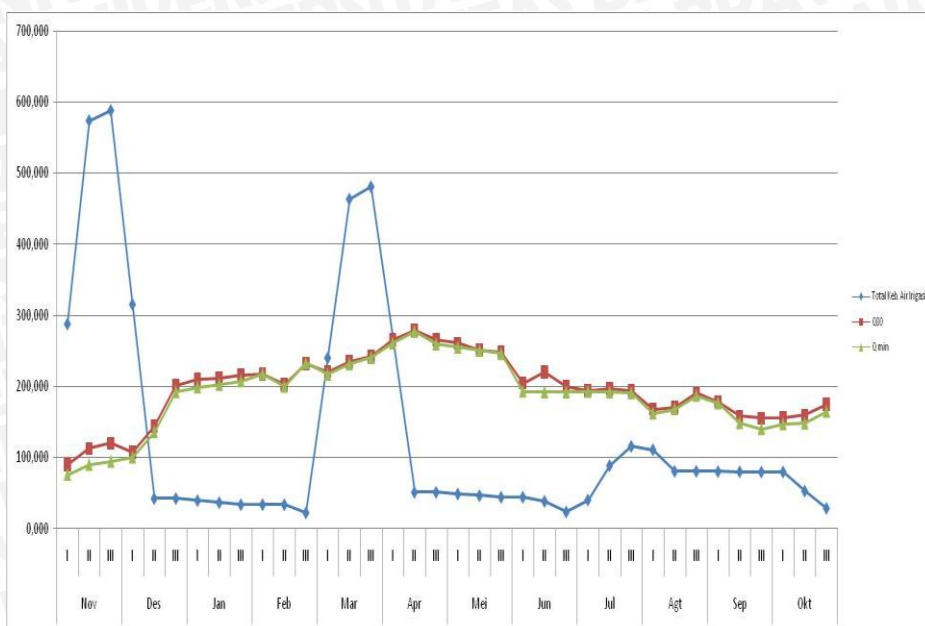
Keterangan:

- [1] : Bulan
- [2] : Periode
- [3] : Pola Tanam
- [4] : Keb. Air Padi Gol. I
- [5] : Keb. Air Palawija Gol. I
- [6] : [4]+[5]
- [7] : Q min 2008-2012
- [8] : [7]/[6]
- [9] : Kriteria Faktor K
- [10] : Q80 2008-2012
- [11] : [10]/[6]
- [12] : Kriteria Faktor K
- [13] : Pola Tanam Gol. II
- [14] : Keb. Air Padi Gol. II
- [15] : Keb. Air Palawija Gol. II
- [16] : [14]+[15]
- [17] : Pola Tanam Gol. III
- [18] : Keb. Air Padi Gol. III
- [19] : Keb. Air Palawija Gol. III
- [20] : [18]+[19]
- [21] : [16]+[20]
- [22] : Q min 2008-2012
- [23] : [22]/[21]
- [24] : Kriteria Faktor K
- [25] : Q80 2008-2012
- [26] : [25]/[21]
- [27] : Kriteria Faktor K

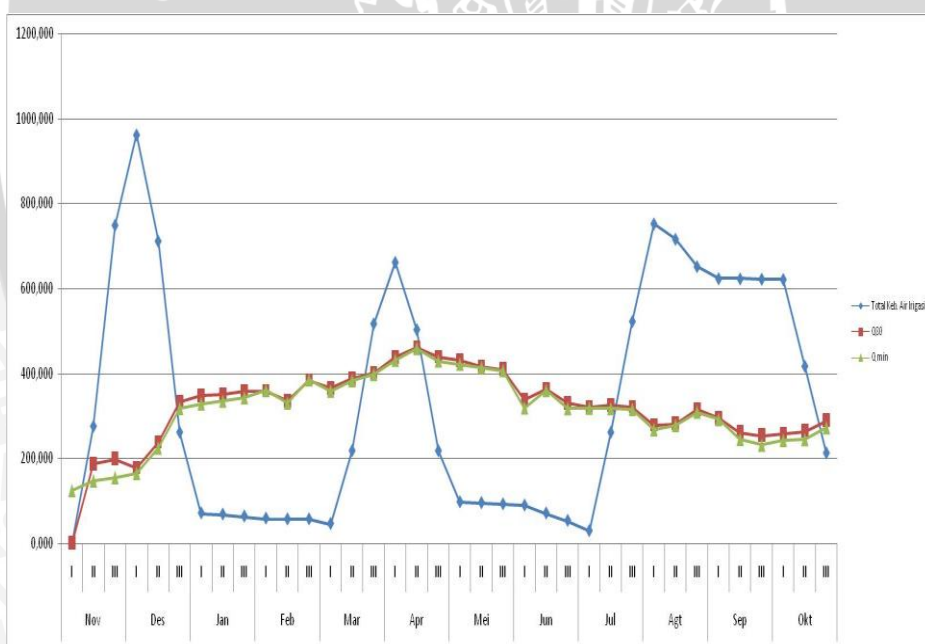
PL : Persemaian & Pengolahan Lahan  
 V : Pemeliharaan fase vegetatif

G : Pemeliharaan fase generatif  
 K : Dibiarkan kering sampai panen





Gambar 4.15 Neraca Air Metode SRI J.I. Pirang Kanan (Alternatif II)  
 Sumber: Hasil Analisa



Gambar 4.16 Neraca Air Metode SRI J.I. Pirang Kiri (Alternatif II)  
 Sumber: Hasil Analisa

Dari analisa perencanaan pola tanam tanam, maka penulis mencoba menggabungkan cara pemberian air Metode Konvensional dengan Metode SRI dalam satu pola tanam dengan memilih 29,79% petak tersier dibagian hulu J.I. Pirang Kiri dan 33,33% petak tersier di bagian hulu J.I. Pirang Kanan menggunakan Metode SRI. Penggabungan dua metode ini bertujuan agar petak tersier dibagian hilir bisa mendapat air irigasi dengan cukup seandainya tidak direncanakan rotasi golongan. Pola tanam gabungan antara Metode Konvensional dan SRI ini dapat dilihat pada Tabel 4.44 untuk J.I. Pirang Kiri seluas 819 Ha dan Tabel 4.45 untuk J.I. Pirang Kanan seluas 495 Ha. Selanjutnya pembagian petak tersier yang menggunakan Metode Konvensional+SRI dapat dilihat pada Gambar 4.15

Tabel 4.44 Pola Tanam Gabungan antara Metode Konvensional dan Metode SRI J.I. Pirang Kiri

| Musim Tanam                             | Jenis Tanaman | Rencana |        | Metode SCL |       | Metode SRI |       | Nov |    |     | Des  |    |     | Jan |    |     | Feb |    |     | Mar |    |     | Apr |    |     | Mei |    |     | Juni |    |     | Jul |       |     | Agt  |       |  | Sep |  |       | Okt    |  |  | Intensitas Tanam (%) |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |        |
|---|---------------|---------|--------|------------|-------|------------|-------|-----|----|-----|------|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|------|----|-----|-----|-------|-----|------|-------|--|-----|--|-------|--------|--|--|----------------------|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--------|--------|
|   |               | Ha      | (%)    | Ha         | (%)   | Ha         | (%)   | I   | II | III | I    | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I    | II | III | I   | II    | III | Padi | Total |  |     |  |       |        |  |  |                      |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |        |
| Luas Baku Sawah D.I. Pirang Kiri 819 Ha |               |         |        |            |       |            |       |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |       |     |      |       |  |     |  |       |        |  |  |                      |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |        |
| MH                                      | Padi          | 819     | 100,00 | 575        | 70,21 | 244        | 29,79 | PL  | PL | PL  | Padi |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |       |     |      |       |  |     |  |       |        |  |  | 100,00               | 100,00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |        |
|   | Palawija dll  | 0       | 0,00   |            |       |            |       |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |       |     |      |       |  |     |  |       |        |  |  |                      |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |        |
| MK I                                    | Padi          | 519     | 63,37  | 275        | 33,58 | 244        | 29,79 |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |       |     |      |       |  |     |  | 63,37 | 100,00 |  |  |                      |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |        |
|   | Palawija dll  | 300     | 36,63  |            |       |            |       |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |       |     |      |       |  |     |  |       |        |  |  |                      |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |        |
| MK II                                   | Padi          | 119     | 14,53  | 0          | 0,00  | 244        | 14,53 |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |       |     |      |       |  |     |  | 14,53 | 100,00 |  |  |                      |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |        |
|   | Palawija dll  | 700     | 85,47  |            |       |            |       |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |       |     |      |       |  |     |  |       |        |  |  |                      |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |        |
| Sumber : Hasil Pengukuran Jember        |               |         |        |            |       |            |       |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     | Total |     |      |       |  |     |  |       |        |  |  |                      |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 177,90 | 300,00 |

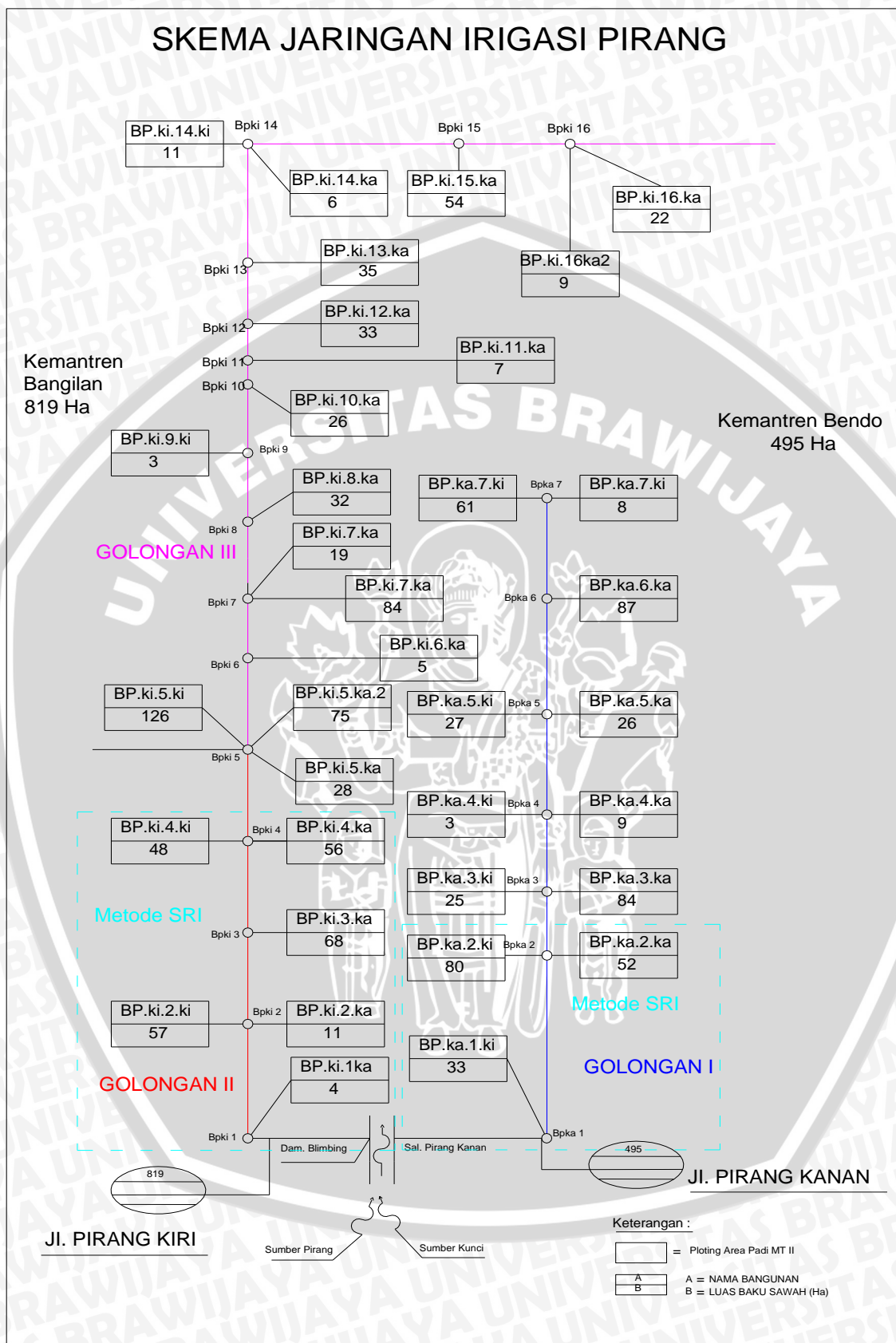
Sumber : Hasil Analisa

Tabel 4.45 Pola Tanam Gabungan antara Metode Konvensional dan Metode SRI J.I. Pirang Kanan

| Musim Tanam                              | Jenis Tanaman | Rencana |        | Metode SCL |       | Metode SRI |       | Nov |    |     | Des  |    |     | Jan |    |     | Feb |    |     | Mar |    |     | Apr |    |     | Mei |    |     | Juni |    |     | Jul |       |     | Agt |    |     | Sep  |       |  | Okt |  |       | Intensitas Tanam (%) |        |  |  |        |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |        |
|--|---------------|---------|--------|------------|-------|------------|-------|-----|----|-----|------|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|------|----|-----|-----|-------|-----|-----|----|-----|------|-------|--|-----|--|-------|----------------------|--------|--|--|--------|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--------|--------|
|  |               | Ha      | (%)    | Ha         | (%)   | Ha         | (%)   | I   | II | III | I    | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I   | II | III | I    | II | III | I   | II    | III | I   | II | III | Padi | Total |  |     |  |       |                      |        |  |  |        |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |        |
| Luas Baku Sawah D.I. Pirang Kanan 495 Ha |               |         |        |            |       |            |       |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |       |     |     |    |     |      |       |  |     |  |       |                      |        |  |  |        |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |        |
| MH                                       | Padi          | 495     | 100,00 | 330        | 66,67 | 165        | 33,33 | PL  | PL | PL  | Padi |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |       |     |     |    |     |      |       |  |     |  |       |                      |        |  |  | 100,00 | 100,00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |        |
|  | Palawija dll  | 0       | 0,00   |            |       |            |       |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |       |     |     |    |     |      |       |  |     |  |       |                      |        |  |  |        |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |        |
| MK I                                     | Padi          | 395     | 79,80  | 230        | 46,46 | 165        | 33,33 |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |       |     |     |    |     |      |       |  |     |  |       | 79,80                | 100,00 |  |  |        |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |        |
|  | Palawija dll  | 100     | 20,20  |            |       |            |       |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |       |     |     |    |     |      |       |  |     |  |       |                      |        |  |  |        |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |        |
| MK II                                    | Padi          | 55      | 11,11  | 0          | 0,00  | 165        | 11,11 |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |       |     |     |    |     |      |       |  |     |  | 11,11 | 100,00               |        |  |  |        |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |        |
|  | Palawija dll  | 440     | 88,89  |            |       |            |       |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     |       |     |     |    |     |      |       |  |     |  |       |                      |        |  |  |        |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |        |
| Sumber : Hasil Analisa                   |               |         |        |            |       |            |       |     |    |     |      |    |     |     |    |     |     |    |     |     |    |     |     |    |     |     |    |     |      |    |     |     | Total |     |     |    |     |      |       |  |     |  |       |                      |        |  |  |        |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 190,91 | 300,00 |

Sumber : Hasil Analisa

## SKEMA JARINGAN IRIGASI PIRANG



Gambar 4.17 Pembagian Petak Tersier dengan menggunakan Metode Konvensional+SRI  
Sumber: Hasil Analisa



Perhitungan kebutuhan air Metode Konvensional+SRI J.I. Pirang Kanan adalah sebagai berikut:

- Musim Tanam I
- Kebutuhan air Metode Konvensional

- Luas tanam : 330 ha
- Padi, Pembibitan 5% luas lahan

- Golongan I

$$\begin{aligned} \text{FPR}_{\text{rencana}} \times \text{LPR} &= 0,080 \times 19,661 \times 0,05 \times (330 \times 100\%) \\ &= 25,953 \text{ lt/det} \end{aligned}$$

- Padi, Garap Tanah 95% luas lahan

- Golongan I

$$\begin{aligned} \text{FPR}_{\text{rencana}} \times \text{LPR} &= 0,080 \times 5,794 \times 0,95 \times (330 \times 100\%) \\ &= 145,320 \text{ lt/det} \end{aligned}$$

- Padi, Tanam/Pemeliharaan Fase Vegetatif padi 100% luas lahan

- Golongan I

$$\begin{aligned} \text{FPR}_{\text{rencana}} \times \text{LPR} &= 0,080 \times 3,248 \times 1 \times (330 \times 100\%) \\ &= 85,739 \text{ lt/det} \end{aligned}$$

- Padi, Tanam/Pemeliharaan Fase Generatif padi 100% luas lahan

- Golongan I

$$\begin{aligned} \text{FPR}_{\text{rencana}} \times \text{LPR} &= 0,080 \times 3,490 \times 1 \times (330 \times 100\%) \\ &= 92,142 \text{ lt/det} \end{aligned}$$

- Kebutuhan air Metode SRI

- Luas tanam : 165 ha
- Padi, Pembibitan 0,2% luas lahan

- Golongan I

$$\begin{aligned} (Q_1 = \frac{H \times A}{T} \times 10.000) / 86,4 &= (\frac{0,005 \times 0,002 \times 165}{1} \times 10.000) / 86,4 \\ &= 0,191 \text{ lt/det} \end{aligned}$$

- Padi, Garap Tanah

- Golongan I

$$\begin{aligned} (Q_1 = \frac{H \times A}{T} \times 10.000) / 86,4 &= (\frac{0,0015 \times 165}{1} \times 10.000) / 86,4 \\ &= 28,646 \text{ lt/det} \end{aligned}$$

- Padi, Tanam/Pemeliharaan Fase Vegetatif pemberian air 8 hari sekali

- Golongan I

$$(Q_1 = \frac{H \times A}{T} \times 10.000) / 86.4 = (\frac{0,012 \times 165 \times 0,5}{8} \times 10.000) / 86.4 = 14,323 \text{ lt/det}$$

- Padi, Tanam/Pemeliharaan Fase Generatif pemberian air 10 hari sekali

- Golongan I

$$(Q_1 = \frac{H \times A}{T} \times 10.000) / 86.4 = (\frac{0,012 \times 165 \times 0,5}{10} \times 10.000) / 86.4 = 11,458 \text{ lt/det}$$

- Palawija dll : tidak ada tanaman pada musim ini

Hasil perhitungan selanjutnya dapat dilihat pada Tabel 4.46 untuk kebutuhan air J.I. Pirang Kanan dan Tabel 4.47 untuk kebutuhan air J.I. Pirang Kiri

Tabel 4.46 Kebutuhan Air dengan Metode Konvensional+SRI J.I. Pirang Kanan

| Musim Tanam | Uraian                        | Metode Konvensional | Metode SRI | Keb. Irigasi (lt/dt), Metode Konv. |         | Keb. Irigasi (lt/dt), Metode SRI |        | Total Keb. Air Irigasi Gol. I (lt/dt) |
|-------------|-------------------------------|---------------------|------------|------------------------------------|---------|----------------------------------|--------|---------------------------------------|
|             |                               |                     |            | Gol.I                              | Gol.II  | Gol.I                            | Gol.II |                                       |
| I           | Luas Baku sawah (Ha)          |                     |            | 330                                |         | 165                              |        |                                       |
|             | Padi 100,00 %                 | 330 ha              | 165 ha     |                                    |         |                                  |        |                                       |
|             | - Pembibitan                  |                     |            |                                    | 25,953  |                                  | 0,191  | 26,144                                |
|             | - Garap Tanah                 |                     |            |                                    | 145,320 |                                  | 28,646 | 173,966                               |
|             | - Pemeliharaan Fase Vegetatif |                     |            |                                    | 85,739  |                                  | 14,323 | 100,062                               |
|             | - Pemeliharaan Fase Generatif |                     |            |                                    | 92,142  |                                  | 11,458 | 103,600                               |
|             | Palawija dll 0,00 %           |                     |            |                                    | 0,000   |                                  |        | 0,000                                 |
| II          | Luas Baku sawah (Ha)          |                     |            |                                    |         | 165                              |        |                                       |
|             | Padi 79,80 %                  | 230 ha              | 165 ha     |                                    |         |                                  |        |                                       |
|             | - Pembibitan                  |                     |            |                                    | 19,415  |                                  | 0,191  | 19,606                                |
|             | - Garap Tanah                 |                     |            |                                    | 108,715 |                                  | 28,646 | 137,360                               |
|             | - Pemeliharaan Fase Vegetatif |                     |            |                                    | 64,142  |                                  | 14,323 | 78,465                                |
|             | - Pemeliharaan Fase Generatif |                     |            |                                    | 68,932  |                                  | 11,458 | 80,390                                |
|             | Palawija dll 20,20 %          |                     |            |                                    | 8,407   |                                  |        | 8,407                                 |
| III         | Luas Baku sawah (Ha)          |                     |            |                                    |         | 165                              |        |                                       |
|             | Padi 11,11 %                  | 0 ha                | 165 ha     |                                    |         |                                  |        |                                       |
|             | - Pembibitan                  |                     |            |                                    | 17,410  |                                  | 0,191  | 17,601                                |
|             | - Garap Tanah                 |                     |            |                                    | 97,485  |                                  | 28,646 | 126,131                               |
|             | - Pemeliharaan Fase Vegetatif |                     |            |                                    | 57,516  |                                  | 14,323 | 71,839                                |
|             | - Pemeliharaan Fase Generatif |                     |            |                                    | 61,812  |                                  | 11,458 | 73,270                                |
|             | Palawija dll 88,89 %          |                     |            |                                    | 238,229 |                                  |        | 238,229                               |

Sumber : Hasil Perhitungan

Tabel 4.47 Kebutuhan Air dengan Metode Konvensional+SRI J.I. Pirang Kiri

| Musim Tanam | Uraian                        | Metode Konvensional | Metode SRI | Keb. Irigasi (lt/dt), Metode Konv. |         | Keb. Irigasi (lt/dt), Metode SRI |         | Total Keb. Air Irigasi Gol. II (lt/dt) | Total Keb. Air Irigasi Gol. III (lt/dt) |
|-------------|-------------------------------|---------------------|------------|------------------------------------|---------|----------------------------------|---------|--|---|
|             |                               |                     |            | Gol.II                             | Gol.III | Gol.II                           | Gol.III |  |   |
| I           | Luas Baku sawah (Ha)          |                     |            | 229                                |         | 346                              |         |  |   |
|             | Padi 100,00 %                 | 575 ha              | 244 ha     |                                    |         |                                  |         |  |   |
|             | - Pembibitan                  |                     |            |                                    | 18,010  |                                  | 0,282   | 0,000                                  | 18,292                                  |
|             | - Garap Tanah                 |                     |            |                                    | 100,843 |                                  | 152,366 | 42,361                                 | 143,204                                 |
|             | - Pemeliharaan Fase Vegetatif |                     |            |                                    | 59,498  |                                  | 89,896  | 21,181                                 | 80,678                                  |
|             | - Pemeliharaan Fase Generatif |                     |            |                                    | 63,941  |                                  | 96,609  | 16,944                                 | 80,885                                  |
|             | Palawija dll 0,00 %           |                     |            |                                    | 0,000   |                                  | 0,000   |  | 0,000                                   |
| II          | Luas Baku sawah (Ha)          |                     |            |                                    |         | 244                              |         | 0                                      |   |
|             | Padi 63,37 %                  | 275 ha              | 244 ha     |                                    |         |                                  |         |  |   |
|             | - Pembibitan                  |                     |            |                                    | 10,699  |                                  | 16,166  | 0,282                                  | 0,000                                   |
|             | - Garap Tanah                 |                     |            |                                    | 59,910  |                                  | 90,519  | 42,361                                 | 0,000                                   |
|             | - Pemeliharaan Fase Vegetatif |                     |            |                                    | 35,347  |                                  | 53,407  | 21,181                                 | 0,000                                   |
|             | - Pemeliharaan Fase Generatif |                     |            |                                    | 37,987  |                                  | 57,395  | 16,944                                 |   |
|             | Palawija dll 36,63 %          |                     |            |                                    | 14,566  |                                  | 10,655  |  |   |
| III         | Luas Baku sawah (Ha)          |                     |            |                                    |         | 244                              |         | 0                                      |   |
|             | Padi 14,53 %                  | 0 ha                | 244 ha     |                                    |         |                                  |         |  |   |
|             | - Pembibitan                  |                     |            |                                    | 15,799  |                                  | 0,000   | 0,282                                  | 0,000                                   |
|             | - Garap Tanah                 |                     |            |                                    | 88,464  |                                  | 0,000   | 42,361                                 | 0,000                                   |
|             | - Pemeliharaan Fase Vegetatif |                     |            |                                    | 52,194  |                                  | 0,000   | 21,181                                 | 0,000                                   |
|             | - Pemeliharaan Fase Generatif |                     |            |                                    | 56,092  |                                  | 0,000   | 16,944                                 |   |
|             | Palawija dll 85,47 %          |                     |            |                                    | 218,885 |                                  | 160,115 |  |   |

Sumber : Hasil Perhitungan

Berikut adalah perhitungan neraca air Metode Konvensional+SRI Jaringan Irigasi Pirang Kanan (Alternatif I)

- Alternatif I

• Bulan : November

• Periode : I

• Golongan : I

• Keb.Air Irigasi (lt/dt) :

$$\begin{aligned} - \text{Padi} &= (2/3 \times \text{Kebutuhan Air Tanam Padi Fase Generatif MT III}) + (1/3 \times \text{Kebutuhan Air Pembibitan MT I}) + (1/3 \times \text{Kebutuhan Air Garap Tanah MT I}) \\ &= (2/3 \times 73,270) + (1/3 \times 26,1441) + (1/3 \times 173,966) \\ &= 115,550 \text{ lt/dt} \end{aligned}$$

$$- \text{Palawija} = 0$$

$$- \text{Total Keb.air Gol I} = 115,550 + 0 = 115,550 \text{ lt/dt}$$

•  $Q_{80}$  November I = 90 (Tabel 4.6)

$$\begin{aligned} \bullet \text{ Faktor K} &= \frac{90}{115,550} \\ &= 0,78, \text{ maka Terus-menerus} \end{aligned}$$

Perhitungan selanjutnya dapat dilihat pada Tabel 4.48 yang menunjukkan neraca air dan pembagian air Metode Konvensional+SRI (Alternatif I) dan Tabel 4.49 yang menunjukkan neraca air dan pembagian air Metode Konvensional+SRI (Alternatif II)



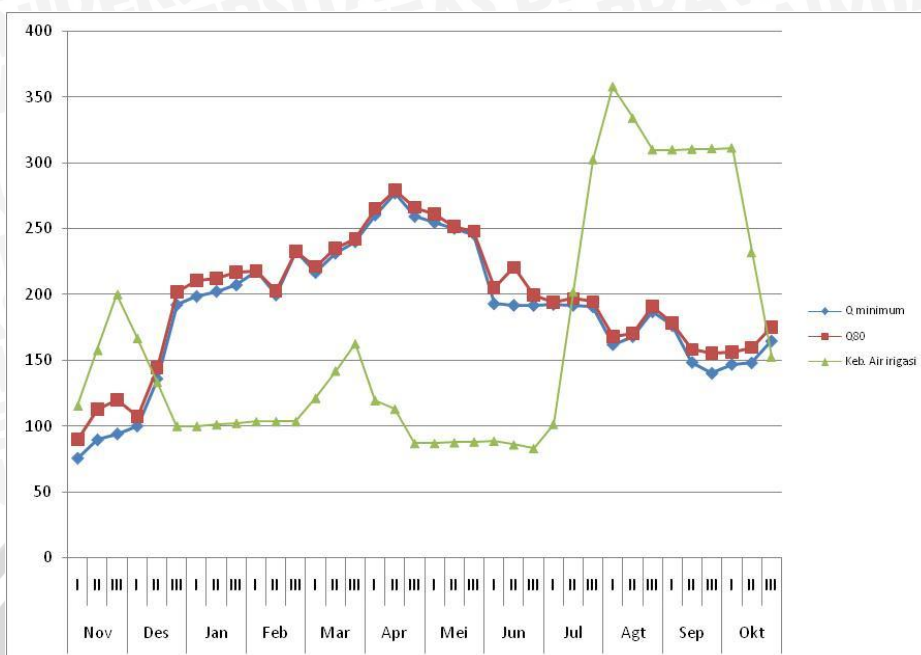
Tabel 4.48 Neraca Air dengan Metode Konvensional+SRI (Alternatif I)

| Bulan | Periode | Pola Tanam |     | Kebutuhan Air Irigasi Gol. I (lt/dt) |          |         | Q<br>Min<br>(lt/dt) | Evaluasi Pembagian Air |                | Q80<br>(lt/dt) | Evaluasi Pembagian Air |                | Kebutuhan Air Irigasi Gol. II (lt/dt) |          |         | Kebutuhan Air Irigasi Gol. III (lt/dt) |          |         | Total Keb.<br>Gol. II dan<br>Gol. III | Q<br>Min<br>(lt/dt) | Evaluasi Pembagian Air |                | Q80<br>(lt/dt) | Evaluasi Pembagian Air |               |
|-------|---------|------------|-----|--------------------------------------|----------|---------|---------------------|------------------------|----------------|----------------|------------------------|----------------|---------------------------------------|----------|---------|--|----------|---------|---------------------------------------|---------------------|------------------------|----------------|----------------|------------------------|---------------|
|       |         |            |     | Padi                                 | Palawija | Total   |                     | Faktor K               | Kriteria       |                | Faktor K               | Kriteria       | Padi                                  | Palawija | Total   | Padi                                   | Palawija | Total   |                                       |                     | Faktor K               | Kriteria       |                | Faktor K               | Kriteria      |
| [1]   | [2]     | [3]        | [4] | [5]                                  | [6]      | [7]     | [8]                 | [9]                    | [10]           | [11]           | [12]                   | [13]           | [14]                                  | [15]     | [16]    | [17]                                   | [18]     | [19]    | [20]                                  | [21]                | [22]                   | [23]           | [24]           | [25]                   |               |
| Nov   | I       | PL         | G   | 115,499                              | -        | 115,499 | 76                  | 0,66                   | Gilir Tersier  | 90             | 0,78                   | Terus menerus  | 102,477                               | -        | 102,477 | 59,859                                 | -        | 59,859  | 162,336                               | 125                 | 0,77                   | Terus menerus  | 149            | 0,92                   | Terus menerus |
|       | II      | PL         | PL  | 157,804                              | 0,000    | 157,804 | 90                  | 0,57                   | Gilir Tersier  | 113            | 0,72                   | Gilir Tersier  | 131,986                               | 0,000    | 131,986 | 119,718                                | 0,000    | 119,718 | 251,704                               | 148                 | 0,59                   | Gilir Tersier  | 187            | 0,74                   | Gilir Tersier |
|       | III     | PL         | PL  | 200,109                              | 0,000    | 200,109 | 94                  | 0,47                   | Gilir Sekunder | 120            | 0,60                   | Gilir Tersier  | 161,496                               | 0,000    | 161,496 | 179,577                                | 0,000    | 179,577 | 341,073                               | 156                 | 0,46                   | Gilir Sekunder | 199            | 0,58                   | Gilir Tersier |
| Des   | I       | V          | PL  | 166,753                              | 0,000    | 166,753 | 100                 | 0,60                   | Gilir Tersier  | 107            | 0,64                   | Gilir Tersier  | 134,552                               | 0,000    | 134,552 | 149,676                                | 0,000    | 149,676 | 284,228                               | 166                 | 0,58                   | Gilir Tersier  | 178            | 0,63                   | Gilir Tersier |
|       | II      | V          | V   | 133,397                              | 0,000    | 133,397 | 136                 | 1,02                   | Terus menerus  | 144            | 1,08                   | Terus menerus  | 107,608                               | 0,000    | 107,608 | 119,775                                | 0,000    | 119,775 | 227,383                               | 225                 | 0,99                   | Terus menerus  | 239            | 1,05                   | Terus menerus |
|       | III     | V          | V   | 100,041                              | 0,000    | 100,041 | 192                 | 1,92                   | Terus menerus  | 202            | 2,02                   | Terus menerus  | 80,664                                | 0,000    | 80,664  | 89,874                                 | 0,000    | 89,874  | 170,538                               | 318                 | 1,86                   | Terus menerus  | 334            | 1,96                   | Terus menerus |
| Jan   | I       | V          | V   | 100,041                              | 0,000    | 100,041 | 199                 | 1,98                   | Terus menerus  | 210            | 2,10                   | Terus menerus  | 80,664                                | 0,000    | 80,664  | 89,874                                 | 0,000    | 89,874  | 170,538                               | 328                 | 1,93                   | Terus menerus  | 348            | 2,04                   | Terus menerus |
|       | II      | G          | V   | 101,189                              | 0,000    | 101,189 | 202                 | 2,00                   | Terus menerus  | 212            | 2,09                   | Terus menerus  | 80,711                                | 0,000    | 80,711  | 92,079                                 | 0,000    | 92,079  | 172,791                               | 335                 | 1,94                   | Terus menerus  | 351            | 2,03                   | Terus menerus |
|       | III     | G          | G   | 102,338                              | 0,000    | 102,338 | 207                 | 2,02                   | Terus menerus  | 217            | 2,12                   | Terus menerus  | 80,759                                | 0,000    | 80,759  | 94,285                                 | 0,000    | 94,285  | 175,043                               | 343                 | 1,96                   | Terus menerus  | 358            | 2,05                   | Terus menerus |
| Feb   | I       | G          | G   | 103,486                              | 0,000    | 103,486 | 217                 | 2,10                   | Terus menerus  | 217            | 2,10                   | Terus menerus  | 80,806                                | 0,000    | 80,806  | 96,490                                 | 0,000    | 96,490  | 177,296                               | 360                 | 2,03                   | Terus menerus  | 360            | 2,03                   | Terus menerus |
|       | II      | G          | G   | 103,486                              | 0,000    | 103,486 | 200                 | 1,93                   | Terus menerus  | 203            | 1,96                   | Terus menerus  | 80,806                                | 0,000    | 80,806  | 96,490                                 | 0,000    | 96,490  | 177,296                               | 330                 | 1,86                   | Terus menerus  | 336            | 1,89                   | Terus menerus |
|       | III     | G          | G   | 103,486                              | 0,000    | 103,486 | 232                 | 2,25                   | Terus menerus  | 233            | 2,25                   | Terus menerus  | 80,806                                | 0,000    | 80,806  | 96,490                                 | 0,000    | 96,490  | 177,296                               | 385                 | 2,17                   | Terus menerus  | 385            | 2,17                   | Terus menerus |
| Mar   | I       | PL         | G   | 121,313                              | -        | 121,313 | 217                 | 1,79                   | Terus menerus  | 221            | 1,82                   | Terus menerus  | 91,622                                | -        | 91,622  | 99,888                                 | -        | 99,888  | 191,510                               | 358                 | 1,87                   | Terus menerus  | 366            | 1,91                   | Terus menerus |
|       | II      | PL         | PL  | 139,140                              | 2,802    | 141,942 | 231                 | 1,63                   | Terus menerus  | 235            | 1,65                   | Terus menerus  | 102,438                               | 4,855    | 107,293 | 103,287                                | 3,552    | 106,839 | 214,132                               | 383                 | 1,79                   | Terus menerus  | 389            | 1,81                   | Terus menerus |
|       | III     | PL         | PL  | 156,967                              | 5,605    | 162,572 | 240                 | 1,48                   | Terus menerus  | 242            | 1,49                   | Terus menerus  | 113,253                               | 9,711    | 122,964 | 106,685                                | 7,104    | 113,789 | 236,753                               | 397                 | 1,68                   | Terus menerus  | 401            | 1,69                   | Terus menerus |
| Apr   | I       | V          | PL  | 111,157                              | 8,407    | 119,564 | 260                 | 2,18                   | Terus menerus  | 265            | 2,22                   | Terus menerus  | 79,091                                | 14,566   | 93,658  | 76,546                                 | 10,655   | 87,202  | 180,859                               | 431                 | 2,38                   | Terus menerus  | 439            | 2,43                   | Terus menerus |
|       | II      | V          | V   | 104,622                              | 8,407    | 113,029 | 277                 | 2,45                   | Terus menerus  | 279            | 2,47                   | Terus menerus  | 75,430                                | 14,566   | 89,997  | 71,158                                 | 10,655   | 81,813  | 171,810                               | 458                 | 2,67                   | Terus menerus  | 462            | 2,69                   | Terus menerus |
|       | III     | V          | V   | 78,449                               | 8,407    | 86,856  | 259                 | 2,98                   | Terus menerus  | 266            | 3,06                   | Terus menerus  | 56,519                                | 14,566   | 71,086  | 53,394                                 | 10,655   | 64,049  | 135,135                               | 429                 | 3,17                   | Terus menerus  | 440            | 3,26                   | Terus menerus |
| Mei   | I       | V          | V   | 78,449                               | 8,407    | 86,856  | 255                 | 2,93                   | Terus menerus  | 261            | 3,00                   | Terus menerus  | 56,519                                | 14,566   | 71,086  | 53,394                                 | 10,655   | 64,049  | 135,135                               | 421                 | 3,12                   | Terus menerus  | 431            | 3,19                   | Terus menerus |
|       | II      | G          | V   | 79,068                               | 8,407    | 87,475  | 250                 | 2,86                   | Terus menerus  | 251            | 2,88                   | Terus menerus  | 55,974                                | 14,566   | 70,541  | 54,704                                 | 10,655   | 65,359  | 135,900                               | 414                 | 3,05                   | Terus menerus  | 416            | 3,06                   | Terus menerus |
|       | III     | G          | G   | 79,686                               | 8,407    | 88,094  | 246                 | 2,79                   | Terus menerus  | 248            | 2,81                   | Terus menerus  | 55,429                                | 14,566   | 69,996  | 56,014                                 | 10,655   | 66,669  | 136,665                               | 406                 | 2,97                   | Terus menerus  | 410            | 3,00                   | Terus menerus |
| Jun   | I       | G          | G   | 80,305                               | 8,407    | 88,712  | 193                 | 2,17                   | Terus menerus  | 205            | 2,31                   | Terus menerus  | 54,884                                | 14,566   | 69,451  | 57,324                                 | 10,655   | 67,979  | 137,430                               | 319                 | 2,32                   | Terus menerus  | 339            | 2,47                   | Terus menerus |
|       | II      | G          | G   | 80,305                               | 5,605    | 85,910  | 192                 | 2,23                   | Terus menerus  | 220            | 2,57                   | Terus menerus  | 54,884                                | 9,711    | 64,595  | 57,324                                 | 7,104    | 64,428  | 129,023                               | 360                 | 2,79                   | Terus menerus  | 365            | 2,83                   | Terus menerus |
|       | III     | G          | G   | 80,305                               | 2,802    | 83,107  | 192                 | 2,31                   | Terus menerus  | 200            | 2,40                   | Terus menerus  | 54,884                                | 4,855    | 59,740  | 57,324                                 | 3,552    | 60,876  | 120,616                               | 317                 | 2,63                   | Terus menerus  | 330            | 2,74                   | Terus menerus |
| Jul   | I       | PL         | G   | 101,447                              | -        | 101,447 | 193                 | 1,90                   | Terus menerus  | 194            | 1,91                   | Terus menerus  | 85,558                                | -        | 85,558  | 38,216                                 | -        | 38,216  | 123,774                               | 319                 | 2,57                   | Terus menerus  | 321            | 2,59                   | Terus menerus |
|       | II      | PL         | PL  | 122,590                              | 79,410   | 201,999 | 192                 | 0,95                   | Terus menerus  | 197            | 0,97                   | Terus menerus  | 116,232                               | 72,962   | 189,194 | 19,108                                 | 53,372   | 72,480  | 261,674                               | 317                 | 1,21                   | Terus menerus  | 326            | 1,24                   | Terus menerus |
|       | III     | PL         | PL  | 143,732                              | 158,819  | 302,551 | 191                 | 0,63                   | Gilir Tersier  | 194            | 0,64                   | Gilir Tersier  | 146,906                               | 145,924  | 292,830 | 0,000                                  | 106,743  | 106,743 | 399,573                               | 315                 | 0,79                   | Terus menerus  | 322            | 0,81                   | Terus menerus |
| Agt   | I       | V          | PL  | 119,763                              | 238,229  | 357,992 | 162                 | 0,45                   | Gilir Sekunder | 168            | 0,47                   | Gilir Sekunder | 122,391                               | 218,885  | 341,277 | 0,000                                  | 160,115  | 160,115 | 501,392                               | 268                 | 0,53                   | Gilir Tersier  | 278            | 0,56                   | Gilir Tersier |
|       | II      | V          | V   | 95,794                               | 238,229  | 334,023 | 168                 | 0,50                   | Gilir Tersier  | 170            | 0,51                   | Gilir Tersier  | 97,877                                | 218,885  | 316,762 | 0,000                                  | 160,115  | 160,115 | 476,877                               | 278                 | 0,58                   | Gilir Tersier  | 282            | 0,59                   | Gilir Tersier |
|       | III     | V          | V   | 71,825                               | 238,229  | 310,054 | 187                 | 0,60                   | Gilir Tersier  | 191            | 0,61                   | Gilir Tersier  | 73,362                                | 218,885  | 292,247 | 0,000                                  | 160,115  | 160,115 | 452,362                               | 309                 | 0,68                   | Gilir Tersier  | 315            | 0,70                   | Gilir Tersier |
| Sep   | I       | V          | V   | 71,825                               | 238,229  | 310,054 | 176                 | 0,57                   | Gilir Tersier  | 179            | 0,58                   | Gilir Tersier  | 73,362                                | 218,885  | 292,247 | 0,000                                  | 160,115  | 160,115 | 452,362                               | 292                 | 0,64                   | Gilir Tersier  | 295            | 0,65                   | Gilir Tersier |
|       | II      | G          | V   | 72,282                               | 238,229  | 310,510 | 148                 | 0,48                   | Gilir Sekunder | 158            | 0,51                   | Gilir Tersier  | 73,230                                | 218,885  | 292,116 | 0,000                                  | 160,115  | 160,115 | 452,230                               | 246                 | 0,54                   | Gilir Tersier  | 262            | 0,58                   | Gilir Tersier |
|       | III     | G          | G   | 72,738                               | 238,229  | 310,966 | 140                 | 0,45                   | Gilir Sekunder | 155            | 0,50                   | Gilir Sekunder | 73,099                                | 218,885  | 291,984 | 0,000                                  | 160,115  | 160,115 | 452,099                               | 232                 | 0,51                   | Gilir Tersier  | 254            | 0,56                   | Gilir Tersier |
| Okt   | I       | G          | G   | 73,194                               | 238,229  | 311,423 | 147                 | 0,47                   | Gilir Sekunder | 156            | 0,50                   | Gilir Tersier  | 72,967                                | 218,885  | 291,852 | 0,000                                  | 160,115  | 160,115 | 451,967                               | 243                 | 0,54                   | Gilir Tersier  | 258            | 0,57                   | Gilir Tersier |
|       | II      | G          | G   | 73,194                               | 158,819  | 232,013 | 148                 | 0,64                   | Gilir Tersier  | 160            | 0,69                   | Gilir Tersier  | 72,967                                | 145,924  | 218,890 | 0,000                                  | 106,743  | 106,743 | 325,634                               | 245                 | 0,75                   | Terus menerus  | 264            | 0,81                   | Terus menerus |
|       | III     | G          | G   | 73,194                               | 79,410   | 152,603 | 165                 | 1,08                   | Terus menerus  | 175            | 1,15                   | Terus menerus  | 72,967                                | 72,962   | 145,929 | 0,000                                  | 53,372   | 53,372  | 199,300                               | 272                 | 1,37                   | Terus menerus  | 290            | 1,45                   | Terus menerus |

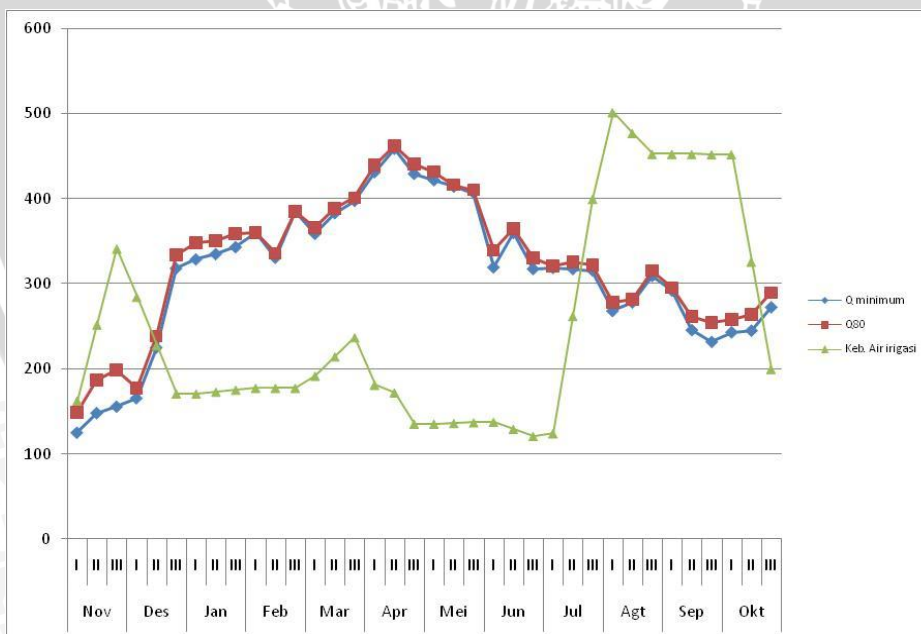
Sumber : Hasil Perhitungan

Keterangan:

- [1] : Bulan
- [2] : Periode
- [3] : Pola Tanam
- [4] : Keb. Air Padi Gol. I
- [5] : Keb. Air Palawija Gol. I
- [6] : [4]+[5]
- [7] : Q min 2008-2012
- [8] : [7]/[6]
- [9] : Kriteria Faktor K
- [10] : Q80 2008-2012
- [11] : [10]/[6]
- [12] : Kriteria Faktor K
- [13] : Keb. Air Padi Gol. II
- [14] : Keb. Air Palawija Gol. II
- [15] : [13]+[14]
- [16] : Keb. Air Padi Gol. III
- [17] : Keb. Air Palawija Gol. III
- [18] : [16]+[17]
- [19] : [15]+[18]
- [20] : Q min 2008-2012
- [21] : [20]/[18]
- [22] : Kriteria Faktor K
- [23] : Q80 2008-2012
- [24] : [23]/[20]
- [25] : Kriteria Faktor K



Gambar 4.18 Grafik Neraca Air Metode Konvensional+SRI J.I. Pirang Kanan (Alternatif I)  
 Sumber: Hasil Analisa



Gambar 4.19 Grafik Neraca Air Metode Konvensional+SRI J.I. Pirang Kiri (Alternatif I)  
 Sumber: Hasil Analisa

Tabel 4.49 Neraca Air dengan Metode Konvensional+SRI (Alternatif II)

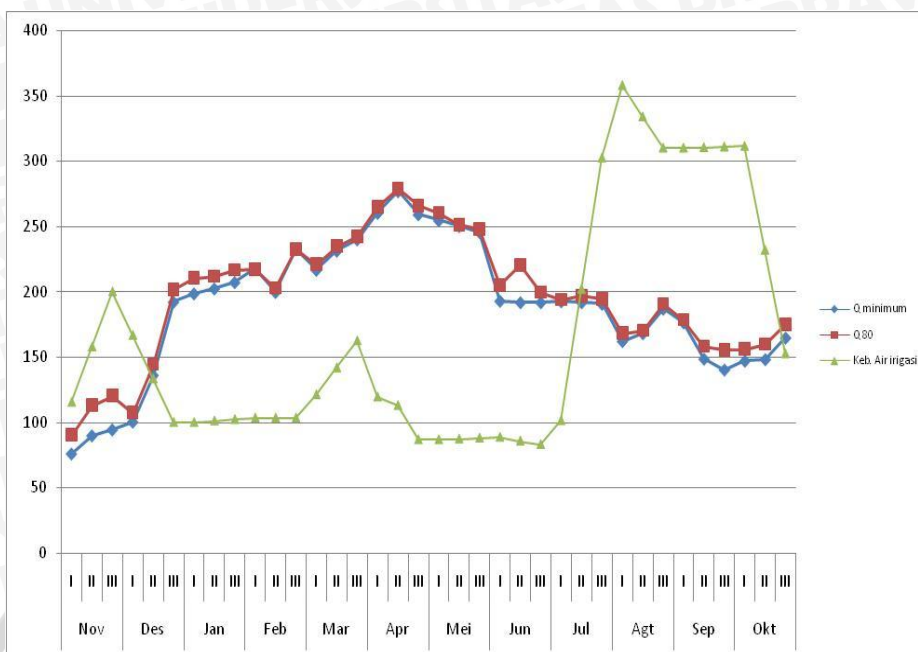
| Bulan | Periode | Pola Tanam Gol. I |          |         | Kebutuhan Air Irigasi Gol. I (lt/dt) |          |          | Q<br>Min<br>(lt/dt) | Evaluasi Pembagian Air |         | Q80<br>(lt/dt) | Evaluasi Pembagian Air |          | Pola Tanam |          |          | Kebutuhan Air Irigasi Gol. II (lt/dt) |         |          | Pola Tanam<br>Gol. III | Kebutuhan Air Irigasi Gol. III (lt/dt) |          |               | Total Keb.<br>Air (lt/dt) | Q<br>(lt/dt) | Evaluasi Pembagian Air |          | Q80<br>(lt/dt) | Evaluasi Pembagian Air |          |
|-------|---------|-------------------|----------|---------|--------------------------------------|----------|----------|---------------------|------------------------|---------|----------------|------------------------|----------|------------|----------|----------|---------------------------------------|---------|----------|------------------------|--|----------|---------------|---------------------------|--------------|------------------------|----------|----------------|------------------------|----------|
|       |         | Padi              | Palawija | Total   | Faktor K                             | Kriteria | Faktor K |                     | Kriteria               | Gol. II |                | Padi                   | Palawija | Total      | Gol. III | Padi     | Palawija                              | Total   | Faktor K |                        | Kriteria                               | Faktor K | Kriteria      |                           |              |                        |          |                |                        |          |
|       |         |                   |          |         |                                      |          |          |                     |                        |         |                |                        |          |            |          |          |                                       |         |          |                        |  |          |               |                           |              | Faktor K               | Kriteria |                | Faktor K               | Kriteria |
| [1]   | [2]     | [3]               | [4]      | [5]     | [6]                                  | [7]      | [8]      | [9]                 | [10]                   | [11]    | [12]           | [13]                   | [14]     | [15]       | [16]     | [17]     | [18]                                  | [19]    | [20]     | [21]                   | [22]                                   | [23]     | [24]          | [25]                      | [26]         | [27]                   |          |                |                        |          |
| Nov   | I       | PL G G            | 115,499  | -       | 115,499                              | 76       | 0,66     | Gilir Tersier       | 90                     | 0,78    | Terus menerus  |                        |          |            | 0,000    |          |                                       |         | 0,000    | 0,000                  | 125                                    | -        | -             | 149                       | -            | -                      |          |                |                        |          |
|       | II      | PL PL G           | 157,804  | 0,000   | 157,804                              | 90       | 0,57     | Gilir Tersier       | 113                    | 0,72    | Gilir Tersier  | PL G G                 | 102,477  | 0,000      | 102,477  |          |                                       | 0,000   | 0,000    | 102,477                | 148                                    | 0,94     | Terus menerus | 187                       | 1,19         | Terus menerus          |          |                |                        |          |
|       | III     | PL PL PL          | 200,109  | 0,000   | 200,109                              | 94       | 0,47     | Gilir Sekunder      | 120                    | 0,60    | Gilir Tersier  | PL PL G                | 131,986  | 0,000      | 131,986  | PL G G   | 59,859                                | 0,000   | 59,859   | 191,845                | 156                                    | 0,78     | Terus menerus | 199                       | 0,99         | Terus menerus          |          |                |                        |          |
| Des   | I       | V PL PL           | 166,753  | 0,000   | 166,753                              | 100      | 0,60     | Gilir Tersier       | 107                    | 0,64    | Gilir Tersier  | PL PL PL               | 161,496  | 0,000      | 161,496  | PL PL G  | 119,718                               | 0,000   | 119,718  | 281,214                | 166                                    | 0,99     | Terus menerus | 178                       | 1,07         | Terus menerus          |          |                |                        |          |
|       | II      | V V PL            | 133,397  | 0,000   | 133,397                              | 136      | 1,02     | Terus menerus       | 144                    | 1,08    | Terus menerus  | V PL PL                | 134,552  | 0,000      | 134,552  | PL PL PL | 179,577                               | 0,000   | 179,577  | 314,129                | 225                                    | 1,69     | Terus menerus | 239                       | 1,79         | Terus menerus          |          |                |                        |          |
|       | III     | V V V             | 100,041  | 0,000   | 100,041                              | 192      | 1,92     | Terus menerus       | 202                    | 2,02    | Terus menerus  | V V PL                 | 107,608  | 0,000      | 107,608  | V PL PL  | 149,676                               | 0,000   | 149,676  | 257,284                | 318                                    | 3,18     | Terus menerus | 334                       | 3,34         | Terus menerus          |          |                |                        |          |
| Jan   | I       | V V V             | 100,041  | 0,000   | 100,041                              | 199      | 1,98     | Terus menerus       | 210                    | 2,10    | Terus menerus  | V V V                  | 80,664   | 0,000      | 80,664   | V V PL   | 119,775                               | 0,000   | 119,775  | 200,439                | 328                                    | 3,28     | Terus menerus | 348                       | 3,48         | Terus menerus          |          |                |                        |          |
|       | II      | G V V             | 101,189  | 0,000   | 101,189                              | 202      | 2,00     | Terus menerus       | 212                    | 2,09    | Terus menerus  | V V V                  | 80,664   | 0,000      | 80,664   | V V V    | 89,874                                | 0,000   | 89,874   | 170,538                | 335                                    | 3,31     | Terus menerus | 351                       | 3,46         | Terus menerus          |          |                |                        |          |
|       | III     | G G V             | 102,338  | 0,000   | 102,338                              | 207      | 2,02     | Terus menerus       | 217                    | 2,12    | Terus menerus  | G V V                  | 80,711   | 0,000      | 80,711   | V V V    | 89,874                                | 0,000   | 89,874   | 170,585                | 343                                    | 3,35     | Terus menerus | 358                       | 3,50         | Terus menerus          |          |                |                        |          |
| Feb   | I       | G G G             | 103,486  | 0,000   | 103,486                              | 217      | 2,10     | Terus menerus       | 217                    | 2,10    | Terus menerus  | G G V                  | 80,759   | 0,000      | 80,759   | G V V    | 92,079                                | 0,000   | 92,079   | 172,838                | 360                                    | 3,48     | Terus menerus | 360                       | 3,48         | Terus menerus          |          |                |                        |          |
|       | II      | G G G             | 103,486  | 0,000   | 103,486                              | 200      | 1,93     | Terus menerus       | 203                    | 1,96    | Terus menerus  | G G G                  | 80,806   | 0,000      | 80,806   | G G V    | 94,285                                | 0,000   | 94,285   | 175,091                | 330                                    | 3,19     | Terus menerus | 336                       | 3,24         | Terus menerus          |          |                |                        |          |
|       | III     | G G G             | 103,486  | 0,000   | 103,486                              | 232      | 2,25     | Terus menerus       | 233                    | 2,25    | Terus menerus  | G G G                  | 80,806   | 0,000      | 80,806   | G G G    | 96,490                                | 0,000   | 96,490   | 177,296                | 385                                    | 3,72     | Terus menerus | 385                       | 3,72         | Terus menerus          |          |                |                        |          |
| Mar   | I       | PL G G            | 121,313  | -       | 121,313                              | 217      | 1,79     | Terus menerus       | 221                    | 1,82    | Terus menerus  | G G G                  | 80,806   | -          | 80,806   | G G G    | 96,490                                | -       | 96,490   | 177,296                | 358                                    | 2,95     | Terus menerus | 366                       | 3,01         | Terus menerus          |          |                |                        |          |
|       | II      | PL PL G           | 139,140  | 2,802   | 141,942                              | 231      | 1,63     | Terus menerus       | 235                    | 1,65    | Terus menerus  | PL G G                 | 91,622   | 4,855      | 96,477   | G G G    | 96,490                                | 3,552   | 100,042  | 196,519                | 383                                    | 2,70     | Terus menerus | 389                       | 2,74         | Terus menerus          |          |                |                        |          |
|       | III     | PL PL PL          | 156,967  | 5,605   | 162,572                              | 240      | 1,48     | Terus menerus       | 242                    | 1,49    | Terus menerus  | PL PL G                | 102,438  | 9,711      | 112,149  | PL G G   | 99,888                                | 7,104   | 106,992  | 219,141                | 397                                    | 2,44     | Terus menerus | 401                       | 2,47         | Terus menerus          |          |                |                        |          |
| Apr   | I       | V PL PL           | 111,157  | 8,407   | 119,564                              | 260      | 2,18     | Terus menerus       | 265                    | 2,22    | Terus menerus  | PL PL PL               | 113,253  | 14,566     | 127,820  | PL PL G  | 103,287                               | 10,655  | 113,942  | 241,762                | 431                                    | 3,60     | Terus menerus | 439                       | 3,67         | Terus menerus          |          |                |                        |          |
|       | II      | V V PL            | 104,622  | 8,407   | 113,029                              | 277      | 2,45     | Terus menerus       | 279                    | 2,47    | Terus menerus  | V PL PL                | 79,091   | 0,000      | 79,091   | PL PL PL | 106,685                               | 10,655  | 117,341  | 196,432                | 458                                    | 4,05     | Terus menerus | 462                       | 4,09         | Terus menerus          |          |                |                        |          |
|       | III     | V V V             | 78,449   | 8,407   | 86,856                               | 259      | 2,98     | Terus menerus       | 266                    | 3,06    | Terus menerus  | V V PL                 | 75,430   | 0,000      | 75,430   | V PL PL  | 76,546                                | 10,655  | 87,202   | 162,632                | 429                                    | 4,94     | Terus menerus | 440                       | 5,07         | Terus menerus          |          |                |                        |          |
| Mei   | I       | V V V             | 78,449   | 8,407   | 86,856                               | 255      | 2,93     | Terus menerus       | 261                    | 3,00    | Terus menerus  | V V V                  | 56,519   | 16,081     | 72,600   | V V PL   | 71,158                                | 10,655  | 81,813   | 154,413                | 421                                    | 4,85     | Terus menerus | 431                       | 4,97         | Terus menerus          |          |                |                        |          |
|       | II      | G V V             | 79,068   | 8,407   | 87,475                               | 250      | 2,86     | Terus menerus       | 251                    | 2,88    | Terus menerus  | V V V                  | 56,519   | 130,825    | 187,344  | V V V    | 53,394                                | 10,655  | 64,049   | 251,393                | 414                                    | 4,73     | Terus menerus | 416                       | 4,76         | Terus menerus          |          |                |                        |          |
|       | III     | G G V             | 79,686   | 8,407   | 88,094                               | 246      | 2,79     | Terus menerus       | 248                    | 2,81    | Terus menerus  | G V V                  | 55,974   | 73,362     | 129,336  | V V V    | 53,394                                | 10,655  | 64,049   | 193,385                | 406                                    | 4,61     | Terus menerus | 410                       | 4,66         | Terus menerus          |          |                |                        |          |
| Jun   | I       | G G G             | 80,305   | 8,407   | 88,712                               | 193      | 2,17     | Terus menerus       | 205                    | 2,31    | Terus menerus  | G G V                  | 55,429   | 218,885    | 274,315  | G V V    | 54,704                                | 10,655  | 65,359   | 339,674                | 319                                    | 3,60     | Terus menerus | 339                       | 3,82         | Terus menerus          |          |                |                        |          |
|       | II      | G G G             | 80,305   | 5,605   | 85,910                               | 192      | 2,23     | Terus menerus       | 220                    | 2,57    | Terus menerus  | G G G                  | 54,884   | 9,711      | 64,595   | G G V    | 56,014                                | 7,104   | 63,118   | 127,713                | 360                                    | 4,19     | Terus menerus | 365                       | 4,25         | Terus menerus          |          |                |                        |          |
|       | III     | G G G             | 80,305   | 2,802   | 83,107                               | 192      | 2,31     | Terus menerus       | 200                    | 2,40    | Terus menerus  | G G G                  | 54,884   | 4,855      | 59,740   | G G G    | 57,324                                | 3,552   | 60,876   | 120,616                | 317                                    | 3,82     | Terus menerus | 330                       | 3,97         | Terus menerus          |          |                |                        |          |
| Jul   | I       | PL G G            | 101,447  | -       | 101,447                              | 193      | 1,90     | Terus menerus       | 194                    | 1,91    | Terus menerus  | G G G                  | 54,884   | -          | 54,884   | G G G    | 57,324                                | -       | 57,324   | 112,208                | 319                                    | 3,14     | Terus menerus | 321                       | 3,16         | Terus menerus          |          |                |                        |          |
|       | II      | PL PL G           | 122,590  | 79,410  | 201,999                              | 192      | 0,95     | Terus menerus       | 197                    | 0,97    | Terus menerus  | PL G G                 | 85,558   | 72,962     | 158,520  | G G G    | 57,324                                | 53,372  | 110,696  | 269,216                | 317                                    | 1,57     | Terus menerus | 326                       | 1,61         | Terus menerus          |          |                |                        |          |
|       | III     | PL PL PL          | 143,732  | 158,819 | 302,551                              | 191      | 0,63     | Gilir Tersier       | 194                    | 0,64    | Gilir Tersier  | PL PL G                | 116,232  | 145,924    | 262,156  | PL G G   | 38,216                                | 106,743 | 144,959  | 407,115                | 315                                    | 1,04     | Terus menerus | 322                       | 1,06         | Terus menerus          |          |                |                        |          |
| Agt   | I       | V PL PL           | 119,763  | 238,229 | 357,992                              | 162      | 0,45     | Gilir Sekunder      | 168                    | 0,47    | Gilir Sekunder | PL PL PL               | 146,906  | 218,885    | 365,792  | PL PL G  | 19,108                                | 160,115 | 179,223  | 545,015                | 268                                    | 0,75     | Gilir Tersier | 278                       | 0,78         | Terus menerus          |          |                |                        |          |
|       | II      | V V PL            | 95,794   | 238,229 | 334,023                              | 168      | 0,50     | Gilir Tersier       | 170                    | 0,51    | Gilir Tersier  | V PL PL                | 122,391  | 218,885    | 341,277  | PL PL PL | 0,000                                 | 160,115 | 160,115  | 501,392                | 278                                    | 0,83     | Terus menerus | 282                       | 0,84         | Terus menerus          |          |                |                        |          |
|       | III     | V V V             | 71,825   | 238,229 | 310,054                              | 187      | 0,60     | Gilir Tersier       | 191                    | 0,61    | Gilir Tersier  | V V PL                 | 97,877   | 218,885    | 316,762  | V PL PL  | 0,000                                 | 160,115 | 160,115  | 476,877                | 309                                    | 1,00     | Terus menerus | 315                       | 1,02         | Terus menerus          |          |                |                        |          |
| Sep   | I       | V V V             | 71,825   | 238,229 | 310,054                              | 176      | 0,57     | Gilir Tersier       | 179                    | 0,58    | Gilir Tersier  | V V V                  | 73,362   | 218,885    | 292,247  | V V PL   | 0,000                                 | 160,115 | 160,115  | 452,362                | 292                                    | 0,94     | Terus menerus | 295                       | 0,95         | Terus menerus          |          |                |                        |          |
|       | II      | G V V             | 72,282   | 238,229 | 310,510                              | 148      | 0,48     | Gilir Sekunder      | 158                    | 0,51    | Gilir Tersier  | V V V                  | 73,362   | 218,885    | 292,247  | V V V    | 0,000                                 | 160,115 | 160,115  | 452,362                | 246                                    | 0,79     | Terus menerus | 262                       | 0,84         | Terus menerus          |          |                |                        |          |
|       | III     | G G V             | 72,738   | 238,229 | 310,966                              | 140      | 0,45     | Gilir Sekunder      | 155                    | 0,50    | Gilir Sekunder | G V V                  | 73,230   | 218,885    | 292,116  | V V V    | 0,000                                 | 160,115 | 160,115  | 452,230                | 232                                    | 0,75     | Gilir Tersier | 254                       | 0,82         | Terus menerus          |          |                |                        |          |
| Okt   | I       | G G G             | 73,194   | 238,229 | 311,423                              | 147      | 0,47     | Gilir Sekunder      | 156                    | 0,50    | Gilir Tersier  | G G V                  | 73,099   | 218,885    | 291,984  | G V V    | 0,000                                 | 160,115 | 160,115  | 452,099                | 243                                    | 0,78     | Terus menerus | 258                       | 0,83         | Terus menerus          |          |                |                        |          |
|       | II      | G G G             | 73,194   | 158,819 | 232,013                              | 148      | 0,64     | Gilir Tersier       | 160                    | 0,69    | Gilir Tersier  | G G G                  | 72,967   | 145,924    | 218,890  | G G V    | 0,000                                 | 106,743 | 106,743  | 325,634                | 245                                    | 1,06     | Terus menerus | 264                       | 1,14         | Terus menerus          |          |                |                        |          |
|       | III     | G G G             | 73,194   | 79,410  | 152,603                              | 165      | 1,08     | Terus menerus       | 175                    | 1,15    | Terus menerus  | G G G                  | 72,967   | 72,962     | 145,929  | G G G    | 0,000                                 | 53,372  | 53,372   | 199,300                | 272                                    | 1,78     | Terus menerus | 290                       | 1,90         | Terus menerus          |          |                |                        |          |

Sumber : Hasil Perhitungan

Keterangan:

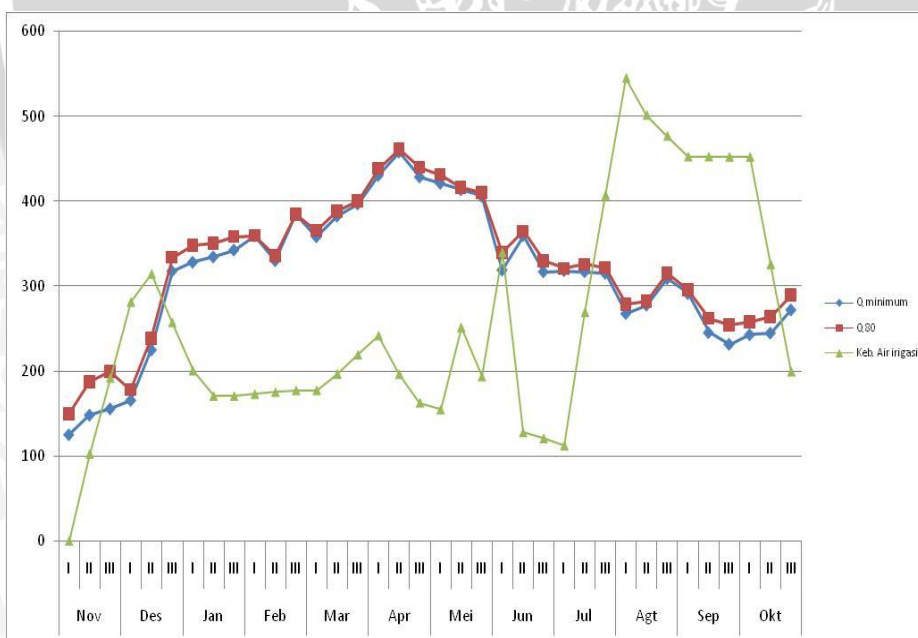
- [1] : Bulan
- [2] : Periode
- [3] : Pola Tanam
- [4] : Keb.Air Padi Gol.I
- [5] : Keb.Air Palawija Gol.
- [6] : [4]+[5]
- [7] : Q min 2008-2012
- [8] : [7]/[6]
- [9] : Kriteria Faktor K
- [10] : Q80 2008-2012
- [11] : [10]/[6]
- [12] : Kriteria Faktor K
- [13] : Pola Tanam Gol. II
- [14] : Keb.Air Padi Gol.II
- [15] : Keb.Air Palawija Gol.II
- [16] : [14]+[15]
- [17] : Pola Tanam Gol. III
- [18] : Keb.Air Padi Gol.III
- [19] : Keb.Air Palawija Gol.III
- [20] : [18]+[19]
- [21] : [16]+[20]
- [22] : Q min 2008-2012
- [23] : [22]/[21]
- [24] : Kriteria Faktor K
- [25] : Q80 2008-2012
- [26] : [25]/[21]
- [27] : Kriteria Faktor K





Gambar 4.20 Grafik Neraca Air Metode Konvensional+SRI J.I. Pirang Kanan (Alternatif II)

Sumber: Hasil Analisa



Gambar 4.21 Grafik Neraca Air Metode Konvensional+SRI J.I. Pirang Kiri (Alternatif II)

Sumber: Hasil Analisa

#### 4.6 Perhitungan Jadwal Rotasi pada Jaringan Irigasi Pirang

Jadwal rotasi dibuat berdasarkan hasil evaluasi neraca air dan pembagian air dan menurut hasil evaluasi pembagian air. Sebagai contoh, penulis akan membuat jadwal pada J.I. Pirang Kiri dari Metode Konvensional (Alternatif I) yang memerlukan jadwal rotasi golongan. Tujuan jadwal rotasi ini adalah untuk mengatur jatah waktu rotasi pada tiap blok golongan yang sudah ditentukan. Contoh perhitungan waktu rotasi/jatah hari gilir adalah sebagai berikut:

- Metode Konvensional Alternatif I

- Bulan November, Periode I
- Kebutuhan Air Irigasi Gol.2 : 158,973 lt/det
- Kebutuhan Air Irigasi Gol.3 : 116,289 lt/det
- Total Kebutuhan Air Irigasi : 158,973 + 116,289  
: 275,262 lt/det
- Lama waktu pemberian air : 12 jam dalam 1hari dengan periode gilir 10harian
- Faktor K : 0,542 → Gilir tingkat tersier
- Lama Gilir (jam)

$$\begin{aligned} - \text{ Periode 1} &= \frac{\text{Keb. Gol.2}}{\text{Total kebutuhan air}} \times 120 \\ &= \frac{158,973}{275,262} \times 120 \\ &= 69,304 \text{ jam} \\ &= 69 \text{ jam} \end{aligned}$$

$$\begin{aligned} - \text{ Periode 2} &= \frac{\text{Keb. Gol.3}}{\text{Total kebutuhan air}} \times 120 \\ &= \frac{116,289}{274,262} \times 120 \\ &= 50,696 \text{ jam} \\ &= 51 \text{ jam} \end{aligned}$$

Untuk Jadwal selanjutnya dapat dilihat pada Tabel 4.50





Sebagai rekapitulasi dari pembuatan jadwal tiap musim tanam, maka dasar perhitungan yang digunakan adalah kebutuhan air maksimum dan ketersediaan air maksimum untuk setiap musim tanam. Berikut adalah perhitungannya:

- Faktor K > 0,75 → Penggenangan terus-menerus
- Faktor K 0,25 - 0,75 → Gilir Tersier

$$\text{Periode 1} = \frac{(\text{Keb. Gol.1} + \text{Keb. Gol.2})/2}{\text{Total kebutuhan air}} \times 120$$

$$\text{Periode 2} = \frac{(\text{Keb. Gol.1} + \text{Keb. Gol.3})/2}{\text{Total kebutuhan air}} \times 120$$

$$\text{Periode 3} = \frac{(\text{Keb. Gol.2} + \text{Keb. Gol.3})/2}{\text{Total kebutuhan air}} \times 120$$

- Faktor K < 0,5 → Gilir Sekunder

$$\text{Periode 1} = \frac{(\text{Keb. Gol.1})}{\text{Total kebutuhan air}} \times 120$$

$$\text{Periode 2} = \frac{(\text{Keb. Gol.2})}{\text{Total kebutuhan air}} \times 120$$

$$\text{Periode 3} = \frac{(\text{Keb. Gol.3})}{\text{Total kebutuhan air}} \times 120$$

#### 4.6.1.1 Musim Tanam I

- Keb. air max = 425,067 lt/det (Tabel 4.50)
- Ketersediaan = 385 lt/det (Tabel 4.50)
- Faktor K =  $385 / 425,067$   
= 0,905 → Terus menerus

#### 4.6.1.2 Musim Tanam II

- Keb. air max = 269,344 lt/det (Tabel 4.50)
- Ketersediaan = 462 lt/det (Tabel 4.50)
- Faktor K =  $462 / 269,344$   
= 1,714 → Terus menerus

#### 4.6.1.3 Musim Tanam III

- Keb. air max = 689,814 lt/det (Tabel 4.50)
- Ketersediaan = 326 lt/det (Tabel 4.50)
- Faktor K =  $326 / 689,814$   
= 0,472 → Gilir Sekunder

Jadwal pemberian air irigasi tiap musim tanam dapat dilihat pada Tabel 4.51

Tabel 4.51 Jadwal Pembagian Air Irigasi Metode Konvensional (Alternatif I)

|                   | Keb.Air<br>(lt/det) | Total Keb.<br>Air (lt/det) | Q80<br>max (lt/det) | Kriteria<br>Pemberian air | Lama Gilir (jam) |                                   | Jadwal Pemberian Air              |         |      |       |       |          |        |       |        |
|-------------------|---------------------|----------------------------|---------------------|---------------------------|------------------|-----------------------------------|-----------------------------------|---------|------|-------|-------|----------|--------|-------|--------|
|                   |                     |                            |                     |                           | Periode I        | Periode II                        | Senin                             | Selasa  | Rabu | Kamis | Jumat | Sabtu    | Minggu | Senin | Selasa |
| Musim Taraman I   | Go12                | 425,067                    | 385                 | Terus menerus             |                  |                                   | Penggenangan Secara Terus-menerus |         |      |       |       |          |        |       |        |
|                   | Go13                |                            |                     |                           | 179,577          | Penggenangan Secara Terus-menerus |                                   |         |      |       |       |          |        |       |        |
| Musim Taraman II  | Go12                | 269,344                    | 462                 | Terus menerus             |                  |                                   | Penggenangan Secara Terus-menerus |         |      |       |       |          |        |       |        |
|                   | Go13                |                            |                     |                           | HHHHH            | Penggenangan Secara Terus-menerus |                                   |         |      |       |       |          |        |       |        |
| Musim Taraman III | Go12                | 689,799                    | 326                 | Gilir Sekunder            | 69               |                                   | 0.5.00                            | Gol. II |      |       | 14.00 | Gol. III |        |       | 17.00  |
|                   | Go13                |                            |                     |                           | 291,417          |                                   | 51                                |         |      |       |       |          |        |       |        |

Sumber : Hasil Perhitungan

Tabel 4.52 Prosentase Tingkat Kejadian Rotasi J.I. Pirang Kiri Dalam Setahun Berdasarkan Debit yang Tersedia ( $Q_{80}$ )

| Nama Jaringan Irigasi | Alternatif | Faktor K  |                     | Metode       |       |        |       |                  |        |
|-----------------------|------------|-----------|---------------------|--------------|-------|--------|-------|------------------|--------|
|                       |            | Nilai     | Kriteria            | Konvensional |       | SRI    |       | Konvensional+SRI |        |
|                       |            |           |                     | Jumlah       | (%)   | Jumlah | (%)   | Jumlah           | (%)    |
| Pirang Kiri           | I          | 0,75-1,00 | Terus-menerus       | 23           | 63,89 | 21     | 58,33 | 26               | 72,22  |
|                       |            | 0,50-0,75 | Giliran di Tersier  | 7            | 19,44 | 5      | 13,89 | 10               | 27,78  |
|                       |            | 0,25-0,50 | Giliran di Sekunder | 6            | 16,67 | 8      | 22,22 | -                | -      |
|                       |            | <0,25     | Giliran di Primer   | -            | -     | 2      | 5,56  | -                | -      |
|                       | II         | 0,75-1,00 | Terus-menerus       | 23           | 65,71 | 21     | 60,00 | 35               | 100,00 |
|                       |            | 0,50-0,75 | Giliran di Tersier  | 4            | 11,43 | 4      | 11,43 | -                | -      |
|                       |            | 0,25-0,50 | Giliran di Sekunder | 8            | 22,86 | 9      | 25,71 | -                | -      |
|                       |            | <0,25     | Giliran di Primer   | -            | -     | 1      | 2,86  | -                | -      |

Sumber: Hasil Analisa

Dari hasil prosentase tingkat kejadian rotasi (Tabel 4.52), dapat diketahui bahwa dalam satu tahun periode tanam pada J.I. Pirang Kiri, Metode Konvensional+SRI Alternatif I maupun Alternatif II paling besar prosentase yang tidak melakukan rotasi yaitu sebesar 72,22% dan 100%.

Tabel 4.53 Prosentase Tingkat Kejadian Rotasi J.I. Pirang Kanan Dalam Setahun Berdasarkan Debit yang Tersedia ( $Q_{80}$ )

| Nama Jaringan Irigasi | Faktor K  |                     | Metode       |       |        |       |                  |       |
|-----------------------|-----------|---------------------|--------------|-------|--------|-------|------------------|-------|
|                       | Nilai     | Kriteria            | Konvensional |       | SRI    |       | Konvensional+SRI |       |
|                       |           |                     | Jumlah       | (%)   | Jumlah | (%)   | Jumlah           | (%)   |
| Pirang Kanan          | 0,75-1,00 | Terus-menerus       | 23           | 63,89 | 21     | 58,33 | 26               | 72,22 |
|                       | 0,50-0,75 | Giliran di Tersier  | 7            | 19,44 | 5      | 13,89 | 10               | 27,78 |
|                       | 0,25-0,50 | Giliran di Sekunder | 6            | 16,67 | 8      | 22,22 | -                | -     |
|                       | <0,25     | Giliran di Primer   | -            | -     | 2      | 5,56  | -                | -     |

Sumber: Hasil Analisa

Dari hasil prosentase tingkat kejadian rotasi (Tabel 4.53), dapat diketahui bahwa dalam satu tahun periode tanam pada J.I. Pirang Kanan, Metode Konvensional+SRI paling besar prosentase yang tidak melakukan rotasi yaitu sebesar 72,22%.

#### 4.7 Rekapitulasi Alternatif

Dasar penentuan alternatif mempertimbangkan hal-hal berikut :

1. Peningkatan intensitas tanam padi yang dicapai.
2. Pemakaian air irigasi secara tepat guna
3. Penyesuaian pola tanam terhadap kondisi jaringan irigasi.
4. Kebutuhan air irigasi selama periode pertumbuhan tanaman dapat terpenuhi.

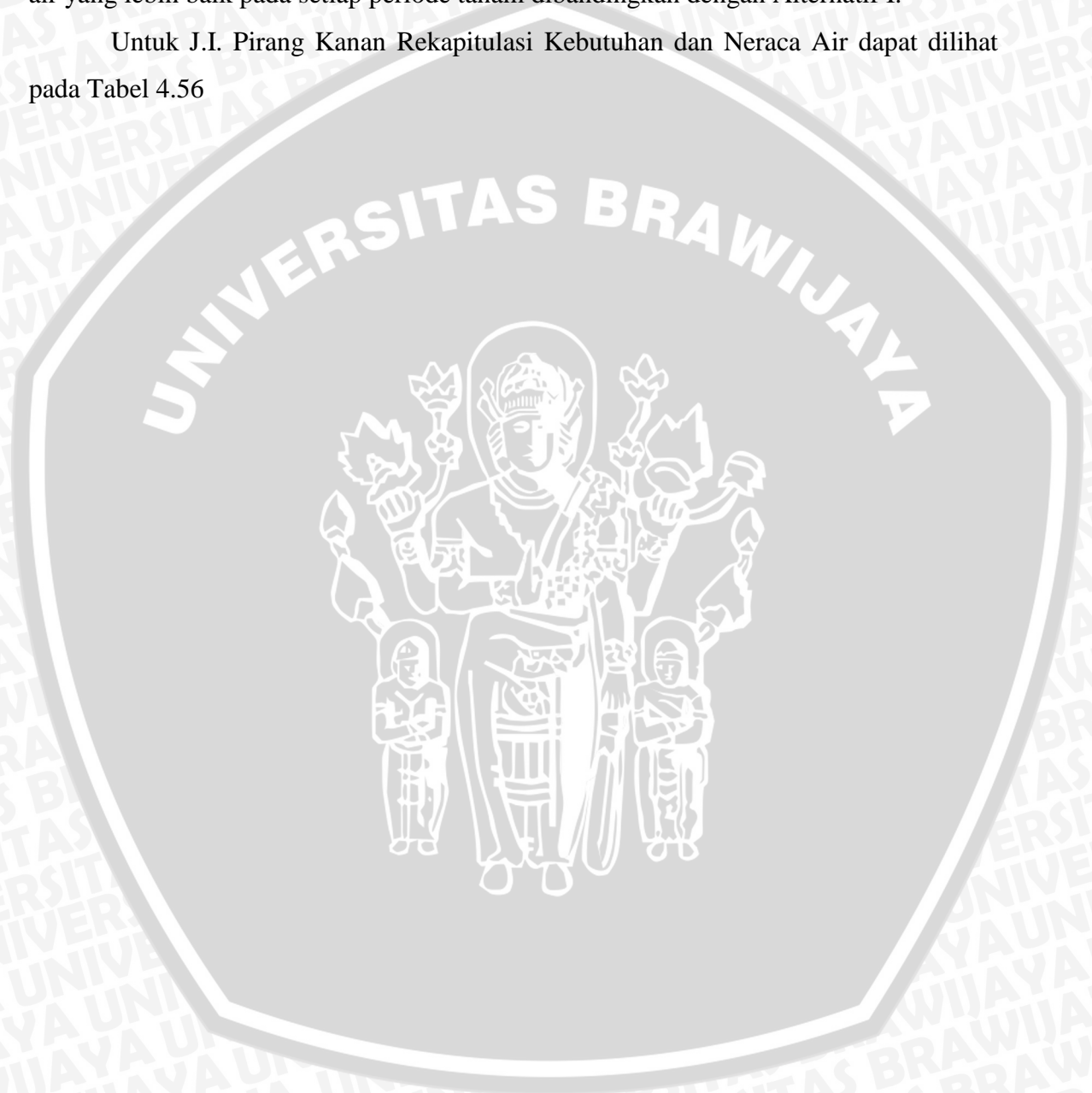
Atas dasar pertimbangan-pertimbangan di atas dan hasil rekapitulasi pada J.I. Irigasi Pirang Kiri dari masing-masing alternatif (Tabel 4.54 dan Tabel 4.55), maka Alternatif II yang cukup baik untuk diterapkan pada Jaringan Irigasi Pirang Kiri.



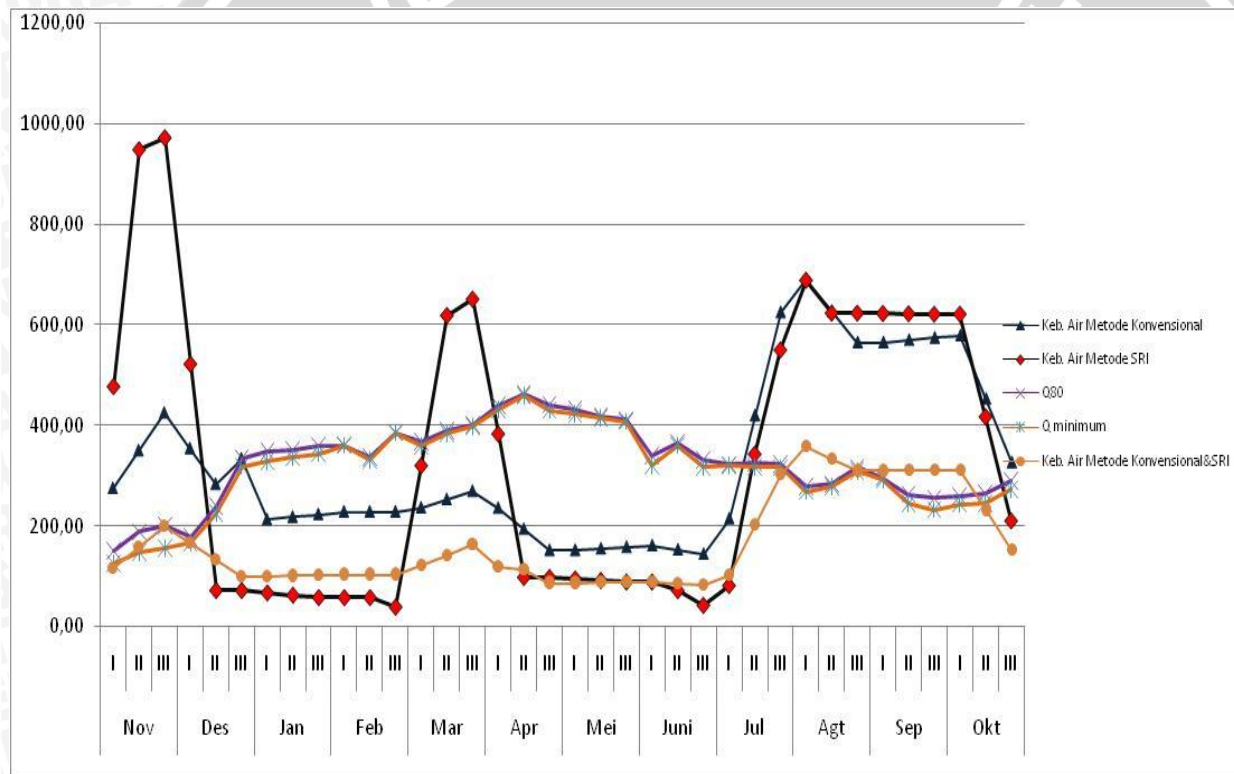
Pada Alternatif II, dapat menghemat pemakaian air irigasi mencapai tingkatan yang lebih tinggi bila dibandingkan dengan Alternatif I. Bila pilihan dialihkan pada Alternatif I, intensitas tanam yang dicapai sama dengan Alternatif II tetapi dalam penghematan pemakaian air irigasi lebih rendah.

Dari uraian tersebut jelas bahwa Alternatif II mempunyai jaminan penyediaan air yang lebih baik pada setiap periode tanam dibandingkan dengan Alternatif I.

Untuk J.I. Pirang Kanan Rekapitulasi Kebutuhan dan Neraca Air dapat dilihat pada Tabel 4.56







Gambar 4.22 Grafik Hubungan Kebutuhan Air & Ketersediaan Air J.I. Pirang Kiri (Alternatif I)  
 Sumber: Hasil Analisa



Tabel 4.55 Rekapitulasi Kebutuhan dan Neraca Air J.I. Pirang Kiri (Alternatif II)

| Uraian  | Sat    | Nov  |        |        | Des    |        |        | Jan    |        |        | Feb    |        |        | Mar    |        |        | Apr    |        |        | Mei    |        |        | Juni   |        |        | Jul    |        |        | Agt    |        |        | Sep    |        |        | Okt    |        |        |
|---|--------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|   |        | I  | II     | III    | I      | II     | III    | I      | II     | III    | I      | II     | III    | I      | II     | III    | I      | II     | III    | I      | II     | III    | I      | II     | III    | I      | II     | III    | I      | II     | III    | I      | II     | III    |        |        |        |
|   |        | PL   |        |        | PL     |        |        | PL     |        |        | PL     |        |        | PL     |        |        | PL     |        |        | PL     |        |        | PL     |        |        | PL     |        |        | PL     |        |        | PL     |        |        | PL     |        |        |
| Intensitas Tanam Padi 177,90 % per Tahun                        |        | [Water balance chart showing PL (green) and Padi (yellow) across months] |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Pola Tanam Rencana Gol. II<br>Padi-Padi+Palawija-Padi+Palawija  |        | [Water balance chart showing PL (green) and Padi (yellow) across months] |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Pola Tanam Rencana Gol. III<br>Padi-Padi+Palawija-Padi+Palawija |        | [Water balance chart showing PL (green) and Padi (yellow) across months] |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Kebutuhan Air Irigasi   |        | [Water balance chart showing PL (green) and Padi (yellow) across months] |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| a. Metode Konvensional  | lt/det | 0,00   | 158,97 | 350,16 | 361,78 | 384,19 | 313,41 | 242,64 | 212,74 | 215,75 | 207,92 | 200,08 | 228,40 | 228,40 | 241,45 | 257,90 | 274,35 | 182,34 | 211,42 | 169,37 | 151,61 | 157,33 | 156,50 | 151,19 | 144,10 | 135,69 | 307,69 | 513,09 | 718,48 | 716,03 | 653,94 | 591,85 | 565,62 | 568,27 | 572,85 | 451,09 | 326,69 |
| b. Metode SRI   | lt/det | 0,00   | 275,50 | 749,35 | 962,23 | 712,02 | 261,45 | 71,09  | 68,36  | 63,62  | 58,88  | 56,88  | 56,88  | 45,93  | 217,90 | 516,86 | 661,85 | 503,29 | 217,76 | 97,14  | 95,40  | 92,40  | 89,39  | 70,76  | 53,40  | 29,10  | 261,17 | 522,34 | 752,64 | 716,29 | 651,89 | 623,16 | 622,76 | 622,08 | 621,39 | 416,82 | 212,54 |
| c. Metode Konvensional+SRI                                      | lt/det | 0,00   | 102,48 | 191,85 | 281,21 | 314,13 | 257,28 | 200,44 | 170,54 | 170,59 | 172,84 | 175,09 | 177,30 | 177,30 | 196,52 | 219,14 | 241,76 | 196,43 | 162,63 | 154,41 | 251,39 | 193,38 | 339,67 | 127,71 | 120,62 | 112,21 | 269,22 | 407,12 | 545,01 | 501,39 | 476,88 | 452,36 | 452,36 | 452,23 | 452,10 | 325,63 | 199,30 |
| Ketersediaan Air  |        | [Water balance chart showing PL (green) and Padi (yellow) across months] |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| a. Q80  | lt/det | 149  | 187    | 199    | 178    | 239    | 334    | 348    | 351    | 358    | 360    | 336    | 385    | 366    | 389    | 401    | 439    | 462    | 440    | 431    | 416    | 410    | 339    | 365    | 330    | 321    | 326    | 322    | 278    | 282    | 315    | 295    | 262    | 254    | 258    | 264    | 290    |
| b. Q minimum  | lt/det | 125  | 148    | 156    | 166    | 225    | 318    | 328    | 335    | 343    | 360    | 330    | 385    | 358    | 383    | 397    | 431    | 458    | 429    | 421    | 414    | 406    | 319    | 360    | 317    | 319    | 317    | 315    | 268    | 278    | 309    | 292    | 246    | 232    | 243    | 245    | 272    |
| Faktor K Metode Konvensional                                    |        | [Water balance chart showing PL (green) and Padi (yellow) across months] |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| a. Q minimum / Kebutuhan<br>Kriteria Gilir                      |        | -  | 0,93   | 0,44   | 0,46   | 0,59   | 1,01   | 1,35   | 1,57   | 1,59   | 1,73   | 1,65   | 1,68   | 1,57   | 1,59   | 1,54   | 1,57   | 2,51   | 2,03   | 2,49   | 2,73   | 2,58   | 2,04   | 2,38   | 2,20   | 2,35   | 1,03   | 0,61   | 0,37   | 0,39   | 0,47   | 0,49   | 0,43   | 0,41   | 0,42   | 0,54   | 0,83   |
| a. Q80 / Kebutuhan<br>Kriteria Gilir                            |        | -  | 1,18   | 0,57   | 0,49   | 0,62   | 1,07   | 1,43   | 1,65   | 1,66   | 1,73   | 1,68   | 1,68   | 1,60   | 1,61   | 1,55   | 1,60   | 2,53   | 2,08   | 2,55   | 2,74   | 2,61   | 2,17   | 2,41   | 2,29   | 2,36   | 1,06   | 0,63   | 0,39   | 0,39   | 0,48   | 0,50   | 0,46   | 0,45   | 0,45   | 0,59   | 0,89   |
| Faktor K Metode SRI   |        | [Water balance chart showing PL (green) and Padi (yellow) across months] |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| a. Q minimum / Kebutuhan<br>Kriteria Gilir                      |        | -  | 0,54   | 0,21   | 0,17   | 0,32   | 1,22   | 4,62   | 4,90   | 5,39   | 6,11   | 5,81   | 6,76   | 7,80   | 1,76   | 0,77   | 0,65   | 0,91   | 1,97   | 4,34   | 4,34   | 4,40   | 3,57   | 5,08   | 5,94   | 10,94  | 1,21   | 0,60   | 0,36   | 0,39   | 0,47   | 0,47   | 0,39   | 0,37   | 0,39   | 0,59   | 1,28   |
| a. Q80 / Kebutuhan<br>Kriteria Gilir                            |        | -  | 0,68   | 0,27   | 0,18   | 0,34   | 1,28   | 4,89   | 5,13   | 5,63   | 6,11   | 5,90   | 6,76   | 7,96   | 1,78   | 0,78   | 0,66   | 0,92   | 2,02   | 4,44   | 4,36   | 4,44   | 3,79   | 5,15   | 6,18   | 11,03  | 1,25   | 0,62   | 0,37   | 0,39   | 0,48   | 0,47   | 0,42   | 0,41   | 0,42   | 0,63   | 1,36   |
| Faktor K Metode Konvensional+SRI                                |        | [Water balance chart showing PL (green) and Padi (yellow) across months] |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| a. Q minimum / Kebutuhan<br>Kriteria Gilir                      |        | -  | 0,94   | 0,78   | 0,99   | 1,69   | 3,18   | 3,28   | 3,31   | 3,35   | 3,48   | 3,19   | 3,72   | 2,95   | 2,70   | 2,44   | 3,60   | 4,05   | 4,94   | 4,85   | 4,73   | 4,61   | 3,60   | 4,19   | 3,82   | 3,14   | 1,57   | 1,04   | 0,75   | 0,83   | 1,00   | 0,94   | 0,79   | 0,75   | 0,78   | 1,06   | 1,78   |
| a. Q80 / Kebutuhan<br>Kriteria Gilir                            |        | -  | 1,19   | 0,99   | 1,07   | 1,79   | 3,34   | 3,48   | 3,46   | 3,50   | 3,48   | 3,24   | 3,72   | 3,01   | 2,74   | 2,47   | 3,67   | 4,09   | 5,07   | 4,97   | 4,76   | 4,66   | 3,82   | 4,25   | 3,97   | 3,16   | 1,61   | 1,06   | 0,78   | 0,84   | 1,02   | 0,95   | 0,84   | 0,82   | 0,83   | 1,14   | 1,90   |

Sumber : Hasil Perhitungan

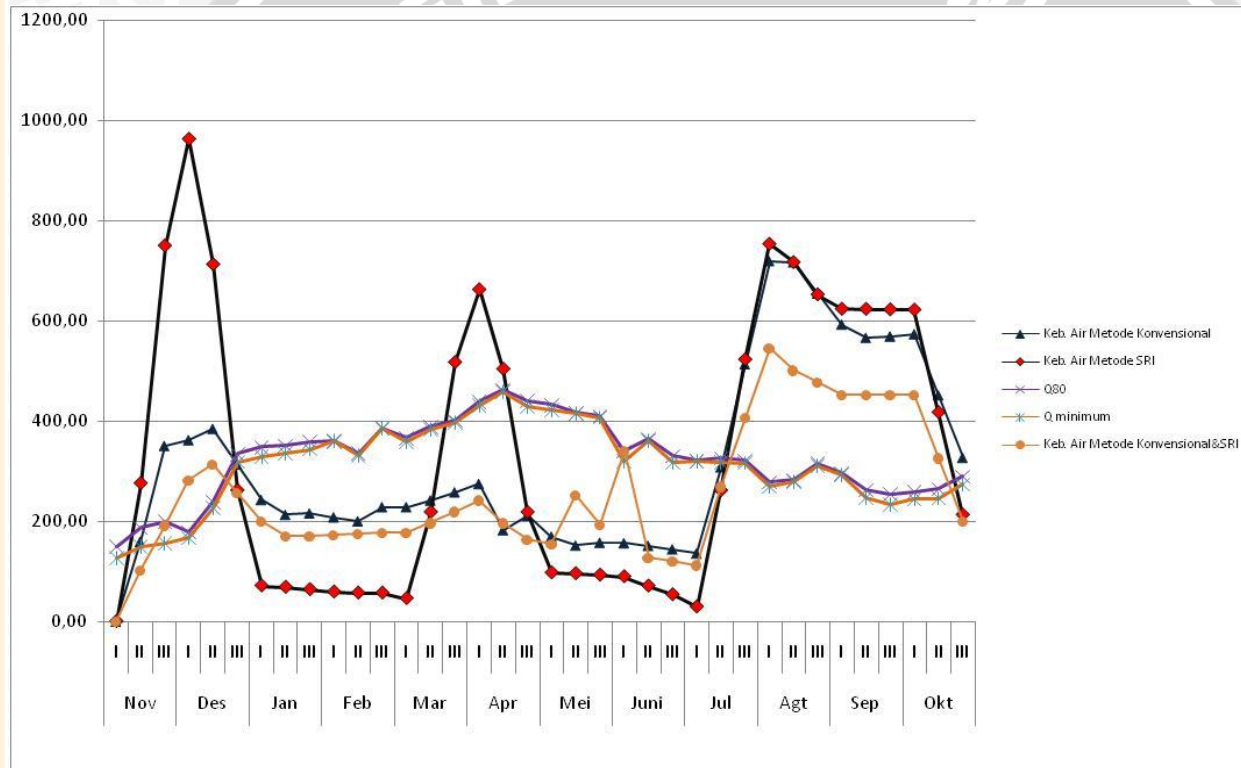
Keterangan Kriteria Gilir

G.P: Gilir Primer

G.S: Gilir Sekunder

GT : Gilir Tersier

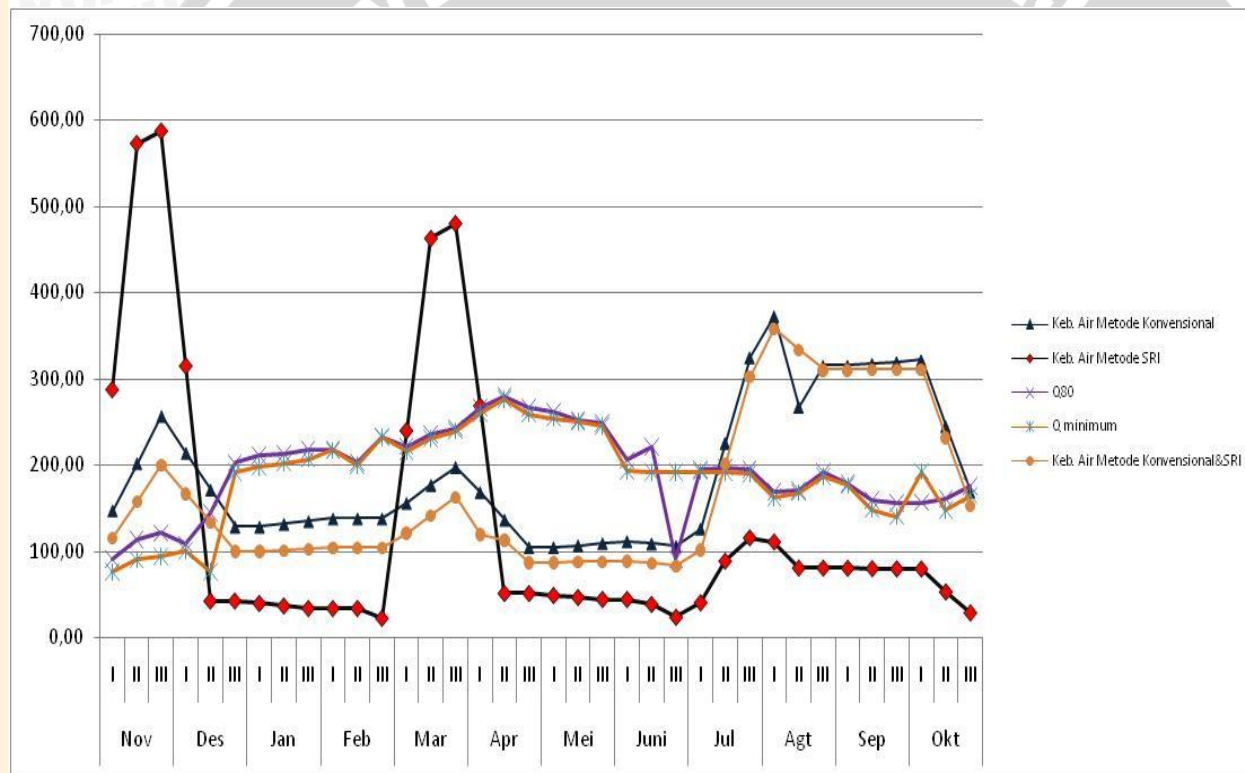
TM : Terus-menerus



Gambar 4.23 Grafik Hubungan Kebutuhan Air & Ketersediaan Air J.I. Pirang Kiri (Alternatif II)  
 Sumber: Hasil Analisa







Gambar 4.24 Grafik Hubungan Kebutuhan Air & Ketersediaan Air J.I. Pirang Kanan  
 Sumber: Hasil Analisa

Tabel 4.57 Rekapitulasi Kebutuhan Air Irigasi Total J.I. Irigasi Pirang Kiri dari Alternatif I & II dalam Satu Periode Tanam (lt/det)

| Metode Pemberian Air                              | MT I      |          |           | MT II     |          |           | MT III   |          |           | Jumlah    |
|---|-----------|----------|-----------|-----------|----------|-----------|----------|----------|-----------|-----------|
|   | Padi (ha) | Pol (ha) | Debit (Q) | Padi (ha) | Pol (ha) | Debit (Q) | Padi(ha) | Pol (ha) | Debit (Q) | Debit (Q) |
| Alternatif I                                      |           |          |           |           |          |           |          |          |           |           |
| Konvensional                                      | 819       | 0        | 3240,095  | 519       | 300      | 2261,280  | 119      | 700      | 6213,280  | 11714,656 |
| SRI   | 819       | 0        | 3398,192  | 519       | 300      | 2639,396  | 119      | 700      | 6020,860  | 12058,447 |
| Konvensional+SRI                                  | 819       | 0        | 2487,522  | 519       | 300      | 1924,967  | 119      | 700      | 4549,244  | 8961,733  |
| Prosentase pemakaian terhadap Metode Konvensional |           |          |           |           |          |           |          |          |           |           |
| Metode SRI  |           |          |           |           |          |           |          |          |           | 0%        |
| Metode Konvensional+SRI                           |           |          |           |           |          |           |          |          |           | 23%       |
| Metode Pemberian Air                              | MT I      |          |           | MT II     |          |           | MT III   |          |           | Jumlah    |
|   | Padi (ha) | Pol (ha) | Debit (Q) | Padi (ha) | Pol (ha) | Debit (Q) | Padi(ha) | Pol (ha) | Debit (Q) | Debit (Q) |
| Alternatif II                                     |           |          |           |           |          |           |          |          |           |           |
| Konvensional                                      | 819       | 0        | 2876,043  | 519       | 300      | 2325,961  | 119      | 700      | 6121,288  | 11323,292 |
| SRI   | 819       | 0        | 3336,248  | 519       | 300      | 2662,086  | 119      | 700      | 6121,288  | 12119,622 |
| Konvensional+SRI                                  | 819       | 0        | 2213,736  | 519       | 300      | 2380,975  | 119      | 700      | 2380,975  | 6975,686  |
| Prosentase pemakaian terhadap Metode Konvensional |           |          |           |           |          |           |          |          |           |           |
| Metode SRI  |           |          |           |           |          |           |          |          |           | 0%        |
| Metode Konvensional+SRI                           |           |          |           |           |          |           |          |          |           | 38%       |

Sumber : Hasil Perhitungan

Berdasarkan hasil rekapitulasi, kebutuhan air irigasi J.I. Pirang Kiri tiap musim tanam (Tabel 4.57) pada Alternatif I maupun Alternatif II lebih hemat menggunakan Metode Konvensional+SRI dengan memilih petak tersier bagian hulu untuk menanam padi SRI . Dapat dilihat pada Alternatif I, disaat menggunakan Metode Konvensional+SRI lebih hemat 24% dibandingkan dengan Metode Konvensional, dan pada Alternatif II, disaat menggunakan Metode Konvensional+SRI (Konvensional+SRI) maka penggunaan airnya jauh lebih hemat yaitu 38% dari Metode Konvensional saja.

Tabel 4.58 Rekapitulasi Kebutuhan Air Irigasi Total J.I. Irigasi Pirang Kanan dalam Satu Periode Tanam (lt/det)

| Metode Pemberian Air                              | MT I      |          |           | MT II     |          |           | MT III   |          |           | Jumlah Debit (Q) |
|---|-----------|----------|-----------|-----------|----------|-----------|----------|----------|-----------|------------------|
|   | Padi (ha) | Pol (ha) | Debit (Q) | Padi (ha) | Pol (ha) | Debit (Q) | Padi(ha) | Pol (ha) | Debit (Q) |                  |
| Alternatif I                                      |           |          |           |           |          |           |          |          |           |                  |
| Konvensional                                      | 819       | 0        | 1929,81   | 519       | 300      | 1588,13   | 119      | 700      | 3320,97   | 6838,90          |
| SRI   | 819       | 0        | 2053,46   | 519       | 300      | 1805,31   | 119      | 700      | 924,66    | 4783,44          |
| Konvensional+SRI                                  | 819       | 0        | 1487,63   | 519       | 300      | 1265,43   | 119      | 700      | 3235,64   | 5988,70          |
| Prosentase pemakaian terhadap Metode Konvensional |           |          |           |           |          |           |          |          |           |                  |
| Metode SRI  |           |          |           |           |          |           |          |          |           | 30%              |
| Metode Konvensional+SRI                           |           |          |           |           |          |           |          |          |           | 12%              |

Sumber : Hasil Perhitungan

Berdasarkan hasil rekapitulasi, kebutuhan air irigasi J.I. Pirang Kanan tiap musim tanam (Tabel 4.58) lebih hemat menggunakan Metode SRI. Dapat dilihat, disaat menggunakan Metode SRI lebih hemat 30% dibandingkan dengan Metode Konvensional saja.

#### 4.8 Perhitungan Pola Operasi Pintu Intake Jaringan Irigasi Pirang

Berdasarkan hasil rekapitulasi diatas, dari beberapa metode yang digunakan, Metode Gabungan (Konvensional+SRI) pada Alternatif II yang terbaik digunakan di J.I. Pirang Kiri dikarenakan menggunakan debit yang terkecil bila dibandingkan dengan metode lain. Oleh karena itu perhitungan pola operasi yang diperlukan untuk memenuhi kebutuhan J.I. Pirang Kiri adalah sebagai berikut :

Lebar Pintu Pengendali Banjir, 1 pintu @ = 0,8 m

Jumlah Pintu = 1 unit

Jumlah Pintu yang dioperasikan/dibuka = 1 unit

Jumlah Lebar Pintu yang dioperasikan = 0,8 m

Elevasi ambang dasar pintu = 18

Rumus Debit aliran pintu sorong:  $Q = Cd \cdot b \cdot Yg \cdot (2g \cdot (Y_0 - Cc \cdot Yg))^{0,5}$

Jika  $Y_0 = 0,05$  m dengan tinggi bukaan ( $Yg$ ) = 0,05 m, maka :

$$Q = 0,660 \times 1 \times 0,8 \times 0,05 \times (2 \times 9,81 \times (0,05 - (0,598 \times 0,05)))^{0,5}$$

$$= 0,02$$



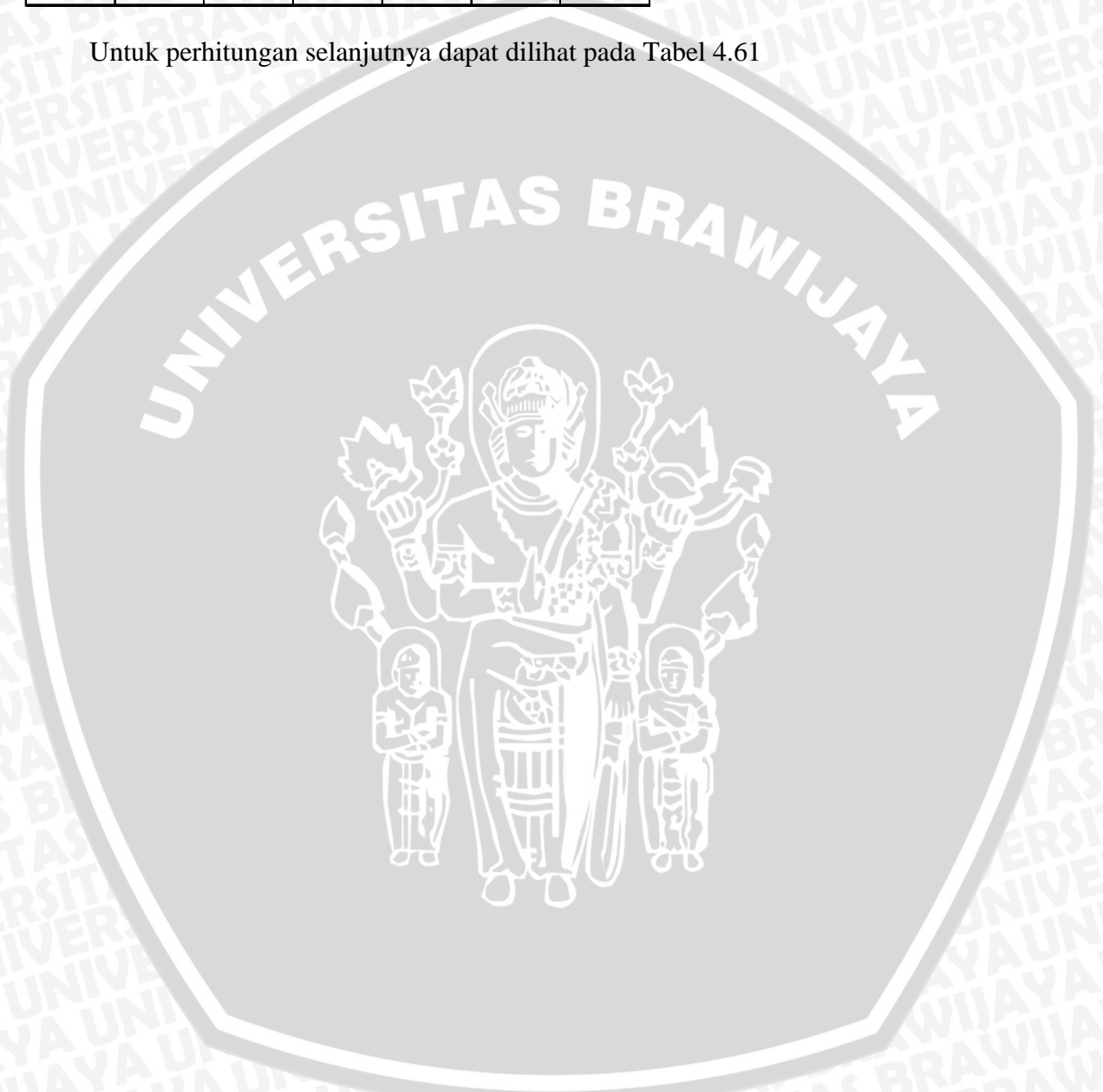
Tabel 4.59 Keragaman Nilai Cd dengan  $Y_g/Y_0$  menurut Henry H.R adalah sebagai berikut :

|           |      |       |     |       |       |       |      |      |      |
|-----------|------|-------|-----|-------|-------|-------|------|------|------|
| $Y_g/Y_0$ | 0    | 0,105 | 0,1 | 0,2   | 0,3   | 0,4   | 0,5  | 0,6  | 0,7  |
| Cd        | 0,61 | 0,6   | 0,6 | 0,605 | 0,605 | 0,607 | 0,62 | 0,64 | 0,66 |

Tabel 4.60 Keragaman Nilai Cc dengan  $Y_g/Y_0$  menurut T.Brooke Benjamin adalah sebagai berikut :

|           |       |       |       |     |       |       |
|-----------|-------|-------|-------|-----|-------|-------|
| $Y_g/Y_0$ | 0     | 0,1   | 0,2   | 0,3 | 0,4   | 0,5   |
| Cc        | 0,611 | 0,606 | 0,602 | 0,6 | 0,598 | 0,598 |

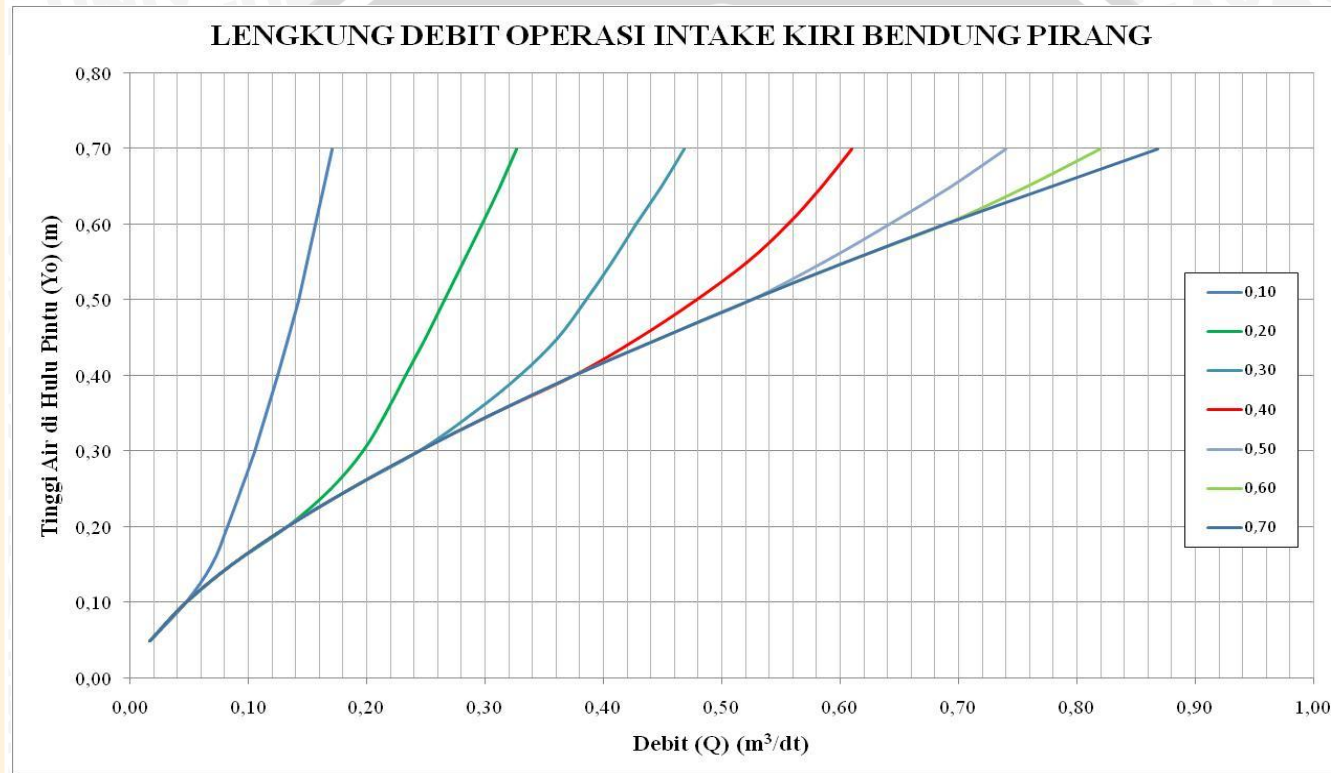
Untuk perhitungan selanjutnya dapat dilihat pada Tabel 4.61



Tabel 4.61 Debit Intake Pirang Kiri untuk Bukaannya 1 (Satu) Pintu

| No | Kedalaman Air di Hulu Pintu | Elevasi Muka Air di Hulu Pintu | Tinggi Bukaannya Pintu Intake (Yg)    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|----|-----------------------------|--------------------------------|---------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|    |                             |                                | Bukaan Penuh                          | 0,05 | 0,10 | 0,15 | 0,20 | 0,25 | 0,30 | 0,35 | 0,40 | 0,45 | 0,50 | 0,55 | 0,60 | 0,65 | 0,70 |
|    | Y <sub>0</sub>              | [0]                            | [1]                                   | [2]  | [3]  | [4]  | [5]  | [6]  | [7]  | [8]  | [9]  | [10] | [11] | [12] | [13] | [14] |      |
|    | Intake (m)                  | Intake (m)                     | Debit Intake (Q) (m <sup>3</sup> /dt) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 1  | 0,05                        | 18,05                          | 0,02                                  | 0,02 | 0,02 | 0,02 | 0,02 | 0,02 | 0,02 | 0,02 | 0,02 | 0,02 | 0,02 | 0,02 | 0,02 | 0,02 | 0,02 |
| 2  | 0,10                        | 18,10                          | 0,05                                  | 0,03 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 |
| 3  | 0,15                        | 18,15                          | 0,09                                  | 0,04 | 0,07 | 0,09 | 0,09 | 0,09 | 0,09 | 0,09 | 0,09 | 0,09 | 0,09 | 0,09 | 0,09 | 0,09 | 0,09 |
| 4  | 0,20                        | 18,20                          | 0,13                                  | 0,04 | 0,08 | 0,12 | 0,13 | 0,13 | 0,13 | 0,13 | 0,13 | 0,13 | 0,13 | 0,13 | 0,13 | 0,13 | 0,13 |
| 5  | 0,25                        | 18,25                          | 0,19                                  | 0,05 | 0,09 | 0,14 | 0,17 | 0,19 | 0,19 | 0,19 | 0,19 | 0,19 | 0,19 | 0,19 | 0,19 | 0,19 | 0,19 |
| 6  | 0,30                        | 18,30                          | 0,24                                  | 0,06 | 0,11 | 0,15 | 0,20 | 0,23 | 0,24 | 0,24 | 0,24 | 0,24 | 0,24 | 0,24 | 0,24 | 0,24 | 0,24 |
| 7  | 0,35                        | 18,35                          | 0,31                                  | 0,06 | 0,12 | 0,17 | 0,22 | 0,26 | 0,29 | 0,31 | 0,31 | 0,31 | 0,31 | 0,31 | 0,31 | 0,31 | 0,31 |
| 8  | 0,40                        | 18,40                          | 0,38                                  | 0,06 | 0,12 | 0,18 | 0,23 | 0,29 | 0,33 | 0,36 | 0,38 | 0,38 | 0,38 | 0,38 | 0,38 | 0,38 | 0,38 |
| 9  | 0,45                        | 18,45                          | 0,45                                  | 0,07 | 0,13 | 0,19 | 0,25 | 0,31 | 0,36 | 0,40 | 0,43 | 0,45 | 0,45 | 0,45 | 0,45 | 0,45 | 0,45 |
| 10 | 0,50                        | 18,50                          | 0,52                                  | 0,07 | 0,14 | 0,21 | 0,27 | 0,33 | 0,39 | 0,44 | 0,48 | 0,51 | 0,52 | 0,52 | 0,52 | 0,52 | 0,52 |
| 11 | 0,55                        | 18,55                          | 0,60                                  | 0,08 | 0,15 | 0,22 | 0,28 | 0,34 | 0,41 | 0,47 | 0,52 | 0,56 | 0,59 | 0,60 | 0,60 | 0,60 | 0,60 |
| 12 | 0,60                        | 18,60                          | 0,69                                  | 0,08 | 0,16 | 0,23 | 0,30 | 0,36 | 0,43 | 0,49 | 0,56 | 0,61 | 0,64 | 0,67 | 0,69 | 0,69 | 0,69 |
| 13 | 0,65                        | 18,65                          | 0,78                                  | 0,08 | 0,16 | 0,24 | 0,31 | 0,38 | 0,45 | 0,52 | 0,58 | 0,65 | 0,69 | 0,73 | 0,76 | 0,78 | 0,78 |
| 14 | 0,70                        | 18,70                          | 0,87                                  | 0,09 | 0,17 | 0,25 | 0,33 | 0,40 | 0,47 | 0,54 | 0,61 | 0,68 | 0,74 | 0,78 | 0,82 | 0,85 | 0,87 |

Sumber : Hasil Perhitungan



Gambar 4.25 Lengkung Debit Operasi Intake Kiri Bendung Pirang  
 Sumber : Hasil Analisa



Sehingga Tabel 4.62 menunjukkan Pola Operasi Pintu Intake Jaringan Irigasi Pirang Kiri pada Metode Gabungan (Konvensional+SRI) Alternatif II

Tabel 4.62 Tinggi Bukaank Intake Pirang Kiri (m)

| Bulan | Periode | Kebutuhan Air Irigasi (lt/dt) | Kebutuhan Air Irigasi (m <sup>3</sup> /hari) | Tinggi Bukaank Pintu Intake (m) |
|-------|---------|-------------------------------|--|---------------------------------|
| [1]   | [2]     | [3]                           | [4]  | [5]                             |
| Nov   | I       | 0                             | 0  | 0                               |
|       | II      | 102,477                       | 0,102  | 0,100                           |
|       | III     | 191,845                       | 0,192  | 0,150                           |
| Des   | I       | 281,214                       | 0,281  | 0,200                           |
|       | II      | 314,129                       | 0,314  | 0,200                           |
|       | III     | 257,284                       | 0,257  | 0,200                           |
| Jan   | I       | 200,439                       | 0,200  | 0,200                           |
|       | II      | 170,538                       | 0,171  | 0,100                           |
|       | III     | 170,585                       | 0,171  | 0,100                           |
| Feb   | I       | 172,838                       | 0,173  | 0,100                           |
|       | II      | 175,091                       | 0,175  | 0,100                           |
|       | III     | 177,296                       | 0,177  | 0,150                           |
| Mar   | I       | 177,296                       | 0,177  | 0,150                           |
|       | II      | 196,519                       | 0,197  | 0,200                           |
|       | III     | 219,141                       | 0,219  | 0,150                           |
| Apr   | I       | 241,762                       | 0,242  | 0,150                           |
|       | II      | 196,432                       | 0,196  | 0,200                           |
|       | III     | 162,632                       | 0,163  | 0,100                           |
| Mei   | I       | 154,413                       | 0,154  | 0,100                           |
|       | II      | 251,393                       | 0,251  | 0,150                           |
|       | III     | 193,385                       | 0,193  | 0,150                           |
| Jun   | I       | 339,674                       | 0,340  | 0,250                           |
|       | II      | 127,713                       | 0,128  | 0,100                           |
|       | III     | 120,616                       | 0,121  | 0,100                           |
| Jul   | I       | 112,208                       | 0,112  | 0,100                           |
|       | II      | 269,216                       | 0,269  | 0,200                           |
|       | III     | 407,115                       | 0,407  | 0,300                           |
| Agt   | I       | 545,015                       | 0,545  | 0,350                           |
|       | II      | 501,392                       | 0,501  | 0,350                           |
|       | III     | 476,877                       | 0,477  | 0,350                           |
| Sep   | I       | 452,362                       | 0,452  | 0,300                           |
|       | II      | 452,362                       | 0,452  | 0,300                           |
|       | III     | 452,230                       | 0,452  | 0,300                           |
| Okt   | I       | 452,099                       | 0,452  | 0,300                           |
|       | II      | 325,634                       | 0,326  | 0,200                           |
|       | III     | 199,300                       | 0,199  | 0,200                           |

Sumber : Hasil Analisa

Berikut adalah perhitungan intake Pirang Kanan :

|  |          |
|--|----------|
| Lebar Pintu Pengendali Banjir, 1 pintu @ | = 0,88 m |
| Jumlah Pintu                             | = 1 unit |
| Jumlah Pintu yang dioperasikan/dibuka    | = 1 unit |
| Jumlah Lebar Pintu yang dioperasikan     | = 0,88 m |
| Elevasi ambang dasar pintu               | = 18     |

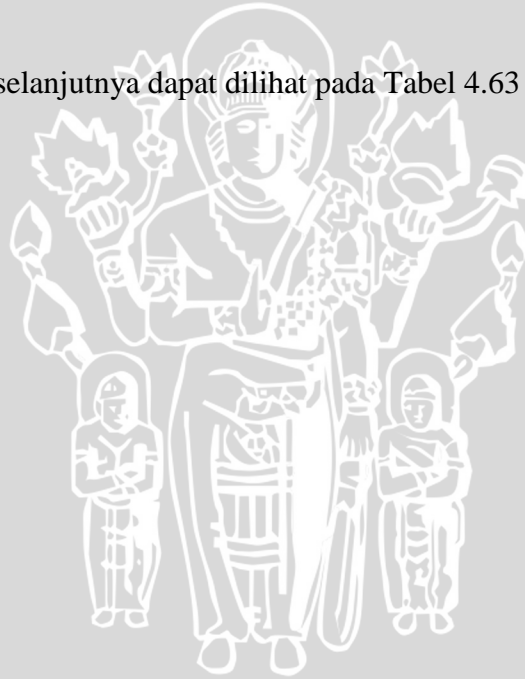
Rumus Debit aliran pintu sorong:  $Q = Cd \cdot b \cdot Yg \left( 2g \cdot (Y_0 - Cc \cdot Yg) \right)^{0,5}$

Jika  $Y_0 = 0,05$  m dengan tinggi bukaan ( $Yg$ ) = 0,05 m, maka :

$$Q = 0,660 \times 1 \times 0,88 \times 0,05 \times (2 \times 9,81 \times (0,05 - (0,598 \times 0,05)))^{0,5}$$

$$= 0,02$$

Untuk perhitungan selanjutnya dapat dilihat pada Tabel 4.63 :

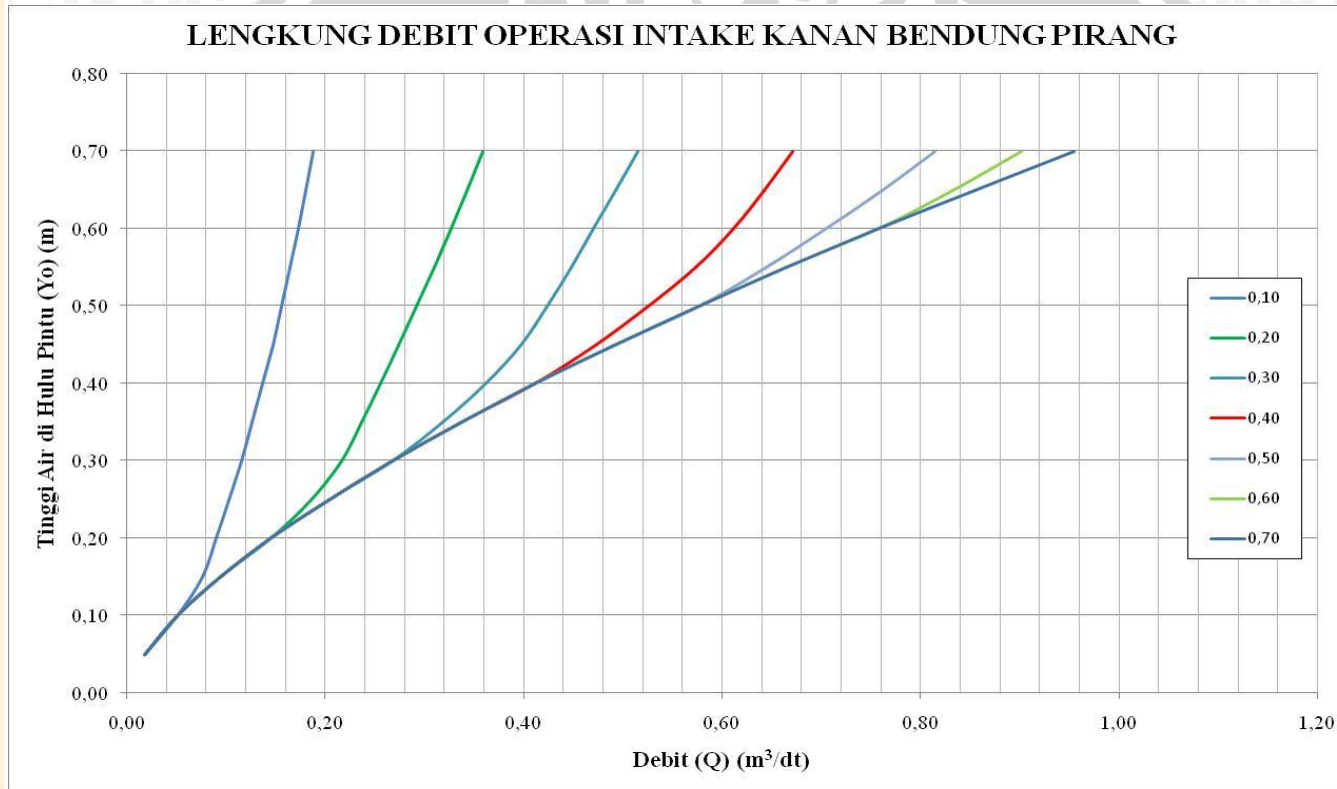


Tabel 4.63 Debit Intake Pirang Kanan untuk Bukaannya 1 (Satu) Pintu

| No | Kedalaman Air di Hulu Pintu | Elevasi Muka Air di Hulu Pintu | Tinggi Bukaannya Pintu Intake (Yg)    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|----|-----------------------------|--------------------------------|---------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|    |                             |                                | Bukaan Penuh                          | 0,05 | 0,10 | 0,15 | 0,20 | 0,25 | 0,30 | 0,35 | 0,40 | 0,45 | 0,50 | 0,55 | 0,60 | 0,65 | 0,70 |      |
|    | Y <sub>0</sub>              |                                | [0]                                   | [1]  | [2]  | [3]  | [4]  | [5]  | [6]  | [7]  | [8]  | [9]  | [10] | [11] | [12] | [13] | [14] |      |
|    | Intake (m)                  | Intake (m)                     | Debit Intake (Q) (m <sup>3</sup> /dt) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 1  | 0,05                        | 18,05                          | 0,02                                  | 0,02 | 0,02 | 0,02 | 0,02 | 0,02 | 0,02 | 0,02 | 0,02 | 0,02 | 0,02 | 0,02 | 0,02 | 0,02 | 0,02 | 0,02 |
| 2  | 0,10                        | 18,10                          | 0,05                                  | 0,03 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 |
| 3  | 0,15                        | 18,15                          | 0,09                                  | 0,04 | 0,08 | 0,09 | 0,09 | 0,09 | 0,09 | 0,09 | 0,09 | 0,09 | 0,09 | 0,09 | 0,09 | 0,09 | 0,09 | 0,09 |
| 4  | 0,20                        | 18,20                          | 0,15                                  | 0,05 | 0,09 | 0,13 | 0,15 | 0,15 | 0,15 | 0,15 | 0,15 | 0,15 | 0,15 | 0,15 | 0,15 | 0,15 | 0,15 | 0,15 |
| 5  | 0,25                        | 18,25                          | 0,20                                  | 0,06 | 0,10 | 0,15 | 0,19 | 0,20 | 0,20 | 0,20 | 0,20 | 0,20 | 0,20 | 0,20 | 0,20 | 0,20 | 0,20 | 0,20 |
| 6  | 0,30                        | 18,30                          | 0,27                                  | 0,06 | 0,12 | 0,17 | 0,22 | 0,25 | 0,27 | 0,27 | 0,27 | 0,27 | 0,27 | 0,27 | 0,27 | 0,27 | 0,27 | 0,27 |
| 7  | 0,35                        | 18,35                          | 0,34                                  | 0,07 | 0,13 | 0,18 | 0,24 | 0,29 | 0,32 | 0,34 | 0,34 | 0,34 | 0,34 | 0,34 | 0,34 | 0,34 | 0,34 | 0,34 |
| 8  | 0,40                        | 18,40                          | 0,41                                  | 0,07 | 0,14 | 0,20 | 0,26 | 0,31 | 0,36 | 0,39 | 0,41 | 0,41 | 0,41 | 0,41 | 0,41 | 0,41 | 0,41 | 0,41 |
| 9  | 0,45                        | 18,45                          | 0,49                                  | 0,08 | 0,15 | 0,21 | 0,27 | 0,34 | 0,40 | 0,44 | 0,47 | 0,49 | 0,49 | 0,49 | 0,49 | 0,49 | 0,49 | 0,49 |
| 10 | 0,50                        | 18,50                          | 0,58                                  | 0,08 | 0,16 | 0,23 | 0,29 | 0,36 | 0,42 | 0,49 | 0,53 | 0,56 | 0,58 | 0,58 | 0,58 | 0,58 | 0,58 | 0,58 |
| 11 | 0,55                        | 18,55                          | 0,67                                  | 0,08 | 0,16 | 0,24 | 0,31 | 0,38 | 0,45 | 0,52 | 0,57 | 0,61 | 0,64 | 0,67 | 0,67 | 0,67 | 0,67 | 0,67 |
| 12 | 0,60                        | 18,60                          | 0,76                                  | 0,09 | 0,17 | 0,25 | 0,33 | 0,40 | 0,47 | 0,54 | 0,61 | 0,67 | 0,71 | 0,74 | 0,76 | 0,76 | 0,76 | 0,76 |
| 13 | 0,65                        | 18,65                          | 0,85                                  | 0,09 | 0,18 | 0,26 | 0,34 | 0,42 | 0,49 | 0,57 | 0,64 | 0,71 | 0,76 | 0,80 | 0,83 | 0,85 | 0,85 | 0,85 |
| 14 | 0,70                        | 18,70                          | 0,96                                  | 0,10 | 0,19 | 0,28 | 0,36 | 0,44 | 0,52 | 0,59 | 0,67 | 0,75 | 0,81 | 0,86 | 0,90 | 0,93 | 0,96 | 0,96 |

Sumber : Hasil Perhitungan





Gambar 4.26 Lengkung Debit Operasi Intake Kanan Bendung Pirang  
 Sumber : Hasil Analisa

Pada J.I. Pirang Kanan metode yang digunakan adalah Metode SRI dikarenakan menggunakan debit yang terkecil. Sehingga Tabel 4.64 menunjukkan Pola Operasi Pintu Intake Jaringan Irigasi Pirang Kanan pada Metode SRI

Tabel 4.64 Tinggi Buka-an Intake Pirang Kanan (m)

| Bulan | Periode | Kebutuhan Air Irigasi (lt/dt) | Kebutuhan Air Irigasi (m <sup>3</sup> /hari) | Tinggi Buka-an Pintu Intake (m) |
|-------|---------|-------------------------------|--|---------------------------------|
| [1]   | [2]     | [3]                           | [4]  | [5]                             |
| Nov   | I       | 287,922                       | 0,288  | 0,200                           |
|       | II      | 573,299                       | 0,573  | 0,350                           |
|       | III     | 587,622                       | 0,588  | 0,350                           |
| Des   | I       | 315,295                       | 0,315  | 0,200                           |
|       | II      | 42,969                        | 0,043  | 0,050                           |
|       | III     | 42,969                        | 0,043  | 0,050                           |
| Jan   | I       | 40,104                        | 0,040  | 0,050                           |
|       | II      | 37,240                        | 0,037  | 0,050                           |
|       | III     | 34,375                        | 0,034  | 0,050                           |
| Feb   | I       | 34,375                        | 0,034  | 0,050                           |
|       | II      | 34,375                        | 0,034  | 0,050                           |
|       | III     | 22,917                        | 0,023  | 0,050                           |
| Mar   | I       | 240,199                       | 0,240  | 0,150                           |
|       | II      | 463,268                       | 0,463  | 0,300                           |
|       | III     | 480,484                       | 0,480  | 0,300                           |
| Apr   | I       | 268,960                       | 0,269  | 0,200                           |
|       | II      | 51,649                        | 0,052  | 0,050                           |
|       | III     | 51,649                        | 0,052  | 0,050                           |
| Mei   | I       | 49,363                        | 0,049  | 0,050                           |
|       | II      | 47,078                        | 0,047  | 0,050                           |
|       | III     | 44,792                        | 0,045  | 0,050                           |
| Jun   | I       | 44,792                        | 0,045  | 0,050                           |
|       | II      | 39,005                        | 0,039  | 0,050                           |
|       | III     | 24,074                        | 0,024  | 0,050                           |
| Jul   | I       | 40,993                        | 0,041  | 0,050                           |
|       | II      | 89,163                        | 0,089  | 0,050                           |
|       | III     | 116,217                       | 0,116  | 0,100                           |
| Agt   | I       | 111,422                       | 0,111  | 0,100                           |
|       | II      | 81,163                        | 0,081  | 0,050                           |
|       | III     | 81,163                        | 0,081  | 0,050                           |
| Sep   | I       | 80,845                        | 0,081  | 0,050                           |
|       | II      | 80,527                        | 0,081  | 0,050                           |
|       | III     | 80,208                        | 0,080  | 0,050                           |
| Okt   | I       | 80,208                        | 0,080  | 0,050                           |
|       | II      | 53,472                        | 0,053  | 0,050                           |
|       | III     | 29,282                        | 0,029  | 0,050                           |

Sumber : Hasil Analisa