

Lampiran 1

Penghitungan kategori ketahanan tanaman menurut metode Castillo (1976)

1. Nilai indeks tertinggi tanaman

$$\begin{aligned} \text{Nilai Indeks Tertinggi} &= \frac{\text{Jumlah rerata tertinggi tiap parameter}}{\text{Jumlah nilai huruf notasi parameter tersebut}} \\ &= \frac{(24,35+484,71+13,10+39,82)}{(3+4+2+2)} \\ &= 51,09 \end{aligned}$$

(Nilai notasi masing-masing huruf adalah: a=1 ; b=2 ; c=3; d=4 ; dst.)

2. Nilai indeks terendah

$$\text{Nilai Indeks Terendah} = \frac{\text{Nilai indeks tertinggi}}{\text{Nilai notasi tertinggi parameter tersebut}}$$

2.1 intensitas serangan	= 51,09/3 = 17,03
2.2 luas daun	= 51,09/4 = 12,77
2.3 panjang akar	= 51,09/2 = 25,55
2.4 berat basah	= 51,09/2 = 25,55

3. Nilai indeks selanjutnya = $\frac{\text{nilai indeks terendah X nilai huruf mendampingi}}{\text{jumlah huruf yang mendampingi}}$

3.1 varietas Lokal

$$\text{IS} = \frac{17,03 \times 3}{1} = 51,09$$

$$\text{LD} = \frac{12,77 \times 7}{2} = 44,70$$

$$\text{PA} = \frac{25,55 \times 2}{1} = 51,10$$

$$\text{BB} = \frac{25,55 \times 2}{1} = 51,10$$

3.2 varietas Toksakan

$$\text{IS} = \frac{17,03 \times 3}{1} = 51,09$$

$$\text{LD} = \frac{12,77 \times 4}{1} = 51,08$$

$$\text{PA} = \frac{25,55 \times 2}{1} = 51,10$$

$$\text{BB} = \frac{25,55 \times 2}{1} = 51,10$$

3.3 varietas Shinta

$$IS = \frac{17,03 \times 5}{2} = 42,58$$

$$LD = \frac{12,77 \times 1}{1} = 12,77$$

$$PA = \frac{25,55 \times 3}{2} = 38,31$$

$$BB = \frac{25,55 \times 1}{1} = 25,55$$

3.4 varietas Majapahit

$$IS = \frac{17,03 \times 3}{2} = 25,55$$

$$LD = \frac{12,77 \times 5}{2} = 31,93$$

$$PA = \frac{25,55 \times 3}{2} = 38,31$$

$$BB = \frac{25,55 \times 2}{1} = 51,09$$

3.5 varietas Dora

$$IS = \frac{17,03 \times 1}{1} = 17,03$$

$$LD = \frac{12,77 \times 3}{2} = 19,16$$

$$PA = \frac{25,55 \times 2}{1} = 51,09$$

$$BB = \frac{25,55 \times 3}{2} = 38,33$$

$$4. \text{ Interval nilai ketahanan} = \frac{\text{Rerata nilai indeks tertinggi} - \text{Rerata indeks terendah}}{3 \text{ (tahan, sedang, rentan)}}$$

$$= \frac{51,09 - 29,80}{3}$$

$$= 7,10$$

Interval kategori ketahanan,

$$51,09 - 7,10 = 43,99$$

$$44,00 - 7,10 = 36,90$$

$$36,91 - 7,10 = 29,80$$

Sehingga:

$$29,80 - 36,91 = \text{tahan}$$

$$36,90 - 44,00 = \text{sedang}$$

$$43,99 - 51,09 = \text{rentan}$$

VARIETAS	IS	LD	PA	BB	Σ	RERATA	Kategori Ketahanan
Toksakan	51.09	51.08	51.10	51.10	204.37	51.09	Rentan
Lokal	51.09	44.70	51.10	51.10	197.99	49.50	Rentan
Majapahit	25.55	31.93	38.31	51.09	146.88	36.72	Tahan
Dora	17.03	19.16	51.09	38.33	125.61	31.40	Tahan
Shinta	42.58	12.77	38.31	25.55	119.21	29.80	Tahan

Keterangan: IS = Intensitas Serangan; LD = Pengurangan Luas Daun; PA = Pengurangan Panjang Akar; BB = Pengurangan Berat Basah