SUMMARY

INTAN PERMATASARI. 105040201111184. The Performance of 12 Families on F_4 Common Bean (*Phaseolus vulgaris* L.) Purple Pods. Supervised by Prof. Dr. Ir. Kuswanto, MS. and Izmi Yulianah, SP, MSi.

Common beans are one of the vegetable legum type widely cultivated and consumed by Indonesian people. Reduce the value of imported leguminous vegetables, particularly beans, needs to be improved domestic production, one of them with the assembly of new varieties for high yield and expected to supply the nutritional needs of the community. Currently manufacture of new varieties, expected to achieved high yield and pod purple. The material used is the local varieties that have high yield crossed with the introduced varieties that have pod purple (Purple Queen). The purple colour on the pod caused by the presence to anthocyanin content. Through this cross, expected to produce a crop of beans with the high yield and has a uniform purple pods.

The purpose of this research is to determine the appearance of 12 family of beans (*Phaseolus vulgaris* L.) F_4 purple pods. The hypothesis proposed in this study is that there are variations in the appearance of the appearance of 12 family of beans (*Phaseolus vulgaris* L.) F_4 purple pods.

The research was conducted on land owned by farmers located in the Kajang Lor Village, District of Junrejo, Batu. Altitude ± 650 m above the sea level, the average daily temperature is 22^0C and rainfall ± 1300 mm / yr. The research was conducted in January until April 2014. Planting material used is the seed of F_4 there are 12 families from crosses purple bean pods of bean plants introduced varieties with local varieties (GKCS-6, GKCS-54, GKCS-97, GKCS-108, GIPQ-12, GIPQ-23, GIPQ-35, GKPQ-12, GKPQ-19, PQGK-1, PQGI-169, dan MCS-13), with 5 parent (2 introduksi there are Purple Queen (PQ) and Cherokee Sun (CS), 3 lokal there are Gogo Kuning (GK), Gilik Ijo (GI), and Mantili (M)). Another research materials are Furadan, benlext, chicken manure and NPK (16:16:16), plastic mulch and label.

This research prepared without any experimental design. Variables parameter are quantitative data are flowering day, number of flower per plant, harvest age (1^{st} time), weight per pod, long pods, diameter pods, number of pods per plant, number of seeds per pod and qualitative data are color pods, grow type, color bars, leaves color, flower color, pods shape, and pods texture. Quantitative data analysis by calculating the mean of value, standard deviation, variance, coefficient of phenotypic diversity and coefficient of genetic diversity.

The results of this study indicate in performance of 12 family on F_4 purple pods common beans family, there is uniforms in type of vine growth, stems color is purple, flowers color is purple, and color pods is purple, that is family PQGK-1, PQGI-169 and GIPQ-35. Family purple pods common beans in variety genetic low criteria that is between 0 – 22% on the family PQGK-1, PQGI-169 and GIPQ-35.