

## SUMMARY

**Ulfa Annisa Sutarto. 0910480285. RESPONSES OF THREE TYPES MUSTARD (*Brassica sp.*) ON APPLICATIONS TYPE OF MULCH. Under the guidance of Dr. Ir. Nurul Aini, MS as a main supervisor and Ir. Koesriharti, MS. As an supervising companion.**

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Mustard (*Brassica juncea* L.) is a vegetable commodities that have a fairly high level of consumption and prospected in Indonesia. Mustard needs increased along with the variety of foods that take advantage of this vegetable. Based on BPS data for 1997-2013, mustard production increased from 441.317 tonnes in 1997 to 635.728 tonnes in 2013, but acreage crops is other than rice only 58.412 hectares. This is caused by the unwillingness of the people to cultivate these products independently or still rely on farmers, so it needs efforts to increase the production of mustard plants with increasingly limited land area (BPS, 2014). The community are not aware about the existence of a limited type of mustard in the market. Development need more to diverse types of cabbage in the market. In addition, one of the techniques of cultivation to increase the production of mustard optimum is to modify the microclimate around the plant by using mulch. The hypothesis is (1) the three types of mustard showed different responses to the application of different kinds of mulch. (2) The three types of mustard showed the growth and yield of different crops. (3) The application of different kinds of mulch will provide growth and yield of mustard plants are different.

The experiment was conducted in Pagu Wates village, Wates Subdistrict, Kediri. Altitude research sites ranging from  $\pm 500$  m above sea level. The experiment was conducted in March and April 2014. The equipment used in this study is a hoe, meter, thermometer soil temperature, analytical scale, LAM, oven, and a camera. The materials used are green mustard seed varieties Tosakan, seed pakcoy varieties Nauli F1, bitter mustard seed varieties Morakot, rice straw, black plastic silver mulch, sugar cane leaves, leaf corn, urea, SP - 36, KCL, insecticide Dursband 200 EC and fungicide Dithane M - 45. The method used in this research is Split Plot Design (SPD) with the main plot is kind of sawi which has 3 types of mustard greens, pak coy and bitter mustard, while the subplot is kind of mulch that silver black plastic mulch, straw mulch, sugar cane leaves mulch and leaf corn mulch. Data analysis obtained were analyzed using analysis of F test at 5% level, if the real effect followed by a least significant difference test at 5% significance level.

The results showed that there was interaction between three types of mustard and wide application of mulch on plant height at 14, 21 and 28 days after planting. Treatment showed that type of length of plant of mustard green are higher than bitter mustard. The number of leaves of pak coy higher than bitter mustard. The economic weight of plant at harvest showed that pak coy higher than bitter mustard. Application of mulch to give effect to the results of mustard plants in all types of treatment. Straw mulch, sugarcane leaf mulch and leaf corn mulch showed an average yield of fresh weight of plants and plant fresh weight at harvest and economic weight at harvest compared with application of black plastic silver mulch. Economical production plant weight at harvest showed that

the application of straw mulch, mulch the leaves of sugarcane, corn stalks and mulch higher than silver black plastic mulch application.

