

## SUMMARY

**Lutfi Pramukyana. 125040201111106. Response of Giving Concentration GA<sub>3</sub>'s Toward Flowering Two Shallot Varieties ( *Allium ascalonicum* L.). Ir. Respatijarti, MS. As main supervisor. Niken Kendarini, SP.Msi as second supervisor.**

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Shallot is one of many commodity that have used by the people . Although that shallot is not a basic needs , but it unavoidable by consumers. The National Production of onion in 2010 increased 8,68 % compared to 1.048.934 tons in 2009 from 965,164 tons. The increased in fact is still lower than national demand 1.149.773 tons ( annonymus<sup>1</sup>, 2010 ) so the government needs to supply shallot from abroad. As we know that the germ from bulbs is susceptible to disease like foul bulbs and the production is also declined by planting generation to generation. The solution to increase the production and the quality of shallot is with the development shallot plant from seed that known as TSS ( true shallot seed ) . TSS has several advantages compared with tubers seeds such as; volume TSS needs is lower which is about  $\pm 3-6$  kg.ha<sup>-1</sup> compared with tubers seeds  $\pm 1-1,5$  ton.ha<sup>-1</sup>, the transportation and storage TSS are easier and cheaper, The origin plant of TSS is healthier because free from pathogenic disease and produce tubers with better quality and larger ( sumarni, 2012 ). To produce TSS need to increase the productivity of the amount of flower and the seeds of the shallot by giving the low temperatures artificially ( vernalitation ) with temperature (5° - 10°C) for 4 week or use treatment of plant grow regulator that is GA<sub>3</sub> that can substitute a part or all functions of low temperatures so that it can induce or stimulate of flowering and the establishment of seeds in shallot plant ( Sumarni et al, 2012 ). The objective of this research is to know the effect of variety used and plant grow regulator (GA<sub>3</sub>) in the flowering phase of shallot. The hypothesis from this research is there is a specific variety and concentration of plant growth regulator (GA<sub>3</sub>) to increase the flowering phase in shallot

This research conducted in the field of Punten village Batu city with an altitude between 1050 mdpl .This reasearch began in December 2015 - April 2016 . The tools that used in this researcht are refrigerator, hoe, watering's tool, knife, gauge, ruler, transparent plastic, bamboo, weight analytic, board marker, shaving brush, camera, stationary. The materials that used in this experiment are tubers of shallot (varieties Bali Karet and Philipine that has stored time during two months and it has been given by vernilization treatment at temperature 10<sup>0</sup>C), water, plant growth regulator (GA<sub>3</sub>), Antracol fungicide, soil, animal manure and NPK fertilizer. Tuber is planted in the field with space 15 x 15 cm each plant and the wide of this trial is 200 m<sup>2</sup> . This research is using Factorial for Random Block Design (RBD) with three replication and there were 30 unit of the beds experiment. First factor is variety. The second factor is giving of zpt ga3 in 5 levels ( 0 ppm, 50 ppm, 100 ppm, 150 ppm and 200 ppm ) which resulted of combinations as follows: factor 1 is variety ( V ) ;

philipine ( V1 ); Bali Karet ( V2) and a second factor is concentration  $GA_3$  ( K ); 0 ppm ( K1 ); 100 ppm ( K2 ); 200 ppm ( K3 ); 300 ppm ( K4 ); 400 ppm ( K5 ). The observations are plant length ( cm ), number of leaves ( dap ), the number of tillers ( dap ), flowering age, percentage of flowering plant (%), total of flower per cluster, Fresh weight of tuber ( g ), the dry weight of tuber ( g ).

The result of analysis variety in this research indicated that there is interaction between the used of variety and concentration of  $GA_3$  in the parameter observation, plant length in 14, 28 and 42 dap, in the age of 56 dap, there is no interaction. In observation of the number of leaves, the number of tillers, the flowering age, the presentation of flowering plant, and the total of flower per cluster, there is no interaction between of variety used and cosentration of  $GA_3$ . The used of Philipine and Bali karet variety and also concentration zpt  $GA_3$  0 ppm , 100 ppm , 200 ppm , 300 ppm and 400 ppm can not increase of flowering in shallot so it does not get the concentration of  $ga_3$  that can increase of flowering shallot. The growth and the result of tubers in Bali Karet variety significantly different with Philipine variety which is Bali Karet variety better than Philipine variety.

