

SUMMARY

Yulianto Nugroho. 0810483050. Integrated Pest Management (IPM) and Non IPM Practices to Aphid (Homoptera: Aphididae) Population and Damage Level on Chili. Supervised by Dr. Ir. Gatot Mudjiono and Dr. Ir. Retno Dyah Puspitasari, MS.

On chili cultivation, there are several factors that can lower production, one of which is a pest. One of the important pests are aphids red chili plants that are virus vectors. The presence of aphids in chili red is very detrimental. To avoid the loss of control efforts need to be done. Implementation of integrated pest management technology (IPM) is one control that can reduce aphid populations. Success in IPM depends on the understanding of the ecology of pests to be controlled. IPM implementation also aims to reduce the use of chemical pesticides. Information about aphid control on IPM in crop cultivation is still a little red chili, so we need a review of the implementation of IPM cultivation to suppress aphid populations and intensity of damage in chili red. The purpose of the study was to determine the level and damage intensity of aphid population on chili crop in IPM and non-IPM.

The research was conducted in Bayem village, Kasembon District, Malang from July to November 2012. In the IPM treatment, the addition of biological agents, manure and NPK 15:15:15 mikoriza. The IPM pest control treatment using botanical pesticides. In the non-IPM treatment was not performed additional biological agents, whereas NPK 16:16:16 fertilizer use. Pest control using chemical pesticides with active ingredients Lambda Cyhalothrin 106 gr/l and Tiametoksan 141 gr/l. The land area is used for each treatment IPM and non-IPM is 180 m². Formed 14 barrack IPM and non-IPM fields formed 18 barrack. Carried observation parameters is the observation of aphid populations and the intensity of the damage, plant growth is the number of leaves, plant height and number of fruits, as well as production. Analysis of the data used is the t test.

Results of the study showed that treatment of IPM and non-IPM no influence on aphid populations. Aphid populations on treatment IPM and non-IPM is the 77 tails/100 leaves and 71 tails/100 leaves. Intensity of aphid damage on IPM treatment was higher (0,47%) significantly compared to non-IPM fields (0,02%). In the IPM treatment influence on plant growth. Number of leaves, plant height and number of fruits on IPM treatment significantly higher than non-IPM (104,03 leaves ; 85,26 leaves) (39,56 cm ; 33,19 cm) (25,72 fruit ; 13,50 fruit). Production of red chilies at a higher IPM (8,5 kg) significantly compared to non-IPM fields (4,6 kg).