

Indriyani N.Y Nababan. 220311100049. Inventarisasi Hama Utama Pada Tanaman Melon (*Cucumis melo* L) Budidaya Hidroponik Deep Flow Technique di Desa Kampak Kecamatan Geger. Dibawah bimbingan Ir. Achmad Djunaedy, M.P dan Erick Yuhardi, S.P., M.P

ABSTRAK

Budidaya melon (*Cucumis melo* L.) hidroponik DFT di Greenhouse Desa Kampak, Kecamatan Geger menghadapi kendala serangan Organisme Pengganggu Tanaman (OPT) yang berpotensi mengancam produktivitas tanaman. Penelitian ini bertujuan untuk menginventarisasi jenis dan populasi serangga hama, menganalisis intensitas serangannya, serta mengevaluasi efektivitas pengaplikasian pestisida Avidor (Imidakloprid 25%) dalam menekan serangan tersebut. Jenis penelitian yang digunakan adalah metode deskriptif kuantitatif dengan pendekatan survei langsung di dalam greenhouse. Pengambilan sampel dilakukan menggunakan metode diagonal terhadap 60 tanaman dari populasi total 600 tanaman (10%), dengan instrumen berupa lembar pengamatan mingguan (M3–M11), serta analisis data menggunakan perhitungan rumus persentase di Microsoft Excel. Temuan utama penelitian ini berhasil menginventarisasi lima jenis hama utama, yaitu Kumbang Pemakan Daun (*Aulacophora* sp.), Belalang Hijau (*Oxya* sp.), Ngengat (*Diaphania* sp.), Kepik (*Leptoglossus* sp.), dan Lalat Buah (*Bactrocera* sp.). Menunjukkan bahwa Kumbang Pemakan Daun mendominasi sepanjang musim dengan intensitas serangan tertinggi mencapai 35,33% pada minggu keenam (M6), sementara aplikasi pestisida Avidor terbukti efektif menekan populasi hama hingga 47% pada aplikasi kedua. Interpretasi dari hasil penelitian ini mengindikasikan bahwa meskipun lingkungan greenhouse dan sistem hidroponik telah diterapkan, Kumbang Pemakan Daun tetap menjadi hama yang paling dominan dan persisten, tetapi populasinya dapat dikendalikan melalui aplikasi insektisida sistemik berbahan aktif Imidakloprid. Kesimpulan dari penelitian ini menunjukkan bahwa pemantauan rutin dan pengaplikasian pestisida kimia secara tepat mampu menekan populasi hama melon, dengan implikasi perlunya penerapan Pengendalian Hama Terpadu (PHT) seperti rotasi bahan aktif pestisida dan kombinasi metode mekanis guna mencegah risiko resistensi hama dan mengurangi ketergantungan pada bahan kimia sintesis di masa depan.

Kata kunci : Budidaya Hidroponik DFT, Hama Melon, Inventarisasi Hama, Intensitas Serangan, Pestisida Avidor

Indriyani N.Y Nababan. 220311100049. Inventory of Main Pests in Melon Plants (*Cucumis melo* L) Hydroponic Deep Flow Technique Cultivation in Kampak Village, Geger District. Supervised by Ir. Achmad Djunaedy, M.P and Erick Yuhardi, S.P., M.P

ABSTRACT

Hydroponic DFT melon (*Cucumis melo* L.) cultivation in Kampak Village Greenhouse, Geger District faces obstacles in the form of attacks by Plant Pest Organisms (OPT) that have the potential to threaten plant productivity. This study aims to inventory the types and populations of major pests, analyze the intensity of attacks, and evaluate the effectiveness of the application of Avidor pesticide (Imidacloprid 25%) in suppressing these attacks. The type of research used is a quantitative descriptive method with a direct survey approach in the greenhouse. Sampling was carried out using the diagonal method on 60 plants from a total population of 600 plants (10%), with instruments in the form of weekly observation sheets (M3–M11), and data analysis using percentage formula calculations in Microsoft Excel. The main findings of this study succeeded in inventorying five main types of pests, namely Leaf-Eating Beetles (*Aulacophora* sp.), Green Grasshoppers (*Oxya* sp.), Moths (*Diaphania* sp.), Ladybugs (*Leptoglossus* sp.), and Fruit Flies (*Bactrocera* sp.). Shows that Leaf-Eating Beetles dominated throughout the season with the highest attack intensity reaching 35.33% in the sixth week (M6), while the application of Avidor pesticide proved effective in suppressing the pest population by up to 47% in the second application. Interpretation of the results of this study indicates that even though the greenhouse environment and hydroponic system have been implemented, Leaf-Eating Beetles remain the most dominant and persistent pest, but their population can be controlled through the application of systemic insecticides with the active ingredient Imidacloprid. The conclusion of this study shows that routine monitoring and appropriate application of chemical pesticides can suppress the melon pest population, with implications for the need to implement Integrated Pest Management (IPM) such as rotation of pesticide active ingredients and a combination of mechanical methods to prevent the risk of pest resistance and reduce dependence on synthetic chemicals in the future.

Keywords: Avidor Pesticide, DFT Hydroponic Cultivation, Infestation Severity, Melon Pests, Pest Inventory