International Master Class in Plant Biosecurity

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Economic Impact of Pesticide and Biosecurity Mechanisme for Agriculture Development in Merauke Border Area of RI and PNG

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Abstract

Pesticides are often used by farmers to pursue increased yields. Farmers almost use all types' pesticides which sell in the market. The market share of pesticides is very potensial and promising. Farmers are expected to be smart consumers, selective and manageable capital for own business. Based on the analysis of farming business in Merauke, the average expenditure on pesticides is 20% of the total cost of farming system and at least 9 pesticides (includes herbicides, fungicides and insecticides) used by farmers in each growing season. The application of pesticide uses varies depending on the number of pest attacks, with average pesticide applications 7-11 times during the growing season. Farmers never use personal protective equipment when use pesticide. This attitude become farmers vulnerable to exposure the pesticide poisoning. There is no regulation of pesticide use applied by local government or recommended usage suggestion. The Indonesian government's program is conducted agriculture development with 1.2 billion hectares in Merauke for food crops farming. The product will be exported to near country such as PNG. This program potential for new pests and uncontrolled pesticides used by farmers, therefore local governments must have biosecurity mechanism plans to produce quality food and healthy farmers also meet of national food security.

Keywords: Merauke, food crops, pesticide

Abstrak

Pestisida kerap digunakan oleh petani untuk mengejar peningkatan hasil panen. Seluruh petani menggunakan hampir semua jenis pestisida yang dijual di pasaran. Pangsa pasar pestisida di wilayah sentra pertanian seperti Merauke memang sangat besar dan menjanjikan. Petani diharapkan menjadi konsumen yang cerdas untuk dapat memilah dan mengelola modal yang digunakan untuk usaha taninya. Hasil penelitian analisis usaha tani petani padi di Merauke, rata-rata pengeluaran untuk pestisida sebesar 20% dari total biaya usaha tani dan setidaknya 9 jenis pestisida baik herbisida, fungisida dan insektisida yang digunakan oleh petani dalam setiap musim tanam. Untuk jumlah pemakaian pestisida bervariasi tergantung dari banyak sedikitnya serangan hama, dengan rata-rata aplikasi pestisida sebanyak 7-11 kali selama musim tanam. Petani tidak pernah menggunakan alat pelindung diri pada saat aplikasi pestisida sehingga rentan terpapar keracunan pestisida. Tidak ada regulasi pemakaian pestisida yang diterapkan oleh pemerintah daerah maupun anjuran pemakaian yang disarankan. Program pemerintah pusat untuk menjadikan Merauke sebagai lumbung pangan nasional dengan rencana pembukaan lahan 1,2 juta hektar akan menghasilkan tanaman pangan untuk kapasitas ekspor ke negara tetangga, misalnya PNG. Program ini berpotensi timbulnya jenis hama baru dan pemakaian pestisida yang tidak terkendali oleh petani, oleh karena itu pemerintah daerah harus memiliki rencana mekanisme biosecurity untuk menghasilkan pangan yang berkualitas dan petani yang sehat serta pemenuhan ketahanan pangan nasional.

Kata kunci: Merauke, tanaman pangan, pestisida