

# Efektivitas peraturan penggunaan pestisida di lapangan: studi kasus petani kubis di Kabupaten Bandung dan Garut, Propinsi Jawa Barat = Effectiveness of regulation on the use of pesticides at field: a case study of cabbage farmers in the districts of Bandung and Garut, West Java Province

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## Abstrak

Tanaman kubis yang merupakan salah satu tanaman hortikultura yang penting, umumnya memerlukan pemeliharaan yang intensif. Berbagai jenis organisme pengganggu tumbuhan (OPT) menyerang tanaman kubis sehingga sering kali menimbulkan kerugian ekonomi yang sangat besar. Kehilangan hasil panen sayuran akibat serangan organisme pengganggu tumbuhan dapat mencapai 30-100%. Bahkan pada tingkat serangan OPT yang rendah pun dapat mengurangi kualitas produk sayuran sehingga mengakibatkan menurunnya harga jual (Sastrosiswojo, 1992a). Hal inilah yang mendorong petani untuk menggunakan pestisida. Pada umumnya penggunaan pestisida pada tanaman kubis sangat intensif. Keadaan tersebut menimbulkan kekhawatiran akan terjadinya dampak negatif penggunaan pestisida terhadap unsur-unsur lingkungan yang ada pada ekosistem pertanian. Penggunaan pestisida yang tidak bijaksana dapat mengakibatkan penurunan populasi musuh alami harus dan serangga berguna lainnya, serta makhluk bukan sasaran (Oka, 1995). Akibatnya apabila keadaan lingkungan mendukung, dapat terjadi ledakan populasi hama karena terjadinya resurgensi hama. Demikian juga residu pestisida di lingkungan dapat terbawa oleh gerakan air dan udara sehingga residu pestisida dapat berada di berbagai unsur lingkungan di permukaan bumi (Untung, 1992). Hal ini dapat mengakibatkan penurunan keragaman jenis (diversitas species) dalam ekosistem pertanian tersebut yang mempengaruhi kestabilan ekosistem. Pada umumnya masyarakat telah memahami, bahwa pestisida merupakan bahan berbahaya yang dapat menimbulkan pengaruh negatif terhadap kesehatan manusia dan lingkungan. Namun demikian, sesungguhnya pestisida juga dapat memberikan manfaat. Oleh karena itu pestisida digunakan dalam pembangunan di berbagai sektor termasuk sektor pertanian tanaman pangan dan hortikultura. Untuk menghindari pengaruh buruk terhadap manusia dan lingkungan perlu diupayakan agar penggunaan pestisida dilakukan dengan tepat dan benar sesuai dengan peraturan yang berlaku. Dalam Undang-Undang No.12 Tahun 1992 tentang Sistem Budidaya Tanaman dinyatakan bahwa penggunaan pestisida merupakan alternatif terakhir, sesuai dengan konsep PHT. Apabila terpaksa menggunakan pestisida maka harus dilakukan dengan bijaksana, artinya :

1. Pestisida yang digunakan telah terdaftar dan diizinkan oleh Menteri Pertanian (Peraturan Pemerintah No.7 Tahun 1973).
2. Memenuhi kriteria 5 tepat, yaitu tepat dosis, tepat waktu, alat, dan cara aplikasi, tepat mutu, tepat jenis, tepat komoditas dan tepat sasaran (Daryanto, 1999). Hal ini sangat dipengaruhi oleh pengetahuan, sikap dan tindakan petani dalam penggunaan pestisida serta pengawasan dari pihak pemerintah yang bertanggung jawab langsung terhadap pelaksanaan peraturan penggunaan pestisida tersebut.

Masalah dalam penelitian ini diidentifikasi sebagai berikut :

1. Apakah pengetahuan, sikap dan tindakan petani alumni SLPHT kubis terhadap pestisida lebih baik

daripada petani Non-SLPHT kubis?

2. Apakah pengetahuan, sikap dan tindakan terhadap pestisida mempengaruhi petani alumni SLPHT kubis dan Non-SLPHT kubis dalam mematuhi peraturan penggunaan pestisida?
3. Apakah petani alumni SLPHT kubis lebih mematuhi peraturan penggunaan pestisida daripada petani Non-SLPHT kubis?

Penelitian ini bertujuan untuk:

1. Mengetahui bagaimanakah pengetahuan, sikap dan tindakan petani alumni SLPHT kubis dan petani Non-SLPHT kubis terhadap pestisida.
2. Mengetahui apakah pengetahuan, sikap dan tindakan terhadap pestisida mempengaruhi petani alumni SLPHT kubis dan petani Non-SLPHT kubis dalam mematuhi peraturan penggunaan pestisida.
3. Mengetahui bagaimanakah kepatuhan petani alumni SLPHT kubis dan petani Non-SLPHT kubis terhadap peraturan penggunaan pestisida.

Berdasarkan hal tersebut, maka hipotesis penelitian ini adalah :

1. Pengetahuan, sikap dan tindakan petani alumni SLPHT kubis terhadap pestisida lebih baik daripada petani Non-SLPHT kubis.
2. Pengetahuan, sikap dan tindakan terhadap pestisida mempengaruhi petani alumni SLPHT kubis dan petani Non-SLPHT kubis dalam mematuhi peraturan penggunaan pestisida,
3. Petani alumni SLPHT kubis lebih mematuhi peraturan penggunaan pestisida daripada petani yang belum pernah dilatih dalam SLPHT kubis.

Penelitian ini dilaksanakan dengan metode survei yaitu mewawancarai petani kubis yang terpilih sebagai sampel untuk memperoleh data primer. Teknik pengambilan sampel yang digunakan adalah purposive sampling : sampel dengan sengaja dipilih berdasarkan kriteria yang pernah mengikuti Sekolah Lapangan Pengendalian Hama Terpadu (SLPHT) dan yang tidak pernah mengikuti SLPHT. Penelitian dilaksanakan di Kabupaten Bandung dan Garut mulai bulan Oktober sampai Desember 2000. Wilayah penelitian ini meliputi Kecamatan Lembang, Pangalengan, Cikajang dan Cisurupan. Dipilih dua sampel desa dari tiap kecamatan, dan pada tiap desa terdiri atas petani alumni SLPHT kubis dan Non-SLPHT kubis. Ditentukan 10 petani alumni SLPHT kubis dan 10 petani Non-SLPHT kubis pada tiap desa sampel. Jumlah responden di delapan desa sampel tersebut ialah 160 petani yang terdiri atas 80 petani alumni SLPHT kubis dan 80 petani Non-SLPHT kubis.

Hasil penelitian penting yang dapat disimpulkan adalah:

1. Pengetahuan dan sikap petani responden SLPHT kubis terhadap pestisida lebih baik daripada petani responden Non-SLPHT kubis di Kabupaten Bandung dan Garut.
  - a. Di Kabupaten Bandung, 72,5% jumlah petani responden alumni SLPHT kubis dan 45% jumlah petani responden Non-SLPHT kubis memiliki pengetahuan tinggi dan sedang terhadap pestisida.
  - b. Di Kabupaten Garut, 62,5% jumlah petani responden alumni SLPHT kubis dan 32,5% jumlah petani responden Non SLPHT Kubis memiliki pengetahuan tinggi terhadap pestisida.
  - c. Di Kabupaten Bandung, 82,5% jumlah petani responden alumni SLPHT kubis dan 25% jumlah petani Non-SLPHT kubis memiliki tingkat sikap tinggi (baik) dan sedang terhadap pestisida.

- d. Di Kabupaten Garut, 60% jumlah petani responden alumni SLPHT kubis dan 7,5% jumlah petani responden Non SLPHT kubis memiliki tingkat sikap tinggi (baik) dan sedang terhadap pestisida.
2. Di Kabupaten Bandung dan Garut hanya tindakan petani responden alumni SLPHT kubis dan Non-SLPHT kubis terhadap pestisida yang mempengaruhi mereka dalam mematuhi peraturan penggunaan pestisida.
- a. Di Kabupaten Bandung dan Garut pengetahuan dan sikap petani responden alumni SLPHT kubis dan Non SLPHT kubis terhadap pestisida tidak mempengaruhi mereka dalam mematuhi peraturan penggunaan pestisida.
3. Petani responden alumni SLPHT kubis di Kabupaten Garut lebih mematuhi peraturan penggunaan pestisida daripada petani responden SLPHT kubis di Kabupaten Bandung.
- a. Di Kabupaten Bandung hanya 7,5% jumlah petani responden alumni SLPHT kubis dan 6,3% jumlah petani responden Non-SLPHT kubis yang menggunakan pestisida sesuai dengan peraturan penggunaan pestisida.
- b. Di Kabupaten Garut, 52,5% jumlah petani responden alumni SLPHT kubis dan tidak ada (0%) petani responden Non-SLPHT kubis yang menggunakan pestisida sesuai dengan peraturan penggunaan pestisida.
- Cabbage is an important vegetables crop, which needs intensification, including cultivation patterns, use of resistant varieties and intensive protection. Many harmful organisms attack cabbages that may cause great financial loss. The crop loss due to pests and diseases on major vegetable crops ranging from 30% to totally loss. Even the low pest attack can reduce vegetable yield and its quality, and reduce the price of vegetables (Sastrosiswojo, 1992a). This is the main reason why the farmers use pesticides as the commonly control measure. Generally, the use of pesticides by the cabbage farmer is very intensive. Since pesticides are used inappropriately, the population of natural enemies and other beneficial insects is reducing (Oka, 1995). Pesticide residues in the environment can be transported by water and air movements (Untung, 1992). This will effect and decrease diversity of species in agricultural ecosystem which will effect ecosystem stability.*

Pesticides are harmful (toxic) materials that may cause negative impact to human health and environment. However, proper use of pesticides may contribute advantageous in the development of agricultural sector, especially on food and vegetable crops.

To avoid negative effects on man (human) and environment, the use of pesticides should be done as stated in the pesticide regulation. In Act Number 12, 1992 about Plant Cultivation Systems, it is stated that the use of pesticides should be the last alternative in line with the Integrated Pest Management (IPM) concept. The important considerations to use of pesticides are as follows:

1. The pesticides have been registered and permitted for their use by the Minister of Agriculture (stated in Government Regulation Number 7, 1973).
2. Based on five criteria, i.e. proper in dose, proper in time, and in tools for its application, good quality, good type, right commodity and target of pest or diseases (Daryanto, 1999). Proper use of pesticides is very much affected by knowledge, attitude, and practice (skill) of the farmers and government institution responsible for the implementation of pesticide regulation.

The problems of this study are as follows :

1. What is knowledge, attitude, and practice by the graduated farmers from IPM FFS on cabbage are better than Non-IPM FFS against the use of pesticides?
2. What the use of pesticides by the graduated farmers from IPM FFS and Non-IPM FFS farmers are affected by their knowledge, attitude, and practice?
3. What the graduated from IPM FFS on cabbage follow the pesticide regulation better than Non-IPM FFS farmers?

The objectives of this study are as follows:

1. To know whether knowledge, attitude, and practice of pesticides by the graduated farmers (alumni of) IPM, Farmers Field School (IPM FFS) are better than Non-FFS farmers.
2. To know whether the use of pesticides the graduated by farmers from IPM FFS on cabbage and Non-IPM FFS are affected by their knowledge, attitude, and practice.
3. To know whether the graduated farmers from IPM FFS on cabbage follow the pesticide regulation better than Non-IPM FFS farmers.

The hypothesis of this study are as follows:

1. Knowledge, attitude, and practice by the graduated farmers from IPM FFS on cabbage are better than Non-IPM FFS against the use of pesticides.
2. The use of pesticides by the graduated farmers from IPM FFS and Non-IPM FFS farmers are affected by their knowledge, attitude, and practice.
3. The graduated from IPM FFS on cabbage follow the pesticide regulation better than Non-IPM FFS farmers.

The gathering of data for the study was done by field surveys. Selected areas were surveyed through the following techniques : (1) structure surveyed questioners, (2) interview of key informants, i.e. sampled farmers representing the alumni of IPM FFS and Non-IPM FFS on cabbage. The selected areas were sub districts of Lembang and Pangalengan (Bandung district or regency), Cikajang and Cisurupan sub districts (Garut district). The field surveys were conducted from October to December 2000. Two villages were selected from each sub districts. Purposive sampling was used to selected 10 farmers from the alumni of IPM FFS and 10 farmers from Non-IPM FFS on cabbage in each selected village. The number of respondents (sample farmers) in eight sampled village were 160 farmers, namely 80 graduated farmers from IPM FFS on cabbage and 80 Non-IPM FFS farmers.

The important results of this study were as follows:

1. Knowledge, attitude, and practice against the use of pesticide by the graduated farmers from IPM FFS on cabbage were higher or better than Non-IPM FFS farmers.
  - a. In Bandung, 72,5% out of the number of farmers graduated from IPM FFSs on cabbages and 45% Out of number of farmers from Non-IPM FFS showed high and moderately high levels of knowledge in using pesticides.
  - b. In Garut district, 62,5% out of the number of farmers graduated from IPM FFSs cabbage and 32,5% out of number of farmers from Non-IPM FFS showed high and moderately levels of knowledge in using pesticides.

c. In Bandung district, 82,5% out of the number of farmers from IPM FFS on cabbage and 25% out the number of farmers from Non-IPM FFS indicated high and moderately high levels of attitude against the use of pesticides.

d. In Garut district, 60% out of number of farmers from graduated from 1PM FFSs cabbages and 7,5% out of number of farmers from Non-IPM FFS cabbages indicated high and moderately high levels of attitude against the use of pesticide.

2. In Bandung and Garut district, only practice of farmers in using pesticides affected graduated farmers from 1PM FFS and Non IPM FFS farmers in the implementation of pesticides regulation on the use of pesticide.

a. In Bandung and Garut district, the obedience of farmers graduated from cabbage IPM FFS and Non-IPM FFS farmers to follow the pesticide in regulation on the use of pesticides were not affected by their knowledge and attitude.

3. The graduated farmers from cabbage IPM FFS in Garut district followed the pesticide regulation better than the alumni of cabbage IPM FFS in Bandung district.

a. In Bandung district, only 7,5% out of the number of farmers graduated from cabbage IPM FFS and 6,3% out of number of farmers from Non-IPM FFS obeyed the pesticide regulation on the use of pesticide.

b. In Garut district, 52,5% out of the number of farmers graduated from cabbage IPM FFS and no farmers from Non-IPM FFS obeyed the pesticide regulation on the use of pesticides.</i>