

## INTISARI

### FAKTOR RISIKO KERACUNAN PESTISIDA PADA PETANI PENYEMPROT SAYURAN DI KECAMATAN SELO KABUPATEN BOYOLALI

Ika Harriyani<sup>1</sup>, Susi Irvati<sup>2</sup>, Adi Heru H<sup>3</sup>

**Latar belakang:** Sayuran merupakan tanaman yang memiliki nilai ekonomis tinggi, umur yang relatif singkat, namun peka terhadap hama dan penyakit. Petani sayuran memiliki risiko yang tinggi mengalami keracunan pestisida. Petani sayuran di Kecamatan Selo Kabupaten Boyolali menggunakan pestisida organofosfat untuk menyemprot tanamannya. Diketahui bahwa petani pernah mengalami mual, muntah dan sakit kepala setelah melakukan penyemprotan dengan pestisida. Berdasarkan skrining yang dilakukan Laboratorium Kesehatan Kabupaten Boyolali tahun 2011 terhadap keracunan pestisida pada 56 petani diketahui bahwa 10 petani mengalami keracunan berat, 13 petani keracunan sedang dan 19 petani keracunan ringan.

**Tujuan:** Mengetahui tingkat keracunan pestisida dan menganalisis faktor risiko tingkat pendidikan, status gizi, masa kerja menyemprot, frekuensi penyemprotan, lama paparan, dosis pestisida, jumlah jenis pestisida dan penggunaan alat pelindung diri terhadap keracunan pestisida pada petani penyemprot sayuran di Kecamatan Selo Kabupaten Boyolali.

**Metode:** Penelitian observasional dengan rancangan *Cross-sectional*. Populasi penelitian anggota kelompok tani di 5 desa yang berjumlah 185 orang. Berdasarkan kriteria inklusi dan eksklusi didapatkan subyek penelitian sebanyak 161 orang. Variabel bebas meliputi tingkat pendidikan, status gizi, masa kerja menyemprot, frekuensi penyemprotan, lama paparan, dosis pestisida, jumlah jenis pestisida, penggunaan APD. Variabel terikat yaitu keracunan pestisida (Kadar kolinesterase 75%). Pemeriksaan kadar kolinesterase menggunakan *Tintometer Kit* dengan metode *Edson*. Analisis data menggunakan uji statistik *Chi-square* dan regresi logistik dengan permodelan.

**Hasil:** Sebanyak 119 orang mengalami keracunan (kadar kolinesterase 75%). Tingkat pendidikan, status gizi, dan jumlah jenis pestisida tidak berhubungan dengan keracunan pestisida; Masa kerja menyemprot, frekuensi penyemprotan, lama paparan dan pemakaian APD merupakan faktor resiko dan berhubungan dengan keracunan pestisida; Dosis pestisida berhubungan tapi bukan faktor resiko keracunan pestisida. Faktor yang dominan berhubungan dengan keracunan pestisida adalah masa kerja menyemprot, pemakaian APD dan frekuensi penyemprotan.

**Kesimpulan:** Tingkat keracunan pestisida sebesar 73,9%. Masa kerja menyemprot, frekuensi penyemprotan, lama paparan dan pemakaian APD merupakan faktor resiko terjadinya keracunan pestisida.

**Saran:** Petugas Penyuluh Lapangan dan Puskesmas memberikan penyuluhan tentang penggunaan pestisida dan dampaknya. Petani lebih memperhatikan frekuensi penyemprotan, lama paparan, dosis dan jumlah jenis pestisida yang digunakan, serta pemakaian APD saat bekerja menggunakan pestisida.

**Kata kunci:** Faktor resiko, Pestisida, Boyolali

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## ABSTRACT

### RISK FACTORS ON PESTICIDE POISONING OF VEGETABLES SPRAYERS FARMERS IN SELO DISTRICT BOYOLALI REGENCY

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**Background:** Vegetables is a plant that has a high economic value, which is a relatively short lifespan, but susceptible to pests and diseases. Vegetable farmers have a high risk of pesticide poisoning. Vegetable farmers in Selo, Boyolali Regency using organophosphate and carbamate pesticides to spray crops. It was known that farmers had experienced nausea, vomiting and headaches after spraying with pesticides. Based on the screening conducted Boyolali Regency Health Laboratory in 2011 against pesticide poisoning in 56 farmers known that 10 farmers suffered severe poisoning, 13 farmers were moderate poisoning and 19 farmers were mild poisoning.

**Objective:** To determine the level of pesticide poisoning and analyze the risk factors for the level of education, nutritional status, tenure of spraying, spraying frequency, duration of exposure, the dose of pesticides, the number of types of pesticides and the use of personal protective equipment against pesticide poisoning in farmers spraying vegetables in District Selo Boyolali.

**Methods:** This observational research with cross-sectional design. The study population members of farmers in five villages totaling 185 people. Based on the inclusion and exclusion criteria for study subjects obtained as many as 161 people. The independent variables include level of education, nutritional status, tenure of spraying, spraying frequency, duration of exposure, the dose of pesticides, the number of types of pesticides, use of PPE. The dependent variable is poisoned by pesticides (cholinesterase levels <75%). The level of cholinesterase using Tintometer Kit with Edson method. Analysis of data using statistical test Chi-square and modeling logistic regression.

**Results:** A total of 119 people were poisoned (cholinesterase levels 75%). Level of education, nutritional status, and the number of pesticides are not associated with pesticide poisoning; The tenure of the spraying, spraying frequency, duration of exposure and the use of PPE are a risk factors and are associated with pesticide poisoning; Pesticide dose related but not a risk factor for pesticide poisoning. The dominant factor associated with pesticide poisoning are tenure spraying, the use of PPE and spraying frequency.

**Conclusions:** The rate of pesticide poisoning amounted to 73.9%. The tenure of the spraying, spraying frequency, duration of exposure and the use of PPE is a risk factor for the occurrence of pesticide poisoning.

**Suggestion:** extension agents and community health centers to provide education on the use of pesticides and their impact. Farmers pay more attention spraying frequency, duration of exposure, the dose and the amount of pesticides used, and the use of PPE when working with pesticides.

**Keywords:** risk factors, Pesticides, Boyolali

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