

Hubungan lama pajanan pestisida terhadap aktivitas enzim kolinesterase darah serta gejala gangguan saraf dan kulit pada pekerja tani (Studi pada Petani dan Buruh Tani di Kecamatan Kersana Kabupaten Brebes Jawa Tengah Tahun 2014) = Association of pesticide s length of exposure with the activity of red blood cell cholinesterase neurological disorders and skin disorders in agricultural workers (Study in farmers and farm labourers at Kersana Sub District Brebes District Central Java)

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## Abstrak

Latar belakang: Produktivitas pertanian yang tinggi di Kabupaten Brebes berpotensi untuk menimbulkan berbagai gangguan kesehatan akibat pestisida pada pekerja tani. Beberapa penelitian sebelumnya pada lokasi yang sama menunjukkan bahwa terdapat beberapa efek kesehatan, baik akut maupun kronis yang dialami pekerja tani akibat pajanan pestisida.

Tujuan: Penelitian ini bertujuan untuk mengetahui gambaran golongan pestisida yang banyak digunakan, aktivitas enzim kolinesterase darah, gejala gangguan saraf, dan gejala gangguan kulit serta hubungannya dengan faktor lama pajanan dan karakteristik individu.

Metodologi: Penelitian ini dilakukan di Kecamatan Kersana, Kabupaten Brebes. Sampel merupakan petani dan buruh tani pada lima desa di Kecamatan Kersana yang berjumlah 121 responden. Pengambilan sampel dilakukan dengan metode quota sampling. Data dikumpulkan melalui wawancara terstruktur, pengukuran status gizi, dan pengukuran enzim kolinesterase darah.

Hasil: Penelitian ini menunjukkan bahwa pestisida yang paling banyak digunakan adalah golongan piretroid dan avermektin (26%). Terdapat hubungan yang signifikan antara jumlah gejala gangguan saraf dengan lama pajanan per minggu ( $p=0,015$ ). Hubungan yang signifikan juga terdapat antara jumlah gejala gangguan kulit yang dialami dengan faktor lama bekerja ( $p=0,045$ ), lama pajanan per minggu ( $p=0,005$ ), umur ( $p=0,002$ ), jenis kelamin ( $p=0,044$ ), dan kebiasaan cuci tangan setelah bekerja dengan pestisida ( $p=0,000$ ).

Kesimpulan: Pestisida yang paling banyak digunakan adalah golongan piretroid dan avermektin. Terdapat hubungan yang bermakna antara jumlah gejala gangguan saraf dengan lama pajanan per minggu. Hubungan yang signifikan juga terdapat antara jumlah gejala gangguan kulit yang dialami dengan faktor lama bekerja, lama pajanan per minggu, umur, jenis kelamin, dan kebiasaan cuci tangan setelah bekerja dengan pestisida.

.....Backgrounds: Brebes Region is one of various region which has high productivity in agricultural products, so this region has a potency for any health effects due to pesticide exposure. Several studies have shown that many health effects has occurred in agricultural workers in Brebes.

Objectives: This research's objectives are knowing the groups of pesticide that commonly used, red blood cell cholinesterase activity, symptoms of neurological and skin disorders and their associations with length of exposure and individual characteristics.

Methods: This research is located on Kersana sub-District, Brebes District, Central Java. Samples are farmers and farm labourers who live in five villages on Kersana District. The number of samples is 121 persons. Quota sampling methods have been chosen by researchers to collect the samples. Data collecting was done by structured-interview, cholinesterase measurement, and nutritional status measurement.

Results: The result has shown that pesticide group which commonly used are phytretroid and avermectin. There is an significant association between the number of neurological disorders and length of exposure in week ( $p=0,015$ ). There are also significant association between the number of skin disorders with working periods ( $p=0,045$ ), length of exposure in week ( $p=0,005$ ), age ( $p=0,002$ ), gender ( $p=0,044$ ), and hand-washing behaviours after working with pesticides ( $p=0,000$ ).

Conclusions: Pesticide group which commonly used are phytretroid and avermectin. There is an significant association between the number of neurological disorders and length of exposure in week. There are also significant association between the number of skin disorders with working periods, length of exposure in week, age, gender, and hand-washing behaviours after working with pesticides.