ABSTRACT

The Changes Of Cholinesterase Activities And Electrolyte (Na,K) Serum Between Before And After The Spray On Red Onion Spraying Farmer In Sukomoro Nganjuk

Sukomoro subdistrict take place in Nganjuk district, East Java is the centre of red onion producer. The preliminary survey in Sukomoro subdistrict, showed that the spray of pesticide in red onion farm was done three to four times in a week, starting from planting until a week before harvesting. At certain months, the spray was done intensively, once a day, to avoid pests. Pesticides are hazardous materials that can cause negative impacts on human health and environmental sustainability. This study is aimed at making analysis of the altered activities of cholinesterase activities, sodium and potassium in a serum before and after the spray on red onion farmers in Sukomoro subdistrict. This is an analytic observational study with cross sectional approach. The study was conducted on March and June 2013 while for data retrieval is performed in may – june 2013. The research was done on 17 participants. They were observed before and after the spraying activity The data collection was done through questionnaires and the examination of the level of cholinesterase and electrolyte serum. The T-test analysis showed that there was significant level between sodium (0,037) and potassium (0,000) before and after the spray, while to saw the influence by using linear regression indicates there was a meaningful relationship between wearing of protective equipment (0,001), the length of exposure (0,019) and cholinesterase. Conclution, there was a significant difference between sodium and potassium before and after the spray, the existence of a meaningful relationship between wearing of protective equipment, length of exposure and cholinesterase.

Keywords: health effect, electrolyte, sodium, potassium, cholinesterase, pesticide