

(226)

**Farmers Perspectives on Negative Impacts of Chemical Pesticide Usage in Vegetable Cultivations: Case Study from the Periyaneelavanai Area, Ampara District**

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**Abstract**

Indiscriminate use of pesticides causes health hazards to humans and long-lasting negative impacts to the environment. The major objectives of this study are to evaluate the current status of pesticide usage in the Periyaneelavanai area, to evaluate farmers' perception on health, environmental effects due to usage, of pesticides, to identify the awareness level of farmers about proper usage of chemical pesticides and alternatives. This study was carried out in two GN divisions of Periyaneelavanai area, Ampara district. To represent 20% respondents, 50 farmers from each GN divisions which upto total 100 were randomly surveyed using a structured questionnaire. In order to gather the necessary data on vegetable cultivation, a preliminary study involving interviews with the Agricultural Instructor-Officer in Charge and affiliated farmers in Periyaneelavanai area were conducted before the actual survey. Descriptive analysis, P test, T test, anova were performed using minitab 14.0 version to conduct data analysis. The present study revealed that Chili, Brinjal, Okra, Tomato, Long beans, Cucurbites, Onion and Leafy vegetables were primarily grown in this area. Abamactin, Coragan, Applaud and Virtako were used as insecticides and Abamactin was the most popular (42%) among farmers. Mancozeb, Propineb and Canazole were used as fungicides and the highest usage was Mancozeb (45%). Mortin rat kill was used as a rodenticide by all the respondent farmers, and they have not used herbicides for their vegetable cultivation; instead, they manually remove the weeds. Skin irritation was the most prominent (60%), acute disease, and Asthma was the most common chronic disease (31%), that can be seen among farmers. The most common adverse environmental impact in this area was the empty pesticide containers piling up along roadsides (95%). All the farmers use at least one PPE while applying pesticide though the frequency of wearing PPE is different among each other. The majority of respondents use gloves, eye protection, and foot ware but lack of awareness towards face, head and body protection. The highest number of farmers selected indoor places (51%) for pesticide storage which cause to have a high risk of exposure among farmers. Most of the farmers selected the option of burying or burning pesticide bottles after using it. Majority of respondents preferred to use chemical pesticides (76%), rather than alternative methods due to the reliability of those methods. It is proposed to educate farmers on application, storage, cleaning and carrying the pesticides, the methods of effectiveness of different individual protection facilities, and utilizing the behavior to reduce the exposure to poisons should be developed and be available to farmers. This will help to reduce negative health and environmental consequences. Moreover, it is recommended to introduce reliable and effective alternative methods for chemical pesticides.

**Keywords:** Periyaneelavanai area, Vegetable cultivation, Pesticides, Environmental impacts, Disease