Integrated Pest Management in Cabbage in the Tamale Metropolis, Northern Ghana

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Abstract

Pesticides application method depends on the nature of the target pest, the characteristic of the target site, the properties of the pesticides, the suitability of the application equipment, and the cost of efficiency of the alternative methods. The intensive use of agro-insecticides by farmers in the Tamale metropolis in northern Ghana has resulted in the detection of high insecticide residues in vegetables, local health hazards and environmental pollution. This study investigated the knowledge and practices of cabbage growers regarding the use of insecticides in the management of insect pests of cabbage. A survey of 70 cabbage farmers was conducted in seven different production sites in the metropolis. Cabbage farming system typically consisted of smallholder farmers growing one or two cabbage varieties. The diamondback moth, *Plutella xylostella* remained the major insect pest in cabbage. More than 90 % of farmers applied pesticides for pest control. There were 12 major types of insecticides used in pest control and each farmer usually used 3–4 types of insecticide over a season. Both high and low toxicity pesticides, with EIQ values ranging between 10.0 and 52.5, were used. Pesticide spray frequency was higher during wet seasons than in the dry seasons. The study also revealed that hypermarkets play an important role in marketing of fresh cabbage in the food chain. Regulations on pesticide residue monitoring need to be applied in order to help address the high insecticide residues on fresh products and their impact on animal and human health in the metropolis.

Keywords: Cabbage, Ghana, insecticides, pest management, Tamale metropolis

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