

ADOPTABILITY OF THE IMPROVED HOLLOW CONE NOZZLE ON BEANS AND TOMATO UNDER FARMER FIELD CONDITIONS

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ABSTRACT

An earlier investigation has revealed that relatively very high volumes of pesticides are being used in vegetable cultivations in Sri Lanka mainly due to the use of errant nozzles under low pressure. The same study has further indicated that the use of an improved hollow cone nozzle under standard pressure managed to reduce around one third of the pesticide volume used in cabbage cultivation. Further evaluation of this improved hollow cone nozzle on other types of foliages under farmers' cultivation conditions is required in recommending this new nozzle replacing the conventional nozzle in foliar applications of insecticides on vegetables. The present study was carried out to confirm the effectiveness of this improved hollow cone nozzle on vegetables with other type of foliage under farmers' cultivation conditions. The pest control efficacy of the improved hollow cone nozzle was compared with the conventional nozzle on tomato and bean in farmers' field at Bandarapola, Matale. Spraying of insecticides using both types of nozzles reduced the number of pests and increased marketable yield and there was no significant difference of the efficiency between them. However the Improved nozzle consumed only 20% to 29% lower spray volume when compared with the conventional nozzle. Therefore, improved hollow cone nozzle can be used to replace the conventional nozzle effectively reducing the use of pesticide volume in vegetable cultivation which will in turn be an environmentally friendly and health wise beneficial for human being.

Key words: Pests, crop yield, Foliar insecticides, Improved hollow cone nozzle.