

RESEARCH NOTE

Impact of front line demonstration for management of thrips in garlic at KVK adopted village of district Mandsaur (M.P.)

■ DURGA SINGH, H.P. SINGH* AND R.P.S. SHAKTAWAT

Krishi Vigyan Kendra, MANDSAUR (M.P.) INDIA

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ABSTRACT

Thrips (*Thrips tabaci*) are perhaps the most important insect pests attacking garlic. They are most common during warm weather. They feed on leaf surfaces, causing them to whiten or silver. Thrips are most damaging when they feed during the early bulbing stage of plant development. Farmers were using different insecticides for control of thrips. However, Fipronil 5% SC constitutes the recommendation for managing garlic thrips. Spraying of Fipronil 5% SC @ 1 ml/litre of water gives good control if sprayed at frequent intervals. Three sprays of Fipronil 5% SC at fortnightly interval has been recommended for management of thrips in garlic. This study was conducted at KVK adopted village Surkhera Mandsaur District. Fipronil 5% SC gave best performance in controlling thrips in garlic.

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*Corresponding author:

Garlic (*Allium sativum*) is an annual herb, cultivated mainly for bulbs. India is the second largest producer of garlic in world India. Over the years, productivity has remained almost static. Great crop losses occur due to high incidence of diseases and pests. India forms a net importer to a major exporter in the global trade of garlic. Other major importing countries include Bangladesh, Malaysia and Nepal. Madhya Pradesh, Gujarat, Orissa, Rajasthan, Uttar Pradesh and Maharashtra are the main States where garlic is grown commercially. Madhya Pradesh is the leading garlic-producing state in the country. In Madhya Pradesh state, main garlic producing districts are Mandsaur, Ratlam, Neemuch, Indore, Chhindwara and Bhopal. It is used mainly as a condiment for its medicinal properties. Garlic has been used as both food and medicine since many centuries. The diseases and disorders in which it is claimed to have positive effects are:

Heart disease, Atherosclerosis, High cholesterol, High blood pressure, Improves immunity and Helps in fighting common cold.

Garlic thrips are probably the most common insect pest that attacks garlic. When damage is severe, the entire plant

may wilt and die. Garlic thrips begin to migrate when weeds in surrounding fields begin to dry up.

Front line demonstration on thrips management of garlic was carried out at village Surkheda of Mandsour district during *Rabi* 2010-11 by Krishi Vigyan Kendra, Mandsaur. Five innovative and receptive farmers from the village were selected for conducting the trial to ensure their active participation. Conduct of the above trials included farmer's perspective, farmer's participation, farmer's management status and suitability of site as suggested by Singh (1999). Fipronil 5 per cent SC 800 ml/ha, three spray at 15 day interval starting from 30 days after sowing was used as a test insecticide to manage the garlic thrips while the existing farmers practice *i.e.* spray of any insecticide along with ash were treated as control for comparison. The yield data were collected from both the recommended and control plots (farmers practice) and their feasibility and economic viability were accessed. The trial was also envisaged with four fundamental assumptions. (i) when the technology is not acceptable for the farmers in it recommended form and need minor modification, refinement or change, (ii) it needs the integration of related indigenous

Table 1: Response of Fipronil 5% SC treatment to manage garlic thrips in terms of yield performance and C: B ratio

Treatment	Yield		Cost of cultivation	Gross returns	Net returns	Cost benefit ratio
	(q/ha)	% increase				
Farmers practice	80.2	-	46000	200500	154500	4.35
Recommended practice*	109	35.91	48500	272500	224000	5.61

*three foliar spray of Fipronil 5% SC@ 800 ml/ha

knowledge of the farmers with the scientific recommendations in the processes of refinement or modification, moreover the refinement or modification is a continuous process in the lake of available technological option specific to each microenvironment, (iii) the collaboration of farmers who have been experimenting on their own to evolve solutions to the constraints, in their farm and of the extension system which is vital in the process of technology development, and (iv) the technology or practices generated through front line demonstration will become farmers' recommendation comprising a basket of alternatives and are the most appropriate to solve problem. Keeping above in view the front line demonstrations were executed. The major field operations were cited by 91.67 per cent farmers as the major hindrance in adopting recommended pesticides application (Mishra and Das, 2009).

The yield performance and cost benefit ratio of front line demonstration due to recommended technology and farmers practice were analyzed and are presented in Table 1. Of the two treatments, recommended practice *i.e.* use of Fipronil 5% SC @ 800 ml/ha was found to be most effective in managing the garlic thrips over farmers practice. The yield performance of recommended practice was 109 q/ha which is almost 35.91 per cent higher than farmers practice (80.2 q/ha). Working out monetary advantage revealed that cost benefit ratio of recommended practice (5.61) was higher over farmers practice (4.35). Outcome of the front line demonstration organized clearly brings out that the adoption of recommended practice (use of Fipronil 5% SC @ 800 ml/ha) is feasible, economically viable and environmentally safe technology for controlling thrips in garlic. The demonstration could convenience most of the

farmers to use recommended technology on account of its obvious advantages and effective management of garlic thrips. These innovative practices showed solving the farmer's problem, decision-making and ability to modify their farming practices.

On the basis of result obtained from front line demonstration, it is obvious that recommended practice was found feasible and economically viable and superior over farmer's practice being followed. It is better option in the management of garlic thrips using best technology. It is suggested that such participatory approach involving extension workers and farmers in demonstration of research emanated proven technology may go a long way to curtail losses on account various biotic stresses.

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