



Awareness Programs Through Various Extension Approaches for Insect Management Practices in Agriculture Among the Farmers of Bahanakadi Village

*Bheesham Kumar¹, Dr. R.K. Thakur² and Dr. Subuhi Nishad³

¹Ph.D. Research Scholar, Department of Agricultural Entomology, College of Agriculture, Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh, India

²Sports Officer & National Service Scheme Program Officer (Boys Unit), College of Agriculture, Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh, India

³Sports Officer & National Service Scheme Programme Coordinator, Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh, India

*Corresponding Author's email: bheeshamkumar777@gmail.com

A major challenge today is entry into the policy making arena, entry into anonymous global market and the transformation of organic products into commodities. The promoters of organic farming consider that it can meet both these demands and become the mean for complete development of rural areas. After almost a century of development, organic agriculture is now being embraced by the mainstream and shows great promise commercially, socially and environmentally. The pest management in organic farming are heavily dependent on preventive measures rather than curative practices which are based on the ecologically safer management methods. Broad management of ecosystem through little modification in the cultural practices such as crop rotation, soil quality management through the addition of organic amendments constitutes the preliminary defence against the attack of insect-pests followed by use of the curative methods like use of predators, parasitoids, plant products and ecologically safer chemicals form the next line of defence against the insect pests. (Haldhar *et.al.* 2017) The demand for organic food was stimulated in the 1960s by the publication of *Silent Spring*, by Rachel Carson, which documented the extent of environmental damage caused by insecticides. (Adamchak 2022).

Insect-pest management strategies for organic farming

For ease of understanding and their effective application for management of insect pests under organic farming, pest management strategies are classified into following categories

- Modification of cultural practices including crop rotation, Sanitation, Mulches, Tillage, soil health management, Fertility management, Trap crop, use of insect resistant plants, etc
- The conservation practices to restore the natural enemies through provision of hedge rows, helter belts, etc.
- Use of biological control agents such as insect predators, parasitoids, insect pathogens by applying or releasing the agents through inoculate and inundated methods.
- Use of botanicals and their mixtures such as Panchagavya, Dasagavya and mineral oils as curative control measures.
- Use of pheromones and other attractant.
- Use of organic pesticides and other permissible pesticides.



Awareness programmes about insect management practices through the various extension approaches among farmers

Awareness Programme was conducted in Bahanakadi villages. This was made happen by going to the social points of villages and gathering as many as farmers in these points. Pamphlet having information about multiplication of bio-agents and application of biopesticides was distributed to villagers and information about insect management practices are spoke to villagers and farmers, contact no. was also distributed for further enquiries and questions from farmers and villagers.

Table: List of bio-agents and their hosts about information to respondents

S. No	Biological Agents	Pest	Crop
1	<i>Trichogramma japonicum</i> -1.0 cc/acre once in 10 days,(Egg parasitoid)	Lepidopteran, <i>borer spp</i>	Cotton, Paddy, Maize, vegetables
2	<i>Trichogramma chilonis</i> -2 cc/acre once in 15 days	Borers	Sugarcane, paddy,Pulses, Vegetables
3	Nuclear Polyhedrosis Virus (NPV) 100-200 LE/acre	<i>Spodoptera spp.</i> & <i>Heliothis spp.</i>	Vegetables
4	<i>Chrysoperla spp.</i> @ 5000-10000 eggs /ha, 3 – 4 times in 15 days (Green lace wing)	Prudenia, Caterpillars, White flies, thrips, aphids	Vegetables
5	<i>Beauveria bassiana</i> - 1.0% Affects the young stage	<i>Helicoperva,Spodoptera a,</i> borers, hairy caterpillars, mites, scales, etc.	Vegetables cereals,
6	<i>Metarhizium anisopliae</i> - 0.5 - 1.0 % affects all stages	White grubs, Beetle grubs, caterpillars, Semi-loopers, mealy	Sugarcane,grou ndnut, rice, potato, cotton,
7	NPV - Nuclear Polyhedrosis Virus of <i>Helicoverpa armigera</i> 250500 ml/ ha, 2 – 3 time at 10 days interval	<i>Helicoverpa armigera</i>	Cotton, groundnut, pulses, cabbage, chillies, Cotton

Natural products, target organisms (Insects, mites, fungi, bacteria, viruses, vertebrates and invertebrates) specifications, and application rates about information to respondents

S. No.	Name of product	Purpose and specifications of use
1	Azadirachtin from the neem tree (<i>Azadirachta indica</i>)	Insect pest control
2	Beeswax	Used as protestant for treatment of cuts and wounds after pruning or in grafting
3	Plant oils	Used for control of small-bodied insects such as thrips, aphids.
4	Sulfur	Used against whiteflies
5	Lime sulfur (Mixture of calcium hydroxide and sulfur) and Bordeaux mixture (copper sulfate and calcium hydroxide)	Used as Fungicide

Source: Dr. S. Narayanan (2005)



References

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