

## Case study of IPM technology adoption

- **Title of the Case Study** Integrated Pest Management in Vegetables production
- **Introduction:** Vegetable, being a good source of vitamins, proteins, minerals, carbohydrates and fibers, also called protective food, forms an integral part of human diet. As far as production is concerned, we are no. two in the world after China. But, as a matter of fact, in terms of productivity and subsequently for per capita availability, we are still lagging behind many countries of the world. Per capita availability of vegetables is 210-gm/ capita/ day against 300-gm/capita/day recommended by ICMR. There is urgent need to increase the productivity of vegetables in our country to feed the increasing population. One of the major constraints in increasing vegetable production is loss caused by vegetable pests. Insect pests are responsible for reducing 40% of the total yield of vegetables. KVK Hoshangabad organized RRA & PRA and farmers meeting and group discussion observed that vegetable growing farmers using only chemical pesticides it increases their cost of production and similarly health concerns with them and consumers who purchased and consumed these vegetables
- **Details of technology,** Use of IPM tools like Yellow and Blue Sticky cards for sucking pests and pheromone trap for various caterpillar, borer, fruit fly etc and other good agricultural practices.
- **Source of technology** JNKVV Jabalpur, IIVR Varanasi, IIHR Bangalore, IARI New Delhi, ICAR-CIAE Bhopal
- **Conceptual framework and Related Scientific Review of literature**
- **Key characteristics of the technology** low cost, eco-friendly
- **Farmers' perception of technology:** farmers convinced now by getting result of IPM tools
- **Farmers' learning of technology, training, adoption and diffusion:** initially we start to provide practical training on IPM tools installation with 5 farmers after they getting success they disseminated this technology with other farmers now 100 and more farmers using this IPM tools and other good agriculture practices.
- **Reasons for adoption of technology** farmers convinced to use these low cost IPM tools easy to use and KVK Hoshngabad arranged these items and provide to farmers on cost basis
- **Reasons for not adoption of technology:** availability of IPM tools not easy as compare to chemical pesticides because dealers don't get commission by selling it similarly no Government or line department subsidy
- **Reasons for change in use of technologies/ Refinement of Technology (If any with relevant details)** No any refinement

- **Adoption and dissemination difficulties / obstacles encountered and strategies adopted for effective dissemination** Like human being those believe in allopathic medicines as compare to ayurvedic and homeopathic medicines similarly majority of farmers totally believe in chemical pesticides and its easy availability while IPM tools not easily available those farmers who are growing vegetables traditionally and still not came in touch with KVK are still depends on nearby dealers and using chemical pesticide for crop protection
- **Mechanism for technology dissimulation by KVK** KVK not only arranged these IPM tools but also did practical training of installation and some items self-preparation
- **Government policy support for technology promotion & adoption & role of line dept.** Currently no Government policy support for this IPM tools technology promotion and limited role of line department
- **Training and support role of KVK:** KVK not only arranged these IPM tools but also provided practical training of installation and low-cost self-preparation of different traps (Fruit fly trap, yellow & Blue sticky trap)
- **Findings on Important parameters related to technology application**

These IPM tools are easy to use and environment safely

- **Economic Parameters (economics per ha/unit mentioning unit size)**

Economic point of view 50 numbers each of yellow and Blue sticky cards required per ha area which cost around Rs. 5500 similarly pheromone trap required 10 to 25 per acre cost around Rs. 45 to Rs. 150 per piece similarly lure cost Rs. 20 to Rs.100 depends on crop and pest

- **Impact of technology with details**

Crops	Production	Yield enhancement	Cost saving	Input saving,	Social	Economic	Environmental impact
Tomato	150 q/acre	25-30-q/acre	Rs. 20,000	Rs.10,000	Farmers those using IPM tools and getting success get recognised among other neighbour farmers	Now these farmers are cutting their cost of production and getting additional income	IPM tools like yellow & Blue Sticky Trap and pheromone trap are environment safely
Chilly	120 q/acre	15-20 q/acre	Rs. 20,000	Rs. 10,000			
Brinjal	200 q/acre	25-30 q/acre	Rs. 20,000	Rs. 10,000			
Okra	130 q/acre	25-30 q/acre	Rs. 20,000	Rs. 10,000			
Sponge Gourd	130 q/acre	25-30 q/acre	Rs.20,000	Rs.10,000			

- **Horizontal spread of the technology** Now this IPM tools Technoly Spread to 4 blocks of Hoshngabad district and around 100 farmers using it

**Details on area of operation and beneficiaries**

Year	Area (ha.)	No. of beneficiaries	No. of villages
2018-19	1	10	5
2019-20	10	100	25

**Yield levels and pesticide use in IPM versus Non IPM (NIPM)**

Year	Average yield (q/ha)		% increase	% increase over district average	No. of sprays of chemical pesticides	Reduction in pesticide use
2018-19	200	300	66	66	1	5 litres
2019-20	200	300	66	66	1	5 litres

- **Strengths-Weaknesses-Opportunities-Challenges (SWOC) of technology adoption in the district/ region**

	<b>Strengths</b>	<b>Weaknesses-</b>	<b>Opportunities</b>	<b>Challenges</b>
Use Of IPM Tools like yellow and blue sticky card and pheromone trap	Effective low cost and environment safely	Not easily available as compared to chemical pesticides	Government and line department should promote it and provide some subsidy on it	The IPM tools are must looking to the farmers doubling income and consumer health

(Include high quality relevant photographs, tables and illustration)

