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Farmers Perception on Technology Attributes of Integrated Pest Management in Brinjal

Key words : Compatibility, Observability, Perception, Relative Advantage, Simplicity, Sustainability, Trailability .

Among the Solanaceous vegetables, brinjal *Solanum melongena* Linn. is the most important vegetable crop. In India, it occupies 0.39 m.ha. (Sardana, 2002) with an average production of 76 t/ ha. In Andhra Pradesh it is grown in an area of 24, 662 ha with a production of 4, 93, 240 tonnes (www.aphorticulture.com, 2006). In recent years, however, the production of brinjal has been seriously affected due to steady increase in insect pest infestation, especially the shoot and fruit borer. In this context, trainings, region specific Front Line Demonstrations on recommended IPM technologies in brinjal and follow up visits to demonstration plots were being implemented by Krishi Vigyan Kendra, Undi in its adopted villages to demonstrate the technical feasibility and economic viability of IPM.

Gillbert *et. al.,* (1980) opined that farmers valuable experience in farming, the physical, socio-cultural, economic and developmental problems encountered by them in adoption of recommended technologies and farmers perception about performance of recommended technologies need to be known to the scientists. Thus technologies recommended being successful, there is a need for ensuring their compatibility, relative advantage, simplicity, observability, trailability and sustainability. Tripathi (1999) expressed his view that the capital intensive nature of technology and the risk associated to be hurdles for poor farmers. Often unsustainability of the technologies to the socio economic and cultural background of the farmer and the marginal advantages may be responsible for failure. Hence in the present study, an attempt was made to understand the farmers perception on technologies recommended with the following objectives.

1. To study overall perception of the brinjal farmers on recommanded and demon strated IPM technology
2. To study the perception of the brinjal farmers on technological attributes of recommended IPM technology.

The ex-post facto research design was used for the study since the variables chosen for the study had already occurred. The study was conducted during 2009-10 in two adopted villages of Krishi Vigyan Kendra (KVK) Viz., Kakaraparru (Peravali mandal) and Guttulavaripalem (Palakoderu mandal) in West Godavari district of Andhra Pradesh where majority of the vegetable farmers were growing brinjal. From each of the adopted village, 25 brinjal farmers who used to regularly attend trainings, practical involvement in FLDs and visit IPM demonstration plots were purposively selected for the study and thus 50 brinjal growers constituted the total sample size.

The perceived attributes of innovations given by G. L. Ray (1996) Viz., compatibility, relative advantage, complexity, observability, trailability and sustainability were considered for the study purpose. These attributes were operationalized and schedule was constructed using the operationalized attributes. The statements were kept in a three point continuum i.e., agree, undecided and disagree. For positive statements the score of 3, 2 and 1 were assigned, respectively and vice versa for negative statements. The overall perception of each individual was the total score obtained for all attributes and the respondents were categorized in 3 categories i.e., low, medium and high based on their perception score using mean and standard deviation as a measure of check. After pre testing the schedule it was personally administered to sample of farmers for collecting data.

Overall perception of brinjal farmers

The results presented in table 1 revealed that more than half of the brinjal farmers (52.00%) perception on recommended and demonstrated IPM technology was medium followed by high (32.00%). Remaining 16.00 per cent farmers were categorized in low perception. The probable reason for this was the selected IPM components demonstrated in the farmers' field were compatible with their farming situation, has relative advantage over the existing

Table 1. Overall perception level of brinjal farmers in respect of recommended IPM techonology.

Category	Frequency	Percentage
Low (Up to 39.48)	8	16.00
Medium (39.48 – 50.40)	26	52.00
High (Above 50.40)	16	32.00
Total	50	100.00
Mean	44.94	
SD	5.46	

plant protection technology, in terms of reduced production costs and improved net returns in demonstration plots which had impressed the farmers for better adoption.

Perception of farmers on technological attributes of brinjal IPM technology

The results pertaining to farmers' perception on technological attributes

Compatibility:

Great majority (78.00%) of the farmers perceived that the IPM technology demonstrated was highly compatible followed by medium (14.00%) and low (8.00%) perception on compatibility. Majority of the respondents had high perception on the recommended IPM technology as it is consistent or in agreement with their belief and values and suitable to their agro-climatic condition and farming situation.

Relative advantage:

Sixty eight per cent of the farmers perceived that the IPM technology recommended was having high relative advantage over the practice of using only chemical pesticides to control the brinjal pests. As the brinjal farmers have witnessed increased yields and net returns, saves time, labour and cost, have less risk than the existing practice, their perceptions are high in this regard.

Simplicity:

All most equal per cent of farmers (50.00% and 46.00%) perceived that the IPM technology recommended was having medium and high simplicity due to its high relative advantage in terms of more yields and income. Only 4.00 per cent of the farmers' perception was complex to understand and use the IPM technology due to non availability of inputs like pheromone traps locally, difficulty in procuring and processing of neem seed kernel extract, lack of interest in preparing yellow sticky traps and difficulty in remembering scouting methods.

Observability:

As the results of IPM technology are visible, majority (74.00%) of the farmers' perception on observability was high followed by medium (14.00%) and low (12.00%) categories. As the farmers have observed marked differences in insect pest infestation, crop damage due to pests and high marketable yields in demonstration plots due to preventive and curative IPM components, they understood the beneficial effects of IPM which is more profitable in the long run.

Trailability:

Great majority (78.00%) of the farmers perceived that the IPM technology is having high trailability followed by medium (18.00%) and low (4.00%) groups. The Front line demonstrations of brinjal IPM in farmers' field have helped in spreading the technology as these demonstrations involve small scale trial by the farmers. As the IPM technology recommended seems to be flexible and can be experimented on a limited basis, farmers' perception was high on this aspect.

Sustainability:

Majority of the farmers (68.00%) perceived that the IPM practices recommended in brinjal crop

were having high sustainability followed by medium (24.00%) and low (8.00%). Farmers were confident with respect to increased yields and reduced cost of cultivation even in future also as they believed the results in demonstrations and they were well convinced of use of IPM technologies for the betterment of yields and also environment as it was ecofriendly.

Conclusion:

It could be concluded from this study that the IPM technology recommended and demonstrated through trainings and Front line demonstrations in the selected villages was a good solution given by KVK farm scientists to mitigate the problem of lower yields due to pest attack and increased production costs due to excess pesticide use. It was also observed that majority of the brinjal farmers perception on the IPM technology was medium and high in terms of their expectations and their farming resources. Hence the farm scientists need to recognize and utilize the farmers' perceptions and experience in generating problem solving technologies which are socially acceptable, economically viable and ecologically safe.

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