Indian Journal of Extension Education
Vol. 49, No. 1 & 2, 2013 (46-49)

Training Needs of Pesticide Retailers in Manipur

M. K. Singh[1], E. Priyadarshani[2], D. Ram[3], H. K. De[4] and D. K. Pandey[5]

ABSTRACT

Agricultural input dealers as para extension workers play a very useful role. Besides serving the farmers, they can contribute towards strengthening the Agricultural Extension System. However, they need to be equipped with latest know how through refresher training. The present study was conducted during 2013 in Manipur to ascertain training needs of pesticide retailers. Data was collected through personal interview of 109 retailers using structured interview schedule. Respondents were found to be highly educated with as much as 51 per cent having graduate and post-graduate degrees. Around 49 per cent of the respondents mobilized their own resources for the business and only 22 per cent sought bank credit. Risk bearing ability, achievement motivation, knowledge and aspiration level of the pesticide retailers were at medium level. Identification of different pest and pesticides emerged as the most needed training area followed by IPM techniques. Among crop specific training need, vegetable crops ranked first followed by rice. Respondents also reported that training on application of ICTs in business is important. Seasonality in the business of pesticide, lack of need-based training and higher transportation cost were some of the constraints identified by the pesticide retailers in Manipur.

Key words : Training, pesticide retailer, para extension workers

INTRODUCTION

The ever-increasing population of India places constant pressure on agriculture to improve productivity. The misuse of pesticides in such scenario is very likely. The harmful effects of the pesticides are now established worldwide. The harm caused may be acute or chronic in nature. Farmers and agricultural labourers are the direct users of pesticides and are more likely to get affected by the acute toxicity of pesticides. The chronic toxicity affects the whole population. The farmers were found to be largely unaware of correct usage of pesticides. They mostly guided by the dealers/retailers in purchase and use of plant protection chemicals. The outreach of state agriculture universities and departments to the farmers was minimal (Bhushan *et. al*., 2013).

Another fact is that the public extension service by itself is not capable enough to handle the multifarious demands of the farming community and is being supplemented by private extension, though on a limited scale, by the input dealers, agencies like NGOs, farmer organizations *etc.* About 2.82 lakh agri-input dealers are operating in rural areas covering almost all parts of the country (Goel, 2003). They have become one of the important sources of farm information to the farming community though not equipped with adequate knowledge. Considering that this dealer network has spread out in almost all major villages of the country and being an important mechanism to reach out to large farming community, it is felt necessary to expose them to scientific knowledge of agriculture and build their capacity in handling field problems and extension communication abilities while increasing their skills in dealing with inputs and discharging regulatory responsibilities. Manipur is a hilly state at the nook corner of the country blessed with rich bio-diversity and a hugely dependent on the agriculture with almost 75 per cent of the population. Hill agriculture is comparatively more vulnerable to insect pest infestation due to the occurrence of varied climatic conditions. Microclimatic specificity of some hilly pockets results in development of hot spot for certain pests (Thakur *et. al*., 2012). Hence, the present study was undertaken with the objectives *viz.*, (i) To study the personal and situational characteristics of pesticide retailers, (ii) To assess their training needs and business constraints.

METHODOLOGY

The present study was conducted during 2013 in Manipur state of North-east India. Out of total 9 districts of the state, two districts namely; Imphal-East and Imphal-West were selected purposively for the present study. All pesticide retailers of both the districts (total 109 respondents) were surveyed through personal interview using pre-tested structured interview schedule. Important variables pertains to profile of the pesticide retailers viz. managerial ability was measured using the scale developed by Samanta (1977), risk taking ability by Supe (1969), achievement motivation by Banerjee and Talukdar (1997), level of aspiration by Kilpatrick and

[1]Associate Professor, [2]PG scholar, [3]Assistant. Professor, Department of Agricultural Extension, College of Agriculture (CAU), Imphal,
[4]Principal Scientist, ZPD, Kolkata, [5]Associate Professor College of Fisheries (CAU), Tripura.

Cantril (1960) were used with suitable modifications. After thorough review of relevant literature and in consultation with experts of relevant field the potential training areas were identified. These areas were rated by the respondents on three point rating scale as 'Most needed' 'Needed' and 'Not needed' for which score 3, 2, and 1 was assigned. Training need was measured by computing the weighted mean score. Areas of training were ranked as per the weighted mean score. Simple statistical measures like frequency distribution, percentage and weighted mean were used to interpret the data.

RESULTS AND DISCUSSION

Profile of the pesticide dealers

The socio-personal profile, psychological characteristics and business skills are the vital factors to run a business and efficient delivery of goods and services. Profile of the input dealers compiled, tabulated and presented in the Table1.

Table 1: Profile of the pesticide retailers

n=109

Category	Frequency (f)	Percentage (%)
Age		
Young(<36 years)	17	15.6
Middle age (37-57 years)	75	68.8
Old age (>58 years)	17	15.6
Education		
Up to Middle (VIII standard)	4	3.7
High school (X standard)	18	16.5
Higher secondary (XII standard)	31	28.4
Graduate	35	32.1
Post graduate and above	21	19.3
Sources of finance		
Bank and other financial institutions	24	22.0
Friends/ partners	8	7.3
Family/ relatives	45	41.4
No outside source	24	22.0
Local money lender (*sensanbi*)	8	7.3
Managerial ability		
Low	22	20.2
Medium	54	49.5
High	33	30.3
Risk bearing ability		
Low	20	18.3
Medium	74	67.9
High	15	13.8
Achievement motivation		
Low	17	15.6
Medium	73	67.0
High	19	17.4
Knowledge level		
Low	27	24.7
Medium	67	61.5
High	15	13.8
Level of aspiration		
Low	34	13.2
Medium	64	58.7
High	11	10.1

It is evident from Table 2 that majority (68.8%) of the respondents belonged to middle age group (37-57 years) and 32.1 per cent were educated up to graduate level followed by 28.4, 19.3, 16.5 and 3.7 per cent had education up to higher secondary, post graduate, high school and middle school respectively. The reason might be due to changing trend of compulsory education in our society and public awareness on benefit of education. Significant percentage (41.4%) of respondents had sought financial assistance from family and relatives followed by 22 per cent who had fulfilled credit needs from internal sources. The study also reveals that only 22 per cent availed institutional credit (banks, cooperatives *etc.*) to maintain and run their business. This is probably due to low credit deposit ratio of nationalized banks in the state.

In regard to managerial ability and psychological characteristics about half of the pesticide retailers (49.5%) had medium level of managerial ability followed by 30.3 and 20.2 per cent had high and low ability to manage their business, respectively. Risk bearing ability, achievement motivation, knowledge and aspiration level of the pesticide retailers were found to be at medium level. Mande & Darade (2011) found that majority (75.80 %) of the farm input dealers had medium level of knowledge about advance technology related to use of seeds, fertilizers and pesticides.

Training needs of the pesticide retailers

The training needs of the pesticide retailers in different areas of pest management are given in Table 2. The identification of different pest and pesticides emerged as the most needed training area and is ranked I with mean score 2.67. Other training areas in descending order of training need score are Insect pest management and its components (II, mean score 2.61), diagnostic and characteristic symptom and damage caused by insect pest (III,MS 2.58), bio-fertilizer-its use and importance (IV, MS 2.49), trade name, chemical name and properties of micro nutrients (growth hormone) (V, MS 2.30), trade name, chemical name and properties of pesticides (VI, MS 2.28), trade name, chemical name and properties of weedicides (VII, MS 2.27) and precautions in handling-storing and use of antidotes in case of accidents (VIII, MS 2.26). Control of non-insect pest-rat, birds, termites, etc., maintenance, selection, use and care of different sprayers, dusters, etc; their minor repairs, crop management (herbicide tolerant programs, etc.), different equipments for training, grafting, spraying, etc. were ranked IX, X, XI and XII with score 2.18, 2.17, 2.16 and 1.28 respectively. Mande & Darade (2011) observed that all farm input dealers of Latur District in

Table 2: Training needs of pesticide retailers in common areas of pest management

Training areas	Most needed	Needed	Not needed	Weighted Mean	Rank
Insect pest, management and its components viz. Cultural, mechanical, biological, chemical and legal.	71	33	5	2.61	II
Identification of different pest and pesticides.	73	36	0	2.67	I
Diagnostic and characteristic symptom and damage caused by insect pest.	67	38	4	2.58	III
Control of non-insect pest-rat, birds, termites, etc.	33	63	13	2.18	IX
Trade name, chemical name and properties of pesticides.	33	73	3	2.28	VI
Trade name, chemical name and properties of weedicides.	34	70	5	2.27	VII
Trade name, chemical name and properties of micro nutrients (growth hormone).	38	66	5	2.30	V
Maintenance, selection, use and care of different sprayers, dusters, etc; their minor repairs.	27	73	9	2.17	X
Precautions in handling- storing and use of antidotes in case of accidents.	39	59	11	2.26	VIII
Bio-fertilizer - its use and importance.	64	34	11	2.49	IV
Different equipments for training, grafting, spraying, etc.	2	26	81	1.28	XII
Crop management (herbicide tolerant programs, etc.)	39	48	22	2.16	XI

Marathwada region of Maharashtra State perceived (100%) training needs on various aspects of pesticides applications

Table 3: Crop specific training needs of pesticide retailers

Training area		Most needed	Needed	Not needed	Weighted Mean score	Rank
Symptom, spread and control of important insect pest of –						
i.	Rice	62	42	5	2.52	II
ii.	Cereal other than rice (wheat)	36	69	4	2.29	VI
iii.	Pulses	30	75	4	2.24	VIII
iv.	Oil seed	37	69	3	2.31	V
v.	Vegetables	77	30	2	2.69	I
vi.	Tuber crops	46	61	2	2.40	III
vii.	Cash crops	45	59	5	2.37	IV
viii.	Flowers and fruits	37	65	7	2.28	VII

Table 3 shows that among crop specific training needs, vegetable crops ranked first with weighted mean score 2.69. Rice (II, MS 2.52), tuber crops (III, MS 2.40), cash crops (IV, MS 2.37), oil seed crops (V, MS 2.31), wheat (VI, MS 2.30), flowers & fruits (VII, MS 2.28) and pulse crops (VIII, MS 2.24) were the other areas of training indicated by the retailers. Agro-climatic conditions are quite conducive for vegetable cultivation and more than 20 vegetables belonging to cruciferous (cole crops), solanaceous, cucurbitaceous, leguminous, tuber crops and leafy vegetables are grown in the region. Consumption of pesticide in vegetable farming is quite high. Hence, pest management in vegetables has assumed significance among the retailers. Mono-cropping of vegetable crops especially in the valley areas prompted the chances for outbreaks of many insect pests (Thakur *et al*., 2012). Moreover, rice is the staple food crop and is grown extensively in valleys, terraces, upland, hill and jhum. Yellow stem borer, leaf folder, case worm, hispa, gundhi bug, swarming caterpillar, thrips, gall midge, and army worm are the important pests prevalent in the region (Shylesha *et al.,* 2006). Hence, pesticide dealers were in need of training to identify the symptom, spread and control of important insect pest of rice and vegetables crops on priority basis.

Table 4: Training needs in ICT application and record keeping

Training area	Most needed	Needed	Not needed	Weighted Mean score	Rank
Record keeping	7	20	82	1.31	II
Record keeping software	5	21	83	1.28	III
Computer	51	58	0	2.47	I
CD-ROM	0	3	106	1.03	VII
DVD	0	2	107	1.02	VIII
VCR	0	4	105	1.04	VI
Internet	0	8	101	1.07	V
E-mail, Scanning	0	10	99	1.09	IV

The training needs of the pesticide retailers in ICT areas are given in Table 4. The application of computer for billing and accounting ranked I with mean score 2.47. Other training areas in descending order of training need are record keeping stood (II, mean score 1.31), record keeping software (III,MS 1.28), E-mail, Scanning (IV, MS 1.09), Internet (V, MS 1.07), VCR (VI, MS 1.04), CD-ROM (VII, MS 1.03) and DVD (VIII, MS 1.02). The presence of ICT has brought about accelerated changes in the world of work, especially in the field of marketing. These changes come along with the attendant problem of enormous professional challenges to equip, train, and retrain the personnel in sales and marketing with modern skills. Using information Communication Technology (ICT), is crucial to most businesses, regardless of size. It is important to a retailer aiming to expand and to improve efficiency. The use of good ICT also improves customer services and consequently customer satisfaction.

It is evident from Table 5 that enormous percentage (97.2%) of the respondents faced problem on fluctuation in selling of pesticides on seasonal basis. This is closely followed by lack of training attended (92.7 %), high cost in transportation (90.8%). As much as 82.6 per cent of the respondent expressed lack of capital and 79.8 per cent of the respondents faced problem of non-availability of bank loan. Further, 71.6 per cent faces problem of irregular contact with extension worker whereas, 69.7 per cent expressed lack of knowledge in maintaining stock book and sales register of the product, 60.6 per cent of the respondents complained about delay in renewal of license. Cumbersome process for renewal of license may be one reason for this delay. About forty six per cent retailers expressed lack of technical knowledge about different brands of product, active ingredients, dose *etc*.

Table 5: Problem faced by pesticide retailers

Statements	Frequency (f)	Percentage (%)	Rank
Lack of capital	90	82.6	IV
Non-availability of bank loan	87	79.8	V
Fluctuation of selling on seasonal basis	106	97.2	I
High cost in transportation	99	90.8	III
Irregular contact of extension worker with the retailers	78	71.6	VI
Lack of need based training	101	92.7	II
Lack of knowledge in maintaining stock book and sales register of the product	76	69.7	VII
Lack of technical knowledge of the retailers about different brands of product	52	45.8	IX
Delay in renewal of the licence	66	60.5	VIII

CONCLUSION

The findings of this study revealed that majority of the pesticide retailers in Manipur had medium level of risk bearing ability, achievement motivation, knowledge and aspiration. To be successful in business these attributes are very important. The core areas of insect pest management in which retailers need training are identification of different pest and pesticides and IPM techniques. Among crop specific training need, vegetable crops ranked first followed by rice. ICT especially application of computer in their business activities was also felt by the retailers. Institutions offering training like MANAGE, SAUs, ICAR Institutes, KVKs may lay emphasis on these preferences while conducting training programme for retailers and input suppliers. It is suggested that psychological and managerial aspects of business are integrated in the curriculum for the retailers. This will ensure quality of service and advice rendered and contribute to evolving the input dealers into para-professionals and enable them to serve the farmers and at the same time strengthening the agricultural extension system.

REFERENCES

Banerjee, M. and Talukdar, R.K. 1997. Problem in Women Entrepreneurship in Assam, *Indian Journal Extension Education* 33(3&4): 107-115.

Bhushan, C., Bhardwaj A. and Misra, S. S. 2013. State of Pesticide Regulations in India, Centre for Science and Environment, New Delhi [http://www.cseindia.org/userfiles/ paper_pesticide.pdf]

Goel, A.K. 2003. Diploma Course in Agricultural Extension, Services for Input Dealers (DAESI)National Institute of Agricultural Extension Management (MANAGE), Ministry of Agriculture, Government of India, "DAESI-2003" Vol.1 No.1, July-Aug. 2003.

Kilpatrick, F.P., & Cantril, H. 1960. Self-anchoring scale: A measure of the individual's unique reality world. *Journal of Individual Psychology,* 16, 158-170.

Mande, J.V. and Darade, N.W. 2011. Training Needs of Farm Input Dealers for Transfer of Agricultural Technology, *Journal of Community Mobilization and Sustainable Development* Vol. 6(2), 141-144

Samanta, R.K. 1977. A study of some agro economic, socio psychological and communication variables associated with repayment behaviour of agricultural credit users of nationlised banks. Ph. D thesis, BCKV, Nadia, West Bengal.

Shylesha, A.N., Azad Thakur N.S., Pathak, K.A., Rao, K.R., Saikia, K., Surose, S., Kodandaram, N.H., Kalaishekar, A. 2006. Integrated management of insect pest of crops in north eastern hill region. Technical Bulletin No. 19. ICAR, RC for NEH Region, Umiam, p 50

Supe, S.V. 1969. Factors related to different degree of rationality in decision making among farmers in Buledana district. Ph.D. thesis (unpublished). IARI, New Delhi.

Thakur, N. S. Azad, Firake D. M., Behere G. T., Firake, P. D., Saikia, K. (2012). Biodiversity of Agriculturally Important Insects in North Eastern Himalaya: An Overview, *Indian Journal of Hill Farming 25(2):37-40*