
Impact of Pineapple Cultivation Training on Village Extension Officers

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ABSTRACT

The present study was conducted to know the impact of training on the knowledge gain about pineapple cultivation amongst the village extension officers. As the study revealed that before participation in the training programme, majority of the village extension officers (46.67 per cent) belonged to medium level of knowledge about pineapple cultivation followed by low level (36.67 per cent), no knowledge (13.33 per cent) and high knowledge (3.33 per cent). After participation in the training programme, all the village extension officers was found in no knowledge category further the study revealed that the highest mean knowledge gain was achieved in both high and low knowledge level categories (31.82 per cent) which indicate the impact of training on village extension officers.

Key words: *Impact, knowledge, training, pineapple, village extension officers.*

INTRODUCTION

Pineapple (*Ananas comosus* L.) is a herbaceous perennial crop belonging to the order Farinasae, family Bromeliaceae and is one of the important commercially grown as tropical fruit in the world. Although tropical in nature, pineapple can adopt well top sub-tropical areas up to 1,100 m above sea level if the area is free from frost as the fruit is canned or made into juice or other processed products like - jam, jelly etc; the fruit is known to be a good source of Vitamin - A, Vitamin - B and Vitamin - C as it also contain fair amount of calcium, phosphorous and iron too.

As India is also one of the major producers of pineapple and further contributing more than 8.00 per cent of the total world production, while the Indian pineapple is commonly used in the form of canned slices, titbits, juice and jam and exported to Nepal, United Kingdom (UK), Spain and United Arab Emirate (UAE). During the current years, India produced 1.17 million tonnes of pineapples from about 79,846 hectare of land. The major pineapple states in India are West Bengal, Assam, Bihar, Nagaland, Meghalaya, Manipur, Arunachal Pradesh and Kerala (Anon. 2010).

Transfer of technology through training has become a common and major extension activity in the field of agriculture. This method of transfer of technology is being used to either make the Research and Development (R & D) staff more efficient in his present job or to train the staff in specialized field. The state department gets their employees trained in various enterprises with a view to introduce new enterprise amongst the farmers in their area of operation. The expenditure made on training can be best justified, when the trainees get

themselves enriched in the area of work and skill upgraded during the training, percolates amongst the ultimate clients (Anon. 2010 and Anon. 2012). Therefore, it is essential that trainee officers must be assessed in terms of learning took place after the training programme. The present study was conducted with following objectives:

1. To study the impact of training on knowledge gain about pineapple cultivation amongst the village extension officers.
2. To study the relationship of selected variables with knowledge gain about pineapple cultivation amongst the village extension officers.

RESEARCH METHODOLOGY

The present study was conducted on 30 (thirty) village extension officers of Nagaland state. Before and after research design was adopted. To know knowledge gain through training programme, pre and post tests were conducted with the help of objective type question paper containing 50 questions with total 100 correct alternatives answers (Ezung, 2013). Each right answer was allocated two scores. By summing up the score of all the right answers, total knowledge score for each individual was calculated and thereby knowledge gain was obtained using standard formula. In order to study the relationship of dependent variable with independent variables, simple correlation co-efficient was worked out (Raju and Rao, 1995).

RESULTS AND DISCUSSION

Keeping in view the objectives, the present study was divided into four parts viz; profile of village extension officers, distribution of village extension officers with respect to knowledge levels, knowledge gain in the various aspects of pineapple cultivation and relationship of knowledge gain with personal independent variables.

Table 1. Back ground profile of village extension officers (N=30)

S. No.	Variable	Frequency	Percentage
1.	Age		
(a).	Young age group (< 30)	07	23.33
(b).	Middle age group (31 - 45)	18	60.00
(c).	Old age group (> 46)	05	16.67
2.	Education		
(a).	Intermediate	03	10.00
(b).	Graduate	16	53.33
(c).	Post-graduate and above	11	36.67
3.	Area of Specialization		
(a).	Major field (Agriculture only)	04	13.33
(b).	Major and related field	11	36.67
(c).	Major and non-related field	08	26.67
(d).	Non-related field only	07	23.33
4.	Nature of duties		
(a).	Administrative work	02	6.67
(b).	Extension work	12	40.00
(c).	Research work	03	10.00

(d).	Administrative and extension works	03	10.00
(e).	Extension and research works	06	20.00
(f).	Administrative and research works	03	10.00
(g).	Administrative, extension & research works	01	3.33
5.	Training / workshop / Experience etc		
(a).	Un-trained (not trained)	03	10.00
(b).	Semi-trained (through experiences)	09	30.00
(c).	Trained (attended training)	13	43.33
(d).	Well-trained (trained and experienced both)	05	16.67
6.	Length of service / experiences		
(a).	Low (up to 5 years)	07	23.33
(b).	Medium (5 to 10 years)	14	46.67
(c).	High (> 10 years)	09	30.00

(Source: Field Survey by Portia, 2012)

Profile of Village Extension Officers:

Table 1 reveals that to understand the background of village extension officers, a total number of six characteristics viz; age, education, area of specialization, nature of duties, training / workshop etc; and length of services / experiences were chosen for study. The majority of the village extension officers (60 per cent) were in the middle age group (31 to 45 years), while 23.33 per cent in the young (< 30 years) and 16.67 per cent old (> 46 years) age groups (Sharma, 2012; Sharma *et al.*, 2014 and Nakhro and Sharma, 2015).

Majority of the officers (53.33 per cent) were graduate followed by post graduate and above (36.67 per cent) and remaining were Intermediate (10.00 per cent). As far as area of specialization required for the post of village extension officers is concerned, there was a lot of variation. The highest percentage of village extension officers (36.67 per cent) were having specialization in major and related field followed by major and non-related field (26.67 per cent), non-related field only (23.33 per cent) and major field (Agriculture only) with 13.33 per cent.

Village extension officers were found to perform mainly three types or nature of duties viz; administrative, extension and research. Among the village extension officers 40.00 per cent were performing extension works only, 20.00 per cent were involved in extension and research both works, While 10.00 per cent each of the village extension officers were involved in research works only (at State Agriculture Research Station), administrative and extension works and administrative & research works, respectively. Whereas, 6.67 per cent were involved in administrative works at head office, only 3.33 per cent were involved in administrative, extension and research works.

Table 1 reveals that the majority of the village extension officers (43.33 per cent) were trained (through training) followed by semi-trained (30.00 per cent), 16.67 per cent were well trained (through training and experienced) and least on un-trained were 10.00 per cent only. The data on length of service / experiences reveals that 46.66 per cent of village extension officers had served between 5 to 10 years (Medium), whereas high (more than 10 years) had 30.00 per cent and remaining 23.33 per cent were in low (less than 5 years) services / experiences.

Knowledge of Village Extension Officers:

The data given in table 2 reveal that the extent of knowledge gained by village extension officer and change in knowledge levels due to training, the village extension officers were categorized into four knowledge levels on the basis of obtainable score as zero knowledge, low level knowledge (up to 25), medium level knowledge (25.01 to 50), high level knowledge (50.01 to 75); also similar studies were carried out by the Sharma (2012); Sharma *et .al* (2014) and Nakhro and Sharma (2015) in the line of present study.

Table 2. Distribution of village extension officers according to knowledge levels with their mean knowledge gain about pineapple cultivation

S. No.	Level of Knowledge	Knowledge		Gain
		Pre-training	Post-training	
1.	No knowledge (zero level)	4 (13.33)	0 (0.0)	4 (18.18)
2.	Low level of Knowledge (up to 25)	11 (36.67)	4 (13.33)	7 (31.82)
3.	Medium level of Knowledge (25.01 to 50.00)	14 (46.67)	18 (60.00)	4 (18.18)
4.	High level of Knowledge (50.01 to 75)	1 (3.33)	8 (26.67)	7 (31.82)
Total		30 (100.00)	30 (100.00)	(22) (100.00)

(Parenthesis indicates percentage to total)

The data given in table 2 reveals that before participation in the training programme, majority of the village extension officers (46.67 per cent) belonged to medium level of knowledge about pineapple cultivation followed by low level (36.67 per cent) and no knowledge (13.33 per cent) and 3.33 per cent of them had high-level knowledge of pineapple cultivation prior to training.

After participation in the training programme, there were drastic changes in knowledge levels of village extension officers of no knowledge category. All the village extension officers in the no knowledge (zero level) category (13.33 per cent) were shifted themselves into high level of knowledge. 26.67 per cent village extension officers of medium level of knowledge category moved in high level category due to training. Bhagat and Singh (1995) also reported similar kind of trend. It indicates that trainee (horticulture officers) with no knowledge of mushroom cultivation were more seriously involved in training as compared to officers with low and medium level of knowledge. The data further reveals that the highest mean knowledge gain were achieved in low and high level of knowledge categories (31.82 per cent) followed by no and medium level of knowledge with 18.18 per cent on both categories, respectively.

Knowledge Gain in various aspects of Pineapple Cultivation:

As table 3 reveals that in order to know the knowledge gain in various aspects of pineapple cultivation, the whole pineapple cultivation process were divided into eleven areas viz; seed rate, time of irrigation, integrated nutrient management, integrated pest management, climate knowledge, finance facilities, weeding management, ridge furrow method / system, soil

treatment, post harvest technology and marketing information. The significance of difference in mean knowledge gain in various aspects was tested by 't' test.

Table 3. Knowledge gain in pineapple cultivation by the village extension officers

S. No.	Practices	Maximum Marks	Mean score obtained		Knowledge gain in percentage	Rank	't' Value
			Pre-test	Post-test			
1.	Sapling rate	10	3.00	7.00	40.00	IV	4.045**
2.	Time of Irrigation	10	2.50	6.00	35.00	VI	13.024**
3.	Integrated Nutri- -ent Management	10	2.50	7.50	50.00	I	7.319**
4.	Integrated Pest Management	10	1.50	6.00	45.00	II	7.730**
5.	Climate knowledge	10	3.50	6.50	30.00	VIII	4.391**
6.	Finance facilities	6	1.00	2.50	25.00	IX	5.838**
7.	Weeding Manage.	8	1.00	4.50	43.75	III	5.319**
8.	Ridge furrow method / system	8	2.50	5.00	31.25	VII	4.078**
9.	Soil treatment	8	1.50	4.50	37.50	V	5.788**
10.	Post harvest tech.	10	2.00	6.00	40.00	IV	10.954**
11.	Marketing infor.	10	2.50	5.00	25.00	IX	5.238**
12.	Overall	100.00	23.50	60.50	37.00	-	18.384**

**** Significant at 1 per cent level of significance**

The data given in table 3 reveals that village extension officers gained highest knowledge in the area of integrated nutrient management with (50.00 per cent) rank I followed by integrated pest management (45.00 per cent) rank II, weed management (43.75 per cent) rank III. Both seed rate and post harvest management with (40.00 per cent) rank IV, soil treatment with (37.50 per cent) rank V, time of irrigation with (35.00 per cent) rank VI, ridge furrow method / system with (31.25 per cent) rank VII, climate knowledge with (30.00 per cent) ranked VIII and finance knowledge & marketing information both were (25.0 per cent) with IX ranked. The overall knowledge gain was 37.00 per cent, which was also significant at 1 per cent level of significance. It indicates that there was significant increase in knowledge in all the individual aspects of pineapple cultivation due to training.

Relationship between Knowledge Gains and selected personnel characteristics of Village Extension Officers:

Table 4 reveals that dependent variable knowledge gain about pineapple cultivation was found to be significantly at 1 per cent level of significance and positively correlated with age, education, area of specialization, nature of duties and length of service / experiences of village extension officers, while it was negative non-significant and correlated with pre-training knowledge about pineapple cultivation. The negative relationship of dependent variable with pre-training knowledge may be due to the reason that village extension officers with no pre-training knowledge about pineapple cultivation might have strong curiosity and eagerness to learn more and more about pineapple cultivation on the one hand, but on the another, the village extension officers having pre-training knowledge might not be serious about the training which resulted into low knowledge gain.

Table 4. Relationship between independent variables and knowledge gain about pineapple cultivation of village extension officers (N = 30).

S. No.	Independent variables	‘r’
1.	Age	0.989743 **
2.	Education	0.792406 **
3.	Area of Specialization	0.600000 **
4.	Nature of duties	0.615457 **
5.	Pre-Training knowledge / experiences etc	- 0.28735 ^{NS}
6.	Length of service / experiences	0.960769 **

*NS - Non Significant and ** - Significant at 1 per cent level of significance*

The positive relationship of knowledge gain with age, education, area of specialization, nature of duties and length of service / experiences indicates the fact that the village extension officers had greater exposures of pineapple cultivation as they had attended a number of trainings in pineapple cultivation in the past. In contrast to this findings by Rahman *et. al* (1993); Bhagat and Singh (1995); Sharma (2012); Sharma *et. al* (2014) and Nakhro and Sharma (2015) also done the similar research in the line of present study and further reported that higher service experience and age as constraining factors in achieving better academic course performance.

Meanwhile, the positive relationship of knowledge gain with age indicate the fact that trainee officers had greater exposure of pineapple cultivation as they had attended a number of trainings in pineapple cultivation in the past. In contrast to the finding, Rahman *et. al* (1993); Sagar and Vijay (2006); Sharma (2012); Sharma *et. al* (2014) and Nakhro and Sharma (2015) done in the line of present study and also reported similarly that higher service experience and age as constraining factors in achieving better academic course performance.

CONCLUSION

The present study revealed that the village extension officers, after attending the training programme had significantly enhanced their overall knowledge about pineapple cultivation.

The knowledge gain in all the aspects viz; age, education, area of specialization, nature of duties, training / workshop etc; and length of services / experiences were having positive impact on knowledge gain by the village extension officers. In view of these findings, it is concluded that the training programme has been effective in achieving the desired outcome in terms of change in the existing knowledge level of village extension officers about pineapple cultivation. Further, it is suggested that such training programme should be organised time to time to transfer pineapple cultivation technology to extension functionaries in enhancing the yield levels in Dimapur district. This will result in increased income of the pineapple growers.

REFERENCES

- i. Anonymous. 2010. Indian Horticultural Database. National Horticulture Board, Ministry of Agriculture, Government of India, Gurgaon, Haryana.
- ii. Anonymous. 2012. Statistical Hand Book of Nagaland, Directorate of Economics and Statistics, Government of Nagaland, Kohima.
- iii. Bhagat, G. R. and Singh, Y. P. 1995. Effectiveness of entrepreneurial development training on the knowledge level of farm entrepreneurs. *Indian Research Journal of Extension Education*. **31**. (1-4): 102-104.
- iv. Ezung, Portia. Alex. 2013. Production and Marketing of Pineapple in Nagaland. A Ph. D. (unpublished) thesis completed in the Department of Agricultural Economics, Nagaland University, SASRD, Medziphema, Nagaland.
- v. Nakhro, Rokoneituo and Sharma, Amod. 2015. Impact of Improved Dairy Techniques on Veterinary Field Assistant. *EPRA International Journal of Economic Growth and Environment Issues*. **3** (11). June-May: 36-40.
- vi. Rahman, H. Mizanur; Alam, M. Shsahe; Howlader, Monotosk and Jameel, farhad. 1993. Factors influencing the performance of the participants attending rice production training at BRRI. *Indian Journal of Extension Education*. **29**. (1-2): 29-35.
- vii. Raju V. T. and Rao D. V .S. 1990. Economics of Farm Production and Management, Oxford and IBH Publishing Company Private Limited, New Delhi.
- viii. Sagar, M. P. and Vijay, B. 2006. Impact of Mushroom cultivation training on Horticulture Officers. *Indian Research Journal of Extension Education*. **6**. (1-2): 45-47.
- ix. Sharma, Amod. 2012. Impact of Potato Cultivation Training on Village Extension Officers. *Journal of Interacademia*. **16** (4a). December: 1029-1035.
- x. Sharma, Amod. Venyo, Vengoto and Chauhan, Jitendra. 2014. Entrepreneurial Behavior of Potato Growers in Kohima district of Nagaland. *Indian Research Journal of Extension Education*. **14** (2). May: 82-86.