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Evaluation of Knowledge Gain through Training Programmes on Scientific Pig Farming

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

The present study was conducted with an objective of assessing the knowledge gained by trainees about various aspects of scientific pig farming organised by Krishi Vigyan Kendra, Lakhimpur. A total of 180 numbers of trainees participated in trainings on scientific pig farming over a period during 2019 and 2020 on random selection. The data were collected on pre and post completion of the training with the help of questionnaire which were distributed to the trainees before training. The questionnaire consisted of 13 different aspects on knowledge on Indian and exotic Pig Breeds, knowledge on selection of piglets, castration age of piglets, attainment of puberty in pigs, oestrus period of a sow, heat detection in gilt, gestation period of sow, care of young piglets, deworming in pigs, marketing age of pigs, feeding of lactating sow, knowledge on Vaccination of pigs and common diseases of pigs.

A score of one and zero score was assigned for each correct and incorrect response, respectively for analysis of knowledge gain. It was found that majority of the trainees were youths (52.22%), followed by Middle aged (32.22%) and Old age (15.55%). Majority of the trainees were from ST category (33.88%) followed by OBC (32.77%), General (21.11%) and SC (12.22%). Among those who attended training 32.22% had education till middle school level followed by primary 22.77, 16.11 % were found illiterate whereas 15% completed secondary, 10.55% higher secondary and 3.33 % completed education upto graduate level.

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The overall knowledge of trainees on pre training evaluation was found to be 19.17% which ended up on a high note with 93.15% on post training evaluation, which is indicative of the positive impact of training on knowledge gain.

Evaluation of knowledge gain on various aspects of scientific pig farming showed that maximum knowledge was gained on vaccination in pigs (88.89%, Rank I) and minimum gain was in knowledge of gestation period of sow (54.44%, Rank XIII).

Keywords: Scientific pig farming; knowledge gain; training.

1. INTRODUCTION

Agriculture remains the livelihood for majority of the state population, however, is no longer viable as primary economic source. Solely relying on the growth of agriculture for doubling the farmer's income is not going to yield any positive outcome. It is well accepted that the farmers' income can be doubled only by integrating agriculture with animal husbandry and allied activities with strong market linkage. Among livestock, pig farming has untapped potential and its proliferation will infuse tremendous scope in income and employment generation of small and marginal farmers. Pig as compared to other livestock species has vast prospects for quick monetary returns to the farmers thus contributing significantly to their economic upliftment. But, to take up pig farming as a source of livelihood one must be skilled enough and should have the knowledge of pig farming for its sustenance. One of the main ways for development of human resource is training and is also an essential prerequisite for running an enterprise successfully and profitably. It improves the knowledge of the trainees about the modern scientific farm practices. Lack of correct and inadequate knowledge leads to under or over adoption of innovation which proves fatal to the farming business. Training is an integral and critical input for the human development for bringing out desirable changes in human knowledge [1].

2. MATERIALS AND METHODS

The present study was conducted with an objective of assessing and evaluating the knowledge gained by trainees about various aspects of scientific pig farming on attending training programmes imparted by Krishi Vigyan Kendra, Lakhimpur, Assam. A total of 180 trainees were considered on random selection for the study who attended training on scientific pig farming and the participants consisted of farmers, farm women and rural youth. Therefore, data were collected from 180 respondents. A

structural questionnaire was prepared which consisted of 13 questions on different aspects of management, breeding, feeding, marketing and diseases of pig. The questionnaire was used pre and post training with same set of questions and subsequently data were collected. '1' score for correct response and '0' score for incorrect response was given for analysis of the Knowledge level and gain in knowledge.

Following formulae was used for evaluation:

$$\text{Knowledge \%} = (\text{Score obtained} / \text{Possible obtainable score}) \times 100$$

$$\text{Knowledge Gain \%} = [(\text{Score obtained on PTE} - \text{Score obtained on PoTE}) / \text{Total possible obtainable score}] \times 100$$

$$\text{Overall Knowledge \%} = (\text{Total score obtained on all aspects} / \text{Total possible obtainable score in all aspects}) \times 100$$

3. RESULTS AND DISCUSSION

On evaluation of the socio-personal characteristics as mentioned in Table 1, it was found that majority of the trainees were youths (52.22%) who were aged between 18-25 years, followed by Middle aged (32.22%) who were between 26-45 years and those with the least numbers were people with Old age (15.55%) who were above 45 years. In addition to that, majority of the trainees were from Schedule Tribe category (33.88%) followed by OBC (32.77%), which may be due to the fact that traditionally these two categories of people are more engaged in pig farming. It was followed by general category with 21.11% and people from schedule caste with 12.22%. Study on their educational status revealed that among those who attended training 32.22% had education till middle school level which was followed by respondents with primary education 22.77, 16.11% were found illiterate whereas 15% completed secondary, 10.55% Higher secondary and 3.33% completed education up to graduation level.

Table 1. Socio-personal characteristics of trainees

Sl No.	Considerations	Frequency	Percentage
1	Age		
	Young (18- 25 years)	94	52.22
	Middle age (26-45)	58	32.22
	Old age (>45)	28	15.55
2	Education		
	Illiterate	29	16.11
	Primary	41	22.77
	Middle	58	32.22
	Secondary	27	15.00
	Higher Secondary	19	10.55
	Graduation	06	3.33
3	Caste/Category		
	General	38	21.11
	Schedule caste(SC)	22	12.22
	Schedule Tribe (ST)	61	33.88
	Other Backward Classes (OBC)	59	32.77

The overall knowledge of trainees on pre training evaluation has been depicted in Table 2. Pre training evaluation (PTE) revealed that the score obtained for knowledge on common diseases of pig was least, with a score of 19 (Knowledge % of 10.55%) which reached to 160 (Knowledge % of 88.88%) on post training evaluation (PoTE). The knowledge gain was found to be 78.33% which ranked Vth. Similarly, it was followed by Knowledge on vaccination of pigs with a score of 20 on PET (Knowledge % of 11.11%) which became 180 on PoTE (Knowledge % of 100%). Knowledge gain was found to be 100% which ranked 1st. Knowledge on oestrus period of sow was scored 21 (Knowledge% of 11.66) on PTE which came to 169 on PoTE (Knowledge % of 93.88%). It ranked IInd with a knowledge gain of 82.22%. Knowledge on oestrus period of sow was followed by knowledge on deworming of pigs. It had a score of 23 on PTE (Knowledge % of 12.77%) which ended up with a score of 166 on PoTE (Knowledge % of 92.22%) and hence with a knowledge gain of 79.45% and ranked IVth. Knowledge on marketing of pigs obtained a score of 25 on PTE (Knowledge % of 13.88%) and 156 (Knowledge % of 86.66%) on PoTE. Knowledge gain was found to be 72.78 % with a ranking of IX. Knowledge on castration of piglets gathered a score of 26 on PTE (Knowledge % of 14.44%) and 160 on PoTE (Knowledge % of 88.88%). Knowledge gain was found to be 74.44% and was ranked VIIth. Knowledge on heat detection of gilt was scored 28 (Knowledge % of 15.55%) on PTE and 160 (Knowledge % of 88.88%) on PoTE. Knowledge gain was 73.33% with a ranking of VIII. Knowledge on feeding of

lactating sow had a score of 29 on PTE (Knowledge % of 16.11%) and 151 (Knowledge % of 83.33%) on PoTE. Knowledge gain was 67.77% with a rank of XI. Knowledge on Indian and exotic pig breeds scored 32 on PTE (Knowledge % of 17.70%) and 176 on PoTE (Knowledge % of 97.77%). Knowledge gain was 80% with a rank of IIIrd. Knowledge on care of young piglets was scored 39 (Knowledge % of 21.66%) on PTE and 168 (Knowledge % of 93.33%) on PoTE. Knowledge gain was 71.67% with a rank of X. Knowledge on selection of piglets was scored 41 (Knowledge % of 22.77%) on PTE and 177 (Knowledge % of 98.33%) on PoTE. Knowledge gain was 75.56% which ranked VIth. Knowledge on attainment of puberty in pigs was scored 65 (Knowledge % of 36.11%) on PTE and 178 (Knowledge % of 98.88%) on PoTE. Knowledge gain was 62.77% which ranked XIIth. Lastly knowledge on gestation period of sow was scored 81 (Knowledge % of 45%) on PTE and 179 (Knowledge % of 99.44) on PoTE. Knowledge gain was 54.44% which ranked XIII. An overall score of 449 with knowledge % of 19.17 was found on Pre training evaluation which reached a score of 2180 with knowledge % of 93.15% at the end of training on post training evaluation. The overall knowledge gain was found to be 73.97%. These findings are in close association with those found by Sharma et al. [2]. He found a significant improvement in the knowledge of the farmers after attending training. Senthilkumar et al. [3] also reported a positive impact of training on farmers' knowledge level, perception and performance Ashraf et al., [4] reported significant ($P<0.01$) improvement in

the knowledge level of the participants after training. Tanwar et al [5] also reported increase in knowledge of farmers on attending training. Belakeri et al. [6] reported that training had positive impact on knowledge gain among the farmers. Barman et al. [7] reported that trainings

could motivate the farmers for adopting the modern techniques. Similar findings were reported by Tiwari et al. [8] who found that trainings help to update and maintain the specialized subject-matter knowledge of the incumbents.

Table 2. Knowledge level of trainees on various aspects of scientific pig farming

Sl.No	Particulars	Score obtained on		Knowledge% on		Knowledg e gain %	Rank (Accordin g to Knowledg e gain)
		Pre-training Evaluatio n (PTE)	Post Training Evaluatio n (PoTE)	Pre-training Evaluatio n (PTE)	Post Training Evaluatio n (PoTE)		
1	Knowledge on Indian and Exotic Pig Breeds	32	176	17.70	97.77	80.00	III
2	Knowledge on selection of piglets	41	177	22.77	98.33	75.56	VI
3	Castration age of piglets	26	160	14.44	88.88	74.44	VII
4	Attainment of Puberty in pigs	65	178	36.11	98.88	62.77	XII
5	Oestrus period of a sow	21	169	11.66	93.88	82.22	II
6	Heat detection in gilt	28	160	15.55	88.88	73.33	VIII
7	Gestation period of sow	81	179	45.00	99.44	54.44	XIII
8	Care of young piglets	39	168	21.66	93.33	71.67	X
9	Deworming in pigs.	23	166	12.77	92.22	79.45	IV
10	Marketing age of pigs	25	156	13.88	86.66	72.78	IX
11	Feeding of lactating sow	29	151	16.11	83.88	67.77	XI
12	Knowledge on Vaccination of pigs	20	180	11.11	100	88.89	I
13	Common diseases of pigs	19	160	10.55	88.88	78.33	V
Overall		449	2180	19.17	93.15	73.97	-

4. CONCLUSION

It can be concluded that trainings play a very important role in upgrading and upscaling knowledge and in filling up the gap between skills and future opportunities of the farmers by improving their technical skills, improve efficiency and productivity of the enterprise or farm the farmers are associated with.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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