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Assessment of knowledge gain of trainees attending training on scientific piggery farming

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Abstract

The present study was conducted with an aim to assess the knowledge gain of trainees about various aspects of piggery farming technologies through scientific training programmes organized by Assam Livestock & Poultry Corporation, Ltd, Khanapara, Guwahati-22. A total of 450 numbers of trainees participated in trainings on scientific piggery farming in the year 2023-24. A questionnaire was prepared to assess the knowledge level of the trainees after discussion with experts, subject matter specialists, officers of the departments and available review of literature. The questionnaire consisted of 15 different aspects of breed, management, feeding, marketing, diseases of pigs and biosecurity measures. The data were collected pre and post completion of the training with the help of questionnaire which were distributed to the trainees before training and after completion of the training programme. The knowledge gained was assessed based on the difference of knowledge level before and after attending the programme on scientific piggery farming. The overall knowledge of trainees on pre training evaluation was found to be 12.31% which increased to 88.66% on post training evaluation and the overall knowledge gain percentage was 76.35 per cent on scientific piggery farming.

Keywords: Assessment, knowledge gain, scientific piggery farming

Introduction

In Assam, amongst the different Animal husbandry practices followed, pig rearing is one of the major activity which not only supports the rural households by providing self employment opportunities and income generation but also have the potential to fulfill the ever increasing demand of meat and meat products in growing urban centres. Certain inherent traits like early maturity, high fecundity and short generation interval are unique to pigs, hence benefits offered by pig farming are incomparable (Shelly *et al* 2021) [6]. In spite of this scope, the pig farming has not reached the level of production to fulfill the ever increasing demand due to constraints faced by the pig farmers viz. lack of scientific knowledge regarding breeds, management, feeding, marketing and diseases of pigs. To meet the desired amount of production there is a need to scientifically and technically augment farmer's knowledge on piggery farming. The training need in different aspects of pig production practices like breeding, feeding, management, animal health care, bio-security measures, are necessary to improve in order to attain optimum productivity thereby making it a more profitable enterprise.

The Assam Livestock and Poultry Corporation Ltd. Khanapara, Guwahati provides need based, skill oriented, vocational training to practicing farmers, farm women and rural youths in various disciplines of livestock and poultry management, production, processing and marketing with the broad objective of increasing productivity and income of farming community in general and rural youths in particular. However, the quantum of gain in knowledge of the trainees varies and is dependent upon many factors which may be personal characteristics of the trainees themselves or some other factors like resource person, physical facilities, audio-visual aids etc. (Sarma *et al* 2014) [4]. So, evaluation of different training programmes conducted requires periodic assessment with regards to knowledge gained by the trainees which in turn will allow suitable and relevant changes to be made in order to make the trainings more effective in future. Therefore, a study was conducted with a purpose to find the socio-personal characteristics of the trainees and to ascertain the effectiveness of trainings in improving the knowledge level of piggery farmers.

Materials and Methods

The present study was conducted with an aim to evaluate and assess the knowledge gain of trainees on attending training programmes about scientific piggery farming imparted by Assam Livestock & Poultry Corporation, Khanapara, Guwahati-22, Assam during the year 2023-24. A total of 450 trainees were selected purposively for the study who had attended the training on scientific piggery farming. The participants consisted of farmers, farm women and rural youths. A questionnaire was prepared after discussion with experts, subject matter specialists, officers of the departments and available review of literature which

consisted of 15 questions on different aspects of scientific piggery farming. The participants were presented with the same set of questionnaire before the start of training programme and after the conclusion of training programme. A score of '1' for correct response and '0'score for incorrect response was given for analysis of the knowledge level and gain in knowledge. Percentage calculation was done for analysis of the socio-personal characteristics, knowledge level and knowledge gain amongst the trainees attending the programme.

Following formulae were used for evaluation:

$$\text{Knowledge \%} = \frac{\text{Score Obtained}}{\text{Possible obtainable score}} \times 100$$

Knowledge Gain % = (Score obtained on PTE - Score obtained on PoTE / Total possible obtainable score) x100

Overall Knowledge = (Total score obtained on all aspects / Total possible obtainable score in all aspects) x100

Results and discussion

Socio-personal profile of the trainees

Socio-personal characteristics of the trainees of piggery farming in Table 1 revealed that majority (47.33%) of the trainees belonged to young aged group (30-50years) followed by middle (34.44%) and old age group (18.22%). Many young trainees turned up for piggery training which shows a positive sign of young youths coming forward to take up piggery farming as a source of income generating activity. 33.33 per cent of the trainees had intermediate level of education. Similar findings were also reported by Singh *et al* 2020 [3]. Caste wise 30 per cent of the trainees belonged to schedule tribe caste followed by OBC (25.56%), General (24.44%) and SC (20%). Similar findings were reported by Chakraborty *et al.* 2021 [1] in their study on evaluation of knowledge gain through training programmes on scientific pig farming organised by Krishi Vigyan Kendra, Lakhimpur, Assam.

Knowledge gain of trainees about scientific piggery farming

In perusal of Table 2, the overall knowledge of trainees for selected practices before starting the training was 12.31%, which reached upto 88.66% after completion of training and the overall knowledge gain was 76.35% with respect to different aspects of scientific piggery training. At initial stage of the training programme the respondents had little knowledge which ranged from 7.78-18.86% among different practices and after training remarkable change was observed in knowledge level which ranged from 77.33-97.78 per cent. Similar results were reported by many researchers Sasikala *et al* 2024 [5], Jena *et al* 2022 [2], Chakraborty *et al* 2021 [1], Singh *et al* 2020 [3], Tanwar *et al* 2018 [3], who found that there was significant increase in the knowledge level after attending such training programmes. Maximum knowledge gain was found in knowledge regarding Indian and exotic breeds of swine (84.44%) and was ranked 1st followed by knowledge on selection of pig breeds for fattening and breeding purpose (83.33%) and was ranked 2nd, care and management of new born piglets (81.56%, rank 3rd), deworming and vaccination schedule (81.33%, rank 4th), Biosecurity measures in a pig farm (81.11%, rank 5th), feed requirements of boar, pregnant and lactating sow, piglets/day (79.56%, rank 6th), housing and space requirements for boar, pregnant and lactating sow, gilts, piglet (79.33%, rank 7th), common diseases of pigs (78.89%, rank 8th), marketing and value addition of pork (77.33%, rank 9th), gestation period of a sow (76.67%, rank 10th), appropriate age for castration of piglets (75.56%, rank 11th), attainment of puberty in a gilt (75.33%, rank 12th), oestrus period of a sow (74.44%, rank 13th), heat detection in sow/gilts (73.78%, rank 14th), artificial insemination in pigs (73.33%, rank 15th). The results clearly indicated that training on scientific piggery farming was effective in enhancing the knowledge of trainees which will be highly effective in meeting their expectations in the near future.

Table 1: Socio-personal profile of the trainees

Socio-personal profile of the trainees (n=450)			
Variables	**Category**	**Frequency**	**Percentage**
Age	Young(>30)	213	47.33
	Middle(30-50)	155	34.44
	Old(<50)	82	18.22
Education	Illiterate	35	7.78
	Primary	105	23.33
	High School	90	20.00
	Intermediate	150	33.33
	Graduate	70	15.56
Caste	General	110	24.44
	Schedule Caste(SC)	90	20.00
	Schedule Tribe (ST)	135	30.00
	Other Backward Class (OBC)	115	25.56

Table 2: Knowledge gain of trainees about scientific piggery farming

Knowledge gain of trainees about scientific piggery farming (n=450)							
Sl No	Particulars	Score obtained		Knowledge %		Knowledge gain %	Rank (As per knowledge gain)
		Pre-training evaluation (PTE)	Post training evaluation (PoTE)	Pre-training evaluation (PTE)	Post training evaluation (PoTE)		
1	Knowledge regarding Indian and Exotic Pig breeds	60	440	13.33	97.78	84.44	I
2	Knowledge on selection of pig breeds for fattening and breeding purpose	55	430	12.22	95.56	83.33	II
3	Attainment of puberty in a Gilt	55	394	12.22	87.56	75.33	XII
4	Oestrus period of a Sow	45	380	10.00	84.44	74.44	XIII
5	Heat detection in Sow/Gilts	84	416	18.67	92.44	73.78	XIV
6	Artificial insemination in Pigs	40	370	8.89	82.22	73.33	XV
7	Gestation period of a Sow	85	430	18.89	95.56	76.67	X
8	Care and management of new born piglets (cutting of naval cord, needle teeth, colostrum feeding, weighing of day old piglets)	60	427	13.33	94.89	81.56	III
9	Appropriate age for Castration of piglets	70	410	15.56	91.11	75.56	XI
10	Deworming and vaccination schedule	58	424	12.89	94.22	81.33	IV
11	Housing and space requirements for Boar, Pregnant and lactating Sow, Gilts, piglet	35	392	7.78	87.11	79.33	VII
12	Feed requirements of Boar, Pregnant and lactating Sow, piglet/day	45	403	10.00	89.56	79.56	VI
13	Marketing and value addition of pork	42	390	9.33	86.67	77.33	IX
14	Common diseases of pigs	50	405	11.11	90.00	78.89	VIII
15	Biosecurity measures in a pig farm	52	417	11.56	92.67	81.11	V
	Overall	836	6128	12.31	88.66	76.35	

Conclusion

The improvement of knowledge gained by the trainees depends on several factors viz. urge for knowledge gain among the trainees, trainer's expertise, smooth organization of training programmes, subject matter covered as per trainees needs, the training atmosphere in which trainees were trained, use of suitable teaching aids like power point presentation, posters and printing materials. Therefore, it can be interpreted that more number of such training programs may be organized which will be beneficial to practicing farmers, farm women and rural youths which will result in enhancement of their knowledge, up gradation of skills and overall increase of their confidence level.

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