# Effectiveness of Training Programme on the Adoption Behaviour of Goat Farmers in Punjab

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## ABSTRACT

In order to evaluate the trainings imparted on goat farming with an emphasis on recommended goat farming practices and technologies, 120 farmers who underwent on-campus trainings offered by Guru Angad Dev Veterinary and Animal Sciences University (GADVASU), Ludhiana were interviewed after six months of training with a pretested interview schedule. The study found that majority (55.83 %) belonged to 31-45 yr age group. Also 37.50 percent respondents were educated up to high school only. As far as annual income was concerned, majority (95.83 %) had annual income up to 6 lakh. About 23.33 percent were landless. All those who adopted goat enterprise, adopted vaccination, deworming and identification of goats fully, however only 10 per cent respondents adopted debudding of kids as they do not give much importance to this. Mean adoption score was highest for high education category (35.29 ± 7.04). Training and capacity building are therefore, must to increase knowledge and awareness however, adoption behavior is dependent on many other factors like societal perception.

**Key Words:** Adoption, Goat farming, Practices, Training.

## INTRODUCTION

Goat rearing plays a vital role in food and economic security of rural people, especially landless, marginal and small farmers (Chander and Rathod, 2015). Goats act as a ready to use economic asset at time of crisis among rural farmers (Lebbie, 2010). Goat production in rural India suffers from various constraints like lack of scientific knowledge which leads to poor productivity (Mohan *et al* 2009). Mohan *et al* (2008) reported that the majority of the respondent goat farmers learnt more skill on use of lime for sanitation (97.59 %), use of vaccine like Paste de Petitis Ruminants, Enterotoxaemia, Foot and Mouth disease etc. (97.59 %), proper housing management (92.77 %), deworming of goats (90.36 %) etc. Senthilkumar *et al* (2014) in a study on the beneficiary farmers of goat rearing revealed that after attending training programme, they adopted housing system (48.3 %), vaccination (61.5%), deworming (55 %) etc. Kumar (2007) found that the level of adoption of different technologies by commercial goat farmers, who had received training on scientific goat farming, was found encouraging. In order to increase the profitability of goat farming on a commercial level, it is must to increase level of new and improved technologies as well as the provision of quality breeding stock to the stakeholders. Singh and Sharma (2019) concluded that feeding of green fodder after weaning at 60d of age to goat kids improved body weights and meat value for commercial purpose.

Training and capacity building have had a major role to play in livestock sector and they aim at improving knowledge, attitude and skills (KAS) and information exchange so that improved techniques can be learned and implemented by eliminating doubts on technical know-how. Further, adoption follows a change in behavior and perception of farmers towards new ideas and innovation. However change in the behavior is preceded by knowledge gain, change in understanding and developing competency in application of technical information.

A new technology or practice introduced to small holder farmer alone does not guarantee widespread adoption and efficient use but needs a push from the in situ situations too. Therefore, this study was carried out to find the adoption of recommended practices for scientific goat farming as a result of week long training at GADVASU, Ludhiana.

## MATERIALS AND METHODS

The data from 120 trainees of goat farming trainings conducted by Department of Veterinary and Animal Husbandry Extension Education, GADVASU, Ludhiana from August 2016 to August 2017 was collected after six months of attending the training programme as adoption can be judged appropriately after this time period. Trainees were randomly selected. The categories were chosen according to the suitability of the study and to allow easy presentation. Interview schedule was prepared and pretested to judge adoption level of trainees for various goat farming practices/technologies and recommended practices such as provision of shed, vaccination, deworming, balanced ration for different categories, debudding, proper identification, stall feeding etc. The collected data were analyzed using SAS 9.3.

- For adoption level of enterprise, 'yes' was given 1 score and 'no' was marked as 0.

- For calculating the adoption score, each adopted technology was given one mark and non-adopted technology was given zero mark.

Adoption score =

Adoption score percent = Adoption score x 100

## RESULTS AND DISCUSSION

**Socio-personal and communication profile of trainees**

Table 1 shows that out of the total 120 respondents from training programme on goat farming, majority (55.83 %) belonged to age group of 31-45 years and only 16.67 percent were in higher age group (≥ 46 years). Also most respondents (37.50 %) were

educated till high school only. In an earlier study by Hundal *et al* (2016) at GADVASU on goat farming also reported that 66 percent trainees belonged to 31-50 age group and most (48.80 %) were educated till high school. As far as annual income is concerned, majority (95.83 %) had annual income upto 6 lakh only. Majority (32.77%) respondents had both land and animals as source of income. At least half of the respondents had land holding between 0.4-2 ha and 23.33 per cent were landless. The Table 1 further shows that many goat trainees, 38.33 per cent and 36.67 per cent had medium and low level of mass media exposure respectively. Dhaka *et al* (2017) also reported that out of 250 women livestock farmers, 58.8 percent had low exposure to mass media followed by 30.0 percent with medium exposure. At least 60.83 percent had medium extension agency contact. He also reported that substantial percentage of farm women with livestock have no source of information from extension personnel and there was urgent need to make these services available so that they may have updated information to boost and sustain livestock productivity. Most respondents (61.67 %) had low level of social participation with only 7.50 percent belonging to high level of participation.

**Adoption and non-adoption of recommended goat farming technologies and practices**

Out of 120 respondents, only 49 (40.83 %) adopted goat farming. Adoption was more where both land and animals formed income source as it was thought that goats would act as source of supplementary income by consuming the left over agriculture residues. Also adoption was more in category with low social participation. Adoption score percent was not affected by education. It was highest (35.82 ± 4.67) in 31- 45 yr age category than other age groups. As for income source, adoption score percent was highest (54.28 ± 11.93) in land and others category. Among land holding the value was highest (57.98 ± 9.91) in 2-4 ha category. It was evident that adoption score percent was not affected by mass media exposure or extension

**Table 1. Socio-personal and communication profile of trainees, adoption, non-adoption and adoption score (%) of recommended goat farming practices and technologies.**

| Attributes | Parameter | Frequency (percentage) | Adoption | Non-Adoption | Chi square value | P value | Adoption score percent (Mean ± SE) |
|---|---|---|---|---|---|---|---|
| Age (yr) | ≤ 30 | 33 (27.50) | 10 (8.33) | 23 (19.17) | | | 24.67$^b$ ± 6.82 |
| | 31-45 | 67 (55.83) | 33 (27.50) | 34 (28.33) | 4.452 | 0.108 | 35.82$^a$ ± 4.67 |
| | ≥ 46 | 20 (16.67) | 6 (5.00) | 14 (11.67) | | | 23.57$^b$ ± 8.69 |
| Education | High school | 45 (37.50) | 18 (15.00) | 27 (22.50) | | | 29.52$^a$ ± 5.70 |
| | Higher secondary | 41 (34.17) | 16 (13.33) | 25 (20.83) | 0.22 | 0.896 | 28.22$^a$ ± 5.91 |
| | Graduate and above | 34 (28.33) | 15 (12.50) | 19 (15.83) | | | 35.29$^a$ ± 7.04 |
| Income (Rupees/yr) | < 1 lakh | 30 (25.00) | 12 (10.00) | 18 (15.00) | | | 27.14$^a$ ± 6.55 |
| | 1-6 lakh | 85 (70.83) | 37 (30.83) | 48 (40.00) | 3.715 | 0.156 | 33.78$^a$ ± 4.35 |
| | ≥ 6 lakh | 5 (4.17) | 0 | 5 (4.17) | | | 0$^b$ |
| Income source | Only land | 17 (14.29) | 0 | 17 (14.17) | | | 0$^d$ |
| | Only animals | 22 (18.49) | 7 (5.83) | 15 (12.50) | | | 24.02$^c$ ± 7.94 |
| | Land and animals | 39 (32.77) | 21 (17.50) | 18 (15.00) | 17.566 | 0.002* | 37.73$^b$ ± 6.02 |
| | Land and others (service/business) | 15 (12.61) | 9 (7.50) | 6 (5.00) | | | 54.28$^a$ ± 11.93 |
| | Others (service/ business) | 26 (21.85) | 11 (9.17) | 15 (12.50) | | | 29.67$^{bc}$ ± 7.17 |
| | All three (land, animals, others) | 0 | 0 | 0 | | | 0 |
| Land (ha) | Landless | 28 (23.33) | 11 (9.17) | 17 (14.17) | | | 29.08$^b$ ± 7.33 |
| | 0.4-2 | 60 (50.00) | 20 (16.67) | 40 (33.33) | | | 24.28$^b$ ± 4.63 |
| | 2-4 | 17 (14.17) | 12 (10.00) | 5 (4.17) | 7.659 | 0.054 | 57.98$^a$ ± 9.91 |
| | >4 | 15 (12.50) | 6 (5.00) | 9 (7.50) | | | 28.57$^b$ ± 9.66 |
| Communication Variables | | | | | | | |
| Mass media exposure | Low | 44 (36.67) | 16 (13.33) | 28 (23.33) | | | 28.24$^a$ ± 5.90 |
| | Medium | 46 (38.33) | 21 (17.50) | 25 (20.83) | 0.815 | 0.665 | 35.40$^a$ ± 5.95 |
| | High | 30 (25.00) | 12 (10.00) | 18 (15.00) | | | 27.14$^a$ ± 6.55 |

| Attributes | Parameter | Frequency (percentage) | Adoption | Non-Adoption | Chi square value | P value | Adoption score percent (Mean ± SE) |
|---|---|---|---|---|---|---|---|
| Extension agency contact | Low | 31 (25.83) | 15 (12.50) | 16 (13.33) | 1.236 | 0.539 | $33.18^a \pm 6.60$ |
| | Medium | 73 (60.83) | 27 (22.50) | 46 (38.33) | | | $31.11^a \pm 4.84$ |
| | High | 16 (13.33) | 7 (5.83) | 9 (7.50) | | | $24.11^a \pm 7.46$ |
| Social participation | Low | 74 (61.67) | 36 (30.00) | 38 (31.67) | 11.712 | 0.003* | $34.75^b \pm 4.42$ |
| | Medium | 37 (30.83) | 7 (5.83) | 30 (25.00) | | | $17.37^c \pm 6.02$ |
| | High | 9 (7.50) | 6 (5.00) | 3 (2.50) | | | $52.38^a \pm 13.26$ |

Note:- 1. Figures marked with '*' are statistically significant (P<.01)
2. Figures in the parenthesis indicate the percentage to the total sample size i.e., 120
3. Figures with different superscripts in column labeled adoption score percent differ significantly (P<.05)

agency contact. As for social participation, it was highest (52.38 ± 13.26) in high social participation category, followed by low participation and least (17.37 ± 6.02) in medium category.

**Adoption level of recommended practices and technologies by goat farmers**

The data (Table 2) revealed that all those who adopted goat enterprise, adopted vaccination, deworming and identification of goats fully, however only 10 percent adopted debudding of kids as they do not consider this of much importance. Also stall feeding was adopted by 30 percent as it was considered costly method to rear goats, sheds for goats were built by only 26.67 percent and balanced ration for different categories of goats was adopted by 31.67 percent as they considered goats to be hardy animals capable of survival in adverse conditions.

## CONCLUSION

About 40.83 percent of the respondents who attended training, started goat farming and adoption revealed direct relationship with educational qualification. It was also found that though training does increase awareness level about enterprise and various technologies involved, their adoption depends on many other factors like societal perception, motivation level etc. Therefore, to counter such view point and increase diversification in animal husbandry, more trainings and workshops with adequate inputs for all stakeholders are the need of the hour. Also, capacity building on marketing should form an essential part of such trainings.

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**Table 2. Adoption level of various recommended practices/ technologies by goat farmers.**

| Technique | Shed provision | Vaccination | Deworming | Balanced ration | Debudding | Identification | Stall feeding |
|---|---|---|---|---|---|---|---|
| Gained knowledge | 120 (100.0) | 120 (100.0) | 120 (100.0) | 120 (100.0) | 120 (100.0) | 120 (100.0) | 120 (100.0) |
| Adopted this technique | 32 (26.67) | 49 (40.83) | 49 (40.83) | 38 (31.67) | 12 (10.00) | 49 (40.83) | 36 (30.00) |
| Any economic benefit | 20 (16.67) | 49 (40.83) | 49 (40.83) | 38 (31.67) | 12 (10.00) | 49 (40.83) | 20 (16.67) |
| Benefit for animal | 32 (26.67) | 49 (40.83) | 49 (40.83) | 38 (31.67) | 12 (10.00) | 49 (40.83) | 20 (16.67) |
| Recommended to others | 20 (16.67) | 49 (40.83) | 49 (40.83) | 38 (31.67) | 12 (10.00) | 49 (40.83) | 20 (16.67) |
| Discontinued it later | 0 | 0 | 0 | 0 | 0 | 0 | 7 (5.83) |
| Have full skill to use it | 32 (26.67) | 10 (8.33) | 49 (40.83) | 38 (31.67) | 0 | 49 (40.83) | 36 (30.00) |
| Can we improve it | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Any government support | 0 | 45 (37.5) | 0 | 0 | 0 | 0 | 0 |

*Figure in parenthesis indicate percentage*

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