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### **Original Research Article**

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# Adoption of Recommended Practices and the Relationship Between the Profile of Trained Youth of the Arya Project About Goat Farming



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#### **ABSTRACT**

Goat farming has a lot of potential and plays a big part in providing food and nutrition security in rural regions. After understanding the important role that young may play, the government has decided to launch a programme to recruit and retain them in agriculture and related fields. Goat farming has a lot of potential and plays a big part in providing food and nutrition security in rural regions. After understanding the important role that young may play, the government has decided to launch a program to recruit and retain them in agriculture and related fields. For the present study, all 120 trained youth in goat farming were selected, trained youth were selected purposively who have obtained training on goat farming under ARYA project and 20 trainers were selected for suggestions for better runnning the program of the study area. Thus, a total of 140 respondents were included in the study. It was revealed that the majority of 53.33 percent of trained youth fall into the medium-level of adoption group, while 18.33 percent fall into the low-level adoption category for improved goat farming practices. On the other hand, it was shown that 28.34% of trained youths had a high level of adoption of improved goat farming practices.

**Keywords:** ARYA, Innovativeness, adoption level and Youth, relationship between profiles of trained youth with their adoption.

#### **INTRODUCTION**

The livestock industry not only supplies vital proteins and a nutritious human diet through eggs, meat, and milk, but it also helps to use non-edible agricultural by-products and provide jobs. The crop enterprise alone could not help in increasing income and employment options for tribal because of poor productivity, low availability of per capita arable lands, and also lack of other income-generating ventures. Hence there is great dependence of tribal communities on animal husbandry practices (Meganathan et. al. 2010). Goat farming is relatively poor in the current traditional large production method. The goat can adapt to a wide range of agro-climatic conditions, from desert dry to cold arid to hot humid. They may be grown in plains, hilly areas, sandy areas, and at high elevations. Goats can thrive on bushes, weeds, local vegetation, shrubs, and trees, as well as live in harsh environments and low-fertility soils where no other crops can be produced. (Keiko, 2011). According to 20 censuses, there are 148.88 million goats in the world, up 10.1% from the previous census. Goats provide around 27.8% of total livestock. With a population of 20.84 million goats, Rajasthan took the top place in the 20th census for goat population. Goats are responsible for 14.22% of all meat output.

Because Banswara is a tribal-dominated region, goat rising has long been practiced alongside other livelihood-based measures. Goats are a cash economy resource for the tribes in this district, and when they need urgent cash, they are sold and the demands are satisfied.

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The goat is a multipurpose animal that serves as both a source of income and catastrophe insurance in the region Goats are a much more flexible form of money than cows and are easily traded, which is why they are known in India as the "poor man's cow"

The ICAR has launched the "Attracting and Retaining of Youth in Agriculture (ARYA)" initiative. In 2015, Krishi Vigyan Kendra will execute this initiative in 25 states throughout the country. Special efforts will be made to recruit rural young under the age of 35 years to the agricultural and allied sector under this program, which was announced by the Prime Minister on the founding day of ICAR, so that the growth in the migration of rural youth to cities may be prevented. Each KVK is responsible for training approximately 200 to 300 youth in agriculture's allied and auxiliary events, such as poultry production, dairy development, fish farming, goat rearing, and mushroom production, as well as other similar activities that retain the rural youth connected to agriculture, whether explicitly or implicitly. Radha Mohan Singh (Former Minister of Agriculture and Farmers Welfare of India, 2014-2019) stated that agriculture has become an unprofitable business for small and marginal farmers. To deal with the agriculture problem, this sector requires not just an integrated strategy, but also specific structural reforms. The ARYA initiative was launched in response to the growing need to attract and retain young people in agriculture.

Krishi Vigyan Kendra, Banswara, has been chosen for the ARYA project, which is financed by the Indian Council of Agricultural Research (ICAR), New Delhi, since 2015. KVK authorities began this initiative to attract and retain youth in agriculture activities by offering year-round employment and building entrepreneurship amongst them. Three agro-based vocational training initiatives (commercial goat farming, commercial poultry farming, horticulture Nursery, and orchard

management including hi-tech and protected horticulture) were selected because these trades have a large number of trained and experienced professionals in these trades.

#### **METHODOLOGY**

The research study was conducted in the Banswara district of Southern Rajasthan, which covers 4522 square kilometers and is bordered by the Aravalli Mountains. There were 11 tehsils in Banswara district of Rajasthan. Banswara KVK has been chosen for the research study due to the following reasons: 1. The ARYA project was implemented through KVKS in 25 states of the country. In Rajasthan, Banswara is the only district in which this project has started initially. 2. The ARYA project has completed more than three years in the district hence the impact of the study can be observed.

140 beneficiaries were selected for the research study of 140 beneficiaries 120 respondents where all 120 youth were trained under the ARYA project for goat farming and 20 trainers were selected for suggestions for better running this program of the study area. Thus, a total of 140 respondents were included in the research study. Data and information were collected by the investigator through personal interview techniques with the help of the interview schedule. Thereafter, data were tabulated and various statistical measures viz. per cent, frequency, mean per-cent score, standard deviation, ranking, and Karl Pearson's correlation were used to arrive at specific inferences. The mean and standard deviation of all respondent's score were computed for classifying the knowledge level into different categories. Accordingly, the members were categorized into low, medium and high-level groups based on the knowledge score of the individual respondents.

#### **RESULT AND DISCUSSION**

# Distribution of trained youth based on their existing adoption level about recommended goat farming practices

The trained youth of the ARYA project are divided into three categories based on their adoption of recommended goat farming practices: low, medium, and high levels of adoption. These categories were formulated using the mean and standard deviation of the total obtained adoption score by the trained youth.

Table 1 demonstrates that 53.33 percent of trained youth fall into the medium-level adoption group, while 18.33 percent fall into the low-level adoption category for improved goat farming practices. On the other hand, it was shown that 28.34% of trained youths had a high level of adoption of improved goat farming practices.

The majority of trained youth (53.33 percent) fall into the medium-level of adoption group, while 18.33 percent fall into the low-level adoption category for improved goat farming methods. On the other hand, it was shown that 28.34% of trained youth had a high degree of adoption of improved goat husbandry methods.

Farmers had adopted various goat farming techniques to varied degrees. The major reason for the farmers' medium adoption of goat farming techniques might be attributed to their improved knowledge and propensity toward modern and scientific goat farming technology, as well as traditional goat farming practices. Some of the techniques in the suggested goat farming Technologies are closely connected with indigenous goat farming methods that were passed down from the ancestors to the next generation, and these practices were largely accepted by the trained youth.

It's conceivable that their poor adoption level is related to financial difficulties, a lack of conviction, and a lack of interest in skill trainings on goat farming techniques offered as part of the initiative. The conclusions presented in this section of the dissertation are backed up by research of Meena *et al.*, (2011), Koli and Koli (2016), Pandey *et al.*, (2011), and Gunaseelan *et al.*, (2018) the majority of the respondents had a medium degree of acceptance when it came to goat husbandry techniques, according to the researchers.

According to the examination of data given in Table 2, the degree of adoption of breeding practices among trained youth was 78.17 MPS with first rank accordingly. The level of adoption of housing practices among trained youth was 77.50 MPS, ranking them in the second position. In terms of adoption feeding habits, trained youths came in third place with 74.11 MPS, while in terms of health practices; trained youths came in third place with 73.17 MPS. The trained youths adopted marketing techniques to the extent of 66.61 MPS, respectively. Because they had gained more information and became more conscious of the value of these practices by attending training sessions regularly, they adopted breeding 78.17 MPS, housing 77.50 MPS, and feeding practices 74.11 MPS. Training might have included a wide range of topics like breeding, housing, and feeding. Due to a lack of veterinarian and marketing facilities in the study region, adoption of health and marketing practices is relatively low. A possible explanation might be a lack of sufficient information supplied during the project regarding knowledge and expertise connected to health and marketing practices. The findings of this study were comparable to those of Rashmi (2010), Thombre (2010), Tanwar and Rohilla (2012), SenthiKumar et al., (2014) and Gunaseelan et al., (2018) who also found breeding, housing, feeding as major aspects of goat farming enterprise.

According to the data in Table 3 the extent of adoption of the housing practices "Proper ventilation facilities are provided" ranked highest among trained youth with 86.39 MPS, as this practice was adopted by the majority of trained youth under housing practices. The level to which trained youth adopted the practice of "Closed housing system is preferred to protect goats from adverse weather conditions" came in second with 84.72 MPS.

Furthermore, concerning housing practices the majority of trained youth have adopted the practice "Proper ventilation facilities are provided" with 86.39 MPS, while trained youth have adopted the practice "Minimum floor space need is met" with 68.06 MPS. A similar conclusion was reached by others of Sorathiyaet al., (2016) who claimed that the majority of the trained youth were early adopters of goat shed ventilation, cleanliness, and drainage.

According to Table 3  $^{''}$ Cleaning of housing / shed regularly" came in third position with 78.61 MPS among trained youth. With 69.72 MPS, the fourth position was awarded to the practice of "East-west direction for housing is adopted" in trained youth. With 68.06 MPS, the trained youth "Minimum floor space need is fulfilled" exercise came in 5th position

The extent of adoption of the "Graze your animal daily for 6-8 hours" exercise ranked highest with 79.17 MPS in the case of trained youth, while the extent of adoption of the "Feed colostrum to youngsters within one hour" exercise ranked 2nd with 76.11 MPS in the case of trained youth.

Table 4 shows that "Feed 3-5 kg green fodder and 1 kg dry fodder per day for adult goats practice" rated third among trained youth with 73.06 MPS. With 71.67 MPS, trained youths ranked

exercise "Feed 200-250 gm of concentrate per day per doe" fourth position, with 70.56 MPS in trained youth the strategy of "Offer 10% of body weight of kid up to the age of 15 days" earned 5th position. The majority of trained youth adopted "Graze your animal daily for 6-8 hours" with 79.17 MPS, while the least adopted was "Offer 10% of body weight of baby up to the age of 15 days" with 70.56 MPS. Soni *et al.*, (2011), Narmatha *et al.*, (2013), and Mandavkar*et al.*, (2015) daily grazing and giving colostrum to new-born goats are also highly significant procedures in goat husbandry.

Table 5 shows that the extent of adoption of the practice "Verification of pregnancy" ranked first with 85.28 MPS by trained youth, as this exercise was adopted by the majority of goat farmers among all breeding practices, while the extent of adoption of the practice "Selection of male and female goats based on genetic potential and health" ranked second with 81.11 MPS.

Table 5 shows that the practice of "adoption of breeding technique (natural)" came in third place with 80.00 MPS in trained youth, while the practice of "allow mating of does at 18 hours after heat" came in 4th position with 73.33 MPS in trained youth. The practice of "breeding your doe for the first time at the age of one year" was ranked 5th since it was the least adopted among the trained youth. This practice came in fifth place in both categories for trained youth with 71.11 MPS.

The level of adoption of the technique "Verification of pregnancy" by trained youth, with 85.28 MPS, as this practice was accepted by the majority of trained youth among all breeding practices. The "Breed your doe for the first time at the age of one year" practice was the least accepted by the trained youth of all the breeding practices. These findings are consistent with those described by Neha *et al.*, (2017) and Nirmala *et al.*, (2017), Singh *et al.*, (2017). They also noted that these breeding management methods are an important element in improving the entire goat farming operation.

Table 6 shows that among all health practices, the amount of adoption of the "Follow sanitary practices for animal shelter and standing place" practice scored top, as it was accepted by the majority of the trained youth. In this practice, the degree of adoption of trained youth ranked first with 76.39 MPS, while the amount of adoption of practice" Consult the veterinarian for the treatment of ill goats" placed second with 75.56 MPS in the case of trained youth.

Further investigation of Table 19 reveals that the practice of "spraying insecticides to destroy and prevent external parasites" placed 3rd in trained youth with 73.89 MPS. With 71.11 MPS in trained youth, the 4th rank was allocated to perform "Vaccination of animals against contagious disease."

The 5th place was acquired by the practice of "Deworningevery 3 months for preventing and controlling internal parasites," which was the least popular among goat farmers of all the health treatments. With 68.89 MPS, this practice came in 6th among trained youth

Among all health practices, the amount of adoption of the "Follow sanitary procedures for animal shelter and standing place" practices was rated highest, as it was accepted by the majority of the trained youth. The majority of trained youth adopted these practices, with 76.39 MPS. With 68.89 MPS, the "Deworning after every three months for avoiding and controlling internal parasites" practice was the least embraced by goat producers of all the health practices. The findings above are consistent with the findings of a research done by Narmathaa et al., (2013), Roy and Tiwari (2017), and Singh et al., (2017) They also found that animal shelter sanitation and

veterinary consultation are among the most essential health procedures.

Table 7 shows that the extent of adoption of the approach of "Selling of goats at 6-8 months of age for more profit" placed top among all marketing techniques, as this approach was adopted by the majority of rained youth. In this practice, the extent of adoption of trained youth was placed first with 71.39 MPS, while the extent of adoption of "Culling of non-productive animals for profitable goat farming practice" was placed 2nd with 69.17 MPS in the case of trained youth.

Table 7 shows that with 66.94 MPS among trained youths, the extent of adoption of the "Selling maximum goats at huge demand in market" practice placed in 3rd place. With 64.17 MPS in trained youth, the 4th rank was assigned to perform "Record-keeping."

The 5th place was gained by the "Insurance of goats" approach, which was the least popular among trained youth of all marketing methods. With 61.39 MPS, this practice came in 6th among trained youth. The level of adoption of the practices of "Selling of goats at 6-8 months of age for higher profit" scored top among all marketing techniques, as this approach was implemented by the majority of trained youth. The adoption of trained youth was 71.39 MPS in this practice, with the majority present. The "Insurance of goat" approach had the lowest acceptance rate among all marketing techniques,- since it was the least used by goat producers. Singh *et al.*, (2017) and Chaturvedani*et al.*, (2018) also found that selling goats at 6-8 months of age is important to fetch more profit.

## To excess the relationship between the profile of trained youth and their adoption

Table 8 shows the correlation coefficient of each profile of trained youth with the adoption relationship as seen by the trained youth. The correlation coefficient values revealed a relationship between the profile of trained youth and their adoption.

The zero-order correlations are presented in Table 8, a brief discussion about which is given under the following subheads: The data indicate that trained youth profiles viz., namely Family size, Social participation, Livestock possession, Training experience, mass media utilization behavior, Innovativeness, Extension contact, Achievement motivation, Scientific orientation with the value of (0.852\*\*), (0.800\*\*), (0.868\*\*), (0.424\*\*), (0.804\*\*), (0.877\*\*), (0.811\*\*), (0.400\*\*) and (0.828\*\*) had- a significant relationship with adoption of trained youth at 0.01 level of probability. The remaining did not have any relationship with the adoption of trained youth.

A majority of trained youth (53.33 percent) were found to have a medium degree of adoption of better goat breeding, feeding, housing, health, and marketing management techniques. It was determined that trained youth profiles of family size, social participation, livestock possession, training experience, mass media utilization behavior, innovativeness, extension contact, achievement motivation, and scientific orientation had a positive significant relationship with trained youth adoption; the remaining variables had no relationship with trained youth adoptions.

#### CONCLUSION

A majority of trained youth (53.33 percent) were found to have a medium degree of adoption of better goat breeding, feeding, housing, health, and marketing management techniques.

It was determined that trained youth profiles of family size, social participation, livestock possession, training experience,

mass media utilization behavior, innovativeness, extension contact, achievement motivation and scientific orientation had a positive significant relationship with trained youth adoption; the remaining variables had no relationship with trained youth adoptions

#### **ACKNOWLEDGMENT**

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#### **CONFLICT OF n INTEREST**

The authors declare no conflicts of interest. We certify that this submission is original work and is not currently under review by any other publication.

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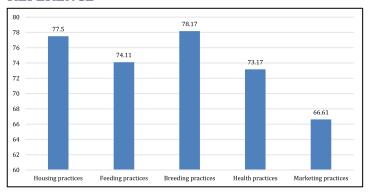


Fig. 1: Adoption Level of trained youth about recommended goat farming practices

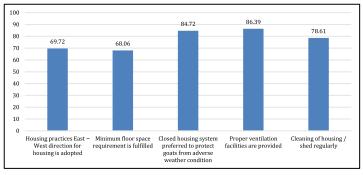


Fig 2: Extent of adoption level of trained youth about housing practices

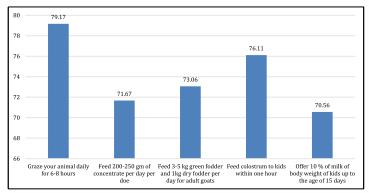


Fig 3: Extent of adoption level of trained youth about feeding practices

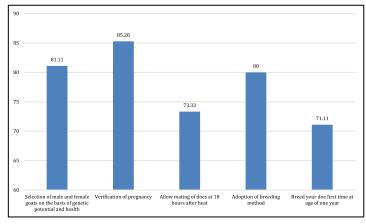


Fig 4: Extent of adoption level of trained youth about breeding practices

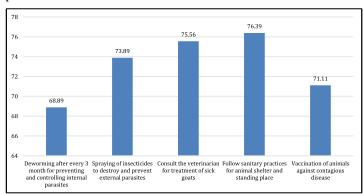


Fig 5: Extent of adoption level of trained youth about health practices

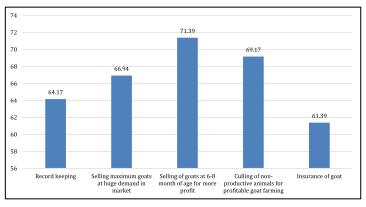


Fig 6: Extent of adoption level of trained youth about Marketing Practices

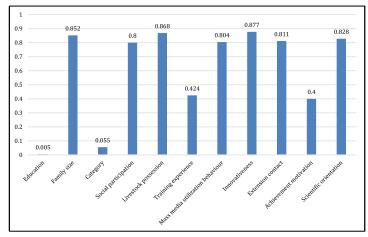


Fig 7: The relationship between profile of trained youth and their Adoption

 $Table \ 1: Distribution \ of trained \ youth \ according \ to \ the \ extent \ of \ adoption \ of \ recommended \ go at \ farming \ practices$ 

S. No.	Adoption level	Trained youth (n=120)		
5. NO.	Adoption level	Frequency	Percentage	
1.	Low (<46.026)	22	18.33	
2.	Medium (46.026 to 64.840)	64	53.33	
3.	High (>64.840)	34	28.34	
Total		120	100	

Mean = 55.433 S.D. = 9.407

Table 2: Extent of adoption level of trained youth about recommended goat farming practices

S. No.	Adoption level	Trained youth (n=120)		
5. NO.	Adoption level	MPS	RANK	
1.	Housing practices	77.50	II	
2.	Feeding practices	74.11	III	
3.	Breeding practices	78.17	I	
4.	Health practices	73.17	IV	
5.	Marketing practices	66.61	V	

<sup>\*</sup>MPS = Mean Percent Score

#### ${\it Table\,3:} \, Extent\, of adoption\, level\, of\, trained\, youth\, about\, housing\, practices$

S. No.	Adoption level	Trained youth (n=120)	
3. NO.	Adoption level		RANK
A.	Housing practices		
1.	Housing practices East – West direction for housing is adopted	69.72	IV
2.	The minimum floor space requirement is fulfilled		V
3.	A closed housing system preferred to protect goats from adverse weather condition		II
4.	Proper ventilation facilities are provided		I
5.	Cleaning of housing / shed regularly	78.61	III

MPS-Mean Percent Score

#### $Table\,4: Extent\,of\,adoption\,level\,of\,trained\,youth\,about\,feeding\,practices$

S. No.	Adoution lovel	Trained youth (n=120)	
3. NO.	Adoption level		RANK
B.	Feeding practices		
1.	Graze your animal daily for 6-8 hours	79.17	I
2.	Feed 200-250 gm of concentrate per day per doe		IV
3.	Feed 3-5 kg green fodder and 1kg dry fodder per day for adult goats		III
4.	Feed colostrum to kids within one hour 76.11		II
5.	Offer 10 % of milk of body weight of kids up to the age of 15 days	70.56	V

 $<sup>{}^*</sup>MPS {=} \, Mean \, Percent \, Score$ 

#### Table 5: Extent of adoption level of trained youth about breeding practices

S. No.	Adoution lovel	Trained youth (n=120)	
3. NO.	Adoption level		RANK
C.	Breeding practices		
1.	Selection of male and female goats based on genetic potential and health	81.11	II
2.	Verification of pregnancy	85.28	I
3.	Allow mating of does at 18 hours after heat	73.33	IV
4.	Adoption of breeding method	80.00	III
5.	Breed your doe for the first time at the age of one year	71.11	V

<sup>\*</sup>MPS = Mean Percent Score

#### $Table\,6: Extent\,of\,adoption\,level\,of\,trained\,youth\,about\,health\,practices$

S. No.	Adaption lovel	Trained yo	Trained youth (n=120)	
3. NU.	Adoption level		RANK	
D	Health practices			
1	Deworming after every 3 months for preventing and controlling internal parasites	68.89	V	
2	Spraying of insecticides to destroy and prevent external parasites	73.89	III	
3	Consult the veterinarian for treatment of sick goats	75.56	II	
4	Follow sanitary practices for animal shelter and standing place 76.39 I		I	
5	Vaccination of animals against contagious disease	71.11	IV	

<sup>\*</sup>MPS = Mean Percent Score

Table 7: Extent of adoption level of trained youth about marketing practices

S. No.	Adoption level	Trained youth (n=120)	
3. NO.	Adoption level		RANK
E.	Marketing practices		
1.	Record keeping	64.17	IV
2.	Selling maximum goats at huge demand in market		III
3.	Selling of goats at 6-8 month of age for more profit		I
4.	Culling of non-productive animals for profitable goat farming		II
5.	Insurance of goat	61.39	V

MPS = Mean Percent Score

Table 8: The relationship between the profile of trained youth and their adoption

Sr. No.	Independent Variables	Correlation-Coefficient ('r' value)
1.	Education	0.005
2.	Family size	0.852**
3.	Category	0.055
4.	Social participation	0.800**
5.	Livestock possession	0.868**
6.	Training experience	0.424**
7.	Mass media utilization behavior	0.804**
8.	Innovativeness	0.877**
9.	Extension contacts	0.811**
10.	Achievement motivation	0.400**
11.	Scientific orientation	0.828**

<sup>\*\*</sup>Significant at 1% level of significance

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