



Adoption of goat farming technologies by the farmers in Udaipur district of Rajasthan

SHYAM BIHARI AND NARPAT SINGH

ABSTRACT : This study was conducted in seven adopted villages viz., Mahuwara, Manpura, Shyampura, Dholpura, Oupli katev, Nichli katev and Amarapura of Cluster Kherwara, district Udaipur, Rajasthan. Total 140 goat farmers were selected, in order to assess the impact of National Agriculture Innovation Project (NAIP) Component-III, by KVK – Udaipur. The study was undertaken after conducting transfer of technology programmes on different improved goat production practices in above adopted villages of NAIP project. The adoption of vaccination, deworming, ecto-parasiticides, mineral mixture, concentrate and green fodder feeding were 3.57 per cent, 17.14 per cent, 26.42 per cent, 2.14 per cent, 35.0 per cent and 9.28 per cent, respectively. However, after the NAIP project, intervention *i.e.* organized animal health camp, training and demonstration, the overall farmers adoption trends were higher in respect to vaccination, deworming, ecto-parasiticides, mineral mixture, concentrate and green fodder feeding as 59.28 per cent, 75.0 per cent, 74.28 per cent, 57.85 per cent, 74.28 per cent and 59.28 per cent, respectively. The overall improvement in the attitude of the goat rears with respect to adoption of goat husbandry technologies would be possible through the demonstration of efficient technologies needed for healthy goat rearing which has not only created awareness but also improved the attitude of goat rearers. It results from the study that the awareness regarding the available viable goat husbandry is essentially required to improve the productivity as well as socio-economic condition of the resource poor tribal farmers.

KEY WORDS : NAIP, Farmers, Attitude, Goat, Technology

HOW TO CITE THIS PAPER : Bihari, Shyam and Singh, Narpat (2016). Adoption of goat farming technologies by the farmers in Udaipur district of Rajasthan. *Res. J. Animal Hus. & Dairy Sci.*, 7(2) : 75-79 : DOI: 10.15740/HAS/RJAHDS/7.2/75-79.

INTRODUCTION

Goat husbandry plays a prominent role in the rural economy in supplementing the income of rural house hold particularly the landless, small and marginal farmers. It can profitably be reared with low investment under semi-intensive as well as the extensive systems of management. They provide quick return on account of their short generation intervals, higher rate of prolificacy

and marketing of related products can be done at any time easily. Goat's importance is indicated by various functional contributions like milk, meat, skin, socio-economic relevance, security, income generation, human nutrition and stability of farming system. Goats are the backbone of rural people economy of arid, semi-arid and hilly regions of our country. The district Udaipur comprised of 8 tehsil out of which 5 tehsil are dominated with high percentage of schedule tribes. tribals In this tribal belt, poor management practices, adverse climatic condition and poor genetic base are the major constraints faced by the goat rears. Improved management practices have been recommended by various research and development organization to improve the goat production,

MEMBERS OF RESEARCH FORUM

Address for correspondence :

Shyam Bihari, Krishi Vigyan Kendra, Sardarshahr, CHURU (RAJASTHAN) INDIA

Associated Authors' :

Narpat Singh, Department of Extension Education, OPJS University, CHURU (RAJASTHAN) INDIA

but for adopting these technologies, the farmers faced many constraints in adoption of these practices (Sharma and Riyazuddin, 1989). A few studies have been carried out which have direct relevance to the technological intervention. Understanding these facts, faced by the farmers, a questionnaire was formulated and technological intervention strategies were adopted to improve the attitude of goat rears towards various useful goat husbandry practices. The aim of the present study was to investigate the impact of NAIP - project, in technological intervention on the attitude of goat rearing farmers in Udaipur district of Rajasthan.

MATERIAL AND METHODS

In present study, data were collected from 140 goat rearing families dwelling in seven villages of Kherwara Cluster *viz.*, Mahuwada, Manpura, Shampura, Dholpura, Upali katev, Nichli katev and Amarpura. These all villages are adopted by Krishi Vigyan Kendra - Udaipur under NAIP project. The investigation was conducting transfer of technology programmes on different improved goat production practices in above adopted villages. Six improved goat production practices (three health care and three feeding) and seven socio-economic indicators assets were identified with the help of experts and goat farmers for this study. The data were collected through personal interview with the help of pre-tested structured schedule. The data collected were tabulated and statistical tools like percentage was used for logical conclusion.

RESULTS AND DISCUSSION

The results of the present study as well as relevant discussions have been presented under following sub heads:

Socio-economic :

Goat is considered to be associated with the poor sections of the rural society which also proved true in this field of study because 94.17 per cent household belonged to resource poor section of the rural population. Socio-economic status of goat rearers is presented in Table 1. Majority of goat rearers 76.42 per cent belonged to middle age group. The results of the study are in agreement with the findings as reported by Pathodiya *et al.* (2003). The participants of young and high age group in the goat rears were found to be 15.0 per cent and 8.58 per cent, respectively. The reasons behind this might be due to difficulties faced by old people in the rainy and

adverse climate and engagement of young owns in other personal affairs. Majority of goat rears 67.85 per cent were illiterate and 24.30 per cent goat rearers acquired primary level of education, while 7.85 per cent having middle and above levels of education in study area. Poor literacy rate may be one of the major reasons not hinder their intervention and poor to adopt the goat rearing technologies in study area. Agriculture and Animal Husbandry is the main occupation of 65.71 per cent goat rearers followed by 22.14, 10.17 and 9.52 per cent agriculture, animal husbandry and service, respectively. Similar results were also reported by Pathodiya *et al.* (2003). The family types of goat rears 61.43 per cent belong to joint family where as 38.57 per cent were from nuclear family. The majority of goat rears were from low and medium income groups 96.43 per cent, which indicated that the poor people kept goat for their livelihood. These results were in concurrence with the findings of Rao and Patro (2002). Most of the goat rears had less than 1.0 hectare of land, out of which $\frac{3}{4}$ land was rain fed. In this situation, income from goat rearing plays a major role for their subsistence in such type of a remote place. These results of the study are supported by Rai and Singh (2004). Most of the goat rears were either land less or small land holders. It indicated that the major goat rearing practices was followed by small, land less and resource poor farmers of selected villages of the district.

Nutrition's and health management :

Table 2 shows that the results of pre and post intervention of technologies *viz.*, animal health camp, training programme, advisory service and demonstrations influenced the attitude of goat rearers towards the adoption of recommended technologies for goat husbandry. The proportion of farmers who vaccinate their animal was higher in Amarpura 85.72 per cent followed by Oupli katev 80.46 per cent, Mahuwara and Dolpura are same 66.67 per cent, Manpura 57.14 per cent, Shyampura 33.33 per cent and Nichli katev 23.80 per cent. Overall 59.28 per cent farmers adopted the vaccinate schedule. A total of 75 per cent goat rearers followed the deworming practices but 25 per cent did not follow deworming owing to poor economic condition. The ecto-parasiticides were found to be severe in the study area even though only 26.42 per cent treat their animal against ecto-parasiticides regularly during pre intervention of technologies of NAIP project. After intervention of

technologies 74.28 per cent farmers adopted ecto parasiticides to treat their animals, only 2.14 per cent mineral mixture feeding 35 per cent concentrate feeding and 9.28 per cent green fodder feeding were followed by the farmers in the study area during survey period, but after technologies intervention, mineral mixture feeding 57.85 per cent the concentrate feeding raised 74.28 per cent and green fodder feeding 59.28 per cent owing the goat rears by using efficient technologies and extension tools. The overall improvement in the attitude of the goats rears with respect to adoption of animal husbandry technologies would be possible through the demonstration of efficient technologies needed for healthy

goat rearing which had not only creating awareness but also improved the attitude of goat rears in relation to scientific goat rearing practices. It results from the study that the awareness regarding the available viable animal husbandry is essentially required to improve the productivity as well as socio- economic condition of the resource poor tribal farmers.

Conclusion :

From the present study, It was conducted that the overall improvement in the attitude of the goats rears with respect to adoption of improved technologies related to goat production would be possible through the

Table 1 : Socio- economic condition of farmers

| Sr. No. | Particulars | Village | | | | | | Overall n=140 | |
|---------|---------------------------|------------------|-----------------|-------------------|-----------------|---------------------|----------------------|------------------|-----------------|
| | | Mahuwara n=21 | Manpura n=14 | Shyampura n=21 | Dolpura n=21 | Oupli katev n=21 | Nichli katev n=21 | | Amapura n=21 |
| 1. | Family profile | | | | | | | | |
| | Low (25 years) | 3(14.29) | 2(14.29) | 1(4.76) | 4(19.06) | 2(9.52) | 5(23.80) | 4(19.06) | 21(15.00) |
| | Medium (26-50 years) | 17(80.95) | 10(71.42) | 18(85.72) | 14(66.66) | 17(80.95) | 16(76.20) | 15(71.42) | 107(76.42) |
| | High (>50years) | 1(4.76) | 2(14.29) | 2(9.52) | 3(14.28) | 2(9.52) | 00 | 2(9.52) | 12(8.58) |
| 2. | Caste | | | | | | | | |
| | SC | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | ST | 19(90.48) | 14(100) | 21(100) | 19(90.48) | 20(95.24) | 21(100) | 18(85.72) | 132(94.28) |
| | Other | 2(9.52) | 00 | 00 | 2(9.52) | 1(4.76) | 00 | 3(14.28) | 8(5.72) |
| 3. | Education | | | | | | | | |
| | Illiterate | 12(57.14) | 9(64.28) | 16(76.20) | 15(71.43) | 10(47.60) | 20(95.24) | 13(61.90) | 95(67.85) |
| | Primary | 8(38.10) | 4(28.58) | 3(14.28) | 5(23.80) | 7(33.34) | 1(4.76) | 6(28.58) | 34(24.30) |
| | Middle and above | 1(4.76) | 1(7.14) | 2(9.52) | 1(4.76) | 4(19.06) | 00 | 2(9.52) | 11(7.85) |
| 4. | Main occupation | | | | | | | | |
| | Agriculture | 5(23.80) | 4(28.58) | 7(33.35) | 3(14.28) | 5(23.80) | 3(14.28) | 4(19.06) | 31(22.14) |
| | Animal Husbandry | 2(9.52) | 2(14.29) | 5(23.80) | 2(9.52) | 1(4.76) | 1(4.76) | 2(9.52) | 15(10.17) |
| | Agri.+Animal Husbandry | 14(66.66) | 8(57.13) | 9(42.85) | 16(76.20) | 14(66.66) | 17(80.96) | 14(66.66) | 92(65.71) |
| | Service | 00 | 00 | 00 | 00 | 1(4.76) | 00 | 1(4.76) | 2(9.52) |
| 5. | Family type | | | | | | | | |
| | Nuclear | 8(38.10) | 4(28.58) | 7(33.34) | 9(42.86) | 7(33.34) | 10(47.60) | 9(42.88) | 54(38.57) |
| | Joint | 13(61.90) | 10(71.42) | 14(66.66) | 12(57.14) | 14(66.66) | 11(52.40) | 12(57.12) | 86(61.43) |
| 6. | Annual income | | | | | | | | |
| | Low (below Rs.10,000) | 9(42.85) | 4(28.58) | 17(80.95) | 15(71.42) | 13(61.90) | 15(71.42) | 9(42.88) | 82(58.57) |
| | Medium (Rs.10,000-20,000) | 11(52.39) | 10(71.42) | 4(19.05) | 6(28.58) | 6(28.58) | 6(28.58) | 10(47.60) | 53(37.86) |
| | High (above Rs.20,000) | 1(4.76) | 00 | 00 | 00 | 2(9.52) | 00 | 2(9.52) | 5(3.57) |
| 7. | Land holding | | | | | | | | |
| | Landless | 1(4.76) | 00 | 00 | 00 | 1(4.76) | 4(19.06) | 00 | 6(28.58) |
| | Marginal (<0.5 hectare) | 18(85.72) | 13(92.85) | 21(100) | 21(100) | 16(76.20) | 16(76.20) | 17(80.95) | 122(87.14) |
| | Small (<0.5-2.0 hectare) | 2(9.52) | 1(7.15) | 00 | 00 | 4(19.06) | 1(4.76) | 4(19.05) | 12(57.12) |

*Figures in parenthesis indicate percentage

Table 2 : Health care and nutritional practices (Pre and post-NAIP interventions)

| Sr. No. | Particulars | Villages | | | | | | | | | | | | | | Overall (n=140) | | |
|---------|--------------------------------------|-----------------|------------|----------------|------------|-------------------|------------|----------------|------------|--------------------|------------|---------------------|------------|------------------|------------|-----------------|-------------|--|
| | | Mahuwara (n=21) | | Manpura (n=14) | | Shyamapura (n=21) | | Dolpura (n=21) | | Oupli katav (n=21) | | Nichli katav (n=21) | | Amarapura (n=21) | | Pre-NAIP | Post-NAIP | |
| | | Pre-NAIP | Post-NAIP | Pre-NAIP | Post-NAIP | Pre-NAIP | Post-NAIP | Pre-NAIP | Post-NAIP | Pre-NAIP | Post-NAIP | Pre-NAIP | Post-NAIP | Pre-NAIP | Post-NAIP | | | |
| 1. | Vaccination | | | | | | | | | | | | | | | | | |
| | Yes | 1 (4.76) | 14 (66.67) | 1 (7.14) | 8 (57.14) | 0 (0) | 7 (33.33) | 0 (0) | 14 (66.67) | 2 (9.52) | 17 (80.96) | 0 (0) | 5 (23.80) | 1 (4.76) | 18 (85.72) | 5 (3.57) | 83 (59.28) | |
| | No | 20 (95.24) | 7 (33.33) | 6 (42.85) | 21 (66.67) | 21 (100) | 14 (66.67) | 7 (33.33) | 7 (33.33) | 19 (90.48) | 4 (19.04) | 4 (100) | 16 (76.20) | 20 (95.24) | 3 (14.28) | 135 (96.43) | 57 (40.72) | |
| 2. | Deworming | | | | | | | | | | | | | | | | | |
| | Yes | 4 (19.04) | 18 (85.72) | 4 (28.57) | 12 (85.71) | 2 (9.52) | 12 (57.14) | 1 (4.76) | 14 (66.67) | 8 (38.10) | 20 (95.24) | 0 (0) | 12 (57.14) | 5 (23.80) | 17 (80.96) | 24 (17.14) | 105 (75) | |
| | No | 17 (80.96) | 3 (14.28) | 10 (71.43) | 2 (14.29) | 19 (90.48) | 9 (42.86) | 20 (95.24) | 7 (33.33) | 13 (61.90) | 1 (4.76) | 1 (100) | 9 (42.86) | 16 (76.20) | 4 (19.04) | 116 (82.86) | 35 (25) | |
| 3. | Ecto-parasiticides | | | | | | | | | | | | | | | | | |
| | Yes | 5 (23.80) | 19 (90.48) | 4 (28.57) | 13 (92.86) | 5 (23.80) | 12 (57.14) | 6 (28.57) | 15 (71.43) | 8 (38.10) | 19 (90.48) | 2 (9.52) | 8 (38.10) | 7 (33.33) | 18 (85.72) | 37 (26.42) | 104 (74.28) | |
| | No | 16 (76.20) | 2 (9.52) | 10 (71.43) | 1 (7.14) | 16 (76.20) | 9 (42.86) | 15 (71.43) | 6 (28.57) | 13 (61.90) | 2 (9.52) | 19 (90.48) | 13 (61.90) | 14 (66.67) | 3 (14.28) | 103 (73.58) | 36 (25.72) | |
| 4. | Mineral Mixture Feeding | | | | | | | | | | | | | | | | | |
| | Yes | 1 (4.76) | 14 (66.67) | 1 (7.14) | 8 (57.14) | 0 (0) | 14 (66.67) | 0 (0) | 12 (57.14) | 1 (4.76) | 16 (76.20) | 0 (0) | 5 (23.80) | 0 (0) | 12 (57.14) | 3 (2.14) | 81 (57.85) | |
| | No | 20 (95.24) | 7 (33.33) | 13 (92.86) | 6 (42.85) | 21 (100) | 7 (33.33) | 21 (100) | 9 (42.86) | 20 (95.24) | 5 (23.80) | 21 (100) | 16 (76.20) | 21 (100) | 9 (42.86) | 137 (97.86) | 59 (42.15) | |
| 5. | Concentrate Feeding | | | | | | | | | | | | | | | | | |
| | Yes | 5 (23.80) | 15 (71.43) | 6 (42.85) | 10 (71.43) | 3 (14.28) | 12 (57.14) | 6 (28.57) | 15 (71.43) | 13 (61.90) | 20 (95.24) | 4 (19.04) | 12 (57.14) | 12 (57.14) | 20 (95.24) | 35 (25.72) | 104 (74.28) | |
| | No | 16 (76.20) | 6 (28.57) | 4 (28.57) | 4 (28.57) | 18 (85.72) | 9 (42.86) | 15 (71.43) | 6 (28.57) | 8 (38.10) | 1 (4.76) | 17 (80.96) | 9 (42.86) | 9 (42.86) | 1 (4.76) | 91 (65) | 36 (25.72) | |
| 6. | Green fodder feeding (Lucern) | | | | | | | | | | | | | | | | | |
| | Yes | 1 (4.76) | 15 (71.43) | 2 (14.29) | 12 (85.71) | 2 (9.52) | 14 (66.67) | 0 (0) | 5 (23.80) | 7 (33.33) | 18 (85.72) | 0 (0) | 5 (23.80) | 1 (4.76) | 14 (66.67) | 13 (9.28) | 83 (59.28) | |
| | No | 20 (95.24) | 6 (28.57) | 12 (85.71) | 2 (14.29) | 19 (90.48) | 7 (33.33) | 21 (100) | 16 (76.20) | 14 (66.67) | 3 (14.28) | 21 (100) | 16 (76.20) | 20 (95.24) | 7 (33.33) | 127 (90.72) | 57 (40.72) | |

*Figures in parenthesis indicate percentage

demonstration of efficient technologies needed for healthy goat rearing which had not only creating awareness but also improved the attitude of goat rearers.

LITERATURE CITED

Pathodiya, O.P., Tailor, S.P. and Nagda, R.K. (2003). Annual Report (2002-2003) of AICRP on goat improvement (Sirohi Gelta Unit) Livestock Research Station, Vallbh Nagar, Maharana Pratap University of Agriculture and Technology, Udaipur (RAJASTHAN) INDIA.

Rai, B. and Singh, M.K. (2004). Rearing practices of Jakhrana

Goat in farmers flock. *Indian J. Small Ruminants*, **90** : 33-35.

Rao, P.K. and Patro, B.N. (2002). Scientist meet 2002, AICRP on Goat Improvement (Ganjan field unit) Deptt. Animal breeding and genetics, Collage of Veterinary Science and Animal Husbandry, Orissa University of Agriculture and Technology, Bhubaneswar (ORISSA) INDIA.

Sharma, N.K. and Riyazuddin (1989). Survey report on constraints analysis in adoption of improved sheep production technologies of the sheep families in adopted and non-adopted village, Central Sheep and Wool Research Institute, Avikanagar (RAJASTHAN) INDIA.

Received : 19.05.2016; Revised: 10.11.2016; Accepted : 23.11.2016