*RESEARCH ARTICLE*.........

# Correlation studies on socio-economic status and adoption of recommended practices adopted by goat owners under MAVIM in Akola district

Jyoti Y. Mote, K.U. Bidwe, **R.R. Shelke and** S.D.Chavan .........................................................

**ABSTRACT......** The present investigation on correlation studies on socio-economic status and adoption of recommended practices adopted by goat owners under MAVIM in Akola district district, Department of Animal Husbandry and Dairy Science, Dr. PDKV, Akola during the year 2016-2017. The data of 125 goat keepers belonging to SHG's under MAVIM were collected by personally interviewing with the help of pretested structure. The information about selected characteristics of goat keeper's *viz.,* age, education, family size, family type, flock size, occupation and annual income, sources of information, infrastructural facilities, and sources of motivation, knowledge and adoption was summarized for drawing the conclusion. Finally revealed that majority of the goat keepers were young (49.60%) and middle age (48%) groups. Over one third of those were high schooled, notably cent per cent goat keepers belonged to medium size family that too majority lives in joint family (52%). Majority of the goat keepers had medium flock size (2 to 4 goats) however, goat keeping as major occupation with annual income between Rs. 27,000 to 54,000/-. The important constraints reported by goat owners were non-availability of pure breeding buck, lack of knowledge about breeding practices, housing requirement, non-availability of grazing area. To overcome the constraints it is proposed to train the goat owners of SHG to develop pasture land at Gram Panchayat level for economic feeding of goats and providing loan facilities to goat owners for purchasing foods and fodders, construction of sheds.

**KEY WORDS......** Mahilla Arthik Vikas Mahamandal (MAVIM), Shelf-help group (SHG), Goat, Recommended management practices, Adopted practices

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# INTRODUCTION.................................................

India has the largest goat population in the world. It is estimated that the goat population has declined by 3.82 per cent over the previous census and total Goat in country is 135.17 million numbers in 2012 (Anonymous, 2017). Out of 120 descript breeds found in the world; India has 20 recognized goat breeds. Osmanabadi, Berari and Sangamneri are the three improved and important breeds

found, having specialty of milk and meat (Thombre *et al*., 2010). The average meat yield from a goat in India is only 10 kg against about 20 kg in Sri Lanka and Pakistan mainly because of underfeeding and faulty management. Also an Indian requires 11 kg of meat annually to fulfill his requirement of animal but he gets only 5 kg meat annually (Verma *et al*., 2001). Goat provides a cost benefit ratio of 1:11.7 with a high investment return of about 30 per cent. Likewise the contribution of goat to Indian economy is about Rs. 12,000 million every year (Saxena *et al.,* 2001).

MAVIM is the state women's development co-operation of Maharashtra, established on the 24th February, 1975 on the occasion of International Women's year. The mission of the corporation is "To bring about gender justice and equality for women, investing in human capital and the capacity building of women, thus, making them economically and socially empowered and enabling them to access sustainable livelihood." SHG's have played crucial role in micro finance and for social and economic upliftment of women. Since, the early 1990's, micro finance was being disbursed largely due to linkages between NABARD, Self-help groups and banks (Sharma, 2013).

The efforts made by government to bring together the common interest groups for social, financial and moral upliftment. The self-help groups are active since decades but their actual utility interests of poverty alleviation and group activity need to verify on one or another platform. Therefore, the present study planned to conduct the role of SHG's in adoption or goat husbandry practices. The finding of this study would be helpful to provide a feedback to the concentrated animal scientists of Veterinary Universities, policy makers of the development department, MAVIM, DRDA, banks, training organization, organizers and extension workers in planning and implementing the SGSY, training programme on SHG of goat keepers in futures in a better way.

## RESEARCH METHODS....................................

The present study was conducted in Akola district of Maharastra state; there were 2805 self-help groups of goat keepers in all the 07 Panchayat Samiti of Akola district, out of these 05 Panchayat Samiti namely, Akola, Akot, Barshitakali, Murtijapur and Patur were selected purposively on the basis of larger self-help groups of goat keepers. There are 10 members in each self-help group who started goat keeping called as goat keepers

hereafter which are under MAVIM. Out of which 05 goat keepers from each self-help group in a village were selected randomly. In this way, a sample of 125 goat keepers was drawn randomly from each SHG in selected 20 villages.

Keeping the objectives of the study in view, structured interview schedule was prepared. The schedule consisted the information about the independent variables namely age, education, family size, type of family, herd size, occupation, and annual income, sources of information, infrastructural facilities and sources of motivation. Second part of the interview schedule consist the questions framed for seeking information about dependent variables *viz.,* knowledge and adoption.

Rogers (1983) conceptualized adoption as a decision to make full use of an innovation as the best course of action available. The management practices adopted by goat owners was divided by 'Yes' and 'No'- *i.e.*, complete, partially, and no adoption. The complete adoption scored 3, partially 2 and no adoption 1. Management index is single numerical value representing net adoption of all components of technology whose value lies between 0 to 1.

Mathematically management index is defined as:

$$\text{Management index} = \frac{\sum_{i=1}^{n} \frac{S_i}{W_i}}{n}$$

where, $S_i$ = Obtained score for $i^{th}$ practice, $W_i$ = Standard score for ith practice, N = Number of $i^{th}$ followed

Correlation studies were taken as suggested by Singh and Chaudhary (1977).

## RESEARCH FINDINGS AND ANALYSIS............

The results obtained from the present investigation as well as relevant discussion have been summarized under the following heads :

### Socio-economic status of goat owner:

The data on personal and socio-economic status of the goat owners with reference to age, education, family size, family type, herd size, occupation, annual income, source of information, infrastructural facilities, sources of motivation presented in Table 1. It reveals from Table 1 that majority of goat owners under study were young, high schooled with small size family. Agriculture + labour as an occupation with joint type of nuclear family. Majority of goat owners having small herd size with Rs.

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**Table 1 : Distribution of goat owners according to their personal, socio-economic, communication and psychological characteristics**

| Sr. No. | Category | Frequency | Percentage |
|---|---|---|---|
| **Age** | | | |
| 1. | Young | 62 | 49.60 |
| 2. | Middle | 60 | 48.00 |
| 3. | Old | 03 | 2.400 |
| | Total | 125 | 100.00 |
| **Education** | | | |
| 1. | Illiterate | 00 | 0.000 |
| 2. | Primary School | 02 | 1.600 |
| 3. | Middle School | 32 | 25.60 |
| 4. | High School | 67 | 53.60 |
| 5. | Higher Secondary | 24 | 19.20 |
| | Total | 125 | 100.00 |
| **Family size** | | | |
| 1. | Small (upto 3 member) | 00 | 0.000 |
| 2. | Medium (4 to 6 member) | 125 | 100.00 |
| 3. | Big (Above 6 member | 00 | 0.000 |
| | Total | 125 | 100.00 |
| **Type of family** | | | |
| 1. | Nuclear family | 60 | 48.00 |
| 2. | Joint family | 65 | 52.00 |
| | Total | 125 | 100.00 |
| **Herd size** | | | |
| 1. | Small (Upto 2) | 44 | 35.20 |
| 2. | Medium (3 to 4 goats) | 43 | 34.40 |
| 3. | Large (Above 4 goats) | 38 | 30.40 |
| | Total | 125 | 100.00 |
| **Occupation** | | | |
| 1. | Goat keeping + labour | 85 | 66.40 |
| 2. | Goat keeping +Agriculture (Farming) | 40 | 33.60 |
| | Total | 125 | 100.00 |
| **Annual income** | | | |
| 1. | Upto Rs.27,000 (BPL) | 01 | 0.800 |
| 2. | Rs., 27001 to 54,000 | 121 | 96.80 |
| 3. | Above Rs. 54,000 | 03 | 2.400 |
| | Total | 125 | 100.00 |
| **Sources of information** | | | |
| 1. | Low | 15 | 12.00 |
| 2. | Medium | 95 | 76.00 |
| 3. | High | 15 | 12.00 |
| | Total | 125 | 100.00 |
| **Infrastructural facilities** | | | |
| 1. | Low | 29 | 23.20 |
| 2. | Medium | 76 | 60.80 |
| 3. | High | 20 | 16.00 |
| | Total | 125 | 100.00 |
| **Sources of motivation** | | | |
| 1. | Low | 44 | 35.20 |
| 2. | Medium | 80 | 64.00 |
| 3. | High | 01 | 0.800 |
| | Total | 125 | 100.00 |

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27,000 to 54,000 annual income and medium sources of information, infrastructural facilities and sources of motivations. These trend obtained in present data are in agreement with the trend noted by Shetter *et al.* (2005); Sabapara (2016) and Thombre *et al.* (2010).

**Adoption of recommended management practices:**

The data with regards to the practice wise adoption of goat management practices have been furnished in Table 2. It is observed that as regards to adoption, cent per cent goat keepers adopted completely the practices of buck for natural breeding, Kachha or Packka type of housing, extensive method of rearing and feeding of tree leaves. Practices like duration of colostrum feeding, goat

insurance and space kept for does were adopted completely by majority of the goat keepers. However, cent per cent goat keepers, did not adopt the practice of selection of descript breeds of goats and breeds for meat production. Majority of the goat keepers did not adopt the practices like symptoms of heat, optimum space kept for buck and feeding of concentrates to milking goat. Majority of the goat keepers (54.4%) appeared in a medium level of adoption of recommended practices of goat keeping and thus, they were mediocre in adoption of the goat management practices. Similar results were also noted by some research workers like Setter *et al.* (2005); Sabapara (2016) and Thombre *et al.* (2010), which supports the trends recorded in the present findings.

**Table 2 : Adoption of recommended practices by goat owners of SHG under MAVIM**

| Sr. No. | Name of practice | Adoption (Respondent n=125) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Complete | | Partial | | No | |
| | | Frequency | Per cent | Frequency | Per cent | Frequency | Per cent |
| **Use of goat breeds** | | | | | | | |
| 1. | Descript goat breeds for goat keeping | 66 | 52.80 | 43 | 34.40 | 16 | 12.80 |
| 2. | Descript goat breed for meat production | 66 | 52.80 | 24 | 19.20 | 35 | 28.00 |
| 3. | Descript goat breed for milk production | 65 | 52.00 | 16 | 12.80 | 44 | 35.20 |
| **Breeding management** | | | | | | | |
| 4. | Puberty age of goat – 9 to 12 months | 36 | 28.80 | 15 | 12.00 | 74 | 59.20 |
| 5. | Age at first conception - 12 to 18 months | 56 | 44.80 | 20 | 16.00 | 49 | 39.20 |
| 6. | Symptoms of heat | 29 | 23.20 | 28 | 22.40 | 68 | 54.40 |
| 7. | Interval in heat and conception - 18 to 24 hrs | 22 | 17.60 | 23 | 18.40 | 80 | 64.00 |
| 8. | Breeding buck for natural service | 125 | 100.00 | 00 | 0.000 | 00 | 0.000 |
| 9. | Gestation period of goat - 150 days | 45 | 36.00 | 27 | 21.60 | 53 | 42.40 |
| **Housing management** | | | | | | | |
| 10. | Type of housing – *Kachha*, *Packka* | 21 | 16.80 | 26 | 20.80 | 78 | 62.40 |
| 11. | Space kept for doe - 12 to 16 sq. ft. | 28 | 22.40 | 22 | 17.60 | 75 | 60.00 |
| 12. | Space kept for buck - 20 sq. ft. | 42 | 33.60 | 20 | 16.00 | 63 | 50.40 |
| 13. | Method of rearing - extensive method | 21 | 16.80 | 15 | 12.00 | 89 | 71.20 |
| 14. | Number of goats in flock - 60 to 80 goats | 06 | 4.80 | 04 | 3.200 | 115 | 92.00 |
| 15. | Maintaining one breeding buck for 20 to 25 does | 110 | 88.00 | 00 | 0.000 | 15 | 12.00 |
| **Feeding management** | | | | | | | |
| 16. | First feeding of colostrums immediately after birth | 58 | 46.40 | 39 | 31.20 | 28 | 22.40 |
| 17. | Duration of colostrums feeding - 3 to 5 days | 63 | 50.40 | 44 | 35.20 | 18 | 14.40 |
| 18. | Feeding of concentrates to milking goat - 250g | 08 | 6.40 | 50 | 40.00 | 67 | 53.60 |
| 19. | Feeding of concentrates to breeding buck– 400g | 00 | 0.000 | 64 | 51.20 | 61 | 48.80 |
| 20. | Feeding leaves of bushes to goat | 00 | 0.000 | 125 | 100.00 | 00 | 0.000 |
| **Health management** | | | | | | | |
| 21. | Vaccination of goat against | 36 | 28.80 | 27 | 21.60 | 62 | 49.60 |
| 22. | Goat insurance | 52 | 41.60 | 00 | 0.000 | 73 | 58.40 |

**Table 3 : Correlation co-efficient of independent variables with knowledge and adoption of recommended practices of goat rearing**

| Sr. No. | Independent variables | 'r' values for knowledge | 'r' values for adoption |
|---|---|---|---|
| 1. | Age | 0.417** | 0.4186** |
| 2. | Education | 0.228* | 0.2442* |
| 3. | Family size | 0.410** | 0.3728** |
| 4. | Type of family | 0.386** | 0.360.** |
| 5. | Herd size | 0.419** | 0.4102** |
| 6. | Occupation | 0.533** | 0.5694** |
| 7. | Annual income | 0.717** | 0.7464** |
| 8. | Sources of information | 0.311** | 0.2696** |
| 9. | Infrastructural facilities | 0.311** | 0.2696** |
| 10. | Sources of motivation | 0.595* | 0.5766** |
| 11. | Knowledge | -- | 0.8785** |

\* and ** indicate significance of values at P=0.05 and 0.01, respectively

## Correlation studies of selected socio-economic characters of goat keepers with adoption of recommended practices of goat rearing:

In order to find out the relationship of selected characteristics of the goat owners with their knowledge and adoption and its correlation co-efficient of personal, socio- economic, communication and psychological characteristics with their knowledge have been furnished in Table 3.

The data depicted in Table 3 reveals that the variable occupation was positively and significantly associated with the extent of knowledge possessed by the goat owners at 0.05 level of probability, where as age, family size, family type, herd size, annual income, source of information and infrastructural facilities were positively and highly significantly correlated with knowledge of goat keepers at 0.01 level of probability. Whereas education and sources of motivation positively significant effect. The Null hypothesis was, therefore, rejected for these variables stating that the knowledge of goat keepers dependent on those characteristics.

It could be seen from Table 3 that the variable infrastructural facilities was positive and highly significantly associated with adoption of recommended goat husbandry practices at 0.05 level of probability, whereas education, herd size, occupation, annual income, sources of information, sources of motivation and knowledge had significant positive relationship with adoption of recommended goat management practices at 0.01 level of probability. The Null hypothesis was, therefore, rejected for these variables. The logical

reasoning behind such findings might be that higher the level of education, higher the adoption level. It could therefore be interpreted that the goat keepers with higher education, big herd size, occupation, higher annual income, higher access to sources of information, adequate infrastructural facilities, sources of motivation and knowledge had an influence over adoption of the goat management practices by goat owners. These findings go to corroborate the findings of Bhosle (2000); Sagar and Dohare (2000) and Patil (2003) who reported that education, herd size; annual income, social participation and sources of information were positively significant with knowledge and its adoption.

## Conclusion:

On the basis of data obtained in present investigation this is concluded that, among the characteristics *viz.,* education, herd size, occupation, annual income, sources of information, infrastructural facilities, and sources of motivation and knowledge of goat keepers had highly significant positive relationship with knowledge and adoption of recommended package of practices of goat management at 0.05 and 0.01 per cent level of significance. Hence, they need to train by appropriate technologies and skill for efficient management and economics of goat enterprises.

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