

## Economics of Goat Farming in Agra District of Uttar Pradesh

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### ABSTRACT

*The economic study of goat farming from different herd size groups (Small, Medium and Large) of barbari and local breed has been conducted. The study was undertaken in randomly selected villages of Saiya, Akola, Bichpuri and Fathepur Sekari Block of Agra District of Uttar-Pradesh during 2010. The goat keepers (household) of selected villages were divided in to two groups maintaining barbari and local breeds. The study revealed that the net income derived from different herd size groups of goats was much higher among barbari breed group than local breed group. The study clearly shows large herd size group of goat keepers achieved higher profits than small and medium herd size groups in both breed of goats. The overall net annual income per goat was worked out to be Rs. 1183.66 in barbari breed and Rs. 894.06 in local breed of goats. The annual income of barbari breed of different herd size groups was higher in comparison to local breed of goats. This shows that the improved breed of barbari goats have positive impact on the income of goat keepers.*

**Key words:** Goat farming; Barbari; Goat keepers;

Goats contribute milk, meat, fiber, skins and manure to the subsistence of small holders and landless rural poor. They play an important role in capital storage, income and employment generation and house hold nutrition. Importance of goats lies in the fact that human population is increasing very rapidly creating increasing demands for animal protein foods on the one hand and the feed resources for large ruminants are decreasing due to shrinkage of grazing lands on the other. This demand can, therefore, be met with by increasing population of goats. It is easier to increase the population of goats than cattle and buffaloes because the capital investment is relatively low, land requirements are small, reproductive rates are higher both due to shorter breeding interval and high prolificacy and they can be managed by spare family labour and do not require any serious housing facilities and management skills. There is much less risk in goat farming in drought prone areas where large mortality occurs due to frequent droughts.

Goats make important economic contributions in India. They are so vital to a large human population that their contribution to national economy cannot be

overlooked. Goats require relatively much lower investments and facilities in terms of housing, feed, labour and health care. There is quick pay of dues because of fast multiplication and early maturity. Further, the risk involved in goat farming is much lower when compared to other livestock and crops production. Goats are reported to be more economical than cattle and sheep under natural grazing browsing (Sharma and Jindal, 2008). Cost and return of goat farming vary among different breeds and different areas. Keeping these points in view, a study was under taken to study the economics of goat farming under different herd size groups in Agra district of Uttar-Pradesh.

### METHODOLOGY

Agra district of Uttar-Pradesh was purposively selected for the study as it has been found more profitable for goat farming. The Agra city most popular for Taj Mahal a world monument and also other monuments. There are many hotels and enormous tourists come around the year comprising local and foreigner tourists and this city has larger population of

Muslim community creating higher demand of goat meat. Thus, there is a well established market for goat meat production in the Agra city. Multistage stratified random sampling technique was used for the study. There are 15 development blocks in the district out of which Saiya, Akola, Bichpuri and Fathepur Sekari block were selected randomly. The list of villages in the selected block was obtained and two villages were selected in each block, so a total eight villages were selected randomly. First of all the list of goat keepers was prepared in the selected villages. Then the whole list was divided into barbari and local breed goat keepers. The goat keepers in the selected villages were categorized on the basis of their herd size groups as Small (1 to 5 goats, kids & buck), Medium (6 to 15 goats, kids & buck) and Large (16 to or more goats, kids & buck).

The study covered 50 goat keepers in all, consisting of 9 goat keepers in small, 10 in medium and 6 in large group from barbari breed and 12 in small, 8 in medium and 5 in large group of local breed of goats. These were selected on the basis of probability proportionate to the number of households in each category. The data for the study were collected through a well structured pre-tested schedule by personal interview method during the year 2010. The statistical means like means and percentage were used to analyze the data.

## RESULTS AND DISCUSSION

The results of study were divided into two parts: (a) Distribution of goats per households and (b) Economics of goats farming.

(a) *Distribution of goats*: The number of goats (with buck & kid) belonging to barbari and local breed per household owned by different herd size groups has been shown in Table 1. The total number of goats was higher in barbari breed (352) than local breed (248). From the Table it could be observed that the barbari goat keepers keep more breedable bucks than local goat keepers. This shows impact of breed improvement of goat for higher production for meat and milk.

*Economics of goat farming*: A comparative economics of goat farming for different herd size of barbari and local goats worked out, as shown in Table 2. The total expenditure of goat farming was divided into various components like value of existing stock, cost of feed, cost of labour, value of shed, miscellaneous cost & veterinary expenses and interest on total expenditure.

The annual total expenditure per goat per year was worked out as Rs. 2578.92 for small herd size group, Rs. 2577.68 for medium herd size group and Rs. 2426.05 for large herd size group in barbari goats. While in local goats, the total expenditure per goat per year was Rs. 2433.17 for small herd size group, Rs. 2221.92 for medium herd size group and Rs. 2251.62 for large herd size group. Thus, the total expenditure was higher in barbari goats than the local goats. The expenditure incurred on cost of feed was nearly 11 per cent in barbari breed and 7.81 per cent in local breed. The explanations of low feed cost of goat farming in both breeds of goats were reared under extensive system of management. So goat keepers allowed grazing on forage and foliage

**Table 1. Distribution of goat per household**

Particular	Barbari Breed				Local Breed				Grant Total
	Small	Medium	Large	Total	Small	Medium	Large	Total	
No. of Breeding Male/Buck	4	4	4	12	2	4	2	8	20
No. of Lacting/ breed able female	12	16	100	128	8	18	50	76	204
No. of Pregnant goats	10	20	40	70	8	8	14	3	100
<i>Kids &amp; Adult up to 12 month</i>									
Male	8	14	20	42	8	16	48	72	114
Female	4	12	60	76	6	8	30	44	120
<i>Above 1 Year</i>									
Male	...	...	...	...	...	...	2	2	2
Female	...	...	24	24	...	8	8	16	40
Total Strength	38	66	248	352	32	62	154	248	600

**Table 2. Comparative Economics of Goat breeds per Goat (In Rupees)**

S. No.	Particular	Barbari Breed				Local Breed			
		Small	Medium	Large	Overall	Small	Medium	Large	Overall
<b>A. Expenditure:</b>									
1.	Value of existing stock	1473.68 (57.14)	1484.84 (57.60)	1330.65 (54.85)	1375.00 (55.62)	1406.25 (57.79)	1258.06 (56.62)	1298.70 (57.68)	1302.41 (57.44)
2.	Cost of Feed	263.15 (10.20)	245.45 (9.52)	270.96 (11.17)	265.34 (10.73)	221.87 (9.13)	190.32 (8.57)	162.33 (7.21)	177.01 (7.81)
3.	Cost of labour	240.10 (9.31)	235.15 (9.12)	225.00 (9.27)	232.42 (9.40)	236.25 (9.71)	226.17 (10.18)	238.00 (10.57)	234.47 (10.34)
4.	Value of shed	265.16 (10.28)	283.03 (10.98)	275.00 (11.34)	272.55 (11.03)	257.50 (10.58)	257.70 (11.60)	262.00 (11.64)	260.69 (11.49)
5.	Miscellaneous cost & veterinary expenses	60.52 (2.36)	53.03 (2.07)	64.51 (2.66)	61.93 (2.51)	50.62 (2.08)	51.61 (2.32)	49.35 (2.19)	50.08 (2.21)
	Total (1 to 5)	2302.61 (89.29)	2301.50 (89.29)	2166.12 (89.29)	2207.24 (89.29)	2172.49 (89.29)	1983.86 (89.29)	2010.38 (89.29)	2024.66 (89.29)
6.	Interest @ Rs. 12 % year	276.31 (10.71)	276.18 (10.71)	259.93 (10.71)	264.75 (10.71)	260.68 (10.71)	238.06 (10.71)	241.24 (10.71)	242.95 (10.71)
7.	Total Expenditure (1 to 6)	2578.92 (100.00)	2577.68 (100.00)	2426.05 (100.00)	2471.99 (100.00)	2433.17 (100.00)	2221.92 (100.00)	2251.62 (100.00)	2267.61 (100.00)
<b>B. Income:</b>									
1.	Value of existing stock	1763.15	1878.78	2016.12	1963.06	1500.00	1467.74	1493.50	1487.90
2.	Value of shed at present	273.68	272.72	258.06	262.5	250.00	241.93	259.74	254.03
3.	Sale of kid, goat & buck up to 12 month	157.89	...	48.38	51.13	321.87	...	584.41	404.43
4.	Sale of goat above 1 year	157.89	321.21	161.29	190.90	...	290.32	51.94	104.83
5.	Sale of total milk	1052.63	954.54	1129.03	1088.06	843.75	741.93	831.16	810.48
6.	Sale of manure	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
	Total Income (1 to 6)	3505.24	3527.25	3712.88	3655.65	3015.62	2841.92	3320.75	3161.67
7.	Net Income (B – A)	926.32	949.57	1286.83	1183.66	582.45	620.00	1069.13	894.06

Note: Figures in parentheses are percentage to the total expenditure.

along the road side, canals, fallow fields (after harvesting of crops) and tree leaves for 6 to 8 hours daily throughout the year. Similar observation was made by Singh *et al.*, 2006.

The expenditure incurred on cost of labour use was 9.40 per cent in barbari breed and 10.34 per cent in local breed. The goat keepers, labour cost was not paid in both of breed because where every time use in spare family labour even children and woman.

Returns in the goat farming include value of milk, sale of kids & goats and value of manure. The annual net income per goat was observed to be substantially higher in barbari breeds. It was Rs. 926.32, Rs. 949.57 and Rs. 1286.83 for small, medium and large herd size groups respectively, in barbari breed, while the figures

in case of local breed for the respective herds of goat farming were in comparatively less. The possible explanation for higher net income among barbari breed was due to better feeding, control of mortality and diseases with better health care and good management practices followed by goat keepers.

It is interesting to note that the overall average net income was Rs. 1183.66 in case of barbari breed and Rs. 894.06 in case of local breed. Relatively lower cost of goats farming was mainly due to higher production of milk and very short breeding interval and fast multiplication and early maturity of kids in case of barbari breed as compared to local breed. The results are comparable with earlier studies under field condition (Bhatia *et al.*, 2006 and Palanichamy *et al.*, 2007)

## CONCLUSION

It can be safely concluded from the above study that goat farming with improved breed of prevalent species and larger herd size is highly remunerative enterprise. Further it was observed the barbari goat keepers followed better feeding and management practices as compared to their counterpart maintaining local goat breeds. This in turn enhanced their profit by

way of higher productivity. On the basis of this study it can be suggested/recommended that local goat keepers should keep improved breed of goats with good management practices, so that the economic position of goat keepers can be improved to a considerable extent.

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