

Livelihood through goat farming

in the tribal hamlets of Adilabad district

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Adilabad district has the biggest tribal population (2,50,461) in the state of Telangana, which has a 76.34% rural population of which 35.32% is tribal. The Gonds, Lambada, Kolams, Pardhan, Andh, Thoti comprise the tribal population of this district. Majority of the tribals in the district are small farmers under rainfed situation or landless agricultural labourers. With an objective to make goat farming as a sustainable livelihood among tribal farmers, Krishi Vigyan Kendra, Adilabad under Tribal Sub Plan (TSP) Project of ICAR, India, supplied local breed goats and few medicines to enhance subsidiary income of tribes in the district. A total of 54 goats with a worth of ₹ 2, 70,000 (@ ₹ 5000 per goat) distributed among 27 tribal farmers in 5 tribal hamlets in the district. Altogether 27 beneficiaries from 2016 to 2019 earned an income of ₹ 838,500 by selling 130 goats @ ₹ 6,500 per goat. The current flock size of goats by 27 farmers is 403. The worth equivalent to present market value is ₹ 28,21,000. Goat farming reduced the migration of rural youth to urban areas. Also adopting goat farming, every beneficiary farmer used family labour efficiently and also ensured regular milk for the family consumption, which is highly nutritious. The manure generated was used in the fields for organic cultivation.

Key words: Goat farming, Gudams, Primitive Tribal Groups, Small and landless farmers

ADILABAD district in Telangana, has total land area of 4,18,602 ha out of which 47% is under cultivation and 41% under forest cover. The district has some of the unique characters viz. high rainfall (average of 1,159.4 mm), rainfed cropping situation, uneven topography, erratic rainfall distribution, less irrigation facilities, more forest area (43%), low literacy and varied socio-economic situations. Adilabad district has the biggest tribal population (2, 50,461) in Telangana, which has a 76.34% rural population of which 35.32% is tribal. The Gonds, Lambada, Kolams, Pardhan, Andh, Thoti comprise the tribal population of this district. Among them Kolam and Thoti are Primitive Tribal Group (PTG). Majority of the tribals in the district are small farmers under rainfed situation or landless agricultural

labourers. During *kharif*, agriculture provides about 100 to 120 days employment to the tribal farmers and seasonal agriculture is not able to provide full employment to the workforce. Vulnerability of the tribes in the district comes from a high level of dependence on rainfed agriculture, which is least diversified, a cotton dominated monocropped system that does not give enough income to

farmers. Small land holdings, low agricultural productivity and low incomes have led to rising indebtedness to private money lenders and also leading to migration from Gudams (tribal hamlets) to cities for their livelihood. The life of the tribals is increasingly vulnerable due to a lack of awareness on sustainable income generation activities to their resource base.



Goat (*Capra hircus*) is usually referred to as the cow of the poor. Goats are among the main meat-producing animals in India, whose meat (chevon) is one of the choicest meats and has huge domestic demand. Besides meat, goats provide other products like milk, skin, fibre and manure to the farmers. Goat meat has no religious inhibitions and is consumed by all the religions and races in the country. Goat milk and meat are an important source of protein and providing the food and nutritional security to millions of marginal and small farmers and agriculture labourers. Goats are simple creature and live in the domestic environment. Rearing of goat is easy and can be done by landless labourers, women and children because they can thrive well on variety of leaves, shrubs, bushes, kitchen waste etc. Goats have got increased digestibility of crude fibre and can produce even on poor quality roughages. Goats can be reared as a viable farming activity and may form source of livelihood and extra income for poor people in the villages. Goat farming thus provides a good source of living and has great potential in most part of the country. Goat has the ability to survive on little vegetation and mountainous regions with little grass.

The population of goats in the Telangana state is 52.17 lakhs with 13th position at all India level and Adilabad district has the population of 1.86 lakhs. Goat and Sheep farming is an important livelihood activity to the shepherd communities like Yadava, Kuruma, Kurba and Kurva in the state of Telangana and

The average per capita meat consumption in India is about 5.5 kg per year. Expert Committee of ICMR has recommended 66 g of protein/day with net protein utilization (NPU) of 0.65. Without substituting vegetable protein with adequate amount of animal protein it would not be possible to achieve protein quality of NPU 0.65 in the National diets. Thus, a minimum requirement for animal protein would be targeted at 20 g per capita per day compared to the present availability of 10 g or world average of 29 g. This 20 g target was also envisaged in the vision document of Department of Animal Husbandry and Dairying, Ministry of Agriculture, which could be provided through milk (50% or 10 g), meat (20% or 4 g), fish (20% or 4 g) and eggs (10% or 2 g).

Adilabad district as well. The Telangana state socio-economic report stated that rearing of sheep and goats is creating livelihood opportunities to about 29 lakhs families. The profit from the unit of investment on goats is comparatively high in goat farming even under adverse seasonal conditions like severe droughts.

Goat farming suits Adilabad district climate and economic situation and provides food and nutritional security to the millions of marginal, small farmers and agricultural labourers. Goats act as a ready to use economic asset at the time of crisis among rural farmers. Intensification of goat production systems like other small animal production systems is regarded as having the potential to contribute to improve the livelihood opportunities of the tribal farmers and weaker sections of the country. Thus, boosting of small animal production has become a major policy option, both to meet the increasing demand for livestock products like meat, milk, wool etc. and at the same time, to contribute to improve the income of rural households.

Goat Milk

Goat milk is highly nutritious as it contains protein of high biological value (B.V), essential fatty acids, minerals and vitamins. The average fat content of Goat milk varies from 4.0 to 4.5%, protein content of 2.9 to 3.7%, Lactose content of 3.6 to 4.2% and mineral content ranges from 0.8 to 0.9% and also goat milk has medicinal values.

Survey

Considering all these factors, *Krishi Vigyan Kendra* (KVK), Adilabad (working under the administrative control of Professor Jayashankar Telangana State Agricultural University) conducted a benchmark survey in different tribal villages. Diversified information was collected through structured personnel interviews of tribal's in the hamlets. Secondary information was collected from local Village panchayat secretary, Mandal veterinary officers, Experienced shepherds, Municipal slaughter house operators, Tribal hamlet headman and other key informants in villages. The important reasons for selection of goats as livelihood farming system for tribes was because of their habitat in hilly regions with little grass and open land, unemployed family labour, regular subsidiary income, community based traditional purposes and milk and meat consumption.

Consensus building

Consent was obtained from villagers with the help of Village Panchayat to select 5 beneficiaries from each tribal hamlet having 40-50 households based on socio-economic conditions of the tribes (Fig. 1). With an objective to make goat farming a sustainable livelihood among tribal farmers, *Krishi Vigyan Kendra* (KVK), Adilabad under Tribal Sub Plan (TSP) Project of ICAR, supplied local breed goats and few medicines to enhance subsidiary income of tribes in the district.

Identification of goats supplier

Contacted well experienced shepherd, who had healthy local breed goat herd in nearby villages and were naive about our project objectives and importance of livelihood to tribal's residing in adjacent villages. The local goat breeds have the following characters:

- Goat colour is predominantly black, white, brown and spotted.
- Average age at the time of distribution 24-36 months.
- Average age at first kidding 20-24



Fig. 1. (a): Krishi Vigyan Kendra, Adilabad training in scientific bearing of goats-off campus



Fig. 1. (b): In-Campus training



Fig. 1. (c): Off-campus demonstration and training

months.

- Kidding is twice in a year, twins and triplets.
- Average birth weight 2.3 kg.
- It has good quality meat and is well accepted in the local market.

Off-and-on campus training

KVK, Adilabad, organized off-and-on campus training and demonstrations for tribals in scientific way of rearing of goats in the tribal hamlets Fig. 1 (a,b,c). It also trained the beneficiary farmers on disease diagnosis and control mortality with the help of local veterinary doctors. KVK also organized National Animal Disease Control Programme (NADCP) in convergence with the district animal husbandry department and also vaccinated the goats against various diseases.

Cost of technology intervention

Each beneficiary was given 2 goats with a worth of ₹ 10,000 (@ ₹ 5,000 each) and few supplementary medicines and vaccines were also supplied. A total of 54 goats with a worth of ₹ 2,70,000 (@ ₹ 5,000 per goat) were distributed among 27 tribal farmers in 5 tribal hamlets in the district. KVK, Adilabad also supplied vaccines and medicines (Fig. 2) with a worth of ₹ 1,000 per beneficiary. To sustain the goat farm and creation of subsidiary income, the observations like number of multiplications in goat farms (Male and Female kids), milk yields, manure quantity and number of male goats sold in the market were recorded.

Economic benefit due to technology intervention

Goat farming created substantial wealth to the tribes and also ensured regular cash flow in every season in the form of male goats which were sold in the market with a cost of ₹ 6,500/ goat. Goat farming ensured regular milk supply for family consumption and the manure collected was used for crop production.

The data shown in Table 1 revealed that beneficiaries in the year 2016 had more number of goats ranging from 16 to 30 per beneficiary

Table 1. Economics of beneficiaries with goat farming in different villages

S. no.	Name of the farmer	No. of goats given	Year (in which goats given)	Goats sold in market	Total revenue from sold goats (@ 6500 ₹)	No. of goats died	Present no. of goats	The average net value of existing farm	Total Goat	
									M	F
1.	Chakati Mothiram S/o Bapurao Sharguda	2	2016	7	45,500	3	26	1,82,000	6	20
2.	Chanakanti Laxman S/o Kasiram Sharguda	2	2016	9	58,500	5	18	1,26,000	6	12
3.	Athram Jangu S/o Champathrao Sharguda	2	2016	8	52,000	8	18	1,26,000	5	13
4.	Sidam Gangaram Jyothiram Sharguda	2	2016	11	71,500	7	16	1,12,000	4	12
5.	Sidam Jenak S/o Bheemrao Sharguda	2	2016	9	58,500	5	30	2,10,000	6	24
6.	Shedmark Manikrao S/o Laxman Shaikguda	2	2016	10	65,000	6	18	1,26,000	6	12
7.	Madavi Shyam Rao S/o Bheem Rao Shaikguda	2	2016	11	71,500	5	23	1,61,000	6	17
8.	Shedmak Devrao S/o Ramji Shaikguda	2	2016	10	65,000	4	25	1,75,000	6	19
9.	Pendur Sitaram S/o Jaithu Shaikguda	2	2016	14	91,000	6	21	1,47,000	7	14
10.	Madavi Maruthi S/o Badhu Shaikguda	2	2016	9	58,500	10	19	1,33,000	5	14
11.	Juganak Nagorao S/o Jugnak Badi Markguda	2	2017	5	32,500	2	20	1,40,000	5	15
12.	Madavi Asharao S/o Manku Markguda	2	2017	4	26,000	1	18	1,26,000	6	12
13.	Purka Lachu S/o Sungu Markguda	2	2017	3	19,500	2	23	1,61,000	8	16
14.	Athram Dattu S/o Suryabhanu Markguda	2	2017	3	19,500	1	18	1,26,000	5	13
15.	Arak Seetharam Markguda	2	2017	4	26,000	3	24	1,68,000	8	16
16.	Juganaka Bheem Rao S/o Ramji Markguda	2	2018	2	13,000	2	9	63,000	5	4
17.	Arka Menga Rao S/o Arka Lingu Markguda	2	2018	1	6,500	1	12	84,000	4	8
18.	Athram Lingu S/o Athram Suryabhanu Markguda	2	2018	2	13,000	2	10	70,000	3	7
19.	Kum ragunath S/o Kumra Ramji Markguda	2	2018	2	13,000	1	9	63,000	2	7
20.	Pendur Sonerao S/o Pendur Sungu Markguda	2	2018	3	19,500	0	12	84,000	5	7
21.	Purka Manohar S/o Purka Bheem Rao Markguda	2	2018	2	13,000	3	8	56,000	2	6
22.	Thodasam Gangaram S/o Ramu Raiguda/Sirikonda	2	2019	0		0	4	28,000	2	2
23.	Sidam Koserao S/o Jaithu Raiguda/Sirikonda	2	2019	0	0	1	5	35,000	2	3
24.	Jugnak Lacchu S/o Nagu Raiguda/Sirikonda	2	2019	0			4	28,000	1	3
25.	Sidem Isru Bai S/o Lachmu Badhiguda/Ichoda	2	2019	0			6	42,000	2	4
26.	Pandrem Gopal S/o Bheemu badhiguda/Ichoda	2	2019	0		1	4	28,000	1	3
27.	Pendur Ashok S/o Birsar Badhiguda/Ichoda	2	2019	1		1	3	21,000	2	1
Grand Total		54		130	8,38,500	80	403	2,821,000	120	284

and sold an average of 10 male goats @ ₹ 6,500/goat. The average income earned by each beneficiary by selling

male goats from 2016-2020 is ₹ 63,700. In Markaguda village each farmer sold an average of 3 male

goats and earned approximately ₹ 20,000 and the existing herd size of individual beneficiary in the range 8 -



Fig. 2. Vaccination of goat in tribal hamlets

12 goats in Markaguda which were distributed in 2018.

Altogether 27 beneficiaries from 2016 to 2019 earned an income of ₹ 8,38,500 by selling 130 goats @ ₹ 6,500 per goat. The current flock size of goats by 27 farmers is 403. The worth equivalent to present market value is ₹ 28,21,000. Similar results were reported in goat production within subsistence farming systems across the world.

Impact

Goat farming reduced the migration of rural youth to urban areas. Adopting goat farming, every beneficiary farmer used family labour efficiently and ensured regular milk to the family consumption, which is highly nutritious. The manure generated was used in the fields for organic cultivation. Some beneficiaries sold the manure to the other farmers and made income out of it. The results are in line with the ambitious flagship scheme called 'Sheep distribution' by government of Telangana, India. This scheme leads to a quantum of jump in rural economy. It paved way for the upliftment of a section of community in the state. Provision of financial subsidy to this skilled community for rearing sheep on a large scale will facilitate not only their economic

development but also facilitate production of adequate quality of meat in the state. It is also aimed to make the Telangana a hub for meat export in near future like hub of IT and Pharma. The traditional shepherd families will be supported with the supply of (20+1) sheep on 75% subsidy with a total project outlay of ₹ 5,000 crores.

Challenges in creation of Livelihood through Goat Farming

- Tribal people possess the required expertise in goat farming though none of the farmer is rearing goats due to lack of financial assistance for purchasing of goats for livelihood activity in the above villages before distributing goats under TSP project.
- Tribals never thought that rearing of goats is as economical as cultivation of cotton and other crops in their areas.
- Lack of awareness on sustainable income generation activities to their resource base by utilizing open lands and forest hill areas for grazing of goats by family labour.

Lessons

Goat farming is one of the best unique livelihood opportunity for the tribal farmers in the district. It can generate subsidiary income, utilizes

family labour and provides year round nutritious milk to the family and paves the way for Doubling of Farmers Income (DFI). Further, an integrated farming system inclusive of goat farming offers unique opportunities for maintaining and extending biodiversity. The emphasis should be on small livestock such as chicken, sheep and goat in accordance with constant income. This would enable the farmers to enhance their productivity and reduce the cost of their production. Goat farming programme, KVK, Adilabad, is on the lines of objectives of the State government's sheep rearing, can be implemented on a larger scale, especially for tribal farmers in erstwhile Adilabad district of Telangana. Tribal people in Adilabad possess the required expertise in goat farming. The income could increase if Villagers could access the services of the local veterinarian. The government of Telangana, is planning to setup modern slaughterhouses in the state to produce and export quality meat to the world. In research aspects, further study needs to be conducted on breeding and management practices.

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