TRADITIONAL LIVESTOCK MANAGEMENT PRACTICES OF THE TRIBAL COMMUNITIES

in the States of Andhra Pradesh & Telangana

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List of Acronyms

FGD: Focus Group Discussion
CPF: Centre for People's Forestry
PRA: Participatory Rural Appraisal
FRA: Forest Rights Act 2006
VSS: Vana Samrakshana Samiti
DAP: drought animal Power
CPR: Common Property Resources
AI: Artificial Insemination
PD: Pregnancy Diagnosis

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Executive Summary

The undertaken research work on titled "Study of Livestock Management Practices of the Tribal Communities in the States of Andhra Pradesh and Telangana" emphasise how livestock is an important income generating source to the rural India in general and for tribal communities in particular. Meaning, seventy percent of livestock of the country is owned by 67 per cent of small, marginal farmers and landless labourers. Moreover, the livestock production has been growing faster than any other agricultural allied sector. It suggest that by 2020 it will constitute more than half of the total global agricultural output in financial terms. Persistent and growing significance of the livestock to the rural and tribal livelihood system, the study made an attempt to understand the traditional livestock management and the constraints involved in livestock rearing practices among the tribal people.

To accomplish the objectives of the study, an exploratory methodology was adopted. Secondary data sources and related literature were extensively used to shape the research study in the context of rural in general and tribal communities in particular. Further, it proceed to gather the primary data by employing interview schedule and focus group discussion as major tools. The interview schedules were used to collect the information among traditional healers and livestock rearing tribal households whereas through FDGs the information was collected from primary stakeholders to supplement of the study.

Major findings reaffirms, that livestock of large and small ruminants includes poultry continues to be major source of livelihood among the tribal communities, where 98 percent of the households who rear it, which is complementary of many studies. Purpose of breeding of the large ruminants was reportedly for tilling the agriculture land whereas the small ruminants and poultry was evidently for self-consumptions and supplementary income. It was found in the study that, the feeding of the livestock takes through grazing in open places with limited exception, sometimes, the livestock was also being feed with the other fodders sources such red clover, white clover, maize, by-products of potato, peas, wheat, barley, leaves of wild trees and wild grasses and etc.

It was found in the study that the livestock were being put to rest at cattle shed in night times uniformly across the study location with little difference. In Srikakulam the cattle sheds are built outside the habitation, whereas in Adilabad and Vishakhapatnam mostly which were built in front of the house or adjacent to the houses. As per as the gender dimensions is concerned in the livestock rearing, men were largely involved, especially for grazing, tilling and other activities, yet in some cases women and children conducts such activities too.

Results of the study found that bloating, constipation, foot rot, skin diseases worms etc. were some of the major diseases which affect the livestock of the study region. The treatments used to be practiced through local quacks as well as from veterinary staff.

The study reportedly reflects the importance of the livestock, and it goes beyond from food production function to multiple purposes. It stunningly reflects that livestock holdings are more equitably distributed than landholdings among the tribal communities, who were the primary respondents of the study, it is considered to be major source of livelihood, after agriculture. In other words, livestock rearing and its holding provides a coping mechanism to deflect the crisis in agriculture. Notwithstanding the challenges involved in livestock rearing, especially outbreak of diseases, inadequate fodder sources due to depletion of the CPRs and other grazing lands, challenges involved in the rearing of cross breeding varieties and indigenous varieties, it plays significant role in the entire livelihood and agriculture system of rural communities in general and tribal communities in particular. Despite the multiple functional importance of livestock, policy makers and government programmes overlooked traditional practice of livestock rearing and over the cross breeding practice, which adversely affects in gradual erosion of indigenous breeds. However, there shall be comprehensive policy framework, which potentially strengthen livestock diversity starting from species specific breeding practices, which includes promoting indigenous genetic breeding based on the local agro ecological niches and further a comprehensive veterinary treatment system needs to developed to address the problem of livestock diseases and fodder security, which in turn ensures protection, conservation and management of CPRs and other commons.

CHAPTER 1

Introduction

BACKGROUND

The tribal population of India is the second largest in the World with 705 tribal groups which contributes 8.6 per cent (10.4 cores) of the total population of 120 cores (Census 2011). The tribal are predominantly rural (92.60 percent), poorest social group and majority of them are illiterate. The tribals are the weakest among the weaker sections of the society because of the generations of isolation and economic deprivation. Majority of farming families are engaged in agricultural operations for about 8-9 months in a year. However it is accepted that income derived from agriculture alone is not meeting the basic needs of the farming family. It is apparent that there is heavy dependence on livestock for various agricultural activities. At the same time, livestock sector constitutes an important aspect of the rural livelihood, mostly as an allied agricultural activity.

Livestock is important source of income and employment in rural sector. Seventy per cent of livestock of country is owned by 67 per cent of small, marginal farmers and landless labourers. Forty percent of the people living below poverty line are largely dependent on livestock for their precarious existence (Rao, 2004). Livestock can be a help to meet the equity objective in rural development through their contribution to the cash income of small and marginal farmers and landless labourers. The rural poor have little access to land and thus there are limited opportunities for them in crop production. On the other hand, livestock wealth is more equitably distributed compared to land and the expanding demand for animal food products generates significant opportunities for the poor to escape poverty through diversifying and intensifying livestock production. However, there are area specific and species-specific constraints in carrying out the animal husbandry activities by the tribal community. Poor livestock producers face numerous constraints in production and marketing. They are constrained in access to capital, quality inputs, improved technology and other necessary support services. They have small marketable surpluses, while local rural markets are thin, and sales to distant urban markets results high transaction costs. Hence, the present study was carried out to understand the traditional livestock management practices and the constraints in livestock farming of tribal areas to suggest suitable policy measures to overcome the hurdles faced by tribal livestock farmers.

LITERATURE REVIEW

The review assesses the secondary information available on traditional livestock management system among the pastoral tribal communities, specifically in India. The review attempts to focus important factors in the area of livestock management like health practices, feeding and shelter, mode of treatment for disease; constraints in livestock rearing and possible scope for livelihood enhancement.

Livestock Rearing Practices and Constraints

A group of scholars N. B. Patel, S. D. Kavad, T. K. S. Rao (2010), Conducted a field survey in Narmada valley region, four Taluka of Narmada district of south Gujarat to collect firsthand information on management practices of dairy animals followed by tribal peoples. The breeding, health care and milking management practices were studied using pre- tested questionnaire through three stage sampling. Study revealed that the estrus detection in cattle was based on sign and symptoms (100.0%) rather than using teaser, moreover main symptoms for identification of animal in heat were bellowing and thin mucus discharge (58.80%). The farmers (86.30%) were observed to inseminate their animals within 12-18 hours of heat. Method of breeding adopted in area was mostly (46.30%) by combination i.e., Natural and artificial insemination (A.I.). Mostly the pregnancy diagnosis (P.D.) was practiced by 18.80% of the farmers. Dry period was more than three months in both indigenous cows (92.40%) and buffaloes (91.20%). Castration was performed in 72.70% of male animals of age more than 2 years. Vaccination was adopted by 53.80% of farmers. Regular de-worming was also practiced by 3.80 and 7.50% farmers for milch cow and calf respectively. Clean milk production was well adopted by farmers of the area. Knuckling (95.0%) was common method of hand milking followed by full hand type (3.80%) and stripping (1.30%). The management practices followed by tribal farmers of area were exceptional for few facets however most of the practices required to be improved substantially.

In a study by another groups researchers C. Jana, F.H. Rahman, S.K. Mondal and A.K. Singh (2014) analyzed goat rearing practices prevailing in the district and to identify the constraints in goat farming through collection of data from 150 respondents from Burdwan district. The data were collected with the help of semi-structured interview schedule after ensuring its reliability and validity. Most of the goat keepers (90%) reared their animals following semi intensive system in kachcha houses (69.33%) which were constructed separately with locally available low-cost materials. Floor of goat shed in most of the cases (56.67%) was earthen and roof had traditional thatch (56.67%). Almost half of the respondents (51.33%) maintained their goats by allowing grazing for 4 – 6 hours per day and supplement with vegetable waste, vegetables and crop residues along with tree leaves feeding. Most of the goat farmers (57.33%) vaccinated their goats against major diseases like goat pox, and foot and mouth disease. Lack of pure breed buck (Rank-I), high incidence of diseases (Rank-II) and lack of capital to start a goat farm (Rank-III) were perceived to be the major constraints by the goat rearers.

N. Meganathan, K.N. Selvakumar, M. Prabu, A. Serma Saravana Pandian and G. Senthil Kumar (2010). A study was conducted to identify the bottlenecks in tribal livestock rearing in six hilly areas of Tamil Nadu namely Kolli hill in Namakkal district, Yercaud hill in Salem district, Ooty hill in The Nilgiris district, Kodaikanal in Dindigul district, Yelagiri hill in Vellore district and Sitheri hill in Dharmapuri district. The data were collected from 900 tribal farmers which included landless, marginal, small and large categories based on landholdings. The data was analysed by Garett's ranking technique. The study revealed that the major bottlenecks in livestock farming among different categories of tribal farmers were lack of sufficient pasture land, lack of marketing facilities, lack of adequate credit facilities, exploitation by middlemen, non-remunerative price for the livestock products and lack of scientific knowledge. Based on the results of the study, policies related to the pasture land development, organized livestock products marketing, extensive credit facilities and improvement of animal and human resources were suggested for effective development of different categories of tribal livestock farmers.

Belay et al. (2011) have recorded the constraints limiting dairy production i.e. lack of land, shortage of feed, lack of improved breeds and lack of management (meditational services, credit services and marketing). Here, veterinary health care is become responsibility of male household head whereas, milking and milk processing was done by female household members. Men decides

selling of animals and milk, while women decide how much of the milk will be kept for household consumption.

Singh et al. (2004) recorded the problems of dairy farming i.e. shortage of feeds and fodders during dry season, traditional method of non-descript type of animal, lack of breeding bull, poor extension services and monopoly gender role in livestock activity. They have suggested the suitable strategies for feed production through planting of fodder tree and grasses in community land area and supplementation of mineral mixture, common salt, surplus crop residues available. Education to farmers of modern livestock practices, equity of gender role, supply the breeding bull in village and appointed skilled veterinary staff at village level are suggested strategies of improved dairy practices.

Kumar et al. (2012) have observed the major constraints faced by the farmers i.e. high cost of feed, lack of guaranteed price of milk, low yield, lack of milk processing technologies and lack of cooperative network in Jammu and Kashmir (India). The study revealed that only 30% of the respondents had knowledge of balanced feed, 28.33% know about how to make silage, 11.66% had knowledge of disposal of animal waste and just 20% had knowledge about vaccination of livestock.

Livestock Breed and Feeding Practices

Manoharan et al. (2003) have concluded that the farmers having cross-breed cows ranked higher feed cost compared to local cows. The cross-breed cow gets lower price for milk and local breed lower productivity. Infertility problem is also one of the main problems in dairy farming. The farmers are recorded higher capital requirement as constraint regarding cross-breed cows compared to local cows.

Alam et al. (1995) stated that the average lactation period for cross-breed cows was higher (304 days) than the local cows (210 days) in Bangladesh as well as the milk production of cross-breed cow was higher (5.66 litres) than the local cows (2.23 litres). The cross-breed dairy farms are more profitable than the local breeds and creating employment opportunities for owners and hired labors.

Patil and Udo (1997) evaluated feeding practices at farm and examines the crossbreeds fit into the existing mixed farming system. Cross-breeds produced on average 1.8 times more milk than local Desi, Gir and Kankrej cows. Cross-breed required fed 1.4times more concentrates and about 1.2 times more green and dry feeds than local cows. Tribal farms, local cows produced less milk than non-tribal farms, whereas cross-breeds produced the same amount of milk on both tribal and non-tribal farms.

Dhaware et al. (2008) concluded that Khillar is draft purpose breed of Maharashtra and males are famous for fast transport and speedy farm operations. The season dose not significantly affect on age of first calving, age of second calving of cow. However, breeding efficiency has significant effect on these traits. The production variability among various periods might be due to differential feeding and management practices, selection pressure and culling ion individuals in the particular period.Livestock and Economy

Patil et al. (2010) have concluded that the land and animals are traditionally basic income sources and assets of Indian farmers. It is major source of protein to majority of population probably, poor families of small landholders, landless laborers mainly from depressed classes (castes and tribes).

Deshmukh (2012) observed that the livestock generates massive employment opportunities to rural population, particularly rural self-employment at lowest possible investment compared to others. The women have contributing to care of new born, feeding, milking and other management practices. Women from tribal and hilly areas have also participated in this activity.

Kalash and Rathore (2009) observed that animal husbandry is supported to agriculture. The farmers are kept cattle and buffaloes for milk production, power for various farm operations, village transport, irrigation and production of manure. The additional income generated through animal rearing by women would improve their livelihood.

Sonawane (2011) stated that milk is most complete food to human being with variety of nutrients and plays a very important role in rural economy. He referred the report of the National Commission on Agriculture i.e. dairy farming as an additional source for improving the status of rural masses, especially weaker sections, consisting of small, medium and landless laborers.

Seife et al. (2012) concluded that livestock can be an important activity to get out the rural population from poverty in developing countries. However, many farmers' of these areas are facing fodder shortfalls (50-60%) during the dry season (December to February). These shortages are reducing productivity and provoking conflict overgrazing. They have found complex causes of scarcity including limited and erratic rainfall, shrinking of grazing lands due to competition for cropping lands and changing land use pattern, favoring urbanization and settlement. Therefore, the market manipulation by some cattle traders, some farmers were selling animals for less than the market prices.

Livestock and Socio- economic aspects

Manhas and Sharma (2008) recognized the livestock farming is the most suitable production system has enormous potential to improve the socio-economic status of the large percentage of rural population. Therefore, the government should support for cattle and buffalo development through subsidy for purchasing the improved breeds, fodder, improved cutting machines, concentrates mineral mixture, chaff cutting machines, construction of cattle shed and necessary dairy utensils. They have suggested that the government should keep a mobile veterinary eternal van in the rural areas regularly for providing spot treatment to the animals and routine guidance.

Chauhan et al. (2006) have pointed that the size of land holding has highly significant positive relationship with adoption of dairy farming practices, which included improved feeding practices, adoptions of improved breeds, improved managements, improved housing and veterinary aids. They have shown the large size of land holding and increasing farmers' inclination towards adoption of improved dairy practices. They record the causes of low per animal milk production in India i.e. poor feeding and management practices.

Khode et al. (2009) have stated that the attributes namely education and socioeconomic status are highly significant in Vidharbha region of Maharashtra in India. Whereas, land size, total annual income, dairy herd size, daily milk production, daily milk sale, milk production from purchased dairy cattle social participation, utilization of communication sources, knowledge level, attitude towards dairy farming, economic motivation and training on dairy farming were significantly correlated with adoption of improved dairy cattle management practices. Independent variables like age, family size, family member participation in dairy farming, number of purchased dairy cattle and experience in dairy farming were non-significantly related with adoption level of improved dairy cattle management practices.

Sato et al. (2005) have compared production and management of organic and conventional

dairy farms. The organic herds had significantly fewer cattle than the conventional. The average daily milk production in organic dairy herds per cow was lower than conventional herds. The incidence of clinical mastitis on organic farms was not statistically different from the conventional farms. T-test results indicating significantly higher parasite burden on organic farms. There was no significant difference between organic and traditional dairy farms for milk production when season, grazing intensity was common.

Others relevant studies

Karthikeyan et al. (2006) have pointed that indigenous knowledge is the accumulated knowledge, skills and technology of the local people. The paper describes five indigenous technologies involving cow-based products used by farmers for various purposes and an analysis on its impact. These technologies include 1) Green leaf extract with cow's urine for pest control, 2) Cotton seeds treatment with cow dung for removing the fuzzy hairs and also to make dibbling of cotton seeds easy, 3) Chilli seeds treatment with cow dung slurry for germination in the Chilli nursery 5 days earlier than normal sowing, 4) Whitefly control with buttermilk in Ladyfinger crops and 5) Ragi seeds hardening using cow's urine for avoid water stress during the crop growth.

Radder et al. (2010) have recorded the multiple objectives and dimensions that livestock keeping in India. Crop residues like straw, husk and grass from grazing are the main source of nutrition to majority of the animals in our country and profitability is sole determining factor of cattle farming.

Singh et al. (2012) resulted that climate change has negative impact on productive and reproductive performance of livestock, increased incidence of livestock diseases and parasitic infestation decreasing trend of feed and fodder resources. Most of the farmers preserved fodder crop in farm of hay for adverse climatic condition, followed mixed livestock farming, diversifying farming practices and changed planting date, provided bedding and warmth to their animals to protect them from extreme cold, similarly during hot days farmers provided cold water and shed to protect their animals as adaptation strategies for sustain livestock production.

The literature conclude that the livestock plays a major role in socio economic development, specifically among the tribal communities and still has wider scope in enhancement of economy of the household. Above literature review was conducted to shape the present study, which was conducted among the tribal communities in the districts of Srikakulam and Visakhapatnam in the state of Andhra Pradesh and Adilabad district in the State of Telangana to document the traditional tribal livestock management practices and to understand their role in tribal culture, health and economy.

OBJECTIVES OF THE STUDY

1. To document the traditional tribal livestock management practices in the study locations
2. To understand the role of livestock in context of tribal culture, health and economy

CHAPTER 2

Methodology

The methodology of the study is exploratory in nature. Secondary sources of information complemented with primary data to accomplish the two specific objectives mentioned above. The study first conducted a comprehensive literature review based on the available literature related to livestock managements specific to India.

In parallel to the above exercise and based upon the preliminary information from the review, primary information was collected at the individual level by using two tools: (1) interview schedules and (2) Focus Group Discussion (FDG). The interview schedules were used to collect the information among traditional healers and with the use of FDGs and interview schedules information was collected in each project districts of Andhra Pradesh and Telangana to the livestock rearing tribal communities who were the primary respodents of the study.

UNIVERSE OF THE STUDY

Sample Area: The study is carried out in tribal populated area of CPF project operational districts Srikakulam and Viskhakhapatnam in of Andhra Pradesh and Adilabad in Telangana.

Sample Size: Sample villages has been chosen to collect the required information in the districts of Adilabad and Nagarkurnool in Telangana, Srikakulam and Vishakhapatnam district of Andhra Pradesh where the CPF operating various activities in the field.

Table No-2.1: List of Sample Villages of the Study

Type	Adilabad	Srikakulam	Vishakhapatnam
Mandal	1.Utnoor 2.Narnoor	1.Hiramandalam 2.Seethampeta	1.Paderu
Villages	Kamayipet Ghanpur, Kannapur Sedwai, Rampur	Mamidijola, Ambalagandi	Gedamputtu Nereduvalsa
Households	219 Households	90 households	80 households
Species	1.Cows 2. Buffaloes 3. Goats 4. Sheep 5. Poultry: Hen	1.Cow 2. Bullocks 3.Buffaloes 4. Goat 5. Sheep 6. Pig 7. Hen	
Community	Gonds, Kolams and Lambadas	Jatapu & Kapu Savara	Kondh, Kondadora

SAMPLING TECHNIQUE:

Multistage purposive sampling technique was used for collecting the primary data of the study.

Methodology for Village selection:

Two Villages was selected from each project location in the districts on the basis of availability of livestock, classification as given below:

Table No-2.2: Classification and types of animals

Classification	Types of animals
Milch animals: Big animals domesticated for food (Mostly for milk)	Cow and Buffaloes (Milk)
Draught animals: Animals domesticated for labor work	Bullocks, Donkeys, Horse, Mules, Camels etc
Small Ruminants	Goats, Sheep, Pigs, Poultry

1. At least one village having all three types of animals

2. Another village having at least two types (Milch/draught) of animals

Methodology for household selection

The household level information was collected from the sample of households in the village that owned at least any one type of livestock.

THE SOURCES OF DATA

The study generated both quantitative and qualitative data. Participatory Rural Appraisal (PRA) methods such as Focus Group discussion, Resource Mapping, transect walk, problem ranking etc. were used. Interactions were held with the livestock rearers, farmers, ethno -veterinary practitioners, VSS members, FRA members, Animal husbandry Department etc.

20 FGD's are conducted for 10 villages in 5 districts for qualitative information. Household surveys were carried out to collect specific quantitative data. The data generated was analysed statistically and also used to verify information captured through group interaction. The household schedule gathered household level information on livestock ownership, livestock management, diseases, prevention, breeding, income from livestock.

Table No-2.3: No. of FGD for each unit (total 5 units)

Unit	Village	No. of FGDs	Groups covered
1	1	1 for Milch and draught animals	1 group for older generation 1 group for younger generation 1 women group
		1 for small ruminants	1 group for older generation 1 group for younger generation 1 women group

LIMITATION OF THE STUDY

The major limitation of the study was such that, methodology of the study primarily exploratory in nature. The surveys are based on small samples and which were conducted at a point in time and thus do not capture seasonal factors. These limitations have to be kept in mind when generalizing the results for policy action.

CHAPTER 3

Findings & Analysis

This chapter provides detailed analysis and findings of the traditional livestock management practices and the changes that have taken place over a period of time past 25 years, amongst the tribes located in Visakhapatnam and Srikakulam districts of Andhra Pradesh and Adilabad district in the state of Telangana. The results, discussions and analysis have been undertaken on relevant issues as part of the study and presented in this chapter.

Overview of Study Villages and Community

Adilabad: It is a Schedule Area of Telangana state and considered as homeland to largest Adivasi population compared to other districts of Telangana. Gonds, Kolam, Pardhans, Mannevars, Thottis, Naikpods and Lambads are the main forest dwelling Adivasi community inhabiting the district. Lambadas were the nomadic pastoralist inhabiting in the district.

Study Villages

The study was carried out in Ghanpur and Kamaiypet villages of Utnoor mandal and Kannapur and Sedwai villages of Narnoor mandal. Where Ghanpur is a Gond inhabit village and Kamaiypet is a Kolam community inhabit village. Similarly, Kannapur and Sedwai are gond community inhabit villages.

Srikakulam: It is a Schedule area of Andhra Pradesh. Jatapu, Savara, Kapu Savara, Kondh, Kondareddy are the main forest dwelling Adivasi community inhabiting the district. There is no original exclusive nomadic pastoralist inhabiting in the study area.

Study VillagesThe study was carried out in villages of Ambalagandi and mamidijola of Savarakota and Hiramandalam mandal. Where Ambalagandi is a Savara village and Mamidijoa is a Kapu Savara village.

Vishakhapatnam: The study is mostly conducted in Paderu area of Vishakhapatnam district which is a schedule area of Andhra Pradesh. Tribes like, Nukadora, Kondadora, Gadabba, Bhagata, Valmiki, Kondh communities are the inhabitant of theselocations.

Study Village

The study was carried out in Villages of Nereduvalsa and Gedamputtu where the community are Kondadoras and Kondhs live respectively.

Livestock ownership across tribes in study locations

The study reaffirms that livestock (large and small ruminants; poultry) continue to be vital component of people's livelihood in tribal villages. 98 percent of the households in study locations have at least one amongst, any of the livestock i.e. cattle, Buffalo, Goat, Sheep and poultry (fowl).

The table below shows that among the total livestock, Goat contributes highest with average of 49percent followed by Cattle (cows and bullocks) with average 21 percent, sheep with average of 16 percent, and buffalo with average 15 percent in Adilabad. Similarly in Srikakulam and Vishakhapatnam it is 44 percent (in average) and 48 percent (in average) for goats, 32 percent (in average) and 25 percent (in average) for sheep, 17 percent and 15 percent for cattle's (cows and bullocks) and 8 percent and 14 percent for buffaloes, respectively.

Table No- 3.1: Availability of livestock (large ruminants) across the study area

Districts	Tribes	Large ruminants				Small ruminants			
		Availability of cows and bullocks (cattles) in %		Availability of Buffaloes in %		Availability of goats in %		Availability of sheep in %	
Adilabad	Gond	17	20	14	15	49	49	20	16
	Kolam	24		12		47		17	
	Lambdas	20		18		50		12	
Srikakulam	Jatapu	16	17	12	8	43	44	29	32
	Kapu savara	17		3		45		35	
Vishakhapat-nam	Kondadora	15	15	17	14	42	48	26	25
	Khond	14		10		53		23	

Source: Household survey

Lambada and Gond community of Adilabad and Khondh community of Vishakhapatnam respectively have 50 percent of the livestock as goat. Goat rearing is more in regards to self-consumption during scarcity of food, and also act as an economic asset by selling during financial crisis

Indigenous breed

Goats and Buffaloes are available of indigenous species, whereas some cross breeds are available for cattle.

Table No- 3.2: Comparison of availability of indigenous breed against availability of cross breed in study locations

	Total number of cattles in study location	Cattles of local breed (in numbers)	Cattles of cross / introduced breed (in numbers)	In percentage availability of cross breed
Adilabad	75	55	20	27
Srikakulam	55	43	12	22
Vishakhapatnam	47	36	11	23

Source: Household survey

The community believes that the decline in the local breed of the cattle population is due to the scarcity of the fodder and water during summer months. In Kamaiyapet village of Adilabad, community shared that in 2006, under Indira Kranthi Patham programme, one graded bull was provided to the villagers for breeding (to get good variety of strong cattle). And this was first introduction of cross breed to the villagers. According to 19th National Livestock census in 2012, there is almost 22.87 percent decrease in the indigenous species of cattle in comparison to the 16th National Livestock census which is conducted in 2007.

The above tables also shows that in an average there is 24 percent increase in rearing of cross breed in study area as compared to earlier 15 years. According to the respondents in the study location, Fifteen years back in the 2002, there was hardly any cross breed in the villages.

Cows, goats and poultry are mostly home breed, or leased in all the three districts. Rarely they are purchased or obtained through loans. Mostly poor, landless households purchase poultry through loans.

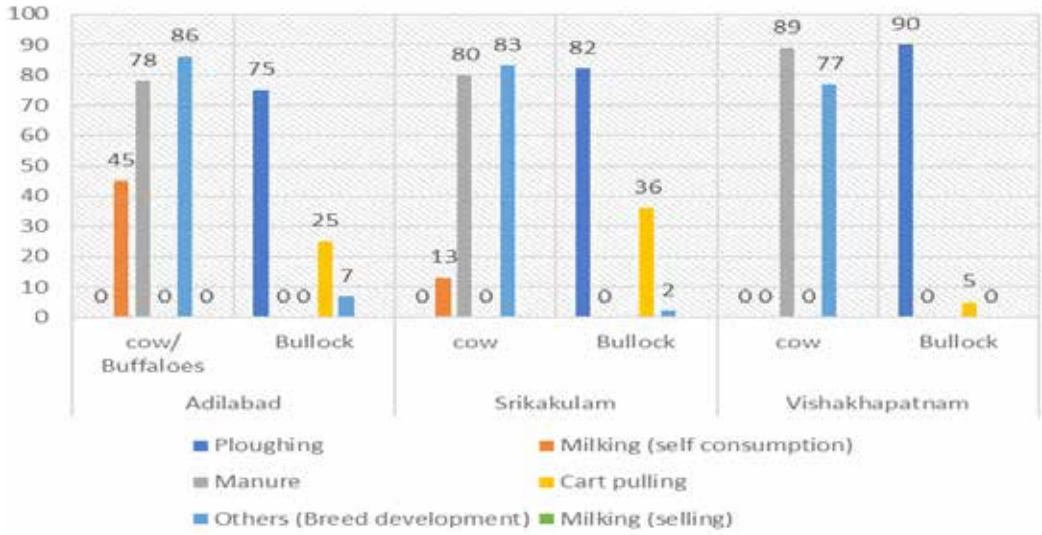
Purpose of Breeding

Purpose of breeding different variety of livestock is mostly similar across the study location. However, the present trend varies a little in regards to use of bullocks for tilling the land. In Adilabad the big and medium scale farmers have less interest in using bullocks for ploughing the farm land. In Vishakhapatnam and Srikakulam, although the farmers have shared that they are interested to use tractors but it is still not so much in practice. In Adilabad, Srikakulam and Vishakhapatnam, 40 percent, 10 percent, and 5 percent of the farmers use tractor respectively whereas others use bullocks for tilling the land.

Breeding of large ruminants- Cattle

Cattle are important as a source of manure, drought animal and source of income from sale of bullocks. Cows are mostly kept for manure and breed development. Milk has never been consumed and dairying has never been part of intrinsic livelihood of tribal community. Recently some families of Adilabad and Srikakulam in the study location have started rearing buffaloes for milk. Bullocks are mostly used for ploughing and cart pulling. Purpose of breeding large and ruminant in the study location is given below in the Graph.

Figure No 3.1: Purpose of rearing large ruminants



Source: Household survey

The use of bullocks for ploughing is much less in Adilabad district of Telangana in comparison to other study location in Srikakulam and Vishakhapatnam districts of Andhra Pradesh. The land is more under cash crop cultivation, i.e. cotton. As a result, farmers mostly prefer to hire tractors for tilling of the land as ploughing with the use of bullock is a tedious job.

Breeding of small ruminants

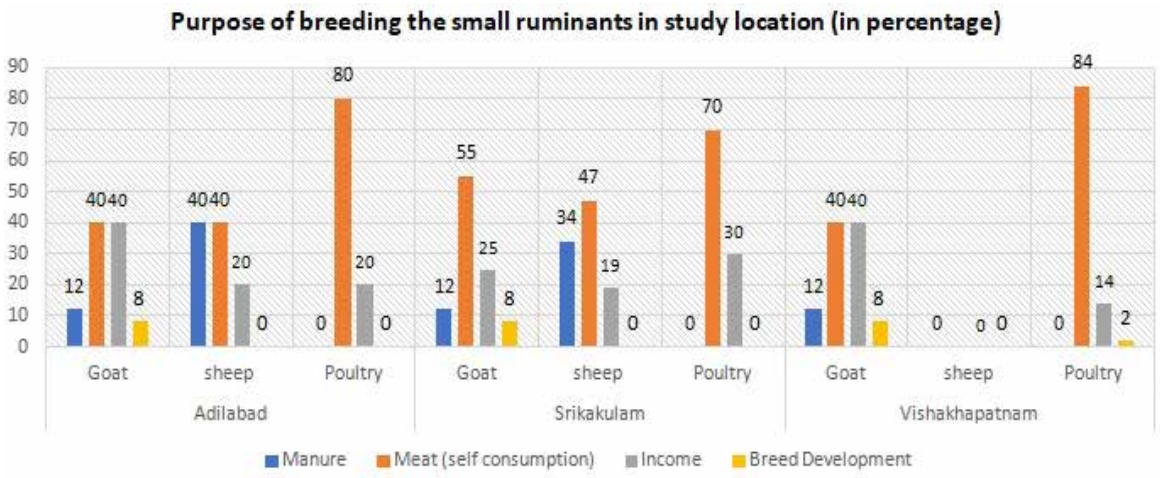
The breeding of goat and sheep is mostly for meat (self-consumption) and income generation. The graph given below shows the different purpose of breeding different small ruminants in three different locations.

Goats are mostly reared for income generation and self-consumption in Adilabad and Vishakhapatnam (40 percent in both the location), whereas in Srikakulam it is mostly self-consumed (55 percent). In either way tribal people consider it mostly as a resilient practice against financial crisis or food scarcity.

The droppings of sheep and goat contain higher nutrients than farmyard manure and compost. It is applied to the field in two ways. The sweeping of sheep or goat sheds are placed in pits for decomposition and it is applied later to the field. The second method is sheep penning, wherein sheep and goats are kept overnight in the field and urine and faecal matter added to the soil is incorporated to a shallow depth by working blade harrow or cultivator.

Poultry is mostly reared for self-consumtion in all the study locations.

Figure No- 3.2: Purpose of rearing small ruminants



Source: Household survey

Feeding and Grazing Practices

Mostly feeding of livestock is done by open grazing. They are taken for grazing all around the year to the nearby forest, non-forest common land. Post agricultural season they are also taken to the farm field for grazing as there is availability of crop residue in the agricultural lands and in the farm fields. Stall feeding is practiced only during summer season.

Availability of Fodder

In study area main source of fodder was red clover, white clover, maize, by- products of Potato, Peas, wheat, barley, leaves of wild trees and wild grasses. Used manual, trail and bullock for the transportation of grass from agriculture land to shed whereas they used only trail and bullock for the transportation of fodder from natural pasture land due to more distance. It was also observed that all transportation work done on co-operative basis. Two or three rearers, borrow or use one bullock cart to transport the fodder from field to shed and collaboratively do the transportation

Crop residue, dried and stored outside the shed for fodder use

Grazing Practices

In all the study location the cattle, goat and sheep go for grazing from early morning to till 5 in the evening in rainy and winter seasons. In rainy and winter seasons they are taken for grazing only to the forest areas. Analysis of grazing practice reveals that during summer months animals predominantly graze in forest (in close proximity to village), non-forest common area, agriculture fallows and harvested fields. . Along with grazing large ruminants are also fed with crop residues and the quantity of residue fed varies with the seasons.During summer, animals were given dry fodder which was usually stored crop residue. Rarely do they purchase any feed from the market. Incase of scarcity of dry fodder, they borrow it from the neighbour. If at all they purchas it is approximately for one month to 15 days raning the overall cost from Rs 500- Rs 1000, which is obtained from nearby market. Majority of the respondent feed approximately 5kg per day during summer. While in winter and monsoon greener fodder is fed and dry fodder is stopped.Green fodder are mostly green leaves collected by women from the forest.

Stall Feeding: It is practice only for cattle once in a day mostly in summer for dry fodders. The hay is mixed with rice bran and rice water and given to cattle in afternoon or early evenings.

Coping mechanism during drought and scarcity of food: lack of adequate fodder during summer or during drought affected period, fodder is borrowed from neighbours or purchased from markets.

Shelter Practice

In Srikakulam the cattle sheds are built outside the habitation settlement. The cattle sheds in the settlements are built a few feet away from the house. Since all the households do not require cattle sheds, their number is few. The habitation settlement are surrounded by these cattle sheds in one direction. Any space left between the cattle sheds and habitation, is used to store the fire wood or grass used for thatching the houses. In some villages, on the backyard of the dwelling place, kitchen gardens are also grown.

In Adilabad and Vishakhapatnam the cattle sheds are mostly in front of the house or adjacent to the houses. The sheds are mostly open space with a roof in Adilabad whereas the sheds in Srikakulam and Vishakhapatanm are closed area made up of wood, mud and hay.

The sheds are mostly well ventilated for proper passage of air, the flooring is of mud. The roofs are mostly sloppy in structure and made up of hay.

Although, majority of the poultry owners made necessary arrangement for night shelter of the birds to protect them from predators, whereas, only few farmers reported that birds shared the same house with the owner. It is same in all the three districts among all the tribal community.

Sheds outside the habition settlement in Srikakulam

Cattle shed in Srikaluman

Cattle shed in Adilabad

Goat shed in Adilabad

Cattle shed in Vishakhapatnam

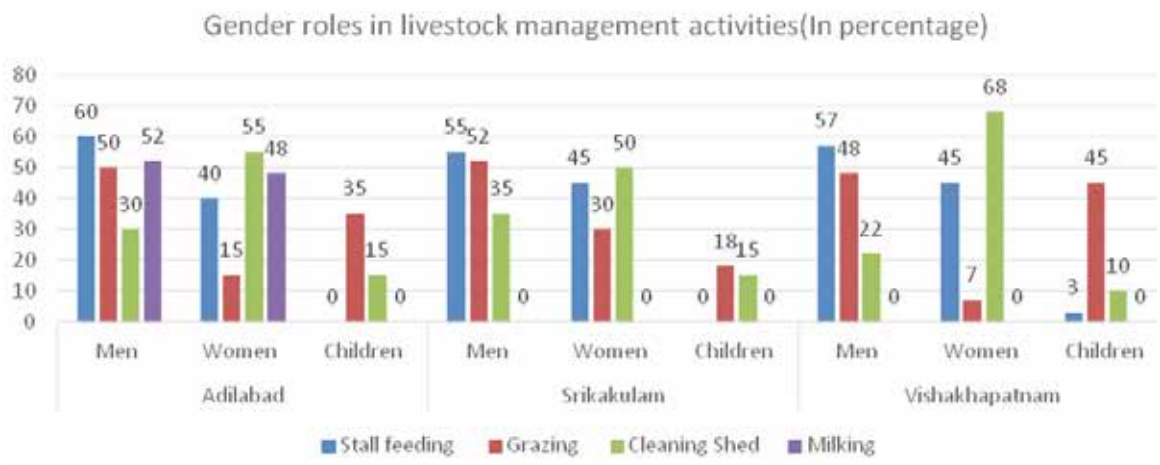
Baskets used for keeping poultry

Hen in hanging basket

Gender Role in Livestock Management Practices

Men and women are equally involved in various activities of livestock management. i.e. Feeding, milking, Cleaning the sheds, Taking them for grazing, across the study locations.

Figure No- 3.3: Gender roles in livestock management activities



Source: Household survey

Grazing: Overall mostly men are involved in taking the animals for grazing. During agricultural seasons it is taken up by the children or females, depending on the household composition. In Vishakhapatnam, the work is shared equally by men and children, i.e. 48 percent of men and 45 percent of children share the work.

The stall feeding of the livestock is a time taking process because the fodder is put in to mangers. In the process of feeding there is no restriction either men or women or children can put the fodder in to the mangers. So, this work is done by combination all three categories of the family members.

In general removal of dung and brooming of the shed was done by 58 percent women and 29percent by men of the families. Bathing/washing and fastening of animals from one to anothewas done by men (57percent), and children (1 percent). Participation of women in cleaning of shed was more than men in all three study locations

Milking of cow are usually done by men and women of the family. The milking time included time of the cow/churi at different leaving of the calf to reach the dam, fastening of the calf after the let-down, actual milking and leaving of the calf to suckle the dam after milking etc. All these activities take about half an hour in evening and morning each. There are two other works related to animal husbandry i.e. grazing and utilization of dung for fuel. It was found that women, men and children took the animals for grazing.

Diseases and Prevention

The major diseases affecting the livestock are bloating, constipation, foot rot, skin diseases worms etc.

In study area incidence of disease was 19.64 percent in cattle and 17.72 percent in sheep and goats. The treatment was done by local quacks as well as at veterinary hospital. Treatment for major diseases affecting livestock are given below:

The large ruminants suffers from diseases like

Foot and Mouth Disease- Shesam Leaf paste is mixed with churning curd & used over the lesions, it is characterized by fever, formation of vesicles and blisters in the mouth, udder, teats and on the skin between the toes and above the hoofs. Animals recovered from the disease present a characteristically rough coat and deformation of the hoof.

Bloating and Constipation; Decotion of root of Citrullus Colocynthis (Erric Puchha) is given twice a day to cure bloating.

Diarrhorea; Past of whole plant of Asthama weed(Nanabalu) with water is given to cure the diarrhorea Eye disease – Amaranthus leaves juice is used as eye drop to treat opacity of the cornea.

Skin Diseases: Solanum Indicum (Pedda Mulaka in telegu) leaves juice is given orally to treat the skin infection caused by ring worms.The symptoms are, grey-white areas of skin with an ash like surface, usually circular in outline and slightly raised, size of lesions are variable, can become very extensive, in calves most commonly found around eyes, on ears and on back, in adult cattle chest and legs more common, sometimes it also occurs in different internal organs like lungs, placenta and brain which are very much fatal. 6. Black Leg: It is an acute infectious and highly fatal, bacterial disease of cattle. Buffaloes, sheep and goats are also affected. Young cattle between 6-24 months of age, in good body condition are mostly affected. It is soil-borne infection which generally occurs during rainy season.

Black Leg: It is an acute infectious and highly fatal, bacterial disease of cattle. Buffaloes, sheep and goats are also affected. Young cattle between 6-24 months of age, in good body condition are mostly affected. It is soil-borne infection which generally occurs during rainy season.

The farmers begin home treatment which they administer by themselves, followed by assessing local healers and veteniary doctors, if available. Vaccination are not given properly in time in any of the study locations.

Small ruminants: Most common diseases are

Diarrhoea: Dry fruit powder of Terminallia bellerica (Tani/Tadi) is given twice for seven days for relief from Diarrhoea.

Foot rot: Foot rot is caused when a cut or scratch in the skin allows infection to penetrate between the claws or around the top of the hoof.

Cold and fever: Bark decotion of axle wood (Angiosssis Latfolia, Tiruman in Telugu) is twice a day for two days to treat fever.

Blue tongue: characterized by fever, swollen purple coloured tongue. Juice of leaves of Lantana Camara is fed for relief from the swollenness.

They are mostly treated with home remedies or sometimes by accessing local healers. Sick sheep and goats are sold before they die

They are mostly treated with home remedies or sometimes by accessing local healers. Sick sheep and goats are sold before they die.

Role of livestock in Livelihoods

Livestock is making a significant contribution socio-economic dimension of the study area, where about 80 percent of the land holders belong to the category of small and marginal farmers, livestock is the main source of livelihood. In the absence of fertile lands and assured irrigation most of the household maintain different species of livestock to supplement their income. While the land owners prefer cattle and buffaloes, the landless prefer to own sheep, goat and poultry.

Cattle, goats and pigs are mostly kept for sale especially when the family wants to buy something big (such as construction materials), farm inputs or even pay school fees. Goats, , are the most reliable source of income from livestock because they are highly marketable in the study area, and their prices are reasonably high. One small goat is sold with minimum price of Rs. 10,000. Chickens, and ducks are used for meat for domestic consumption. Chickens and fowls are also frequently sold for cash, especially to purchase less expensive household items. This utilisation of livestock has implication on the selection of appropriate species of livestock to be given to farmers depending on the objectives. The study has shown that increases in numbers of certain species at household simply lead to more sales and an increase in household income, not direct consumption of livestock products. Such species are cattle, goats, sheep, chickens and guinea fowls.

Livestock and Culture

The customs, rituals, art, ceremonial functions, folkways, traditions, etc. of any specific culture contributes to the development of particular pattern of life (Parikhand Patel, 1989). An attempt was made to document some of the customs and beliefs of tribal associated with animal husbandry based on observation, interaction and discussion with some of old tribal people.

In Srikakulam when a particular person is to sacrifice an animal like goat, or pig, or buffalo, other community members in the village support them by contributing some amount towards purchase of that animal. However, others were given a part of the meat of the animal sacrificed. The Savara community worship is more or less transactional like. Animal sacrifices are offered to appease the evil spirits, not to interfere and cause damage to the interests and activities.

In Adilabad, lambada community considered livestock as status symbol. According to them, tribal have more livestock symbolically reflects more prestige in their society.

In different study locations Tribal have custom of giving livestock as “gift ” in marriage of their daughters and in case of death of any family member, they donate or gift a healthy animal to the priest of village with belief that departed soul will rest in peace in heaven.

The study observed that the dead animals are thrown away in open areas at distance of about 1-2 km away from houses or in jungle. Carcass is neither buried nor sold.

CHAPTER 4

Conclusions & Recommendations

Relationship between livestock and household Income

The study observes that the importance of the livestock goes beyond its food production function, since it plays a multiple role. Livestock holdings are more equitably distributed than land holdings (agricultural land) among small and marginal communities; and landless poor; even rural women derive livelihoods and sustenance. Livestock sector is more socially inclusive and a part of culture. Livestock rearing provides a coping mechanism to deflect the crisis in agriculture.

It has been demonstrated that there is a link between livestock income and the number of different livestock species owned by the farmers. Specifically, the more types of livestock a farmer keeps, the more income he/she derives. This implies that it is good to consider giving farmers a package of livestock species instead of concentrating on only one.

Livestock breeding

Policy makers and government programmes have consistently overlooked traditional system and favoured industrial production system using exotic cross breeds resulting in gradual erosion of indigenous breeds. Majority of population are resource poor and cannot maintain crossbreds (further aggravating social inequity) and expansion of unsustainable production systems.

Livestock challenges

The major challenges faced by livestock in the study areas were disease outbreaks and lack of feed due to erratic rains and droughts and the associate lack of drinking water. It was reviewed that lack of feed during the dry season is worsened by irrigation practices (fencing of water points) that are not favourable to the survival of livestock. This is making livestock in difficulties to cope with the effects of climate change, which in turn decreases the farmers' ability to cope with the same or similar problems.

Government livestock development programs and their Impact

The various schemes launched by the Government of India which have not quite effectively proved helpful to the rearers.

Efforts have been made in the past to increase milk production through introduction of the artificial insemination, improve efficiency and effectiveness by using frozen semen technology for cross breeding among the cattle. This has drastically affected the breeding of local breeds. A reorientation of the cattle and buffalo breeding policy need to be adopted in view of safe guarding indigenous breeds and need of drought animal power (DAP).

In order to control emerging and exotic diseases, the Livestock Health and Disease Control, the

centrally sponsored scheme was launched in the 12th Five year plan of the government of India. The scheme helps collect, compile and disseminate monthly animal disease status in order to help the States control the spread of diseases. Certain diseases like the Rinderpest, Foot & Mouth Disease, Brucellosis, Classical Swine Fever etc. come especially under the scheme as a separate component owing to the seriousness of the disease in livestock. Under this vaccination and awareness component play crucial roles at the ground level. But after four years also the scheme has failed to reach to the rural tribal areas. Proper medical assistance are also not available in most of the rural areas and still first preference is given to local quacks by the reares for treatment of the diseases. Gopal Mitra[1] is also not available in all the villages. Vaccination are marketed by private parties at high cost.

Productivity of livestock is dependent on availability of quality of feed and fodder in requisite qualities. Production of coarse grains has gone down over the years. There is large shortage of green fodder. Same time pressure on control grazing and harsh restriction on grazing in forest areas makes it more difficult for reares to provide quality feed to the livestock. In this scenario govt provide scheme for fodder cultivation in barren lands and non-agricultural lands but has not been very fruitful in the study locations.

Recommendations

Specific recommendations are as follows:

1. **There is need to improve livestock diversity in the study areas. Policy Framework to be strengthen Livestock Diversity by:**
    - Breed-specific, breeding policy that take into consideration local agro ecological niches and community requirements.
    - Planned breeding programme for development of indigenous genetic resources.
    - The promotion of indigenous breeds' calls for the need to facilitate community based breeding programs that will provide local breed stock for livestock, and enhance breed development to increase yield and adaptation to local environments.
2. **To address the problem of livestock diseases it is suggested**
    - There should be a stronger collaboration with the government veterinary health workers responsible for the areas.
    - Health care monitoring and reporting systems need to be adopted and rooted at the village and the panchayat levels.
    - Health services to be delivered by the Govt. through disease control & eradication mode (minimum of 75-80 percent of animals need to be vaccinated)
    - In view of the above points –health cover needs to be free with timely availability of vaccines for all diseases for all types of livestock

[1]Gopal Mitra is government scheme, under this scheme Govt. is to appoint one trained professional in every panchayat across country to provide medical care to animals, besides artificial insemination (AI) for which they would be given three months' special training the person.

3. Fodder Security:

- Need to protect CPRs for livestock grazing –further reduction should be stopped, conservation & management of CPRs through community based groups. Efforts should be made to develop pasture lands involving local communities through soil and water conservation, introduction of improved legumes and grasses, forage tree species and prevention of grazing.
- Droughts occur quite frequently–attention to fodder availability is paid only when drought is declared –need to have a pro-active fodder policy (fodder banks during good years
- Establishment of fodder banks in fodder scarcity regions through Dairy Federations and People's Organizations can help small farmers to feed their livestock during scarcity. In paddy and wheat growing areas where the straw is wasted, facilities for compacting straw should be installed and arrangement should be made to collect and pack them. Fodder banks can play a critical role in timely supply of feed to livestock owners during the drought years

4. Support for small farmers for calf rearing, feed subsidy, insurance coverage, venture capital, etc. may be given to ensure their active role in dairy development and rearing of small ruminants for purchase of bullocks and goat

REFERENCES

Anonymous (2007). The 18th All India Livestock Census. Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, Govt. of India.

Alam j., Yasmin F., Sayeed M. A. and Rahman S. M. A. 1995. Economics of mini dairy farms in selected areas of Bangladesh. AJAS. 8(1): 17-22

Belay Duguma, Yisehak Kechero and Janssens G. P. J. 2011. Analysis of Constraints Facing Urban Dairy Farmers and Gender Responsibility in Animal Management in Jimma Town. Libyan Agriculture Research Center Journal International. 2(4): 155-160

Chauhan D. S., Kamble V. J., Padghan P. V., Khandare N. O. and Kamble R. R. 2006. Dairy farming practices adopted in tribal area of Kinwat tehsil (District – Nanded). Indian J. Anim. Res. 40(1): 64-66

Dhaware S. A., Deshpande K. S., Thombre D. S. and Chauhan D. S. 2008. Evaluation of some economic traits in Khillar cattle. Indian J. Anim. Res. 42(1): 60-62

Deshmukh R. D. 2012. Dairy Farming in Indaia. Indian Streams Research Journal. 2(3): 1-4

Jitendra Kumar, Birendra Kumar and Sanjeev Kumar (2011) Constraints Faced by Dairy Farmers in Adopting Improved Dairy Farming Practices in Bettiah District of Bihar. Indian J. Dairy Sci., 64 (1): 59-62.

Karthikeyan C., Veeraragavathatham D. and Firdouse S. Ayisha. 2006. Cow based Indigenous

Technologies in dry farming. Indian Journal of Traditional Knowledge. 5(1): 47-50

Khode N.V., Sawarkar S. W., Banthia V.V., Nande M. P. and Basunathe V. K. 2009. Adoption of Improved Dairy Cattle Management Practices under Vidarbha Development Programme Package. Indian Res. J Ext. Edu. 9(2): 80-84

Kumar Praveen, Kher S. K. and Dwivedi Sudhakar. 2012. An analytical study of livestock in Jammu and Kashmir. International Journal of Plant, Animal and Environmental Sciences. 2(3): 169-177 www.ijpaes.com

Manhas Jasbir Singh and Sharma V. P. 2008. Constraints in dairy farming in Jammu district of Jammu and Kashmir. Indian J. Anim. Res. 42(1): 49-52

Manoharan R., Selvakumar K. N. and A. Serma Saravana Pandian. 2003. Constraints in milk production faced by the farmers in Pondicherry union territory. Indian J. Anim. Res. 37(1): 68-70

Meena, B. S., A. K. Singh, Jitendra Chauhan and Gopal Sankhala (2009) Farmers Knowledge on Feeding Practices of Dairy Animals in Jhansi District. Indian Res. J. Ext. Edu., 9 (1): 28-31

Meganathan, N.; Selvakumar, K. N.; Prabhu, M.; Saravan Pandian, A.S. and Senthil Kumar, G. (2010). Constraint analysis of tribal livestock farming in Tamil Nadu. Tamil Nadu J. of Veterinary and Animal Sciences, 6 (1): 12-18.

Patel, N. B., Kavad, S. D., & Rao, T. K. S. (2010). Eco-friendly livestock management practices followed by tribal households of Narmada valley region of India. Journal of Applied and Natural Science, 6(2), 512-518. Retrieved from https://journals.ansfoundation.org/index.php/jans/article/view/491

Patil B. R. and Udo H.M.J. 1997. The Impact of Cross-breed Cows in Mixed Farming Systems in Gujarat, India : Milk Production and Feeding Practices. AJAS. 10(3): 253-259

Rathore, R. S., Rajbir Singh and R. N. Kachwaha (2009) Adoption of Recommended Management Practices and Relationship between Selected Traits of the Respondents. Indian J. Dairy Sci., 62 (4): 327-334

Sato.K, (2005) A comparison of production and management between organic and conventional dairy herds, Journal Livestock Science, Volume 93, Issue 2, Pages 105-115

Seife Ayele, Alan Duncan, Asamoah Larbi and Troung Tan Khanh. 2012. Enhancing innovaton in livestock value chains through networks: Lessons from fodder innovaton case studies in developing countries. Science and Public Policy. 39: 333-346

Singh Parasu Ram, Singh Mahendra and Jaiswal R. S. 2004. Constraints and strategies in rural livestock farming in Almora distict of hilly Uttaranchal. Indian J. Anim. Res. 38(2): 91-96

Singh, Mahendra and Anil Chauhan (2006) Constraints Faced by Dairy Owners in Adoption of Scientific Dairy Farming Practices. Indian J. Dairy Sci., 59 (1): 49-54.

Sonawane Bharat Balasaheb. 2011. Dairy farming and industry Indian scenario. International Referred Research Journal. 2(24): 8-9

ANNEXURE-I

Interview Schedule for the Study 3: Traditional Livestock management practice among Tribal's of Andhra Pradesh, Telangana and Odisha

Basic Details:

Name of the respondent_____ Village: _____

Gram Panchayat; _____ District: _____

Age_____ Gender: Male / Female, Community: _____

Primary occupation: _____

Secondary Occupation: _____

Since how long the family is into livestock rearing _____ (In years)

Previous availability data belongs to: 25 years / 50 years

Name and variety of animals domesticated then and now

S. No	Previous availability 50 years back/ 25 years back			Current availability		
	Name of animals *	Breed	Use of animals	Name of animals	Breed	Use of animals

Fodder

Fodder is/was available (Forest/ Grazing grounds/ open Fields):

Previous _____
Current _____

Name of the fodder crops-

Previous _____
Current _____

Did they have preventive and curative usage? Yes/ No

If yes, give details below:

For how many months in a year the fodder is available? _____ (50 years back), _____ (currently)

Do you purchase fodder from outside? Yes/ No

If yes, how often _____ in a year and at what price _____ In Rupees

Do you use agriculture biomass as fodder? Yes/ No

If yes give particulars:

Do they store the fodder? Yes/ No

If yes

where

And for how many days? _____

Feeding practice:

How many times in day the animals were feeded?

It is open grazing or Stall feeding or both? Give the details below

	Open grazing	Stall feeding
Which time of the day		
For how much time or How many times in a day		
What item were given to the animals for feed	Not applicable	

If open grazing is in practice, who takes care of animals during grazing? Men / Women/ Children?

Its community based grazing system or individually done _____

Shelter Practice: Put the tick for the response

Where are the animals kept?

Previous: Shed/ Open

Current: Shed/ Open

If kept in shed, it is community based shed / individual

Is the shed constructed inside the village, near to house / outside the village?

Are the shed different for different types of animals? Yes/ No

How many times in a day the shed is cleaned _____ and when_____ (Morning/ afternoon/ evening)

Gender Dynamics

What role is played by women in livestock managements? List out the activities?

1.

2.

3.

4

Are children also involved in any activities? Yes/ no

If Yes Pls list out the activities?

1.

2.

3.

Diseases and prevention

Are the animals vaccinated regularly? Yes/ No

If yes, it's done by privately or by govt institutes _____

Traditionally what were the precautions taken when the animal is ill? Put tick or cross

Kept separately ()

Stall feeding ()

Massage ()

Any Other _____

Are the traditional veterinary healers available in village now? Yes / No

If yes do you visit them now, when the animals fall sick yes/ no

If yes How often? Always / once in a while / rarely (put tick)

What is the care given to pregnant animals? List out

1.

2.

3

4

5

Economic aspects

1. Dependence on livestock for livelihood (Put tick)

   Previous years; Primary / secondary / tertiary

   Present years; Primary / secondary / tertiary

2. If reducing, list out the constraints

   _____

   _____

3. What are the livelihood opportunities- selling milk, sales of animals, scope of selling animal products?

   (Put tick mark)

4. Any availability of market, near the village for selling of goats, hens, sheep's (if they have) yes/ no

   a. If yes, distance from the village _____km

5. How much do they get for selling one animal?

Sr No	Name of the animal	Previous		Currently	
		Min amount received per animal / Exchange and Barter system	Max amount received per animal	Min amount received per animal	Max amount received per animal

Are/were any services available for buying/subsidized fodder, trainings, breeding &health services. Yes / No

Do they take animals on rent? Yes/ no

If yes for how many days _____

And for what purpose _____

Perception

What are the change that has taken over a period of time in livestock management practice?

1

2

3

4

Has the change benefitted them if Y how and N why?

Before they were in their own protected environment over a period of time what are the external factors that have influenced them/lifestyle and their impact.

Date of data collection

Signature of the investigator

ANNEXURE-II

Checklist for the Focus Group Discussions

Basic Details

- Name and variety of animals domesticated then and now
- Use of each animal
- If changes why and when
- Do they take animals on rent from other farmers
- Name of the communities who have livestock for livelihood then/now if change why?

Fodder and Grazing Lands

- where the fodder is/was available
- Name of the fodder crops- then and now
- Open grazing or any other practice vs stall feeding then/now
- Seasonal availability of fodder- then/now
- Storage of fodder – Do/did they store fodder Y/N
- How many months was/is the fodder available in fields/CPRs and how many months do they buy
- What were the coping mechanism against scarcity of fodder availability

  - Rights-traditional what were the rights of on the CPRs and now (Community grazing lands)

  - If CPRs- what was/is the community level Management system in CP{RS for sustenance and

equitable use of the resource

- Current and past situation/status of CPRs

- Payment - In the past/present is there any fee or tax they pay to the Govt for the resource

Shelter places for livestock

- Where are they kept: shed?
- Kept individually at household level or at village level
- Cleaning and feeding practices
- Preventive measures taken for protection ; diseases and from attack of wild animals

Social and cultural aspect in Livestock management

- Gender dynamics - traditional vs current practice on roles of men and women in livestock management
- Traditional /religious practice around livestock and why

Health / Immunization

- Diseases and Cure of the livestock - Traditional available mechanism and now
- Service providers – Are/were any services available for health services. Local or govt programs
- Vaccination /diseases were it locally addressed or some support from govt dispensary…

Livelihood / Economic aspects

- What is the livelihood opportunities- milk, value addition, sale of animals
- Over a period of time the livelihood has become more or less dependent on livestock Y/N if reducing why
- Insurance of livestock –

Use Of livestock in Agriculture and its allied activities:

Overall view of community on livestock management

- There perception on the change that has taken over a period of time. Has the change benefitted them if Y how and N why?
- What were/are the support mechanisms – (govt, NGOs etc) how they have changed over the time… and what are their expectations in future from CPF on it?
- Before they were in their own shielded environment over a period of time. What are the external factors that have influenced them/lifestyle and their impact?

Registered Office & Head Quarters

CENTRE FOR PEOPLE'S FORESTRY
12-13-483/39, Lane 6, Street No.14
Nagarjunanagar Colony, Tarnaka
Secunderabad - 5000 17
Tel: 040-27154484
www.cpf.in I info@cpf.in

Field Offices

TELANGANA

Adilabad District
CENTRE FOR PEOPLE'S FORESTRY
Gangannapeta, Beside ITDA office,
Utnoor Main Road, Adilabad district-504311

ANDHRA PRADESH

Srikakulam District
CENTRE FOR PEOPLE'S FORESTRY
Above Lakshmi Chit funds,
Duvari Street, Pathapatnam-532213
Srikakulam District.

Krishna District
CENTRE FOR PEOPLE'S FORESTRY
Kerala Hotel Centre,
Ground Floor, D.No: 11-99,
Ibrahimpatnam, Krishna District-521456

ODISHA

Malkangiri District
CENTRE FOR PEOPLE'S FORESTRY
Near Electric Office,
Podia Road, Post Kalimela-764047
Malkangiri district, Odisha

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