Summary of Findings and Conclusions of the Study

According to the 17th Livestock Census released in January 2005, India owns one of the largest livestock populations in the world. It accounts for 57 per cent of the world’s buffalo population and 16 per cent of the cattle population. It ranks first in respect of cattle and buffalo population, third in sheep and second in goat population in third world. While a majority of the animals continue to be reared under suboptimal conditions, still India is the largest producer of milk in the world.

Total export earnings from livestock, poultry and related products was Rs.5,120 crore in 2004-05, of which leather accounted for Rs.2,660 crore and meat and meat products for Rs.1,720 crore. Besides, the sector also plays an important role in utilization of agricultural by products, such as hay, which are unfit for human consumption. The livestock sector produced 90.7 MT of milk, 45.2 billion eggs, 2.12 MT of meat and 44.5 million kg of wool in 2004-05.

An Intensive Dairy Development Project (IDDP) was launched in the country in the non-operation flood, hilly and backward areas with the objectives of development of milch cattle, increased milk production by providing technical input services, procurement, processing and marketing of milk in a cost effective manner,
ensuring remunerative price to the milk producers and generating additional employment opportunities in the rural areas. The programme is currently being implemented in 25 States and one Union Territory. 62 projects with an outlay of Rs.334 crore have been approved since inception of the scheme and an expenditure of Rs.234 crore has been incurred up to end-March 2005.

Sheep rearing is a traditional occupation of Kurubas, Golla, ST, and SC communities in Andhra Pradesh State. It is concentrated in drought prone areas of the state, especially, in Telangana and Rayalaseema regions. Similarly, goat rearing is a subsidiary income generating activity of weaker sections of the society spread all over the state. More than 30 lakh households are engaged (directly and indirectly) in the sheep and goat rearing activity and their livelihood depends on it.

Both sheep and goats have been rearing by grazing in the common lands of villages or public lands and fallow lands. The grazing of sheep and goats in open fields has phenomenally slide down due to various reasons like increase in the irrigated area implementation of drought prone area development programmes, ecological and environmental awareness, etc. As a consequence of this the traditional occupation of sheep and goats rearing in the state is in crisis.
Hence, an attempt has been made to study the socio-economic conditions of sheep and goats rearers in the district, to highlight the problems of sheep and goats rearers and to make constructive measures for the economic survival of the community engaged in this occupation and to assess the future potential of these two small ruminants in the rural economy of Anantapur district.

**Small Ruminant Sector of Andhra Pradesh**

The animal husbandry sector plays a vital role in providing household nutritional security, raising rural household income, and generating employment – and in rural transformation. Animals are very useful to the rural economy. They provide labour for cultivation, irrigation and transpiration; their waste is used as manure for fertilizing the soil and as fuel. Besides these, animals and poultry provide milk, meat and eggs for human consumption. Livestock provide economic security and social status to the family. The concentration of livestock in general and of small ruminants in particular, is in marginal, small and semi-medium holdings, which represent mostly the poorer sections of Indian society.

Andhra Pradesh is the fifth – largest state of India in terms of both surface area and population. About 70 per cent of the state’s population is engages in agriculture. Over 80 per cent of them are small and marginal farmers and landless labourers own a mere 35
per cent (3.5 million hectares) of the total 10 million hectares of cultivated land. About 20 million bovines (cattle and buffaloes), 27.5 million sheep and goats, 750,000 pigs and 65 million poultry are owned by some 10 million households engaged in agriculture. The landless, marginal, and small farmers own about 70 per cent of the livestock.

Sheep and goats are predominant sources of livelihoods for rural households in the arid and semi-arid regions of Andhra Pradesh. Many factors such as climate, needs of the people, economic and social environment, and available technologies influence the small ruminant husbandry that is kept under different production systems. Small ruminants are reared mainly by the poor. The government programmes largely neglected the small ruminants sector even though a majority of the people belonging to the weaker sections depends on sheep and goat rearing. Of the 27.5 million small ruminants, 65 per cent are sheep and 35 per cent are goats. The sheep populations in concentrated along the hill ranges of Rayalaseema, Mahabubnagar, the central parts of Telangana and north coastal Andhra. The goat population is spread more evenly due to its better adaptability to divergent climatic conditions. However, there are a few pockets with a high goat concentration, especially in the tribal and hill belts along the northern border of the state.
The poor prefer goats because of the case of feeding them and their faster reproduction rate, but government policy in Andhra Pradesh has sought to actively discourage goat rearing (Deshingkar 2002).

Among the forest-dependent communities, a large number depend on livestock-rearing as a source of livelihood in the Rayalaseema and Southern Telangana regions. In these regions fodder requirements for livestock are met through a variety of ways, namely, grass in common village lands, agricultural lands after the harvest, private fallow lands, and the periphery of forestlands. However, in spite of all these options available for fodder, most of the rural poor are facing difficulties in getting adequate fodder for their livestock. To a large extent-livestock owners who have large ruminants (milch animals) are able to meet their fodder requirements through cut and carry method or cultivated fodder in small plots of land. In case of small ruminant rearers who are generally landless, marginal and small landholders face difficulties in meeting their fodder needs.

Anantapur, geographically, the largest and most backward district in Andhra Pradesh. It is located in a rain-shadow zone in Rayalaseema region of Andhra Pradesh. As such, it is suffering from the locational disadvantages of accounting for the lowest rainfall of 544 mm in the state and it is next only to Jaisalmer in Rajasthan.
That is to say, Anantapur district stands for the second lowest rainfall occurring district in the entire country. It is only less than 10 per cent of the total geographical area covered under forest area, which is without worth mentioning trees, only bushy and thorny type of plants are found, which meet the firewood needs of the people in rural areas.

Since, the rainfall is too low to raise any crop that takes more than 3-4 months for harvest, many traditional crops like jowar, bajra and korra(a kind of millet) have disappeared from the agricultural scene of the district. Its only the groundnut crop whose harvest is expected with in 120 days has been cultivating in the district on a large scale since 1980s.

There are no perennial rivers that flow across the district. The High Level Canal (HLC) along with tanks, tube wells formed the chief sources of water for irrigation. In the context of scanty rainfall which occurrence unevenly and irregularly caused frequent crops failures resulting in severe drought conditions, creating a situation for acute scarcity for food and fodder, degenerating both human beings and animals.

It is thus, the situation prevailing in the district holds a limited scope for agricultural prosperity. There is an urgent need to diversify agricultural as it is no longer viable. In a situation like this,
horticulture and live-stock development seems to be next best alternatives to provide income employment opportunities in the district. Sensing the situation, many farmers started raising fruit bearing gardens on a commercial basis since 1980s. The farmers experienced good economic returns by way of raising horticultural corps with the limited available water resources. Thanks to the DPAP authorities who have created awareness with regard to efficient water management techniques of drip irrigation and sprinkler irrigation for agricultural prosperity in the district. Drip irrigation, demonstrated and introduced by the DPAP attracted large number of farmers and encouraged them to take up horticulture which picked up its momentum in the district and the district now is in a position to raise nearly 20 varities of horticultural fruit crops.

According to the statistics maintained by the Revenue Authority of Anantapur District 1135888 hectare of land account for gross cropped area for the year 2005-06 and 64,507 hectare of land was brought under horticulture crops. That is to say, nearly, 18 percent of the gross cropped area comes under horticulture crops in the district for the year which was far above the state average area of 13 percent gross cropped area brought under horticulture crops.

Anantapur district is known for quality horticulture crops produce, the area under horticulture crops is increasing year by and crop diversification is taking place in a big way in the district from
agriculture crops to horticulture crops. The area under horticulture crops 68,850 hectare and production 8,34,004 MT during 2004-05.

It may be mentioned here that the DPAP in collaboration with the Horticultural Department played catalytic role in the growth and development horticulture in the district. As a result of pro-active role played by the DPAP, Anantapur district occupied the first place in the state in respect of producing the largest quantitative and quality of horticultural fruit crops for the year 2006-07.

The district stands second place in respect of sheep and goat population in the state. The size of sheep population 19.05, 972 and size of goat population 5,03,275 during the year 2004-05 in the district. The sheep and goat population activities provides direct employment to one lakh households and another one lakh persons have been indirectly find gainfully employment. The sheep and goat flesh provides animal proteins to the people in the district by way of generating Rs.175 crore of annual income to the district economy. The purpose of the present study is to assess socio-economic background of sheep and goat rearers who are engaged in contribution of significant income to the district economy on a regular basis. The sheep and goat rearing has a significant bearing in the context of drought prone and famine conditions prevailing in the district.
Objectives

The specific objectives of the Study are:

1. To study the growth and development of Sheep and Goats rearing in Anantapur District;
2. To analyze the trends of growth of Sheep and Goats population in Anantapur district as compared with Andhra Pradesh;
3. To compare with the economics of Sheep and Goats rearing in the selected sample area;
4. To study the Problems and Prospects of Sheep and Goats rearing in the district;
5. To assess government policy provision and for the development of Sheep and Goats rearing in the Anantapur district; and
6. To offer suggestions for better development of Sheep and Goats rearing in the district.

Hypotheses

1. Goat is more Economical than Sheep.
2. Number of Sheep as positive association with cost.
3. Number of Goats as positive with cost.
4. Institutional finance did not help many sheep and Goats rearers.
5. The district's climatic conditions are highly suitable for Sheep and Goats rearing.
Techniques used in the Study

The study has used simply averages, and percentages for analyzing the data. Wherever required apart from Charts and Tables have been presented.

Data Base

The study is based both on the primary and secondary data. The secondary data have been collected from the published documents, such as Five Year Plan documents of India and A.P; statistical abstracts of India, A.P. and Anantapur district; records of Department of Animal Husbandry Government of Andhra Pradesh. The primary data have been collected by way of canvassing a pre-tested questionnaire in the study area. The study takes the year 1990-91 base year and covers up to 2004-05.

Methodology

The district of Anantapur, for administrative purpose, is divided into three-Revenue Divisions: Anantapur, Penukonda and Dharmavarm. One mandal from each Revenue Division has been selected following the purposive sampling technique; there is a greater concentration of Sheep and Goat rearers in each one of the sampled mandals provided the basis to adopt purposive sampling technique in the study. The data have been collected by canvassing
a questionnaire; following sample survey method as mentioned in the statement hereunder.

**Sample Design**

The statement of sample size followed in the study.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Name of the Revenue Division</th>
<th>Name of the Mandal</th>
<th>Name of the Village</th>
<th>Sheep rearing House holds</th>
<th>Goats rearing House holds</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Anantapur</td>
<td>Rapthadu</td>
<td>1. Rapthadu</td>
<td></td>
<td>1. Cheriopalli</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Bandamedapalli</td>
<td>(50)</td>
<td>2. Palavai</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Dharmavaram</td>
<td>Kanaganapalli</td>
<td>1. Parvathadavarapalli</td>
<td></td>
<td>1. Muktapuram</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Kanaganpalli</td>
<td>(50)</td>
<td>2. Kurlapalli</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Penukonda</td>
<td>Mudigubba</td>
<td>1. Jonnalakothapalli</td>
<td></td>
<td>1. Enumulavari palli</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Ganireddypalli</td>
<td>(50)</td>
<td>2. Rallanthapuram</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Grand Total</strong></td>
<td></td>
<td></td>
<td><strong>150</strong></td>
<td><strong>150</strong></td>
<td><strong>300</strong></td>
</tr>
</tbody>
</table>

Thus, in all, 300 sample sheep and goats Rearing House holds have been consulted for collecting primary data.

**Limitations of the Study**

The present study is confined to examine the Economics of Sheep and Goat rearing and to study the Socio – Economic conditions of sheep and goat rearers in Anantapur, geographically the largest and the most backward, district in the state of Andhra Pradesh. Relevant information and data have been collected, by frequenting the shepherds the sample households for the year 2005-06.
Therefore, conclusions drawn in the study are area-specific and may not directly applicable to other areas due to variations in the agro-climatic and socio-economic conditions. All possible efforts have been made to collect reasonably satisfactory data/information from the sample respondents. Indeed a large sample than the present one would have been more useful; but it could not be done so due to the constraints of time and resources on the part of the individual researcher.

Plan of the Study

The study has been presented in six chapters: the first chapter deals with the introduction, importance of the study, review of the literature, objectives, hypotheses, methodology and chapterisation; the second chapter examines Livestock Economy and the significance of Sheep and Goat rearing, and the special significance of Sheep and Goat rearing to backward area/district like Anantapur; third chapter analyses geo-climatic and provision commons and factors promoting, growth and development for the Sheep and Goat rearing Anantapur district; fourth chapter studies Socio-Economic conditions of 300 sample households who are spread over three Revenue Divisions in the district; fifth chapter analyses problems and prospects of sheep and goat rearers in the district; and sixth chapter presents summary of findings and conclusions of the study.
Summary of the Findings of the study

On account of periodic awareness camps conducted by the district developmental agencies—the Department of Animal Husbandry and DRDA diversification process of agricultural sector achieved a significant progress—more than 60,000 hectares of gross cropped area brought under horticulture and the district occupied a pride of place of standing in the second rank with respect to the growth in sheep and goats for the year 2004-05. It is significant to state that sheep and goat rearing activities directly provide sustenance to one lakh households and indirectly it has provided gainful employment to another one lakh persons on a regular basis. Indeed, this is no mean an achievement in a drought prone, backward and famine district like Anantapur, which is the poorest district in the state, nay, in the entire country itself.

Although, the sheep and goat rearers do not exactly leading a nomadic life, nevertheless, the socio-economic conditions of the sheep and goat rearers is anything but backward in respect of low level of literacy.

It is rather painful to note that 80 per cent of the sheep rearing households are illiterates, with only 20 per cent could be educated up to the primary level only.
In the case of the goats rearer households 90 per cent of them happened to be illiterates while only the remaining 10 per cent could be educated up to the primary level only.

As the head of the households happened to be largely illiterates they could not evince interest in promoting the educational skills of their children. As such over 44 per cent of the male children in the primary and upper primary school levels dropped from the regular school education while in case of female school going children the dropped out rate in these categories is 56 per cent in the case of sheep rearing households.

Over 45 per cent of the male children in the primary and upper primary school levels dropped from the regular school education while in case of female school going children the dropped out rate in these categories is 55 per cent in the case of goats rearing households. But one thing that was noticed during survey that most of the rearers live in pucca-houses, mostly accommodated in two-roomed-houses with electrical connections for lighting purpose and it is rather pathetic to note that a majority of them do not have sanitary facilities; they go for defecation in the open areas. However, one satisfactory thing to record is that the households did not complain of drinking water problems in the respective villages the respondents expressed their gratitude Sri Bagavan Satyasaibaba who launched rural drinking water schemes.
at cost of Rs.200 crore in the district and the district administration for facilitating the provision of drinking water.

The total size of sheep in 1965 was 8,37,771 which rose to 9,29,474 in 2000. Over period of five years, that is, by 2005 the total sheep size increased to 19,05,972. The total size of goat in 1965 was 3,53,981 which rose to 3,54,502 in 2000. Over period of five years, that is, by 2005 the total goat size increased to 5,03,275.

The price per Kilogram of sheep meat was Rs.5 in 1965 which rose to Rs.120 by 2000 and further it rose to Rs.160 per kilogram by 2005. That means over period of 40 years meat price was increased by 32 fold while sheep size increased by 2.3 fold whereas in the case of goat meat, it was increased by about 38 fold while goat size increased by 1.4 fold. Thus, their seems to be a miss-match between supply and demand of sheep and goat meat. Supply and demand of sheep and goat has been logging behind very much in the district.

Over 5.4 lakh sheep and goat were slaughtered in the district during the year 2005-06. The economic returns over this were calculated, excluding the manure part, the total returns on the marketing the meat of the slaughters ruminants was over Rs.175 crore for the year 2005-06.
Over 12 per cent of the households engaged as daily wage earners and 13 per cent engaged as agricultural labourers in the respective villages.

More than 35 per cent of the rearers are landless people while 57 per cent of them are marginal farmers and 8 per cent of them small farmers. Of the land owners, over 21 per cent had irrigation facilities and 79 per cent cultivated their lands under rain fed conditions.

It was observed that 51.03 per cent were the male workers, of which children constitute 7 per cent while in the case of females, they have accounted for 49 per cent of workforce, of which female children accounted for 8 per cent.

The dependency ratio has been fluctuating between 1:5.3 and 1:6.20. Child labour has been reported to be high among the female child labour has been over 53 per cent compared to 47 per cent male children.

It is observed that over 53 per cent of the households engaged in two occupations while 30 per cent engaged in more than two occupations.

Nearly ,60 per cent of the rearers owned sheep of flock size in the range of 62 to 150; 28 Per cent owned flock size in the range
of 150 to 650 while over 13 per cent owned flock size in the range of 650 to 1000 and above.

In the case of goat rearers 51 per cent owned goat flock size in the range of 15 to 25; 30 per cent owned flock size between 25 to 45 while 19 per cent owned goat flock size in the range of 45 to 55 and above.

With regard to returns in the form of income, 56 per cent of the sheep rearers could get income up to Rs.50,000 per year; 27 per cent could get income in the range of Rs.50,000 to Rs.1,00,000; 11 per cent get income in the range of Rs.1,00,000 to Rs.2,00,000 while 7 per cent could earn an annual income of Rs.2,00,000 lakh and above.

The income position in respect of goat rearers is much less compared to sheep rearers; 57 per cent of goat rearers earned income up to Rs.20,000 per year; 28 per cent earned income in the range of Rs.20,000 to Rs.40,000; over 9 per cent could get income in the range of Rs.40,000 to 60,000 while 5 per cent of them could earn income of Rs.60,000 and above.

With regard to savings, sheep rearers saved more than goat rearers for the simple reason that their flock sizes varied significantly over the goat rearers. The percentage of saving, for
both, was fluctuating between 15 per cent to 30 per cent of the annual incomes.

It was 82 per cent of the rearers mobilized required finances from the local money lenders by paying usurious rates of interest while only 18 per cent availed institutional assistances and 23 per cent availed themselves of both the sources of finances.

With regard to durable goods, 30 per cent households had radios, 63 percent T.V.s, 41 bicycles, 23 per cent motorcycles.

It is rather disheartening to observe that the households, largely, allocated 5 per cent to 6 per cent of their total income on educational expenditure of their wards.

Over 83 per cent of the sheep rearers had outstanding debts in the range of Rs.30,000 to 60,000 and 27 per cent had loans above Rs.60,000 each while in the case of goat rearers 88 per cent of them had loans in the range of Rs.30,000 to Rs.60,000 and 22 per cent of them had outstanding loans up to Rs.60,000 could above each.
Conclusion

According to a conservative estimate, the income contributed by the activities of sheep and goat rearing was to the tune of Rs. 175 crores for the year 2004-05 to the district economy. The district’s geo-climatic conditions are highly suitable for the expansion of these activities further and there is a vast potential to increase its contribution by many fold to the district economy. To accomplish this, the bankers have to develop rearer-friendly relationship with the sheep and goat rearers which go a long way in the fast growth of the activities. In addition to this, the various schemes which were implemented could cover less than one per cent of the ruminants; this needs to be significantly extended to cover higher and higher percentage of ruminants and thus enable the activities grow faster in such away as to generate more income and employment opportunities in the poorest district of the country.