Problems and Prospects of Sheep and Goat rearing in Anantapur district.

Sheep and goat rearing is beset with many problems in the study area. The main problems are listed hereunder:

1. Problems relating to grazing lands
2. Problems in marketing of sheep and goat
3. Problems relating to adoption of management practices
4. Seasonal diseases
5. Shrinking of grazing lands
6. Thieves menace
7. Usurious rates of interest charged by money-lenders
8. Reluctance on the part of the bankers in meeting the financial needs of the sheep and goat rearers
9. Absence of wool cording units
10. Superstitious beliefs adopted in warding off diseases
11. Lack of awareness on the part of the rearers
12. Lack of the needed encouragement by the government
13. Acute scarcity of water in summer
14. Attack by wild animals
15. Road accidents and train accidents
16. Small land holdings
17. Lack of insecurity to shepherds and sheep and goat
Problems relating to grazing lands

The analysis presented in Table: 5.1 showed that shortage of grazing lands was a pressing problem as reported by 92.00 and 85.00 per cent sheep and goats rearers respectively. They felt that they were deprived of their traditional right to graze in forest area which was getting more and more restricted by the forest department. The problem of inferior quality of feed was faced by most of the goats rearers than sheep rearers.

As the vegetation was sparse in the waste lands and no worth mentioning forests it turned out to be a serious problem. No supplementary feeding was practiced by any of the rearers except in goat flocks where lopping of side leaves and feeding dried pods was practiced. Some rearers who have small number of goats fed on the available vegetation and vegetable wastes freely available in the local areas, without spending much money. Some goats rearers maintained a few babul trees. The animals were not maintained on any concentrate feeding but on the available grazing / browsing mostly. On enquiry it was found that most of rearers did not follow the practice of vaccination. The sheep demonstration unit and other veterinary institutions never sensitized rearers about preventive measures against diseases like blue tongue, enterotoxaemia and rinderpest etc. They still believed in using local medicines.
None of the rearers practiced flushing of their animals. The practice of pre-flushing and flushing if practiced, the rate of kidding/lambing would have been better. But the rearers were not bothered about it.

Table: 5.1

Problems of sheep and goats rearing

<table>
<thead>
<tr>
<th>S.No</th>
<th>Particulars</th>
<th>Sheep</th>
<th>Goats</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Grazing</td>
<td>138 (92.00)</td>
<td>128 (85.33)</td>
</tr>
<tr>
<td>2</td>
<td>Inferior quality of feed</td>
<td>123 (82.00)</td>
<td>141 (94.00)</td>
</tr>
<tr>
<td>3</td>
<td>Absence of vaccination Practice</td>
<td>142 (94.66)</td>
<td>143 (95.33)</td>
</tr>
<tr>
<td>4</td>
<td>Non-Practice of flushing</td>
<td>150 (100.00)</td>
<td>150 (100.00)</td>
</tr>
</tbody>
</table>

Source: Field Survey
Note: Figures in the brackets indicate percentage to total number of rearers of sheep and goats

Problems in marketing of sheep and goats

Absence of regulated market was felt by 93.33 per cent of sheep rearers and 96.00 per cent of goats rearers. As the rearers are illiterates and ignorant of prices prevailing they were exploited by the middlemen (Table 5.2) From they survey it was found that nearly all the rearers faced this problem, and had to sell their sheep at unremunerative prices. Since the buyers were few and there was no competition amongst them, oligospony market situation existed. The buyers had a dominant way in the price fixation, as a result of which the sheep rearers could not obtain better returns.
Improper weighing was another problem faced by almost all the rearers, as the animals were sold through approximate weight and visual observation. Accurate body weight was not considered in the sale of live sheep. The share in consumers rupees was low to almost all the rearers, the number of intermediaries were many in the marketing channel below the market were unregulated in the district.

Table: 5.2
Problems in marketing of sheep and goats

<table>
<thead>
<tr>
<th>S.No</th>
<th>Particulars</th>
<th>Sheep</th>
<th>Goats</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Absence of regulated markets</td>
<td>143 (95.33)</td>
<td>144 (96.00)</td>
</tr>
<tr>
<td>2</td>
<td>Exploitation by middlemen</td>
<td>132 (88.00)</td>
<td>144 (96.00)</td>
</tr>
<tr>
<td>3</td>
<td>Improper weight</td>
<td>145 (96.66)</td>
<td>147 (98.00)</td>
</tr>
<tr>
<td>4</td>
<td>Share in consumer's rupee low</td>
<td>141 (94.00)</td>
<td>139 (92.66)</td>
</tr>
</tbody>
</table>

Source: Field Survey
Note: Figures in the brackets indicate percentage to total number of rearers of Sheep and Goats

Extent of adoption of Management practices

The practices of recommended management practices in any enterprise will help in increasing the present income levels. It will be of interest to know the extent of adoption of the recommended practices by the selected the rearers.

The present attempt is one in this direction, to have a deep insight into the adoption of the recommended practices.
It is clear from the (Table 5.3) that only 31.33 per cent of sheep rearers and 22.00 per cent of goats rearers were able to provide grazing lands to their animals, while adoption of this practice decreased with increase in the flock size. The practice of feeding of concentrates was negligible.

This was primarily because of lack of consciousness of supplying better feeds. The need of timely vaccination was not realized by 60.00 per cent of sheep rearers and 65.33 per cent of goats rearers. Provision of care for the pregnant ewes was also low in all the rearers.

The awareness of the rearers in culling old rams and ewes was 6.66 and 8.00 per cent in sheep and goats rearers respectively. The percentage of rearers adopting the practices of deworming and deticking their sheep was very low, but increased with importance of ‘flushing’ in sheep rearing. Flushing stimulates higher fertility and some times increases the lambing percentage more ewes may give twins in the flock and lamb crop will be uniform in size and age.
**Table: 5.3**

Extent of adoption of management practices

<table>
<thead>
<tr>
<th>S.No</th>
<th>Particulars</th>
<th>Sheep</th>
<th>Goats</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Provision of grazing lands</td>
<td>47 (31.33)</td>
<td>33 (22.00)</td>
</tr>
<tr>
<td>2</td>
<td>Feeding of concentrates</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Timely Vaccination</td>
<td>90 (60.00)</td>
<td>98 (65.33)</td>
</tr>
<tr>
<td>4</td>
<td>Care of pregnant ewes/does</td>
<td>35 (23.33)</td>
<td>28 (18.66)</td>
</tr>
<tr>
<td>5</td>
<td>Removal of old rams, ewes/bucks and does</td>
<td>10 (6.66)</td>
<td>12 (8.00)</td>
</tr>
<tr>
<td>6</td>
<td>Regular deworming and deticking</td>
<td>10 (6.66)</td>
<td>16 (10.66)</td>
</tr>
<tr>
<td>7</td>
<td>Flushing</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Field Survey
Note: Figures in the brackets indicate percentage to total number of rearers of Sheep and Goats.

---

**Seasonal Diseases**

Sheep and goat are subjected to seasonal diseases. Of which the viral diseases became rampant in the district due to the wet conditions that prevailed an account of the recent heavy rains. At least, one lakh families eke-out a leaving through sheep rearing; not less than 13 lakh sheep were affected by the disease in the district (Deccan Chronical, December 16, 2005).

Because of viral diseases 11 lakh sheep reported to have died within free months, leaving behind the rearers at crossroads (Eenadu District Edition, December 17, 2005).
The another dreadly disease effects sheep is 'blue tongue': nearly 40,000 sheep were reported to be affected by the disease; and a majority of sheep affected by the disease died in the district, causing heavy loss to shepherds. The disease was rampant in seven mandals; Kanagapalli, Kambadur, Kalyanadurg, Narpala, Mudigubba, Uravakonda, Gooty, Kadiri. All these mandals have higher concentration of sheep and goat in the district.

**Shrinking of Grazing lands**

Grazing land is gradually shrinking in area in the district. It is due to illegal encroachment of common land by the private parties. Another important cause for shrinkage in grazing land is due to land distribution activity taken up by the Andhra Pradesh state government.

So far, the state government distributed land among the landless people in four installments; the details of which are displayed in Table: 5.4.

**Table: 5.4**

**Four Phases Land Distributions in Anantapur District**

<table>
<thead>
<tr>
<th>S.No</th>
<th>Date</th>
<th>Land Distribution</th>
<th>No. of Benfishers</th>
<th>Total No's of acres of land</th>
<th>Land allotted by per benfishers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>26-1-2005</td>
<td>First Phase</td>
<td>3965</td>
<td>8964.71</td>
<td>2.26</td>
</tr>
<tr>
<td>2</td>
<td>22-8-2005</td>
<td>Second Phase</td>
<td>2681</td>
<td>6762.80</td>
<td>2.52</td>
</tr>
<tr>
<td>3</td>
<td>19-11-2006</td>
<td>Third Phase</td>
<td>4256</td>
<td>11705.30</td>
<td>2.75</td>
</tr>
<tr>
<td>4</td>
<td>19-1-2008</td>
<td>Fourth Phase</td>
<td>5994</td>
<td>16111.01</td>
<td>2.68</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>16876</strong></td>
<td><strong>43543.82</strong></td>
<td>2.58</td>
</tr>
</tbody>
</table>

*Source: District Collectrate, Anantapur.*
As a result of land distribution in four phases 43,543.82 acres of land has been distributed among 16,876 beneficiaries; each beneficiary could get, on average, 2.58 acres of land.

Land distribution coupled with illegal encroachment has seriously brought down the grazing lands, adversely affecting sheep and goat rearing in the district.

**Thieves menace**

Since, flocks have been rested in the open place thieves find it is easy to steal them away in the nights; very frequently thefts are being recurring. For example, 60 sheep were stolen on a night in Kanaganapalli mandal (Eenadu District Edition12, 2004); 40 sheep stolen by injuring the shepherds who keep vigil of flock in kadiri mandal (Eenadu District Edition April 18, 2005); similarly 40 sheep were stolen in Tadimarri mandal by severely attacking the shepherds (Eenadu District February 12, 2007).

**Usurious rates of interest charged by money-lenders**

In the shepherds households sheep is considered the property that was handed over from generation to generation. The flocks so maintained by the households was based on the financial assistance extended either by relatives or friends. And in some cases, shepherds borrowed funds from local money-lenders at high rate of interest. This often worked out to be not economical for the shepherds. At times, on demand the money-lender, the borrowed
shepherds had to sell away their flocks at low rates to clear off their
deads.

Reluctance on the part of the bankers in meeting the financial
needs of the sheep and goat rearers

Since, shepherds used to be illiterates, they are not familiar
with the bank transactions they find it not accessibility to bank
finance to increase their flock size are to buy they needed
equipment and medicines there is no evidence that the banks Field
Officers approached shepherds to know their financial
requirements. A majority of the shepherds did not find access to
banks loans in the study area.

Absence of wool cording units

Even though the district stands second in sheep population,
not even a single wool carding unit seemed to be functioning; all the
wool would be sent out of the district for cording and weaving of
wool blankets. Earlierly, their used to be a cumbly-weaving
cooperative society at Gummagatta. It was closed long back due to
lock of proper maintenance and petternage by the government.

Superstitious beliefs

High rate of illiteracy has been noticed among the
shepherds; they are found to be more gullible and superstitious in
their outlook. They hoped to cure diseases of by performing by
some age-old traditions followed by their fore-fathers. The
shepherds in the Kanagapalli mandal hang upside down a live lamb or sheep to prevent the attack of disease to their flocks. They believe in doing so; because all diseases could be nullified by way of hanging upside down a live lamb/goat.

**Lack of awareness about diseases by the shepherds**

The veterinary services are found to be inadequate and the staff of the veterinary department could not meet shepherds by way conducting awareness camps to sensitize the shepherds about the probable diseases that would often affect the sheep and goats; ignorance on the part of the shepherds coasted them a lot-shepherds suffered high losses on account of enmass death of entire flocks. It is reported that a shepherds who lost entire flocks of 40 sheep at a stretch committed suicide. (Varthaa District Edition February 5,2005).

**Lack of Government assistance**

Although, the district stands second for sheep population, adequate veterinary services have not been made available. As a result, district experienced a heavy losses; 11 lakh sheep died within three months. (Eenadu District Edition March3,2006). It was all because the of government could not bestow enough pattern age for the health and security of the sheep and goat. It is often reported that the veterinary hospitals, most of the times, did not have sufficient medicines.
Acute water scarcity

Water in the most of the tanks not be found in summer. The shepherds find it difficultly maintain their flocks in the district. Some mandals, viz, Kanagapalli, Mudigubba, Rapthadu, Gorantla and Tadimarry face acute water scarcity in summer; hence, shepherds tend their sheep to the neighboring state of Karnataka, to nearby places in Bellary district where H.L.C canal flows. The shepherds found rich availability of fodder and water for their flocks. Nearly, flocks would be maintaining around Bellary for three months in a year.

Attack by wild animals

As the flock of sheep and goat is always found grazing and under resting in the open area, wild animals, such as wolves and leopards found it easy to prey upon the them leopard attacked sheep flock and severely injured 15 sheep and killed five sheep (Eenadu District Edition May15, 2005).

Similarly, leopard attacked flock of sheep and killed at least ten sheep in Amarapuram mandal (Eenadu District Edition December 17, 2006).

Road and Train accidents

On either side of railway track good quality of fodder available. The rearers tend their flock for grazing purpose on either side of the railway track.
Sheep by nature sheepish, if once ship falls in to a pit all other sheep follow suit and if a sheep crosses railway track, the remaining do the same without any thinking-sheepish mentality.

More than 150 sheep died while crossing the railway track when the train was passing through; the flabberghasted sheep ran helter-skelter and fell under the moving train wheels (Eenadu District Edition August 9, 2006).

Similarly, 250 sheep reported to have died in train accident at N.S. Gate in Kanaganapalli mandal (Eenadu District Edition April 2, 2007). Another such accident occurred at Dadulur (village) where around 200 sheep died by falling Volvo lorry.

**Small land holdings by the rearers**

A majority of the sheep and goats rearers come under either marginal or small farmers category based on land house holdings. The land house holdings are just sufficient to keep the flock in the rain and shine in their own lands, leave alone maintaining their own grazing lands. This has seriously constrained in maintaining larger flocks by the shepherds.

**Lack of insecurity to shepherds and sheep and Goat**

Sheep and Goat rearing is being carried on under insecurity conditions in the district. Both shepherds and ruminants - sheep and goat - have been worst affected by the prevailing insecurity
conditions here, in the district. For instance, shepherds who belonged to Kanagapalli mandal took their ruminants for grazing purpose to Bellary district in Karnataka where fodder and water available in plenty. It so happened that the shepherds on their way back arranged pens near Kudair in Anantapur district where they were attacked by pseudo-naxalities who threatened the shepherds at a gun point at midnight and have collected a cash of Rs.15,000 and two mobile phones besides vanishing into the darkness with four sheep (Andhra Jyothi, District education February 20, 2008).

In another incident in which two girls of below 15 years age who were tending goats were attacked and killed around 2 p.m. and fled away with 40 goats in Thadimarry mandal in the district. (Eenadu District education, February 12, 2007).

The incidents of this sort occurring quite often in the district, leaving behind the shepherds’ families with high losses, often irreparable loss of loosing the breadwinners’ of the families concerned.

Prospects

Sheep husbandry has potential in India’s agricultural economy as an increasing need is being felt to diversify farm enterprise to provide greater profits. Sheep husbandry provides two different crops a year: wool and lambs. These crops are
usually harvested at different seasons, which makes for good distribution of income.

Sheep are unique among domestic livestock as they are reared for a variety of purposes and can be maintained under diverse environmental conditions, utilizing uncultivable waste lands and weeds from fields. They contribute to the subtenence of man by supply of food and raw material for clothing.

Certain breeds of Indian sheep possess qualities such as high resistance to diseases and resistance to heat and water stress, qualities that are not found in other exotic breeds.

Sheep is most docile and earliest domesticated among farm animals for basic needs of food and clothings. It converts food and roughage cheaply into good cash products and fertilize land\textsuperscript{1}.

Sheep are small animals easy to manage. They are kept by poor farmers and landless laborers for meat, wool, skin, manure and to some extent even milk. Sheep with multifaceted utility plays an important role in arid and semi-arid areas with marginal and submarginal land unfit for crop production, even under dry land forming.

Growth of sheep industry in India: Among the small ruminants, goats have registered an increase in population at the rate of 4 per cent. Sheep is traditionally a poor man's companion.
South India, in particular, is registering a huge negative growth rate whereas most of the Northern India states are registering a low but a positive growth rate in sheep population. The overall negative growth rate of this ecofriendly animal is causing concern not only because of lowered per capita possession of this valuable animal but also because this would affect the economy of the country and would cause a great loss to the people below the poverty line².

Sheep provides the much needed wool, fibers, manure and to small extent milk also. Considering the overall utility of sheep. A very slow annual growth rate (0.94%) was observed during 1951 to 1996. The highest (4.17%) during 1951 to '61 and followed by declining trend (-2.06%), during 1961 to '72 was found as in case of goat. The main cause of decreasing trend during this period was more slaughter due to increased demand in war period. Again during 1972 to '82 an increasing trend (1.66%) and followed by (0.41%) was observed. The annual growth rate (4.93 %) in crossbred and (1.77%) in indigenous sheep was observed during 1987 to 92³. The highest increase trend in hilly regions and slow in remaining parts of U.P. was found. It seems that there is a direct effect of the sheep is kept mainly for meat, wool and manures for fields. The increased use of chemical fertilizers in the State has a significant effect on sitting of sheep in fields for manures. In spite of this, the sheep population is increasing in hills where pastures are available.
Sheep husbandry has been widely practiced in those areas where agriculture could not be the main occupation. Sheep rearers traditionally lead a nomadic life; sheep in India have an important role in rural economy particularly in arid, semi arid and hilly parts of the country. Sheep rearing is a subsidiary occupation of mainly socio-economically poor farmers and landless laborers.

**Sheep Development**

According to livestock census 2003, there are about 61.47 million sheep and 124.36 million goats in the country. About five million households in the country are engaged in the rearing of small ruminants (sheep, goats and rabbits) and other allied activities. The production of wool was 44.50 million kg during 2004-05. The expected wool production during 2005-06 stands at 50.0 million kg.

The Central Sheep Breeding Farm, Hissar is producing acclimatized exotic/cross bred superior quality rams. The farm has supplied 1370 rams and 50 Rambouillet ewes during 2004-05 to different states. During 2005-06, the farm has supplied 854 rams and 30 crossbred ewes. The target for net production and sale of rams has been kept at 900.

**Conservation of Threatened Breeds**

Population of some of the pure-bred small ruminants, equines, pigs and pack animals has come down considerably and
such breeds have come to the category of threatened breeds in the
country. The farms or the farmers unit in their respective breeding
tract are to be established with cent per cent central assistance for
breeds of these animals wherein their population is less than
10,000 with active participation of State Government and NGOs,
etc.\textsuperscript{7}

A new Centrally Sponsored Scheme for conservation of such
threatened breeds has been started during Tenth Five-Year plan
with a budget outlay of Rs.1500 lakh. During 2005-06, an amount
of Rs.406.92 lakh has been released for conservation of Terrasa
Goat (Rs.20.00 lakh) in Andaman & Nicobar Islands, Buthia Pony
(Rs.44.39 lakh) in Arunachal Pradesh, Yak (Rs.13.00 lakh) in
Himachal Pradesh, Zanskari Horse (Rs. 29.96 lakh ) and Double
Humped camel (Rs.29.85) in Jammu & Kashmir, Madgyal Sheep
(Rs.64.50 lakh) in Maharashtra, Jamunaparti Goat (Rs.59.87 Iskh)
in Uttar Pradesh, Gray Sindhi Horse (Rs.19.70 lakh) in Punjab ,
and Ghoongro pig (Rs.31.15 lakh) Bonpala sheep (Rs.30.00 lakh)
and Garole sheep (Rs.32.25 lakh) & Back Bengal Goat (Rs.32.25
lakh) in West Bengal. There is a budget provision of Rs.400 lakh
under the scheme during 2006-07.\textsuperscript{8}

**Goat rearing**

Goats are widely distributed in all agro-ecological zones of
India. The goat is a friend of the weakest section of society and a
ray of hope in the areas where agriculture is not economically viable and ecologically sustainable.

Goats maintain the nutritional status of the lower strata of people by providing milk and meat, Goats can profitably be raised with low investment under intensive to the most extensive forms of nomadic grazing.

The socio-economic importance of goat rearing is evident from the sharp increase in their population during the post independence period from 47.2 million in 1951-52 to about 125 million today⁹.

It has been estimated that the goat population may reach a figure of 135 million by 2010, when it may stabilize. Presently the annual growth rate it goat population is 3.60 per cent¹⁰.

Annually, India produces 475 million kg of meat, 2.760 million kg of milk, and 130 million kg of skins. 30 Metric tonnes of pashmina and about 90,000 Metric tonnes of manure from goats¹¹.

Looking into the importance of this species in the national economy and poverty alleviation in the rural areas, the Indian Council of Agricultural Research, Ministry of Agriculture, and Government of India established a National Goat Research Centre in the year 1976 at Makhdoom village in Mathura district of Uttar
Pradesh. This Centre was upgraded to the level of a full-fledged Institute in 1979 and named as Central Institute for Research on Goats.

The mandate of the Institute is to undertake research, training and extension education programmes for improving milk, meat and fibre production of goats in the country and to develop processing technology of goat products.\textsuperscript{12}

**Objectives of the institute are**

- To undertake basic and applied research in all disciplines relating to goat production and product technology.
- To develop, update and standardize area specific package of practices concerning feeding, management, breeding and health cover of goats.
- To impart training in specialized fields of research in caprines.
- To undertake programme of transfer of technologies for milk, meat and fibre production and value added products.
- To take part in a programme for development of wasteland through agro-forestry for grazing.

This Institute is located at Makhdoom village, on 302 hectares of snady, kans and munj infested ravine land. The general topography of the land is highly undulating with a difference of about 56 metres between low and high levels.\textsuperscript{13}
Geologically, the land comes under Jamuna alluvial soil category. Underground water resources are saline in most locations excepting some pockets from where drinking water is being harvested.

The Institute functions under the overall administrative control of the ICAR and the Director are the controlling authority at the Institute head quarters. The Institute Management Committee helps in policy making and some administrative matters. The Research Advisory Committee consisting of highly experienced scientists helps in framing research priorities and thrust areas.

The Scientific Research Council of the Institute finalizes and monitors the execution of the research projects. There are four Research Divisions and one section in the institute.

The headquarters of the All India Co-ordinate Research Project on Goat Improvement is also located at the Institute. The institute also maintains a unit of AICRP on sheep for mutton.

In addition, the institute has a unit of All India Coordinated Research Projected (AICRP) on Improvement of feed resources and nutrient utilization for raising animal production. About a dozen externally-funded research projects are also underway at the institute.
India holds a lot of prospects for livestock population. The country had 39.10 million sheep in 1951 which roused to 50.78 million by 1992 further the sheep population touched as high a figure as 61.47 million by 2003. In the case of goat whose population was 47.20 million in 1951 which roused to 115.28 million by 1992 and again it went up to 124.36 million by 2003.

From the above facts it is clearly that there was a lot of prospects for sheep and goat rearing which was reaped up and until 2003.

It is pertinent state that the goat population was more than double the population size of sheep, vide Table: 5.5.

The calculated growth rates both sheep and goat reveals the fact that goat population which was of the order of 2.26 per cent came down to 0.90 per cent between 1978-92 which slightly improved and stabilized at 1.26 per cent between 1992-97 but it drastically came down to 0.22 per cent between 1997-2003.

In the case of sheep one witness rather a mixed growth rates for example, the growth rate of sheep between 1951-56 was 0.10 Per cent and this positive trend continued up to 1996 and their after country tasted negative growth rate at -1.16 per cent between 1996-72. Then slowly picked up momentum and achieved the highest growth rate of 3.53 per cent between 1997-82 followed by negative
growth rate of -1.29 per cent between 1982-87. Good growth rate sheep population was regarded between 1987 and 1997. But later on it declined to 1.12 per cent between 1997-2003. The negative trends that were observed in the growth rate of sheep and goat were largely due to seasonal diseases and fodder scarcity, vide Table: 5.5.

As Anantapur district is located in semi-arid zone, agricultural prospects are not bright. As such, population has learnt, over years, as how to survive picking up activities like sheep and goat rearing.

As a matter fact, the district stands second in sheep and goat rearing in the state of Andhra Pradesh, providing livelihoods directly to One lakh households and indirectly to another One lakh persons who comprise butchers, commission agents, traders and a fleet of vehicles engaged in the transport of sheep and goats to various markets both with in and outside the district.

It is pertinent to state that the population of sheep and goat increased rather rapidly between 1965 and 2005. The size of sheep population 1965 was 8,37,771 which rose to 19,05,972 in 2005 and similarly, the sheep population which was 3,53,981 in 1965 which rose to 5,03,275 in 2005, this clearly shows that the geo-climatic conditions are quite favorable to rear sheep and goat in the district.
Another revealing fact that, the shepherds response to price stimuli of mutton is positive. For instance, the price per kilogram sheep meat was Rs.5 in 1965, which rose to Rs.30 in 1985; further it rose to Rs.90 in 1995 and by 2005 it was Rs.160 per kilogram of sheep mutton.

Whereas the price per kilogram goat meat was Rs.4 in 1965, which rose to Rs.25 in 1985; Rs.85 in 1995 and by 2005 it was Rs.150 per kilogram of goat mutton.

The raising prices of both sheep mutton and goat mutton attracted a good number of rearers to take up this activity in the district, on a large scale by large number of rearers. The urbanization trend too sufficiently supported many to take up activities of sheep and goat rearing in the district. The observed urbanization trends, in brief, explained hereunder;

**Urbanization in India**

During the last 100 years, the urban population living in towns and cities has steadily increased. In 1901, about 26 million persons were enumerated as urban residents who in 2001 reached to about 285 million. India's urban population is the largest urban population in the world, second only to China, though India's urban population as a proportion of total population cannot be considered to be very much (against the background of 85 per cent in Australia, 86 per cent in New Zealand, 77 per cent in Japan, 72 to 77 per cent
in North America, South America, Latin America and Europe, and 34 per cent in Africa and Asia). It would be true to say that by and large, the trend observed reveals increase in the percentage of living in urban areas in the recent times in India.

The projected urban population as displayed in the table 5.6 clearly states the fact that the urban population is going to increase steadily in the years to come. The percentage of urban population to in India projected to be 31 per cent in 2005 and by 2025 it would reach 43 per cent and by 2030 the percentage of urban population in India is projected to be 46 per cent total population. The increase in urban population provides a sufficient impetus for furthering the activities of sheep and goat rearing in the district.

The sheep population between 1965 and 2005 increased about 2.3 fold whereas the price per kilogram of sheep mutton during the period increased by 32 fold and the goats population during the period increased by about 1.4 fold whereas the price per kilogram of goat mutton was increased by 38 fold during the period in the district, implying the fact that there exists a vast scope for expansion of the activities of sheep and goats rearing which provides a large scope for increase in the income and employment levels in the district, (vide Table:2.8 and 2.9).

Undoubtedly, the district stands to profit by extensively under-taking the sheep and goat rearing activities, provided the
banks provide easy loan access to shepherds and the government makes provision for water nearby grazing lands during summer season in the district.

Table: 5.5
Sheep and Goat Population and growth rates in India, during 1951-2003

<table>
<thead>
<tr>
<th>S.No</th>
<th>Year</th>
<th>Population and Growth rates (%) (In million Numbers)</th>
<th>Sheep</th>
<th>Goat</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1951</td>
<td>39.10</td>
<td>47.20</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1956</td>
<td>39.30</td>
<td>55.40</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.10)</td>
<td>(3.26)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1961</td>
<td>40.20</td>
<td>60.90</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.45)</td>
<td>(1.91)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1966</td>
<td>42.40</td>
<td>64.60</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.07)</td>
<td>(1.19)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>1972</td>
<td>40.00</td>
<td>67.50</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-1.16)</td>
<td>(0.88)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>1977</td>
<td>41.00</td>
<td>75.60</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.50)</td>
<td>(2.29)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>1982</td>
<td>48.76</td>
<td>95.25</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(3.53)</td>
<td>(4.73)</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>1987</td>
<td>45.70</td>
<td>110.21</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-1.29)</td>
<td>(2.96)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>1992</td>
<td>50.78</td>
<td>115.28</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.13)</td>
<td>(0.90)</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>1997</td>
<td>57.49</td>
<td>122.72</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.51)</td>
<td>(1.26)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>2003</td>
<td>61.47</td>
<td>124.36</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.12)</td>
<td>(0.22)</td>
<td></td>
</tr>
</tbody>
</table>

Source: Ministry of Agriculture, Government of India.
Table: 5.6
Trends in Urbanization in India

<table>
<thead>
<tr>
<th>S.No</th>
<th>Year</th>
<th>Actual Size of Population lived in Urban areas (in millions)</th>
<th>Percentage of Population lived in Urban areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1951</td>
<td>62.5</td>
<td>17.6</td>
</tr>
<tr>
<td>2</td>
<td>1961</td>
<td>78.9</td>
<td>18.0</td>
</tr>
<tr>
<td>3</td>
<td>1971</td>
<td>109.1</td>
<td>20.2</td>
</tr>
<tr>
<td>4</td>
<td>1981</td>
<td>159.5</td>
<td>23.3</td>
</tr>
<tr>
<td>5</td>
<td>1991</td>
<td>217.6</td>
<td>25.7</td>
</tr>
<tr>
<td>6</td>
<td>2001</td>
<td>285.0</td>
<td>27.8</td>
</tr>
<tr>
<td>7</td>
<td>2005</td>
<td>330.120000</td>
<td>31</td>
</tr>
<tr>
<td>8</td>
<td>2010</td>
<td>380.210000</td>
<td>33</td>
</tr>
<tr>
<td>9</td>
<td>2015</td>
<td>435.110000</td>
<td>36</td>
</tr>
<tr>
<td>10</td>
<td>2025</td>
<td>565.80000</td>
<td>43</td>
</tr>
<tr>
<td>11</td>
<td>2030</td>
<td>634.05000</td>
<td>46</td>
</tr>
</tbody>
</table>

Projected Urban and Population

<table>
<thead>
<tr>
<th>Year</th>
<th>Population (in millions)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>330.120000</td>
<td>31</td>
</tr>
<tr>
<td>2010</td>
<td>380.210000</td>
<td>33</td>
</tr>
<tr>
<td>2015</td>
<td>435.110000</td>
<td>36</td>
</tr>
<tr>
<td>2025</td>
<td>565.80000</td>
<td>43</td>
</tr>
<tr>
<td>2030</td>
<td>634.05000</td>
<td>46</td>
</tr>
</tbody>
</table>

Source: Urbanization and Growth of Million + Cities in India
Dr. U.V. Somayajulu, Mr.Tilakmukherji, TNS India
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