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# UNIT 17 LIVESTOCK AND RELIEF MEASURES

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## 17.0 OBJECTIVES

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After reading this unit, you should be able to:

- Discuss the effect of disasters on livestock population and health;
- Comment upon the problems of livestock in disaster situation;
- Indicate relief measures for livestock; and
- Explain the overall livestock relief management process

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## 17.1 INTRODUCTION

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In this unit, we will discuss the importance of livestock in India in terms of its economic importance and also the effect of disasters on the livestock population and health. In addition, livestock problems in disaster situations and relief measures will be briefly described.

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## 17.2 IMPORTANCE OF LIVESTOCK IN INDIAN SITUATION

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Livestock has been an integral part of human civilisation and culture right from the time that humans started domestication of animals. In early times, livestock possession was a symbol of progress and prosperity. Even in these times, the most significant positive point in favour of animal husbandry is its employment potential for rural poor. As it does not demand more skill, it suits the farmers and landless rural agricultural labourers well. It is not only an alternate source to provide livelihood but also a proposition favoured by weaker sections of the society, most significantly, the women. Dairy farming by landless and poor farmers provides employment potential to their family members and substantially contribute to their family income. One study of National Dairy Research Institute, Karnal shows that a number of dairy animals kept by landless poor farmers per household is less but more productive compared to that of big landlords/cultivators.

The National Commission on Agriculture in India observed that next to crops, animal husbandry has the largest employment potential in rural areas. This sector can make significant potential in direct and indirect employment in several ancillary activities (such as livestock feed, dairy and poultry equipment, leather and wool industry etc.) for the weaker sections of the society.

The importance of livestock is depicted pictorially in Fig. 1

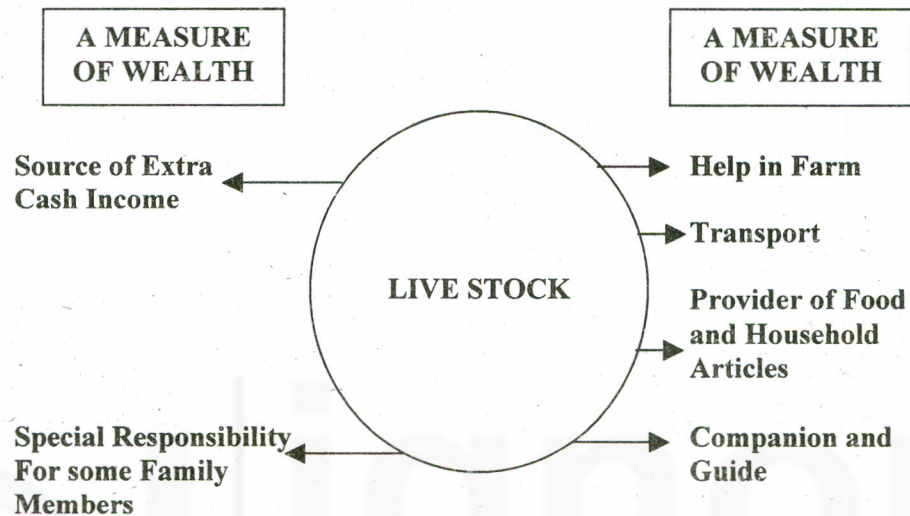


Figure 1

### 17.3 NEED FOR PROTECTING LIVESTOCK DURING DISASTERS

There is a mutual give and take relationship between livestock and rural community. The major livestock products or outputs can be divided into 10 categories as depicted in Figure 2, which also shows the seven categories of inputs. Income from livestock includes not only cash from sale of animals, but also provision of services such as ploughing and transport. Land and agricultural improvement requires animal traction for ploughing, animal power for pumping water and post-harvest processing. The use of dung for manure and fuel and the making of fertiliser from dung, bone, feather or horn are obvious livestock outputs. Livestock products which are used as clothing include wool, skins, hides, leather and feathers. In urban areas, livestock are not only companions for blind, elderly or lonely people but also provide security. The positive hygiene and health aspects of livestock output include soap making from animal products, transportation of water and the garbage-scavenging activities of pigs.

Seeing the multiple uses of the livestock population in India and particularly in the rural society, it is important to protect livestock in disaster situations like floods, droughts and cyclones. During these natural calamities, animals may be lost due to drowning, running away out of fright, death due to snakebites etc. More common and severe damage to livestock are incurable injuries, starvation of animals due to being stranded and death due to various diseases after the disaster.

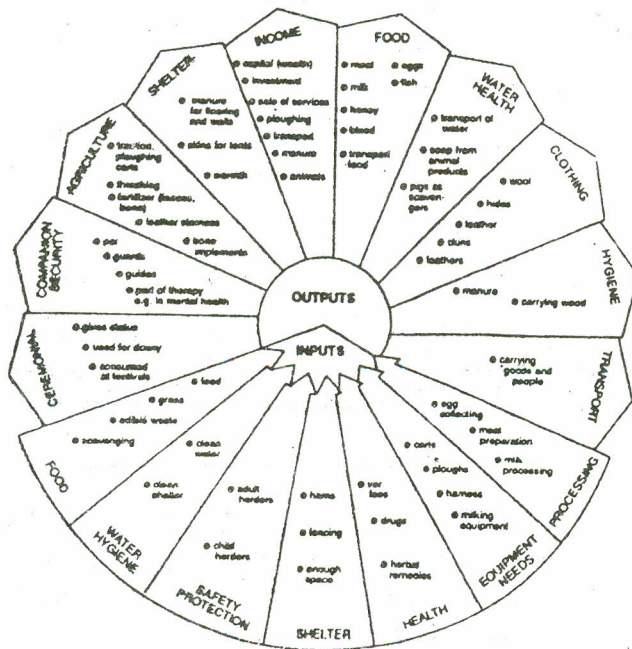


Figure 2: Community Inputs and Livestock Outputs

Whenever, there is any natural and human-made disaster, attention of the Government, NGOs and others are focused on human population. Most of the relief and rehabilitation works are for affected human community. The next focus is normally on livestock and other damages. According to the Government of India policy, first priority in disaster situation is to save human lives and provide them relief followed by livestock relief and then only come other aspects (viz. repair of roads, bridges, other infrastructure, houses etc.) Hence, disaster manager has to perform an important function to organise disaster relief to livestock next only to taking care of humans.

**Check Your Progress 1**

- Note:** i) Use the space given below for your answers.  
 ii) Check your answers with those given at the end of this unit.

1) Briefly discuss the priority systems in a disaster situation.

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2) Highlight the importance of livestock in Indian situation.

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## 17.4 LIVESTOCK PROBLEMS IN A DISASTER SITUATION

It has been stated above that during any natural calamity, prime concern of authorities, NGOs and related organisations is to save human lives and provide relief to the affected community. Livestock and infrastructure are always a second or third priority. The animal population is also affected equally in any disaster but their relief is normally neglected. It is also clear from the introduction of this unit that livestock is one of the major sources of our national wealth. As a significant part of sectoral growth and employment generation depends on livestock economy, its importance cannot be minimised in the development process of Indian economy. Loss of any form of livestock will affect the economic recovery of the people and will have a delayed and long lasting ill-effect on agriculture and people's lives, especially the rural poor. Some of the effects of various types of disasters on livestock are given below:

Whenever a disaster occurs, livestock is affected equally like humans. Even though a disaster usually lasts for a small period of time only, the loss of lives could be heavy.

### UTTARKASHI EARTHQUAKE 1991

In villages near the epicentre of the earthquake, more animals died than human beings. In village 'Jamak' in which maximum loss of life and damage took place, 72 people died and 200 animals perished -----.

In drought situations, livestock is equally affected as human population. According to information available for 1987 drought, in India, which is still the latest widespread drought of the country, more than 50% of the total bovine population was affected (out of total population of 21.4 million, 12.0 million were affected by drought in affected states and UTs). In some states, the percentage affected was much higher than the national average.

Drought situation also causes malnutrition and leads to starvation deaths of animals. There is short-term as well as long-term impact of the disaster i.e. mortality and morbidity respectively.

In disasters caused by floods and cyclones, the impact on livestock is generally of short-term duration but severe in nature. Non-availability of feed for the duration of floods and epidemic diseases after the floods subside are very common. Incapacitation, disease or even death of livestock may have long-lasting effects on tillage and availability of animal products in the affected parts of the country.

- i) People want to save their own lives and of their family members during disasters but tend to neglect the safety of their animals. Sometimes animals run away in panic.
- ii) Death of animals due to collapse of cattle sheds during earthquakes and landslides. Even if there are no casualties, injuries are often caused.
- iii) It is reported that during the earthquake or during the cyclone, animals try to free themselves of the neck ropes or metal chains. Sometimes, death takes place in this struggle by way of 'asphyxiation'.
- iv) Drowning and washing away of animals in floods is most commonly reported.
- v) Animals and birds are reported as being blown away during cyclones and high winds.
- vi) Animals get stranded on isolated elevated places in case of floods or storm surges.
- vii) Many a time, deaths of animals are caused by attacks through poisonous insects, snakes, rodents and leaches. Long-term starvation deaths are also common.

**Indirect Effects of Natural Disasters on Livestock**

There are many indirect effects of natural disasters on animal population. These can be summed up as follows:

- i) Wet conditions, after floods or cyclones, enhance the chances of infection by internal parasites like round worms, tape worms, liver flukes as well as of many epidemic diseases, like Haemorrhagic Septicaemia (HS), Black Quarter (BQ) or Anthrax.
- ii) There can be non-specific water borne infections causing diarrhoea and other enteric diseases.
- iii) Water and moisture may lead to wet hair coats, sticking of blood sucking leaches, skin disorders and ectoparasites. Standing in wet surfaces or in water can cause 'hoof-rot' and result in lameness.
- iv) Moisture leads to many respiratory disorders in the animals and birds.
- v) Loss of weight in the animals is possible.
- vi) Loss of production of milk is most often reported.
- vii) Similarly, loss of production of eggs in the poultry is reported.
- viii) Losses to the agriculture sector in shortage of ploughing animals are likely.

The extent of damage to the livestock can be understood by following two cases:

**FLOODS IN ASSAM (1988)**

Assam is one of the most flood-prone states, suffers two or eight waves of floods every year. In 1988 (which was one of the worst year), almost all the districts and about 21742 villages were affected (four times more than average villages affected). A total of 99 lakhs of animals (70% of total population were affected) and about 3500 large animals (Valued at Rs. 3.8 crores) were drowned or washed away and lost. About 644 cattle camps had to be run and 4018 technical staff was deputed to carry out relief and rehabilitation work such as vaccination, treatment for injured animals, supply of food and feeding etc. It cost about Rs. 7.5 crores to the state government.

**ANDHRA CYCLONE, 1977/1979/1984/1989**

Andhra is one of the cyclone prone states. It has 1050 km. long coastline, which is exposed to this type of disaster. The cyclone of 1977 is one of the most severe disasters, which struck the Andhra coast. As a result of which 5.74 lakh cattle perished in two worst affected districts. It caused a loss of Rs. 1.5 crores to the state government.

In the cyclone of May 1979, 3 lakh and in Nov. 1984 cyclone, one lakh livestock perished.

In the cyclone of 1989, in Kavali Tehsil alone (in which the cyclone crossed the coast) nearly 1600 cattle were perished (or lost) and 680 poultry farms, with more than one lakh birds, were blown away. The number of sheep and goats that perished in the disaster was several thousand. It cost more than one crore rupee loss to the state.

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## **17.5 PREPAREDNESS, RELIEF, REHABILITATION AND RECONSTRUCTION MEASURES**

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### **Preparedness**

The important measures for disaster preparedness for animals are as follows:

There should be a separate plan for livestock population in the preparedness plan at state, district and even block levels. Similarly, there should be some initiatives by the central as well as state governments to take preventive measures to protect livestock such as-

- Construction of livestock shelters in disaster prone areas. In normal times, these structures can be used for animal feed stores, animal production, extension centre cum veterinary dispensary (on same lines as cyclone shelters are proposed to be used as community centres).
- Requisite stocks should be maintained for fodder, vaccines and medicines for animals in disaster prone areas.
- Animal shelters should be near the human shelters so that people can take their animals with them at the time of warning.
- Community should be trained to protect their animal population in the disaster situation.
- Separate action plan should be chalked out for veterinary staff who should receive the training dealing with to specific disaster situation.
- Contingency plans to remove the animals from affected areas. For poultry, special cages and transport arrangements can be made.
- In cyclone/ flood prone areas, regular mock exercises for livestock protection should be there.

### **Relief**

The various relief measures for animals in the aftermath of disasters are briefly indicated as under:

- Stranded and affected livestock in the disaster should be rescued and taken to safer places such as cattle shelter and provided with basic needs for life i.e. feed, fodder and drinking water.

- The community and trained staff should protect the animals against beasts of prey and poisonous insects, snakes and reptiles.
- The community should maintain hygiene and assist the veterinary staff in giving vaccine and medicines to the injured and affected animals.
- The veterinary and para-veterinary staff should be assisted in damage assessment and specific needs of the cattle.
- Removal of dead animals and disposal of dead bodies should be given high priority.
- Non- Governmental Organisations (NGOs) can play a major role in providing relief to the livestock during the disaster in the following ways-
  - a) establishment and running of cattle camps.
  - b) collection/ transport and distribution of feed and fodder.
  - c) collection of forest grass, straws, etc. for feed.
  - d) accurate reporting on the extent of loss of livestock belonging to individual farmers.
  - e) disposal of animal carcasses
  - f) providing training to the community for animal care during natural disasters.

### Rehabilitation and Reconstruction Measures

- Arrangements could be made for purchase of livestock that the farmers want to sell- out of distress. The cattle can be rehabilitated in 'Goshalas'/ 'Gosadans'.
- Farmers of the disaster-affected area should be encouraged to go for insurance of their livestock so that they may be adequately compensated for the livestock lost, incapacitated or dead due to disasters.
- There is a system of distributed cash relief by the State Government for the loss of animals.
- Reconstruction of damaged veterinary hospitals and artificial insemination centres should be given priority.
- After the disaster, cattle breed of high quality and resistance should be introduced in the area so that better genetic stock could come up for the future.
- Setting up of permanent fodder bank in drought and flood affected areas will help the people in a disaster situation. This will provide permanent feed security system in the vulnerable areas.

### Check Your Progress 2

- Note:** i) Use the space given below for your answers.  
ii) Check your answers with those given at the end of this unit.

- 1) Throw light on the livestock problems in a disaster situation.

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2) Discuss briefly the three major steps in relief measures for livestock.

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3) Mention three important steps in livestock rehabilitation and reconstruction.

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## 17.6 LET US SUM UP

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This unit has highlighted the important role of livestock in Indian rural communities as it helps in the farm and provide extra income to poor people. In addition, need for protecting livestock in disaster situations has been discussed. The unit has briefly described the livestock problem in disaster situations. Preparedness, relief, rehabilitation and reconstruction measures have also been discussed.

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## 17.7 KEY WORDS

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- Livestock** : Animals kept on a farm for use or profit
- Preparedness** : Actions designed to minimise loss of life and damage, and to organize and facilitate timely and effective rescue, relief and rehabilitation in the times of disaster. To be more specific, preparedness is concerned with understanding the threat, forecasting and warning; educating and training officials and the populations; establishing organizations for disaster management, including preparation of operational plans, training relief groups, stock piling supplies and earmarking necessary funds.
- Relief** : Relief means meeting the immediate needs for food, clothing, shelter and medical care of disaster victims; assistance given to save lives and alleviate suffering in the days and weeks following a disaster. The relief period, for creeping disasters may be months or even years.
- Resettlement** : Resettlement is an important component of a rehabilitation programme following a disaster. Displaced population requires to be resettled as a part of the process of rehabilitation.



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## 17.8 REFERENCES

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- Bhanja, S. K. *Livestock Development for Rural Poor*. Kurukshetra: Jan., 13-14, 1989.
- Jayachandra, K. *Milch Animal Scheme in Drought-Prone Areas: A Case Study*, 1990.
- Misra, G. P. *Managing Livestock to Boost Rural Economy*. Yojana, July 1-15, p. 17-18, 1986.
- Sastry, N. S. R. *Managing Livestock Sector During Floods and Cyclones*. Journal of Rural Development Vol. 13 (4): 583-592, 1994.
- The Drought of 1987- Response and Management*, Vol. I & II, Ministry of Agriculture and Cooperation, Government of India.

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## 17.9 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

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### Check Your Progress 1

- 1) Your answer should include the following points:  
According to the Government of India policy:
  - First priority in a disaster situation is to save human lives and provide them relief followed by livestock and other aspects like repair.
- 2) Your answer should include the following points:
  - Next to agriculture, animal husbandry has the largest employment potential in rural areas.
  - It is not only the alternate source to provide livelihood but a proposition favoured by weaker sections of the society like women.
  - Dairy farming by landless and poor farmers provide employment potential to their family members.
- 3) Your answer should include the following points:
  - Considering the multiple uses of the livestock population in India, it is important to protect livestock in a disaster situation.
  - Next to agriculture, animal husbandry provides the largest employment in rural areas.
  - It is the main livelihood for landless and poor farmers as well as for weaker sections.
  - Loss of livestock will not only affect the economy adversely but also will have a long lasting ill-effect on people's lives, especially the rural poor.

### Check Your Progress 2

- 1) Your answer should include the following point.
  - Some of the major points to be kept in mind are the direct effects:
    - i) Animals run away in panic;
    - ii) Death of animals due to collapse of cattle sheds;
    - iii) Drowning of animals in floods;
    - iv) Starvation deaths; and
    - v) Respiratory diseases in wet conditions.

## Relief Measures

- Some of the indirect effects are:
  - i) Wet conditions after floods or cyclones enhance the chances of infection by internal parasites; and
  - ii) Loss to agriculture sector due to shortage of ploughing animals.
- 2) Your answer should include the following points:
  - The animals should be provided basic requirements i.e. food, shelter, drinking water, and medicines.
  - The community and trained staff should protect the animals against beasts of prey, poisonous insects, snakes and reptiles.
  - Removal of dead animals and disposal of dead bodies should be given high priority.
- 3) Your answer should include the following points:
  - Arrangements be made for purchase of deemed stock that the farmers want to sell out of distress (sheep, goat etc.). Cattle should be rehabilitated in 'Goshalas' and Gosadans.
  - Farmers of the disaster affected area should be encouraged to go in for insurance of their livestock so that they may be compensated for the livestock lost, incapacitated or dead in the disasters.
  - Reconstruction of damaged veterinary hospitals and artificial insemination centres should be given priority.