

## **EXTENT OF CRISIS AS PERCEIVED BY SHEEP FARMERS IN TAMIL NADU**

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**Abstract:** A study was undertaken in Erode district in Tamil Nadu to know the extent of crisis in sheep farming as perceived by the sheep farmers. The data were collected by interview schedule from 100 farmers selected from 20 villages using multistage random sampling procedure. Among the Twenty five crisis situations, heavily rainfall during monsoon, occurrence of blue tongue and sheep pox were perceived to be the major crisis situations.

**Keywords:** Crisis, sheep farming, sheep farmers, Heavy rainfall.

### **Introduction**

Sheep farming is a major source of livelihood for the farmers. Sheep husbandry occupies an unique place in the farming systems of the areas with limited land or water resources due to their ability to convert resources unusable by man or by the larger livestock categories into highly nutritious food and by providing 'year round employment' and 'sustainable income'(1). The success of enterprise depends mainly on its efficient management in achieving higher production and productivity. However, the frequent occurrence of drought and famine, continuous declining in grazing resources cyclones, flood, drought and disease outbreaks etc., causes sudden disturbances in economic equilibrium of the enterprise (2&3). Besides these, the extremely unfavorable conditions caused by societal, governmental, institutional, personal, managerial and marketing factors often threatens the future or existence of the enterprise and puts the individual/ entrepreneur in a state of crisis overpowering his/her homeostatic mechanism. Sheep enterprise is no exception to this and the sheep farmers often face severe crisis on successfully managing their enterprise due to several unforeseen factors. From this background, the present study was taken with the objective to know the extent of crisis in sheep farming as perceived by the sheep farmers.

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## Research Methodology

The study was carried out in Erode district of Tamil Nadu state, which was selected on the basis of highest sheep population among all the districts in the state (4). Among the seven taluks in Erode district, two taluks namely Perundurai and Dharapuram were randomly selected. From these two taluks, 10 villages each were selected by simple random sampling method. Thus a total of 20 villages were selected. A sample of 50 respondents was chosen from the selected 10 villages in each taluk by applying proportionate random sampling technique. Thus a total of 100 respondents were selected which constitute the sample for the study. The identified variables were then sent to 60 experts / judges to indicate the relevancy of each variable on a four point continuum ranging from “most relevant”, “relevant” “least relevant” and “not relevant” with assigned weightages of 4, 3, 2 and 1 respectively. Perceived extent of crisis in sheep farming was operationalized as a perceived situation of concentrated period of disturbance caused by environmental and/or man made factors affecting sheep production and productivity and in turn the sheep farmers income, thereby stimulating action on the part of sheep farmers to overcome crisis situation.

### Measurement of extent of crisis in sheep farming

It was arrived by ranking the 25 items/statements selected for the study based on the index of each item which was calculated as follows:

$$Crisis\ Index = \frac{Actual\ score\ for\ an\ item}{Maximum\ possible\ for\ that\ item} \times 100$$

Based on score obtained, the respondents were classified as high, medium and low level categories using mean and standard deviation.

## Result and discussion

### Extent of crisis in sheep farming as perceived by sheep farmers

various crisis situations listed in Table 1, heavy rainfall during monsoon, received highest value in the crisis index and was ranked first followed by occurrence of bluetongue which was ranked second. This indicates that an overwhelming majority of the respondents perceived these two crisis situations to a greater extent that had put them in extreme difficulty in running their sheep farming enterprise profitably. According to the respondents, the locale selected for the study experienced heavy rainfall during monsoon, which inundated their surroundings and prevented / restricted movement of sheep especially for grazing. This resulted in greater hardship to the respondents in meeting the feed requirements of the sheep essential for its survival. Frequent outbreak of bluetongue disease in the study area resulted in

heavy mortality and morbidity of the sheep and consequently huge financial loss to the sheep farmers. Occurrence of sheep pox was also found to cause extreme difficulty to the respondents and hence it occupied the third position in the crisis ranking. Sheep affected with pox disease will have poor growth rate and low body weight gain which eventually cause lower productivity of sheep and greater loss in the profit margin to the farmers

The crisis situations such as gastro-intestinal parasitism, exploitation by middlemen, tick infestation and absence of organized marketing were also found to threaten the existence of the sheep enterprise to a greater extent and were assigned IV, V, VI and VII ranks respectively according to the sheep farmers perception. Unawareness about the importance of regular deworming and irrational use of anthelmintics led to uncontrolled parasitic infection in the sheep flock that eventually resulted in poor feed conversion ability and low weight gain and greater financial loss. Due to the absence of organized marketing, middlemen were reported to offer very low price for sheep leaving the sheep farmers in the lurch. Heavy tick infestation caused anemia and transmission of protozoan diseases, consequently leading to heavy mortality, morbidity and poor productivity.

**Table 1 : Ranking of extent of crisis in sheep farming as perceived by sheep farmers  
n = 100**

| S.No. | Crisis situation  | Crisis score | Index | Rank  |
|-------|---|--------------|-------|-------|
| 1     | Heavy rainfall during monsoon   | 360          | 90.0  | I     |
| 2     | Occurrence of bluetongue  | 355          | 88.0  | II    |
| 3     | Occurrence sheep pox  | 346          | 86.0  | III   |
| 4     | Gastro-intestinal parasitism  | 328          | 82.0  | IV    |
| 5     | Exploitation by middlemen   | 315          | 78.7  | V     |
| 6     | Tick infestation  | 310          | 77.5  | VI    |
| 7     | Absence of organised marketing  | 309          | 77.0  | VII   |
| 8     | Acute shortage of green fodder  | 299          | 74.7  | VIII  |
| 9     | Prolonged period of drought   | 298          | 74.5  | IX    |
| 10    | Wound myiasis   | 297          | 74.3  | X     |
| 11    | Non-availability of grazing land  | 293          | 74.2  | XI    |
| 12    | Extreme hotness / heatstroke  | 276          | 69.0  | XII   |
| 13    | Frequent attack of sheep flock by predators like stray dogs, foxes, etc | 273          | 68.2  | XIII  |
| 14    | Indebtedness  | 273          | 68.2  | XIII  |
| 15    | Liver fluke infestation   | 264          | 66.0  | XIV   |
| 16    | Coccidial infection   | 258          | 64.5  | XV    |
| 17    | Occurrence of PPR   | 250          | 62.5  | XVI   |
| 18    | High lamb mortality   | 237          | 59.2  | XVII  |
| 19    | Occurrence of FMD   | 235          | 58.5  | XVIII |
| 20    | Vaccination failure   | 219          | 54.7  | XIX   |
| 21    | Occurrence of enterotoxaemia  | 216          | 51.2  | XX    |

|    |   |     |      |       |
|----|---|-----|------|-------|
| 22 | Occurrence of Anthrax   | 205 | 50.5 | XXI   |
| 23 | High cost of concentrate feed   | 202 | 45.2 | XXII  |
| 24 | Proclamation of legislation / executive orders preventing grazing of sheep in forest land | 100 | 25.0 | XXIII |
| 25 | Lack of formal crisis/disaster management institution nearby                              | 100 | 25.0 | XXIII |

Table 1 further indicates that 'acute shortage of green fodder (VII), prolonged period of drought (IX), wound myiasis (X) and non- availability of grazing land (XI) were also perceived to be the important crisis situations by the sheep farmers. Longer duration of drought period and absence of assured irrigation were found to affect fodder cultivation and hence the respondents felt extreme difficulty in meeting the requirements. Maintenance of poor hygiene and less attention to sheep flock after the occurrence of the diseases like foot rot, Foot and Mouth Disease (FMD), sheep pox, bluetongue, etc., caused wound myiasis to take a heavy toll in the production and productivity of the sheep enterprise.

The crisis situations such as; extreme hotness / heatstroke, frequent attack of sheep flock by predators, liver fluke infestation, coccidial infection and PPR in that order were also considered to be the other important crisis situations. Following this, high lamb mortality, FMD, vaccination failure, enterotoxaemia, anthrax and high cost of concentrate feed were perceived to some extent as crisis by the respondents. Proclamation of legislative / executive order preventing grazing of sheep and lack of formal crisis management institutions nearby were considered to be the crisis situations by none of the respondents.

#### **Distribution of respondents according to their perceived extent of crisis**

Based on the cumulative scores of the 25 crisis situations, the respondents were classified into three categories namely low, medium and high level crisis groups and the same was presented in Table 2. It could be observed that 59.00 per cent of the respondents were in medium crisis level categories, nearly one-fifth of them were found in each of the low (21.00 per cent) and high (20.00 per cent) crisis level categories. The vagaries of nature, occurrence of various diseases and the lack of institutional infrastructure for marketing might have put the respondents in extreme difficulty in running the sheep enterprise and hence majority were found in medium extent of crisis category.

**Table 2: Distribution of respondents according to their perceived extent of crisis**  
n = 100

| S.No. | Levels               | Frequency (f) | Percentage (%) |
|-------|----------------------|---------------|----------------|
| 1     | Low (< 64.07)        | 21            | 21.00          |
| 2     | Medium (64.07-71.37) | 59            | 59.00          |
| 3     | High (> 71.37)       | 20            | 20.00          |

**Crisis as perceived by different categories of sheep farmers and their distribution**

Table 3 shows that majority (78.57 per cent) of the respondents owning small sized flock expressed medium extent of crisis in sheep farming.

**Table 4.4: Crisis as perceived by different categories of sheep farmers and their distribution**

| S. No. | Crisis group | Flock size categories |       |        |    |       |      | Total |    |
|--------|--------------|-----------------------|-------|--------|----|-------|------|-------|----|
|        |              | Small                 |       | Medium |    | Large |      | f     | %  |
|        |              | f                     | %     | f      | %  | f     | %    |       |    |
| 1.     | Low          | 0                     | 0     | 16     | 32 | 5     | 22.7 | 21    | 21 |
| 2.     | Medium       | 22                    | 78.57 | 26     | 52 | 11    | 50   | 59    | 59 |
| 3.     | High         | 6                     | 21.43 | 8      | 16 | 6     | 27.3 | 20    | 20 |

In the medium flock owning category, majority (84.00 per cent) were found to experience medium to low extent of crisis as against large flock owning categories in which majority (77.30 per cent) were found to experience medium to high extent of crisis in sheep farming. Size of the flock seemed to exert influence on the sheep farmers' perception and hence the trend in distribution among the respondents owning medium sized flock was medium to low as against medium to high in both small and large flock owning categories.

**Summary**

Heavy rainfall during monsoon was perceived to be the most important crisis by vast majority of the respondents. Heavy rainfall during the north east monsoon in the months of October and November caused inundation surrounding the sheep farm and prevented or restricted movement of sheep for grazing. To prevent inundation, frequent desilting of drainage channels and construction of flood water drainage system are of paramount importance in overcoming the crisis. occurrence of bluetongue and sheep pox were perceived to be next important crisis to manage this by implementing suitable community participated animal disease surveillance and monitoring system is in urgent demand to combat the ill-effects of the various diseases affecting the livestock in general and the sheep in particular.

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