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## SCALE OF LIVESTOCK ENTERPRISE

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### SCOPE

Livestock enterprise has been considered to include households engaged in (a) rearing of livestock for milk and animal power: this will include the ISIC Code Nos.<sup>1</sup> 0401, 0402, 0403, 0404 and 0405; (b) meat and eggs: this will include ISIC Code Nos. 0421, 0422, 0431, 0432; (c) bee-keeping and honey making: this will be represented by ISIC Code Nos. 0441 and 0442; (d) textiles (wool and silk): this includes ISIC Code Nos. 0411, 0412 and 0450; (e) the rest of the households engaged in rearing of other small animals and insects as also the preparation of other animal husbandry products such as hides and skins, ivory, teeth, hair, etc: this will be reflected by ISIC Code Nos. 0461, 0462, 0481, 0482, 0483, 0484.

### CRITERIA FOR SCALE OF LIVESTOCK ENTERPRISE

It has been assumed in this paper that the criteria for judging the scale of enterprises engaged in livestock rearing and their products will be as under:

- (i) the number of workers in a household associated with livestock rearing and their products.
- (ii) the size of holding with which the livestock enterprises are associated and the isolation of significant size classes of holdings.
- (iii) duration of engagement in livestock during the year.
- (iv) the proportion of hired workers to family workers. This will reflect the commercial character of these enterprises.

The livestock enterprises have been considered here in terms of households associated only with livestock and those engaged both in livestock and cultivation. These data have been collected in 1961 Census through the household schedule.

With these preliminary remarks, it is proposed to study the distribution pattern of the various components constituting the livestock enterprise as described above. There are about 331 thousand households associated with livestock enterprises only in rural areas as against 41 thousand in urban area. Of the total households in rural areas, 267.4 thousand households are engaged in rearing of livestock for milk production and animal power. Another 20 thousand are associated with meat and egg preparations. About 42 thousand households happen to be engaged in wool and silk textiles.

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*N. B. :* Detailed Tables giving data on which this Paper is based, have not been appended in order to save space.

1. The description of Code Numbers is given in Appendix I.

If we study the State-wise distribution of each of the five components into which the livestock enterprises have been separated for rural areas, it is observed that of the total households engaged in rearing of livestock for milk and animal power, a little more than one-fourth of the total are located in Uttar Pradesh followed by another one-fifth in Gujarat. Next in importance are Punjab, (13.6 per cent), Andhra Pradesh (9.8 per cent) and Rajasthan (8.2 per cent). Considering the households engaged in meat production, it is observed that Uttar Pradesh occupies the first place accounting as it does for a little more than one-fourth of the total households. Andhra Pradesh follows with 21 per cent and Maharashtra with 14 per cent. Punjab accounts for only 8 per cent of the total households. The households engaged in wool and silk textiles reveal slightly different distribution pattern with Andhra Pradesh accounting for about two-fifth of the total households engaged in textiles to be followed by West Bengal with 15 per cent, Punjab and Maharashtra with each about 12 per cent. The households associated with bee-keeping and honey making are mostly concentrated in Uttar Pradesh, Andhra Pradesh and Mysore together accounting for about 65 per cent of the total. The miscellaneous category of households which includes the rearing of small animals as also the preparation of ivory products and hides and skins is largely concentrated in Punjab with 71 per cent of total households.

The distribution pattern for urban areas in the five categories considered is different from rural areas from the point of view of relative distribution in the various States. The important States and their share for the above 5 categories are as follows :

- Category I: Gujarat (26.0),  
Uttar Pradesh (16.5),  
Maharashtra (13.1).
- Category II: Andhra Pradesh (36.6),  
Maharashtra (12.5).
- Category III: Uttar Pradesh (27.7),  
Maharashtra (22.2),  
Madras (16.6).
- Category IV: Mysore (38.4),  
Andhra Pradesh (30.5).
- Category V: Orissa (37.0),  
Punjab (34.8).

Considering all the 5 categories under livestock enterprises, it is observed that Uttar Pradesh alone accounts for 25 per cent of the total households in rural areas as against 15 per cent in urban areas. The other important States in rural areas are Gujarat (15.3 per cent), Andhra Pradesh (13.9 per cent), Punjab (13.1 per cent). In the urban areas, the important States besides Uttar Pradesh are Gujarat (22.7 per cent), Maharashtra (12.6), Andhra Pradesh (8.9 per cent).

If we study the distribution pattern of each of the five categories separately for various States, it is observed that in both rural and urban areas, Category I (milk production and animal power) accounts for most significant proportion

of the total livestock households barring West Bengal. Thus under the category the proportions vary from 49.52 per cent in Mysore to 99.76 per cent in Jammu & Kashmir. West Bengal has its households mostly associated with wool and silk textiles. The other three States in rural areas important for wool and silk textiles are Mysore (41.82 per cent), Andhra Pradesh (33.30 per cent) and Maharashtra (26.73 per cent). The households associated with meat and eggs seem to be concentrated in Kerala (38.28 per cent). The other important States are Madras (17.51 per cent) and Maharashtra (15.13 per cent). Perhaps the high proportions of households in the coastal States are due to the prevalence of fishing industry there.

In urban areas the broad picture as depicted in the rural areas is also reflected with the difference that in West Bengal households are mostly concentrated in the rearing of livestock for milk and animal power. In category II, Assam has occupied a place of pre-eminence accounting for about 42 per cent of households.

#### SCALE OF LIVESTOCK ENTERPRISE IN SELECTED DISTRICTS

With a view to study the scale of livestock enterprise, it was thought desirable to select major districts in the country which account for about 2,000 or more households associated with livestock only. Taking this criterion, 50 districts come to the picture and their State-wise break-up is as follows:

State					No. of districts selected
Andhra Pradesh	..	..	..	..	12
Madras	..	..	..	..	2
West Bengal	..	..	..	..	1
Gujarat	..	..	..	..	11
Maharashtra	..	..	..	..	1
Uttar Pradesh	..	..	..	..	7
Punjab	..	..	..	..	12
Rajasthan	..	..	..	..	4
Total					50

These districts have been studied both for the households engaged in livestock only as also those engaged both in livestock and cultivation from the point of view of size of working strength and size of holding and their duration of engagement so as to reflect the scale of their enterprises.

The classification of households engaged only in livestock by the number of workers associated with livestock enterprises has been attempted for the 50 selected districts. The sizes of working strength adopted in 1961 Census for classification of households are : 1 worker, 2 workers, 3-5 workers, 6-10 workers, over 10 workers.

Roughly speaking, the households associated with 1 and 2 workers might be considered households working on a small scale in the various livestock enterprises; 3-5 worker households medium scale of livestock enterprises and 6--worker households large scale enterprises. It is observed that in the rural areas, most of the households get exhausted in one worker and 2 worker categories of households. The relative proportions of medium scale and large scale of households are relatively of a lower order in most of the districts considered here. In some of the districts, however quite a sizable proportion of households engaged in livestock are operating on medium scale. Some of the districts in Saurashtra region of Gujarat and Telengana region of Andhra Pradesh seem to be having households (about 20 per cent or more) operating on medium scale of livestock. Thus, it seems that the most important livestock belt is concentrated in Saurashtra region of Gujarat and Telengana region of Andhra Pradesh, particularly from the point of view of relatively high scale of operation in terms of workers associated with livestock enterprise only.

#### *Double Occupation Households*

For the 50 selected districts for which we have studied the size of working strength in single occupation in livestock households, the study has also been made for double occupation households (households engaged both in livestock and cultivation). To study their distribution pattern by size classes of holding the broad sizes of holdings under which these households have been grouped are up to 5 acres, 5-10 acres, 10-15 acres and 15 acres and above.

The percentage distribution of double occupation households by size class of holding has been studied for each of the 50 districts and it has been assumed that double occupation households associated with 5 acre holdings operate on small scale livestock enterprise ; 5-10 acres medium scale of livestock enterprise and those with 10 acres and above, large scale of livestock enterprises. It may be noted that in Andhra Pradesh, Guntur, Nellore, Kurnool, Mehbubnagar, Hyderabad and Nalgonda are having households (at least 15 per cent) which seem to be operating on large scale of livestock enterprise. Such districts in Gujarat are Jamnagar, Rajkot, Surendranagar, Bhavnagar, Amreli, Junagadh, Kutch, Banaskantha, Ahmedabad, etc. It may be stated that the proportion of large scale livestock enterprise households is about 40 to 60 per cent in many of these districts of Andhra Pradesh and Gujarat. This further confirms the assertion earlier made about livestock belt in Saurashtra region of Gujarat and Telengana region of Andhra Pradesh. It may, however, be pointed out that the double occupation households have a wider spread as these are also located in the districts of Maharashtra, Uttar Pradesh, Punjab and Rajasthan as will be seen from Table I.

#### *Duration of Engagement Round the Year*

If we consider the scale of operation from the point of view of the duration of engagement in livestock enterprise in rural areas for both single occupation and double occupation households, it is observed that a significant majority of both sets of households seem to be located under the duration of engagement 10-12 months. This implies that the livestock enterprise operations continue round the year and therefore the problem of seasonality in household industry which

TABLE I—LARGE SCALE LIVESTOCK ENTERPRISE IN DOUBLE OCCUPATION HOUSEHOLDS AND THE PROPORTION OF SUCH HOUSEHOLDS BY SELECTED DISTRICTS

State	Districts	Percentage to total
Maharashtra	Sholapur	68.43
Uttar Pradesh	Bijnor	25.70
	Saharanpur	30.16
Punjab	Rohtak	58.31
	Karnal	56.20
	Ambala	40.95
	Ludhiana	53.12
	Ferozepur	57.55
	Amritsar	52.53
	Gurdaspur	43.41
	Bhatinda	52.94
	Sangrur	60.35
	Patiala	55.66
	Jaipur	51.58
Rajasthan	Jalore	62.91
	Pali	41.73

is so much talked about these days does not seem to exist at least in livestock enterprise. This at least is the result, if we consider, of the distribution of these households from the point of view of number of days they work. It is not possible on the basis of the data collected in 1961 Census to speak of the extent and level of under-employment as the data relating to number of hours per day for which these households work in livestock enterprises were not collected.

#### *Commercialisation*

To study the impact of commercialisation in livestock household industry, the number of hired workers per 1,000 of family workers in single and double occupation households was also studied for the selected districts. The number of hired workers per 1,000 family workers work out roughly between 1 to 3 per cent in single occupation households and one might therefore conclude that perhaps livestock enterprises, by and large, are more or less family occupations and commercialisation has not made much headway in this direction. In case of double occupation households associated with livestock and cultivation, the relative percentage of hired workers exceed their percentage in single occupation households and vary between 3-10 per cent barring North Arcot with 24 per cent. The higher proportion in double occupation households might be because of use of hired workers for the major period of the time for cultivation and their engagement in livestock enterprise might be casual and relatively less time consuming.

## CONCLUSION

It is evident from the foregoing that the duration of engagement round the year and the hiring of workers do not play a significant role in determining the scale of livestock enterprise. However, the input of family workers and their association with different categories of sizes of holdings reflect quite significantly the scale of livestock enterprise. In the case of households engaged in livestock only most of the districts have majority of the households operating on a small scale of livestock enterprise, associated as these are with one or two workers. Single occupation households with 3-5 workers seem to be concentrated in Saurashtra region of Gujarat and Telengana region of Andhra Pradesh. The households engaged both in livestock and cultivation are also associated with higher size of holdings in significant proportions in Saurashtra region and Telengana region and thus confirm the relatively higher scale of livestock enterprise in these regions. Besides, double occupation households with higher scale of livestock enterprise are also spread out in the districts of Rajasthan along the Aravalli ranges and then these districts extend towards Western Uttar Pradesh and North and Eastern Punjab.

Relatively speaking at State level, one might say that taking into account both single and double occupation households, the various districts of Gujarat are having relatively higher scale of livestock enterprise, followed by Punjab, Andhra Pradesh and Uttar Pradesh.

## APPENDIX I

## EXPLANATION OF ISIC CODE NUMBERS

*(a) Milk and Animal Power*

- 0401 Rearing of goat for milk and animal power.
- 0402 Rearing of buffalo for milk and animal power.
- 0403 Rearing of cows for milk and animal power.
- 0404 Rearing of camels and other big domestic animals.
- 0405 Production and rearing of livestock mainly for milk and animal power, n.e.c.

*(b) Meat and Eggs*

- 0421 Rearing and production of pigs and goats (mainly for slaughter).
- 0422 Rearing and production of other animals (mainly for slaughter), n.e.c.
- 0431 Poultry keeping and production of eggs.
- 0432 Rearing and production of ducks, hens, etc., and other small birds, e.g., pigeons, parrots, peacock, maina, etc.

*(c) Bee-Keeping and Honey Making*

- 0441 Bee-keeping for production of honey and wax.
- 0442 Collection of wax and honey.

*(d) Textiles (Wool and Silk)*

- 0411 Sheep breeding and rearing.
- 0412 Production of wool.
- 0450 Rearing of tassar/ori/mulberry and other silk worms and production of cocoons and raw silk.

*(e) Miscellaneous*

- 0461 Dog breeding, rearing of rabbits and guinea-pigs.
- 0462 Rearing of other small animals and insects, n.e.c.
- 0481 Collection of bones.
- 0482 Manufacture of glue from animal carcasses.
- 0483 Manufacture of guts.
- 0484 Production of other animal husbandry products such as skin, ivory, teeth and hair, etc.