Household Livestock in the Eruwa District of the Ibarapa Division, Oyo State, Nigeria

by

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SUMMARY

NUMBERS of sheep, goats, pigs, chicken, dogs and cats classified as adult males, adult females and young were counted in Eruwa Ibarapa Division, Oyo State, Nigeria and its associated villages during July and August 1974. Counts involved a total of 1275 households, 769 in the town and 506 in the villages; 9.42 per cent kept sheep, 58.44 per cent goats, 4.32 per cent pigs, 88.00 per cent chickens, 28.16 per cent dogs and 27.38 per cent cats. Means of animals per town household were 4.59 sheep, 3.58 goats, 11.95 pigs, 14.73 chickens, 1.89 dogs and 1.62 cats; means per village household were 6.75 sheep, 5.01 goats, no pigs, 17.60 chickens, 2.01 dogs and 1.81 cats. The investigation has provided a sampling frame from which samples can be drawn for specific investigations and continuing surveillances.

INTRODUCTION

The town of Eruwa and its surrounding villages is situated in the Southern part of the derived savanna zone, 60 km west of Ibadan (capital of Oyo State) and 120 km north of Lagos. The populations of the town and villages counted during the 1963 National Census were 22,887 and 8,479 respectively. The major farming activity is cash cropping of commodities such as maize, yam, cassava, cocoa and tobacco, but both in the town and villages householders keep small numbers of domestic livestock. As a preliminary to assessing mortality and morbidity in these livestock, devising methods of treatment and control and to determining whether these livestock might be a source of zoonotic infections, a census of household livestock was performed in July and August 1974.

METHODS

Information was collected from 769 households in the town and 506 households in the associated villages by four-

teen lay enumerators (senior pupils of the local Grammar School) supervised by the authors. A questionnaire was completed in the presence of a responsible member of the household; this included the identity of the household (National Census Number), the district of the town and the name of the village and the date when the information was elicited. As a further check on the identity of the households the enumerators prepared simple maps. Counts were made of sheep, goats, pigs, chickens, dogs and cats, classified as adult-males, adult females and offspring.

The data, after checking, were coded, transferred to 80 column punch cards and thence to magnetic tape for computer analysis using the Rothamsted General Survey Programme.

Data from the town were analysed separately from those of the villages.

RESULTS

In Table 1 the number of households holding each category of animal is presented. In Table 2 the different combinations of food animals in households is illustrated; it will be seen that goats and chickens are the animals most commonly kept. In Tables 3 and 4, the number of animals of different age groups is given. The validity of these results is being checked, at present, by sample surveys of the 1,275 households; this process will also indicate trends in animal numbers. The final table (5) estimates the number of livestock units (LU) and the mean LU per household; pigs which are of local breeds were allocated 0.1 LU.

Although no question was asked about small rodents, 9 householders volunteered the information that they kept guinea

TABLE 1

Eruwa — Animals held by households (769 Town, 506 Villages) 1275 Total

<i>Households</i>	<i>No.</i>	<i>Town %</i>	<i>No.</i>	<i>Villages %</i>	<i>Total No.</i>	<i>Households %</i>
with Sheep	84	10.93	36	7.12	120	9.42
with Goats	521	67.75	224	44.27	745	58.44
with Pigs	55	7.16	0	0.00	55	4.32
with Chickens	635	82.58	487	96.25	1122	88.00
with Dogs	135	17.56	224	44.27	359	28.16
with Cats	214	27.83	135	26.68	349	27.38

TABLE 2

Eruwa — Distribution of food Animals by households

<i>Animals</i>	<i>Town No.</i>	<i>Households %</i>	<i>Village No.</i>	<i>Households %</i>	<i>Total No.</i>	<i>Households %</i>
Nene	48	6.25	3	0.60	51	4.00
Sheep only	5	0.65	1	0.20	6	0.47
Goats only	74	9.63	15	2.97	89	6.98
Pis only	0	0.00	0	0.00	0	0.00
Chigckens only	166	21.59	268	52.97	434	34.04
Sheep & goats	3	0.39	0	0.00	3	0.24
Sheep & pigs	0	0.00	0	0.00	0	0.00
Sheep & Chickens	13	1.69	10	1.98	23	1.81
Goats & pigs	3	0.39	0	0.00	3	0.24
Goats & chickens	352	45.78	184	36.37	536	42.04
Sheep, goats & pigs	1	0.13	0	0.00	1	0.08
Sheep, goats & chickens	53	6.90	25	4.94	78	6.12
Sheep, pigs & chickens	3	0.39	0	0.00	3	0.24
Goats, pigs & chickens	30	3.91	0	0.00	30	2.36
Pigs & chickens	12	1.56	0	0.00	12	0.95
All animals	6	0.78	0	0.00	6	0.47
Total Household	769	100.00	506	00.00	1275	100.00

TABLE 3

Eruwa — Numbers of animals, Eruwa Town, 769 Households

<i>Animal</i>	<i>No. Households</i>	<i>Male</i>	<i>Female</i>	<i>Young</i>	<i>Total</i>	<i>Mean</i>
Sheep	84	76	213	96	385	4.59
Goats	521	214	1063	587	1864	3.58
Pigs	55	125	191	341	657	11.95
Chickens	635	1617	3836	3898	9351	14.73
Dogs	135	82	137	36	255	1.89
Cats	214	76	166	103	345	1.62

TABLE 4

Eruwa — Numbers of animals, Eruwa Villages, 506 Households

<i>Animals</i>	<i>No. Households</i>	<i>Male</i>	<i>Female</i>	<i>Young</i>	<i>Total</i>	<i>Mean</i>
Sheep	36	42	114	87	243	6.75
Goats	224	167	572	382	1121	5.01
Pigs	0	0	0	0	0	0.00
Chickens	487	1302	2452	4815	8567	17.60
Dogs	224	143	267	40	450	2.01
Cats	135	54	104	86	244	1.81

TABLE 5

Eruwa — Livestock units (LU), town and villages, food animals

<i>Animal</i>	<i>Total Number</i>	<i>LU Factor</i>	<i>Livestock Units</i>
Sheep	628	0.1	62.80
Goats	2985	0.1	298.85
Pigs	341	0.1	34.10
Chickens	17918	0.01	179.18
Total			574.93
Mean 1275 Households			0.45

pigs ("Home Rats", House Rats). Numbers totalled 19 males, 50 females and 26 young giving a household average of 2.1 males, 5.6 females and 2.9 young. These, and other animals potentially, a source of protein, will be taken into account in future work.

DISCUSSION

The main purpose of this investigation was to provide a list of households and their animals and thus a sampling frame from which random, stratified random or systematic samples could be drawn for investigating specific diseases and disease situations. This frame has already been used for an investigation of the endoparasites in pigs (Dipeolu and Sellers, 1976) and currently plans are in hand to investigate disease situation in other categories of livestock. Thus the purpose of this census differed from that of surveys of household numbers performed previously in Nigeria. However, the livestock figure obtained proved broadly similar. In a rural economic survey (Report 1966) in

June, 1964, 36 village units with 1080 households were selected using a stratified multi-stage sampling technique; 78.4 per cent households kept animals, 78.2 per cent poultry, 39.8 per cent goats, 22.2 per cent sheep, 4.8 per cent pigs, the average numbers per household being poultry 11.28, goats 3.26, sheep 3.07 and pigs 5.30. Upton (1967) studied six villages in varying climatic zones in southwestern Nigeria and with varying farming practices; a total of 135 farmers were included and the mean numbers of animals kept were sheep 2.2, goats 2.8, pigs 1.4 poultry 10.4, dogs 0.6 and cats 0.2. Norman (1972) in an economic survey of three villages in Zaria province found goat numbers from 2.17 – 2.20, sheep 2.12 – 2.54 and chickens 4.05–6.44 per household. More recently, Matthewman (personal communication) in villages in the rain forest zone 17 miles west of Ibadan found, of 681 households, 86 per cent chickens, 60 per cent goats, 43 per cent sheep, 0.3 per cent pigs, 22 per cent dogs and 14 per cent cats. As was the case in our census, goats and chickens appeared the most popular combination of animals.

With the exception of the Federal Survey (Report 1966), most animal counts have been done in a single investigation. Our figures refer to the situation in the rainy season but numbers may well vary during the different seasons of the year. However, the provision of a sample frame allows a system of continual surveillance on a comparatively small number of households using proven sampling methods. This surveillance will, in fact, be part and parcel of our disease investigation.

Finally it is recommended that, in estimating livestock numbers as has been proposed in various National Plans, reliable results are better achieved by using recognized sampling techniques so that part of the population only is counted from which accurate estimates of the total population can be made. Such techniques increase the efficiency of the count, are saving in labour and avoid the processing of excessive quantities of data leading to inaccurate and inconsistent results. Also the figures, because they are fewer, can be processed more rapidly and surveys can thus be repeated at periods so that trends in livestock numbers can be monitored.

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