Indian J. Anim. Res., 34(1): 60-63, 2000

POPULATION ESTIMATES OF SHEEP AND GOAT BREEDS OF INDIA

M.S. Tantia and P.K.Vij
National Bureau of Animal Genetic Resources, Karnal-132 001, India

ABSTRACT

The breed-wise population for 38 recognized breeds of sheep and 20 breeds of goats was estimated from the records of Indian Livestock Census,1992.The breed tract for each breed was divided into three parts as central, adjacent and specified pockets.For sheep 50 to 80 , 20 to 50 and 5 to 20 per cent and for goats 30 to 60, 15 to 30 and 5 to 15 per cent of total population was allotted for these categories of the breed tract respectively. The estimates for each breed population are presented in a tabular form. Among sheep breeds Deccani population estimates were maximum (4.55m) followed by Marwari (3.80m). The estimated population was very low for Nilgiri (3,000), Banapala (5,000) and Gurej (11,000) breeds. In goat breeds Bengal estimated the highest (19.44m) followed by Marwari (3.27m) whereas Jhakrana and Beetal estimates were minimum,i.e. 52,000 and 54,000 respectively. The Bonpala and Nigiri sheep are at the verge of extinction and need immediate attention for their conservation.

Sheep and goat are the backbone of landless and small farmers particularly in areas where agriculture production is low and the farmers have to depend upon livestock for their livelihood. India has a large population of these species (50.8 and 115.3 m in 1992) and the number of breeds representing these species is also fairly large (38 and 20 respectively). The quinquinnial livestock census is conducted species-wise and population of different breeds within a species is not available as such. Preliminary surveys in the native tract of these breeds revealed that the population of indigenous breeds of sheep and goat has declined considerably and is further declining due to the replacement with few high producing breeds or crossbreds. Since these indigenous breeds are well adapted to the local agroecological conditions and produce almost on zero input these are more sustainable than the so called high producing breeds. The declining trend in the population of these breeds needs to be checked for exploiting these to their full potential. In the absence of any information on their population status, it is very difficult to plan improvement programmes and policies for their conservation.

Sheep population of India registered an increase of 4.13% during 1982 to 1992. The major increase apart from Kerala where it increased more than 3 folds was observed in Jammu and Kashmir (54.37%). The declining trend in the population decreased in Punjab,Gujarat, Madhya Predesh and Rajasthan by 13.91, 13.58, 12.83 and 9.40% respectively (Table 1).

Goat population of India registered an increase of 21% during 1982 to 1992. Among major states, Punjab and Andhra Pradesh have shown decline in goats by 23.29 and 22.32% respectively (Table 1). The increase was observed in most of other major states. The population almost doubled in Assam whereas Jammu and Kashmir, Bihar and Uttar Pradesh registered increase of 55.90, 42.88 and 35.35% respectively.

Table 1. Sheep amd Goat Population Dynamics ('000)

State	Sheep Population			Goat Population		
	1982	1992	Trend % (1982-92)	1982	1992	Trend % (1982-92)
Andhra Pradesh	7519	7768	3.31	5559	4318	-22.32
Assam	46	150	226.08	1729	3454	99.77
Bihar	1322	1690	27.84	12221	17461	42.88
Gujarat	2357	2037	-13.58	3300	4242	28.55
Haryana	758	1044	37.73	608	799	31.41
Himachal Predesh	1091	1074	-1.56	1060	1116	5.28
Jammu & Kashmir	1909	2947	54.37	1004	1766	55.90
Karanataka	4792	5432	13.35	4547	6285	38.22
Kerala	7	29	314.28	2004	1849	-7.73
Madhya Pradesh	959	836	-12.83	7572	8370	10.54
Maharashtra	2671	3674	15.09	7705	9941	29.02
Orissa	1990	1841	-7.49	4931	4804	-2.58
Punjab	611	526	-13.91	700	544	-23.29
Rajasthan	13431	12169	-9.40	15479	15285	-1.25
Tamil Nadu	5537	5849	5.63	5246	6343	20.91
Uttar Pradesh	2307	2404	4.20	9686	13110	35.35
West Bengal	1365	1488	9.01	10916	14169	29.80
INDIA	**48765**	**50799**	**4.13**	**95255**	**115278**	**21.02**

The distribution for each breed was decided on the basis of available information in literature (CSIR, 1979; Acharya, 1982; Acharya and Bhat, 1984). The breed tract was divided into three parts as central, adjacent and specified pockets based on the distribution pattern. A percentage was fixed for each category of breed tract. For sheep breeds 50-80, 20-50 and 5 to 20 per cent and for goat breeds 30-60, 15-30 and 5 to 15 per cent of total population of a district were assumed to represent the population of the breed in the three parts of breeding tract respectively. Breedwise population estimates were derived according to these proportions from livestock census (DES, 1987 and 1992). Population for all 38 breeds of sheep and 20 breeds of goat have been estimated and presented in Table 2 and 3 respectively.

Among sheep breeds, Deccani estimated the maximum (4.55 m) followed by Marwari (3.80). The estimates of Nilgiri, Bonpala and Gurej were only 3,000, 5,000, and 11,000 respectively threatening their existence. The adult male to female ratio varied between 1:1 to 1:12.5 in different breeds of sheep. The 1:1 ratio was estimated for Nilgiri, 1:1.7 for Changthangi, 1:2.3 for Tibetan whereas 1: 12.5 for Malpura, 1:10 for Sonadi and 1:8.1 for Deccani.The adult male to female ratio was narrow for the breeds having lower population estimates.

Bengal breed of goat estimated highest (19.44 m) followed by Marwari (3.27m) and Sangamneri (2.38m). The estimates were only 52,000 for Jhakrana and 54,000 for Beetal breeds. The adult male to female ratio varied from 1:1.6 to 1:33. No definite trend for male female ratio was observed in goat breeds. Ratio of 1:33 was estimated for Jhakrana and 1:1.6 for Changthangi. In Bengal breed

Table 2. Breedwise estimates of sheep breeds ('000)

Breed	Adult females	Females pure bred	Adult males	Total Population
Bolangir	170	118	63	384
Bellary*	168	135	34	287
Bonpala	2.5	2.3	1	
Changthangi	35	28	21	69
Chokla	691	552	122	1077
Chota Nagpuri**	338	169	101	616
Coimbatore	157	126	41	303
Deccani	3054	2138	378	4549
Gaddi	483	338	101	760
Ganjam	141	113	53	319
Gurej	6	3	2	11
Hassan*	147	118	54	290
Jaiselmeri	621	373	117	955
Jalauni	46	23	12	88
Karnath	14	6	3	20
Kashmir Marino	709	567	174	1108
Kenguri*	150	90	17	217
Kilakarsal*	107	75	32	204
Madras Red*	229	206	66	413
Magra	431	215	115	700
Malpura	601	301	48	877
Mandya*	254	178	69	429
Marwari	2632	2369	339	3802
Mecheri*	300	240	90	619
Muzaffar Nagri	24	19	8	49
Nali	413	289	86	665
Nellore	859	687	174	1408
Nilgiri*	1	0.8	1	3
Patanwadi	623	498	71	852
Poonchi	74	30	12	102
Pugal	153	61	43	249
Ramnad White	322	258	96	578
Rampur Bushair	68	55	24	126
Shahbadi**	146	87	37	230
Sonadi	709	496	71	1096
Tibetan	16	12	7	30
Tiruchi Black*	544	381	180	959
Vembur*	111	89	34	206

* 1987 Census data ** 1982 Census Data

the ratio was 1.2.9 and in Marwari 1:29.

These estimates were based on the information acquired by the authors regarding distribution and changing animal husbandry scenario of our country. These can be considered as preliminary estimates and may form the basis for further conservation programmes. However, systematic sampling and subsequent breed wise livestock census in the country is recommended for true estimates of each breed.

Table 3. Breedwise estimates of Goat breeds ('000)

Breed	Adult females	Females pure bred	Adult males	Total Population
Barbari	49	30	9	94
Beetal*	27	22	5	54
Bengal	8800	7040	3047	19443
Changthangi	51	40	31	96
Chegu	58	47	15	106
Gaddi	308	216	75	522
Ganjam	219	175	88	501
Gohilwadi	141	57	10	197
Jamnapari	45	18	5	124
Jhakrana	33	23	1	52
Kannaidu	170	102	70	368
Kutchi	263	211	16	382
Malabari*	60	35	6	121
Marwari	1985	1588	68	3273
Mehsana	217	108	12	315
Osmanabadi	72	36	8	131
Sangamneri*	1416	1132	101	2381
Sirohi	243	195	10	348
Surti	86	34	13	147
Zalawadi	88	44	5	124

** 1987 Census Data

The alarming situation of Nilgiri, Bonpala and Gurej breeds of sheep should not be ignored and immediate steps should be initiated for conservation of these breeds otherwise this unique germplasm may vanish from the scene.

REFERENCES

Acharya, R.M. (1982) Sheep and goat breeds of India. FAO Animal production and Health paper 30, Food and Agriculture Organisation of the United Nations, Rome, Italy.

Acharya, R.M. and Bhat, P.N. (1984) *Livestock and poultry genetic resources in India.* IVRI Research Bulletin No. 1. *Indian Veterinary Research Institute,* Izatnagar.

CSIR (1979). The wealth of India raw materials Vol. VI Livestock including poultry. Publication and Information Directorte,Council of Scientific and Industrial Research, New Delhi.

Diretorate of Eco. & Statistics (India) (1987) and (1992) The Indian Livestock Census. Directorate of Economics and Statistics, Government of India, New Delhi.