

Estimation and Analysis of Sheep and Goat Population in India

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ABSTRACT

The Sheep and goat breeds 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 an expansive populace of these species and the quantity of breeds speaking to these species is additionally genuinely vast. The quinquennial animals evaluation is directed species-wise and populace of various breeds inside an animal types isn't accessible in that capacity. Preparatory reviews in the local tract of these breeds uncovered that the number of inhabitants in indigenous types of sheep and goat has declined significantly and is further declining because of the supplanting with couple of high delivering breeds or crossbreds.

Keywords: Sheeps, goats, breeds, Populations, livestock.

INTRODUCTION

India is a rich repository of sheep genetic resources having 42 breeds. Majority share of these breeds have been characterized as far as phenotypic attributes, which recognize them from different populaces and have essentially been named after the name of their primary natural surroundings. No endeavor has been made to characterize these populaces as far as their phylogeny and hereditary structure.

Cross rearing of local sheep with colorful breeds has been by and by since long to achieve change in both fleece and lamb creation. The consequences of such endeavors have been the advancement of some prevalent breeds, viz. Hissardale, Kashmir Merino, Bharat Merino and so on.

Sheep populace of India enlisted an expansion of 4.13% amid 1982 to 1992. The real increment separated from Kerala where it expanded more than 3 folds was seen in Jammu and Kashmir (54.37%). The declining pattern in the populace diminished in Punjab, Gujarat, Madhya Pradesh and Rajasthan by 13.91, 13.58, 12.83 and 9.40% separately. Goat populace of India enrolled an expansion of 21% amid 1982 to 1992. Among real states, Punjab and Andhra Pradesh have indicated decrease in goats by 23.29 and 22.32 U separately. The expansion was seen in the vast majority of other real states. The populace relatively multiplied in Assam while Jammu and Kashmir, Bihar and Uttar Pradesh enlisted increment of 55.90, 42.88 and 35.35% separately.

Preparatory studies in the local tract of these breeds uncovered that the number of inhabitants in indigenous types of sheep and goat has declined significantly and is further declining because of the supplanting with couple of high delivering breeds or crossbreds. Since these indigenous breeds are very much adjusted to the neighborhood agroecological conditions and create nearly on zero information these are more feasible than the alleged high delivering breeds. The declining pattern in the number of inhabitants in these breeds should be checked for misusing these to their t. maximum capacity. Without any data on their populace status,- it is extremely hard to design change projects and approaches for their protection.

Historical Background

The domestication of creatures was done amid Neolithic circumstances alongside the development of cereals. In the first place goats and sheep, second steers and pigs, lastly draft creatures, for example, steeds and asses were trained.

The wild goat (*Capra hircus*), the boss tribal stock from which the different types of household goats have been inferred, is found in the desolate slopes of Baluchistan and the western Sind. In upper east Quetta, it is supplanted by markhor (*capra*

falconeri), likewise found in Turkestan, Afghanistan, Baluchistan and Kashmir. The Circassian goat is said to be the descendent of the markhor. By a wide margin the most essential assortment is the bezoar goat (*Capra hircus aegagrus*), which ranges from the Sind in the east through Iran and Asia Minor to Crete and the Cyclades in the west, in spite of the fact that in many parts of this territory it has vanished. From Iran it reaches out into Russian Turkestan and the Caucasus, and into western Asia Minor.

The goat was the most punctual ruminant to be tamed. The Harappa toys contain portrayals of a goat. Two seals from Mohanjo-daro demonstrate a wild bezoar goat with gigantic twisted horns, and a whiskery residential male goat with side-spreading horns. The Gaddi goat, which extraordinarily looks like the hereditary wild goat, was utilized as a helpful animal weight in the mountains is as yet utilized as a part of the Himalayan district of India for conveying salt and nourishment grains.

There are numerous wild assortments of sheep (*Ovis orientalis vignei*) in the mountains from Afghanistan to Armenia, and they are presumably the predecessors of the tamed sheep of India and also of Arabia. The occupants of Mohanjo-daro and Harappa effectively had trained sheep. In spite of the fact that sheep were most likely first tamed in the mountains of Iran, Turkestan and Baluchistan, we discover them right on time ever, and they filled a valuable need in the economies of the Mesopotamian and northern Indian developments. They gave drain, meat and dress for the tenants of the icy north (Randhawa, 1980).

General Information

Sheep and goats are important species of livestock for India. They contribute incredibly to the agrarian economy, particularly in territories where harvest and dairy cultivating are not conservative, and assume an imperative part in the occupation of an expansive extent of little and minimal ranchers and landless workers.

Populace insights of these species from the 1977 statistics are not yet completely in. Be that as it may, in essential States, for which insights are accessible, changes in the sheep populace going from - 15.35% to +17.39% and in the goat populaces from - 7.14% to +31.25% have been watched. As indicated by the 1972 registration, the nation had 40 m sheep, which contributed around \$175 m (Rs 1 400 m) every year to the national economy, in view of a harsh gauge of generation of 34.3 m kg of fleece, 101 m kg of lamb, and 14.6 m skins, notwithstanding excrement, housings, offal, and so forth. Essentially, as indicated by the 1972 statistics, the nation had 68 m goats which contributed around \$458 m (Rs 3 655 m) every year by creating around 255 m kg of meat, 34.9 m skins and 590 m kg of drain. Goats contribute 35% of the aggregate meat (barring poultry) and 3% of the aggregate drain delivered in the nation (NCA, 1976). India sent out fleece and woolens worth \$143.7 m (Rs 1 150 m) in 1978– 79, of which floor coverings constituted right around 71% (WWEPC, 1980). Fare profit from completed cowhide and calfskin merchandise, including crude and handled sheep-and goat-skins, came to \$326.1 m (Rs 2 609 m) amid 1978– 79 (EPCFL and IM, 1980). In 1978, there were 40.43 m sheep and 70.20 m goats in India, creating 118 m kg of lamb and 276 m kg of chevon, 717 m kg of drain, 33.3 m kg of fleece and 26 117 and 71 148 m huge amounts of crisp sheep and goat-skins, separately (FAO, 1979).

The profitability of Indian sheep and goats is low, yet considering the nutritious and physical natural conditions under which they are raised, it can't be viewed as wasteful. Real purposes behind this low efficiency are insufficient brushing assets, illness issues and genuine absence of sorted out endeavors for hereditary change. There is little determination of rams and bucks utilized for reproducing, and much between mating among neighboring breeds happens.

Sheep advancement exercises attempted in various States of the nation amid late years have not had much effect. Sheep-raising keeps on being a regressive calling, principally in the hands of poor, landless or little and minimal ranchers who possess either an uneconomical holding or no land by any means, and in this way touch their sheep on normal vegetation and harvest stubbles supplemented by tree loppings. No formative exertion has been made for enhancing goats. Substantial regions some time ago were accessible for animals brushing, since they were not viewed as appropriate for edit generation, have now been put under oats. The thickness of animals per unit of brushing territory has incredibly expanded, attributable to increments in their numbers and the shrinkage of touching area. This has brought about further diminishing munching potential through the substitution of more nutritious perpetual grasses and lasting vegetables by grasses of low quality, for example, *Aristida*, *Heteropogon* and *Andropogon*. As a result of the non-accessibility of the essential touching terrains, sheep-proprietors hone transient brushing over broad territories in a similar State or notwithstanding neighboring States, once in a while including goats inside their sheep rushes. In the northern sloping district, where goat rushes are for the most part extensive, a comparative relocation happens.

Indian sheep and goats breed consistently. There is generally no control on the reproducing season, as the rams and bucks stay with the groups, yet once in a while rearing is confined by composing the prepuce with a cotton tape, keeping in mind the end goal to guarantee that the sheep are dropped amid the great season, from the perspective of both sustenance and the

physical condition. Sheep and goat mortality is very high. Of the bacterial and viral infections, pneumonia in different structures (especially aspiratory adenomatosis), sheep-pox, enterotoxaemia and Bacillus anthracis in sheep, and pneumonia, clostridial sicknesses and lumbar loss of motion in goats are normal and result in high mortality. Inner and, to some degree, outer parasites likewise cause vast bleakness and financial misfortune.

Sheeps and Goats Breeds in India

India's vast genetic resources in sheep and goats are reflected by the availability of 40 breeds of sheep and 20 breeds of goats. In the strict sense, there are no particular breeds, since the lion's share of them don't have indicated characterized characters. Nor are there reproducing social orders or offices to enroll creatures of specific breeds, keep up run books and guarantee the virtue of the breed. A populace of sheep or goats in a given area, with characters unmistakable from different populaces in the region and with a particular neighborhood name, has for the most part been considered as a breed. There has been little push to moderate and further enhance the local breeds. At a couple of Central and State Government cultivates, some critical types of sheep and goats are kept up for purebreeding and creating stud rams for dissemination to the ranchers.

The vast majority of the types of sheep and goats in India have developed normally through adjustment to agro-natural conditions; to a constrained degree there has been fake determination for particular needs. These breeds have by and large been named after their place of cause or based on conspicuous qualities. A couple of breeds, e.g. Hissardale, Kashmir Merino and Nilgiri, are cross-breeds including local and outlandish fine/double/sheep breeds. The numbers and dispersion of Hissardale and Nilgiri are extremely constrained, while the Kashmir Merino, however vast in numbers, has no unequivocal level of intriguing finewool legacy and has included all the local types of Jammu and Kashmir.

A large portion of the types of sheep and goats are exceptionally very much adjusted to the brutal atmosphere, long movement, and absence of vegetation and drinking water. A vast extent of sheep and goats (all the more especially the last mentioned) are of unremarkable or blended breeds.

Among the Indian sheep breeds, the most vital in number and appropriation are Marwari and Deccani. The Marwari covers most of the bone-dry northwestern district, in both Rajasthan and Gujarat. It is exceedingly transient, after a transhumant arrangement of administration, and has had the best effect on different breeds, particularly those with exceptionally coarse and bristly wools, Malpura and Sonadi. The Sonadi covers a large portion of the focal piece of the southern promontory, being circulated in the States of Maharashtra, Andhra Pradesh and Karnataka.

There has been an extremely incredible measure of between blend among indigenous breeds. Intersection with fascinating breeds has likewise been attempted so as to update the neighborhood breeds and to grow new ones, yet no genuine thought has been given to hereditary change. The present reproducing approach for enhancing fleece generation for attire and covers and expanding lamb creation in sheep is to cross the better cover fleece breeds and to a great degree coarse and furry breeds with extraordinary prevalent fine-fleece and dualpurpose breeds. For enhancing floor covering fleece generation in some northwestern cover fleece breeds and meat creation in some south Indian non-wooly sheep breeds, be that as it may, choice inside breeds is being prescribed. In goats, the rearing arrangement is to redesign mediocre breeds with unrivaled breeds, particularly Jamnapari and Beetal.

Population Trends

The sheep populace, as per the quinquennial censuses for 1919– 20, 1924– 25, 1929– 30, 1934– 35, 1939– 40, 1945 was 22.60, 23.13, 25.22, 22.13, 25.08 and 19.77 m separately. These figures demonstrate a relentless increment from 1920 to 1930, trailed by a decrease in 1935 and in this way in 1945. The conceivable purposes behind the decay could be aimless butcher of creatures amid the shortage years going before the 1934– 35 registration and amid World War II, going before the 1945 evaluation (NCA, 1976).

The dispersion of the sheep populace by States from 1951 to 1977 shows up in Table 1. Sheep populace thickness by areas, as indicated by the 1972 registration, is displayed in Figure 1. There was dynamic increment in the sheep populace in the vicinity of 1951 and 1966, trailed by a decrease in 1972.

The dispersion of goats by States amid a similar period is displayed in Table 2, and populace thickness by areas, as indicated by the 1972 statistics, in Figure 2. The goat populace demonstrated a consistent rising pattern over this period, despite the fact that no goat improvement programs were sought after and around 36% of the aggregate goat populace was butchered each year.

Breeds Requiring Protection

Aimless cross-reproducing amid the most recent couple of years has jeopardized a couple of imperative indigenous breeds, especially those from Jammu and Kashmir, where all the local types of sheep have been associated with vast scale cross-

rearing with extraordinary fine-fleece breeds. Other imperiled breeds are the Magra, Pugal and Chokla types of Rajasthan, the significant explanations behind whose genuine lessening are troubles of atmosphere and deficient thoughtfulness regarding the improvement of encourage and watering assets in their home tracts.

The quantity of creatures of the Mandya breed in Karnataka is additionally declining, in light of the fact that a large portion of the land in its home region has been brought under flooded development; a further reason is the high occurrence of cryptorchidism, perhaps coming about because of counterfeit choice for substantial compliance known to be identified with the condition.

The imperative goat breeds whose numbers have declined genuinely are the Barbari and the Jamnapari. It is accounted for that lone 5000 creatures of the Jamnapari breed still exist at introduce.

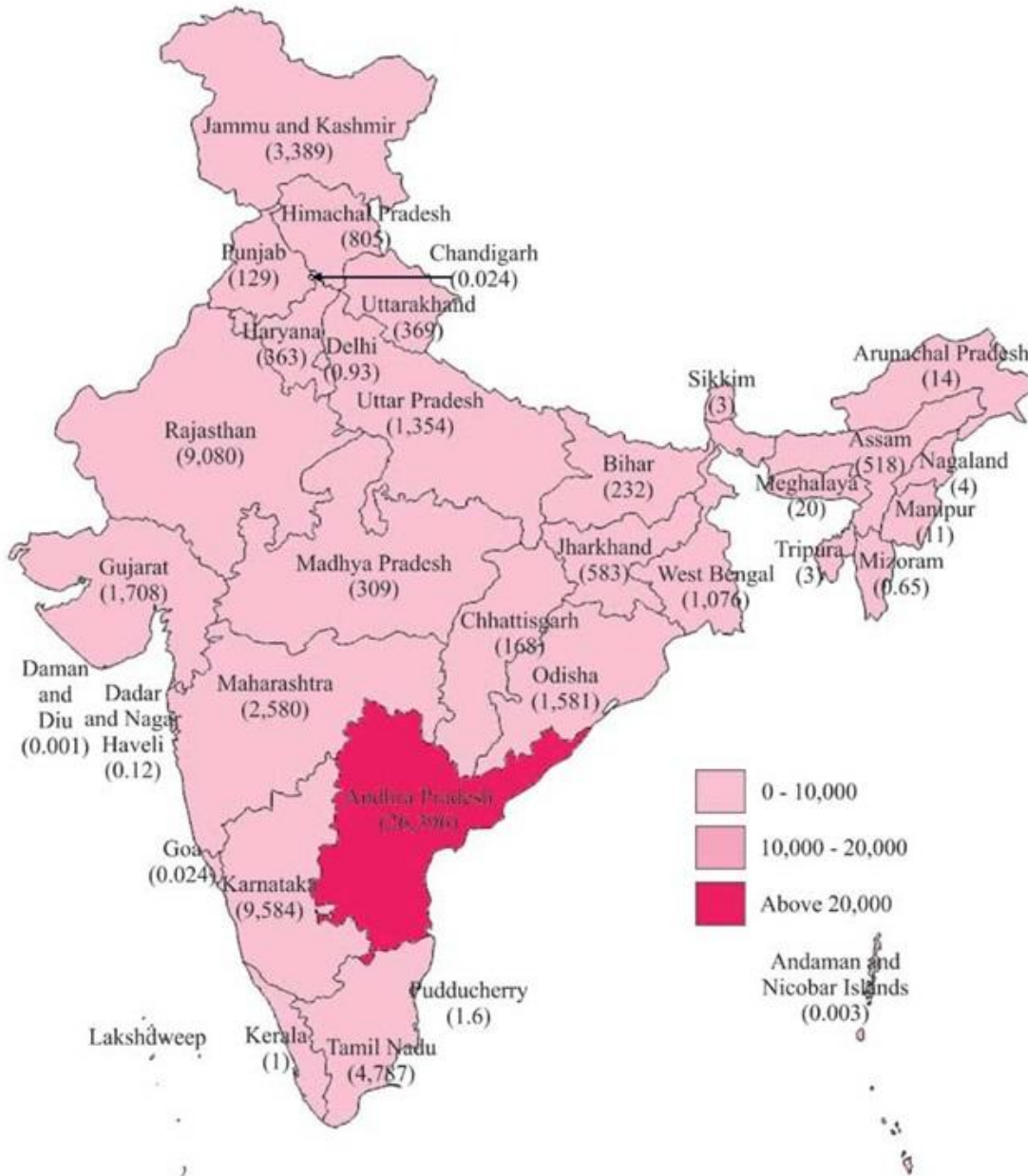


Figure : Sheep Population in India in 2012

As compared to the 18th Livestock Census, there has been an overall decline of 3.33 percent in the total livestock population in the country. The total livestock population including cattle, buffaloes, sheep, goat, pigs, horses and ponies,

mules, donkeys, camels, mithun and yaks, was 512.05 million in 2012. The total poultry population, including fowls, ducks, turkeys and others, was 729.2 million.

Table 1: Import of Livestock and Livestock PRODUCTS from 2001-2003 to 2011-14

	2001-2003		2004-2007		2008-2011		2011-2014	
	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
<i>Live Sheep & Goats</i>	27.8	8.5	28.2	10.5	25.6	8.8	15.5	5.
<i>Meat of Sheep or Goats, Fresh, Chilled or Frozen</i>	4.6	1.9	2.1	0.2	2.0	0.3	8.2	1.3
<i>Raw Skins of Sheep/Lambs(Fresh/Salted-DR)</i>	5517.4	1265.5	3832.4	863.8	2231.4	639.3	1736.3	665.2
<i>Woolless Leather of Sheep or Lamb Skin</i>	1477.5	1033.1	1561.3	845.7	3613.9	1226.3	4847.3	1749.2
<i>Wool not Carded or Combed</i>	72737.7	6235.6	73657.5	8018.3	84609.7	8706.1	80626.3	8288.8

(Value-Rs.in million) LIVESTOCK (000 nos.)

Table 2: Export of Livestock and Livestock PRODUCTS from 2001-2003 to 2011-14

	2001-2003		2004-2007		2008-2011		2011-2014	
	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
<i>Live Sheep & Goats</i>	-	-	1.31	1.1	308.5	144.1	247.46	171.4
<i>Meat of Sheep or Goats, Fresh, Chilled or Frozen</i>	3915.1	330.7	4973.6	399.5	16820.5	1103.9	8885.3	793.6
<i>Raw Skins of Sheep/Lambs(Fresh/Salted-Dried)</i>	17.1	10.0	22.8	8.7	16.0	2.9	240.0	21.6
<i>Woolless Leather of Sheep or Lamb Skin</i>	964.5	1279.6	1174.0	1620.4	547.0	732.3	249.1	405.6
<i>Wool not Carded or Combed</i>	71.2	13.8	51.2	15.9	98.3	33.0	217.7	45.2

(Value-Rs.in million) LIVESTOCK (000 nos.)

CONCLUSION

Many attempts have already been made to define some of the important breeds of sheep under *ad hoc* research schemes financed by the ICAR. Still earlier, some attempts were made to publish such descriptions. These were mostly based on exterior phenotypes: shape and length of ears, length and direction of horns, fleece type, body colour, and tail length; there was little serious description of body weights, body measurements, population size, flock size and structure, management practices followed, productivity, and problems associated with their conservation and further development. The estimates of genetic trend showed favorable genetic changes in many breeds but for rest of the traits these were unfavorable.

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.

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