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Livestock Ownership in Rural India as per NSSO Data

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Abstract:

The composition of the livestock population in broad groups like bovine (cattle and buffaloes), ovine (sheep and goats), pigs, and poultry has changed over the last two decades. The buffalo population has expanded dramatically from 70 million in 1982 to 98 million in 2003. Between 1997 and 2003, the number of total bovines in the country decreased by 1.9 percent. The overall ovine population has risen from 144 million in 1982 to 186 million in 2003. The number of goats climbed steadily from 95 million in 1982 to 124 million in 2003, albeit slower. Between 1997 and 2003, the goat population grew almost constantly. On the other hand, the sheep population has been expanding, but with significant differences in the trend. Between 1982 and 2003, the poultry population increased more than double, from 207 million to 489 million. Between 1997 and 2003, poultry witnessed an all-time high growth of 7 percent yearly. The pig population has increased from 10 million in 1982 to 14 million in 2003. However, growth in the pig population has decelerated sharply since 1992 due to a lack of widespread demand for pork. Keeping these trends in mind, this paper tries to describe and analyze the present pattern of livestock ownership in India using the 77th round of NSS data.

Keywords: Livestock, Population, Rural India

Introduction:

In the past, the livestock sector grew faster than the agricultural sector as a whole. This sector contributes 4.11 percent of total gross domestic product and 25.6 percent of total agriculture GDP (AgGDP). It grew at a CAGR of 8.24 percent during 2014-2015 to 2018-19 (Economic survey 2020-21, 2021). India ranks first in world milk production, increasing its output from 17 million tonnes in 1950-51 to about 137.69 million tonnes in 2013-14. The per capita availability of milk was 128 grams in 1980-81 gradually increasing to 232 grams in 2004-05 (B Sahoo and Pinaki Sharma). And it has reached a level of 406 grams per day during 2019-20 which is more than the world average of around 305 grams per day in 2020 (Annual Report 2020-21 (English) 30.06.21] BAHS. Pdf, 2021). This resulted in crossed Indian descript and non-descript cattle with exotic dairy breeds, primarily

Holstein Friesian, Jersey, and Brown Swiss breeds. India has the world's largest cow and buffalo populations. India has a large livestock population with 185 million cattle, 98 million buffaloes, 124 million goats, 61 million sheep, 14 million pigs, and 489 million chicken birds. Cattle account for 38.2 percent of all livestock in the country, buffaloes for 20.2 percent, sheep for 12.7 percent, goats for 25.6 percent, and pigs for just 2.8 percent. The entire livestock population of all other animals is less than 0.50 percent. However, the composition of the livestock population in broad groups like bovine (cattle and buffaloes), ovine (sheep and goats), pigs, and poultry has changed over the last two decades. The cattle population that had been increasing until 1992 started declining, and between 1992 and 2003, it fell by 9 percent. The cow population drop is limited to indigenous cattle, which accounted for 87 percent of the overall cattle population in 2003. The number of indigenous cattle decreased by 15%, while the number of crossbred cattle surged by 62%. Males had a significant drop (22 percent). The primary causes of the indigenous cattle population reduction are the increased use of mechanical power to replace draught animals and low milk yields (Birthal and Taneja 2006). The buffalo population has expanded dramatically from 70 million in 1982 to 98 million in 2003. Between 1997 and 2003, the number of total bovines in the country decreased by 1.9 percent. The overall ovine population has risen from 144 million in 1982 to 186 million in 2003.

The number of goats climbed steadily from 95 million in 1982 to 124 million in 2003, albeit slower. Between 1997 and 2003, the goat population grew almost constantly. On the other hand, the sheep population has been expanding, but with significant differences in the trend. Between 1982 and 2003, the poultry population increased more than double, from 207 million to 489 million. Except during 1992-97, the poultry population has maintained a steady growth of above 4 percent yearly. Between 1997 and 2003, poultry witnessed an all-time high growth of 7 percent a year. The pig population has increased from 10 million in 1982 to 14 million in 2003. However, growth in the pig population has decelerated sharply since 1992 due to a lack of widespread demand for pork.

Objective:

To describe and analyze the present pattern of ownership of livestock ownership in India.

Methodology:

The data for our analysis is obtained from the 77th round of the National Sample Survey of India undertaken from January 2019- to December 2019. The 77th round primarily focused on Land and Livestock holdings of Households (LHS) and Situational Assessment of Agricultural Households (SAS) of rural areas in India except for villages of Andaman and Nicobar Islands, Lakshadweep, Ladakh region of Jammu and Kashmir, rural areas of Nagaland and Arunachal Pradesh which are difficult to access. SAS and LHS employed a multistage random sampling methodology, with census villages serving as the first sample unit and households as the final sample unit. For this study, a total of 58,035 and 56,894 agricultural households have been covered across India from visit

one and visit two, respectively, for the agricultural year 2018-2019. Each sampled household was visited twice during the survey, and information regarding indebtedness, farming of animals, income and expenditure from crop and animal farming, etc., were collected. Different Reference period has been used for additional items. For animal farming and other non-farm business, the reference period was the previous 30 days from the survey's date. The household defined as the agricultural household was considered agricultural household for this study if it earned more than Rs. Four thousand farm activities in the previous 365 days and had at least one member self-employed in agriculture (including animal/ husbandry /poultry /fishery/ piggery /beekeeping).

Dynamics of livestock population in India:

The total livestock population of India is 536.76 million out of which 514.11 million are from rural and 22.65 million are from the urban area of the country. The total number of bovine (Cattle, buffalo, Mithun, and Yak) is 303.76 million out of which, the number of cattle is 193.46 million, Female cows are 145.91 million in number, the exotic\Crossbred and Indigenous\Non-descript cattle population is 51.36 million and 142.11 million respectively, the total number of buffalo is 109.85 million, the number of sheep is 74.26 million, goat population is 148.88 million, the number of the pig is 9.06 million, the number of Mithun and yak 3.9 lakhs and fifty-eight thousands respectively. The number of horses and ponies is 3.4 lakhs, mules are eighty-four thousand, donkeys are 1.2 lakhs, camels are 2.5 lakhs and total poultry is 851.81 million in the year 2019.

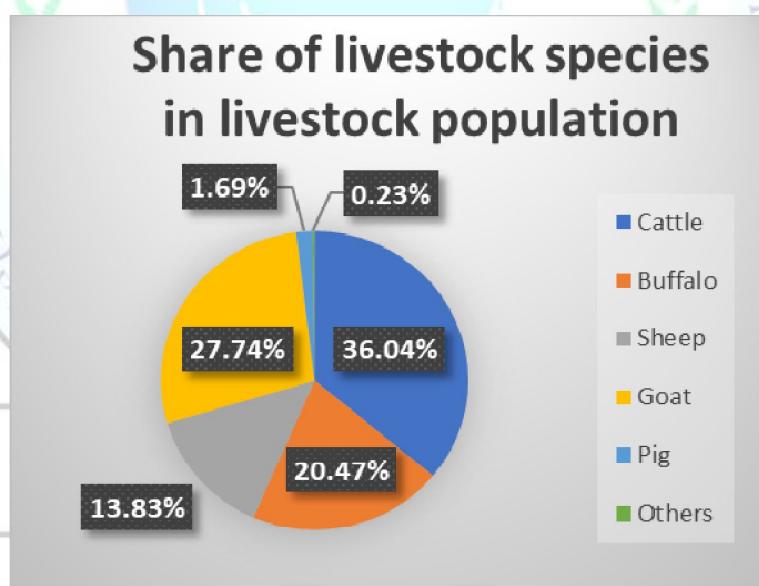


Figure 1

Figure 1 explains the distribution of livestock. Out of the total livestock in the country, around 36.04 percent are cattle, 20.47 percent are buffaloes, 13.83 percent are sheep, 27.74 percent are goats and only 1.69 percent are pigs. Mithun, Horses, Yaks, Mules, Ponies, Camels, and donkeys all together contribute 0.23 percent of the livestock (Government of India, Ministry of Agriculture, 2020)

Figure 2 shows the highest contributing states in different species of livestock. Out of the total population of livestock in India, Uttar Pradesh is contributing the highest number of livestock (68 million), followed by Rajasthan (56.8 million), Madhya Pradesh (40.6 million), West Bengal (37.5 million), Bihar (36.5 million), Andhra Pradesh (34.1 million), Maharashtra (33.1 million), Telangana (32.6 million), Karnataka (29.0 million) and Gujarat (26.9 million) in India's livestock holdings.

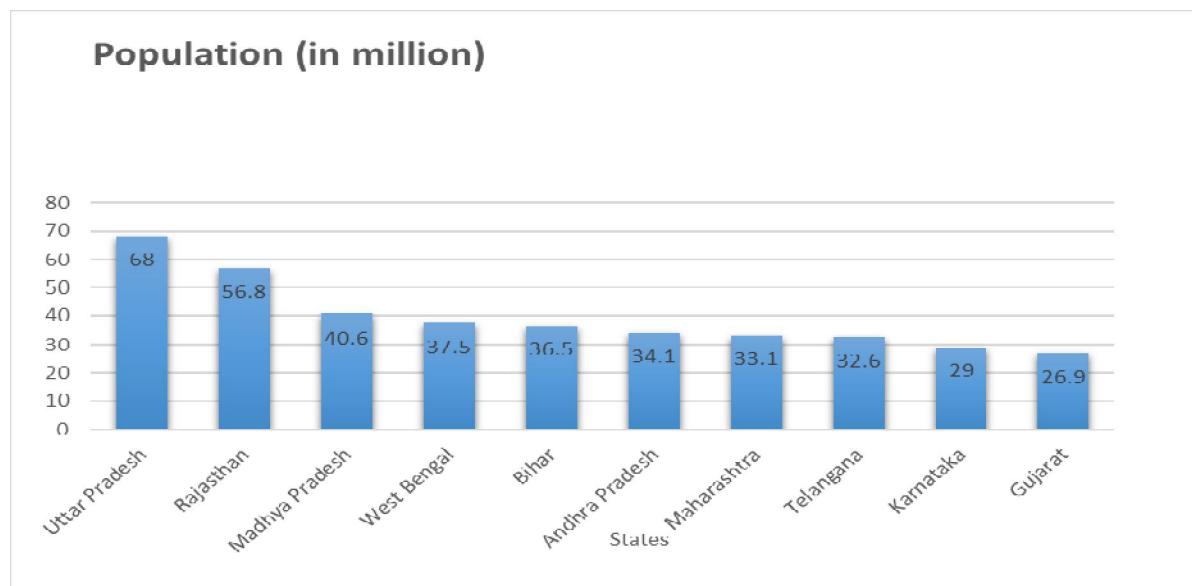


Figure 2

Table 1 shows the highest number of livestock species contributed to the total livestock population in India. West Bengal contributed the highest number (19.1 million) of cattle, Number of buffaloes and horses & ponies were 33.0 million and 0.76 lakhs respectively in Uttar Pradesh, the highest number of sheep (19.1 million) recorded in Telangana, Rajasthan contributed the highest number of Goats (20.8 million), Donkeys (0.23 lakhs) and camels (2.13 lakhs) to the livestock population, the highest number of poultry has been recorded in Tamil Nadu (120.8 million) which was also maximum in numbers among all the species of livestock, the highest number of Mules (0.26 lakhs) and Mithun (3,50,154) were recorded in Uttarakhand and Arunachal Pradesh, Maximum population of Yak were in Jammu & Kashmir which is the least species in numbers contributed to the livestock population.

Table 1

| Species name | States | Highest contributing species |
|--------------|---------------|------------------------------|
| Cattle | West Bengal | 19.1 (in million) |
| Buffaloes | Uttar Pradesh | 33.0 (in million) |
| Sheep | Telangana | 19.1 (in million) |
| Goats | Rajasthan | 20.8 (in million) |

| | | |
|-------------------|-------------------|--------------------|
| Pigs | Assam | 2.10 (in million) |
| Mithun | Arunachal Pradesh | 3,50,154 |
| Yaks | Jammu & Kashmir | 26,221 |
| Horses and Ponies | Uttar Pradesh | 0.76 (in Lakhs) |
| Mules | Uttarakhand | 0.26 (in Lakhs) |
| Donkeys | Rajasthan | 0.23 (in Lakhs) |
| Camels | Rajasthan | 2.13 (in Lakhs) |
| Poultry | Tamil Nadu | 120.8 (in million) |

Table 2 shows the total population of livestock has increased by 10.58 % in 22 years between 1997 and 2019. Total cattle have decreased by 2.73% and the population has come down from 198.881 million to 193.46 million from 1997 to 2019. The main reasons for the decline in the indigenous cattle population are the increasing substitution of draught animals with mechanical power and low milk yield (Birthal and Taneja 2006).

Table 2

| Species | Population(in millions) 1997 | Population(in millions) 2019 | Growth Rate 1997-2019 |
|-------------------|---------------------------------|---------------------------------|-----------------------------|
| Cattle | 198.881 | 193.46 | -2.73 |
| Buffaloes | 89.918 | 109.85 | 22.17 |
| Sheep | 57.494 | 74.26 | 29.16 |
| Goats | 122.721 | 148.88 | 21.32 |
| Pigs | 13.291 | 9.06 | -31.83 |
| Mithun | 0.177 | 0.39 | 120.34 |
| Yaks | 0.059 | 0.06 | 1.69 |
| Horses and Ponies | 0.827 | 0.34 | -58.89 |
| Mules | 0.221 | 0.08 | -63.80 |
| Donkeys | 0.882 | 0.12 | -86.39 |
| Camels | 0.912 | 0.25 | -72.59 |
| Total | 485.385 | 536.76 | 10.58 |

The buffalo population has increased from 89.918 million in 1997 to 109.85 million in 2019. The number of goats increased from 122.721 million in 1997 to 148.88 million in 2019. From 1997- to 2019, the growth in the goat population was positive except for the year 2012 when it has come down to 135.17 million and further increased in 2019. The sheep population has increased by 29.16

percent. Poultry is gaining importance in India due to the growth and availability of poultry feed at reasonable prices. Between 1982 and 2003, the poultry population increased more than double, from 207 million to 489 million. The pig population has decreased from 13.291 million in 1997 to 9.06 million in 2017. Growth in the pig population has decelerated due to the lack of widespread demand for pork. There has been a sharp increase in the population of Mithun which was 120.34 percent from 1997 to 2019 but the population of Donkeys in the country has decreased by 86.39 percent.

Conclusion:

The production of milk and per capita availability of milk increased significantly over a period of time. India ranks first in world milk production, increasing its output from 17 million tonnes in 1950-51 to about 137.69 million tonnes in 2013-14. The per capita availability of milk was 128 grams in 1980-81 gradually increasing to 232 grams in 2004-05 (B Sahoo and Pinaki Sharma). And it has reached a level of 406 grams per day during 2019-20 which is more than the world average of around 305 grams per day in 2020 (Annual Report 2020-21 (English)_30.06.21] BAHS. Pdf, 2021). It is observed that the livestock population is increasing, and the growth in total livestock is positive in 2019. The overall growth rate of the livestock population in rural India from 1997 to 2019 is 10.58 percent. In 2019 the percentage of Mithun was highest (120.34%) and the same in donkeys was lowest at -86.39%.

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