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DWINDLING POPULATION OF INDIAN WORKING EQUINES: A WORRYING TREND

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ABSTRACT

The equine species, which includes donkeys, mules, horses, and ponies, have made major contributions to human civilizations all throughout the world. The Indian livestock sector, after an initial decline in period from 2007 - 2012, staged a remarkable comeback during the period from 2012-2019 with an impressive overall growth rate of 4.8%. However, the total population of horses, ponies, mules and donkeys in India is 0.55 million as per the latest livestock census, a decrease by 51.9% over the previous livestock census (2012). The 'decreasing utility' due to increasing vehicles and urbanization has been considered as factors for the drastic dip in population. This paper, based on secondary data, aims to provide a concise summary of the current status, growth rate, distribution patterns, and factors leading to the decline in the population of working equines in India. Tabular presentations and graphical representations have been utilized for easy analysis and comparison of population trends across different years.

Key Words: Equines, Trend, Horses, Ponies, Mules

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INTRODUCTION

Agricultural diversification is increasingly seen as a pathway to achieve the goal of doubling farmers' income across India. Animal husbandry is regarded as an important and consistent source of livelihood due to uniform and egalitarian distribution of livestock as compared to land ownership. Livestock sector contributes 4.11% Gross Domestic Product and quarter (25.6%) of the agricultural gross domestic product (Yadav *et*

al., 2021). The importance of this sector can be understood by fact that it employs 8.8 % of the total population of India (Singh *et al*., 2022). India possesses one of the largest and most diverse livestock wealth in the world. The livestock industry in India contributes much to the general well-being of the rural populace by producing a continuous stream of income and reducing seasonality in livelihood patterns particularly of the rural poor (Birthal and Ali*,* 2005*)*. The world's greatest population of livestock is found in India, accounting for 59.29 per cent of world's buffalo population and 19.46 per cent of world's cattle. Furthermore, our country is ranking first in respect of cattle and buffalo population, second in goat, fish and poultry, third in sheep and tenth in camel global population (Mondal and Mishra, 2022). Livestock is one of the most dynamic industries in the world. The demand for animal products is rising along with the global population, especially in developing nations like India. With a global and national narrative towards food and nutritional security, the food producing livestock are considered important while the nonfood producing livestock like horses, ponies, donkeys and mules have taken backstage.

Working animals are draught animals used for traction and transportation; these animals are mostly camelids, bovids, and equids. Horses, ponies, mules, and donkeys are examples of working equines. *Equus caballus*, or horses; *Equus asinus*, or donkeys; and *Equus asinus* × *Equus caballus*, or horse-donkey hybrids, or mules, are the domestic species of Equus (Orlando, 2015).

In India, working horses are employed in urban, semi-urban, and rural settings for a variety of tasks. They are engaged in a variety of roles in India and considered source of employment in various sectors including agriculture, tourism, construction and mining. They are highly resilient and capable to sustain for longer periods without feed and water. They continue to be valuable as a major mode of transportation in mountainous areas even though they are impacted by the constant process of automation and rural development. Working horses help some of the world's poorest communities, allowing people in low- and middle-income nations to sustain their families and earn a living (Pritchard *et al.,* 2005). Numerous non-governmental organizations (NGOs) operate globally to enhance the well-being and health of both working and non-working equines; nevertheless, limited data is available regarding even the most fundamental facets of their activity (Upjohn *et al*., 2014).

MATERIALS AND METHODS

The entire study is mainly based on secondary data. The data on working equines were collected and compiled from various published sources like Livestock census (2007, 2012 & 2019), Basic Animal Husbandry Statistics (BAHS, 2023) and various census reports of Directorate of Economics and Statistics and Animal Husbandry Statistics Division published by Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture and Farmer's Welfare, Govt. of India (LC, 2007, 2012 and 2019) and FAOSTAT

production data (www.faostat.org). The major analytical tool employed for the study was tabular analysis. Percentages were worked out to facilitate easy comparison. Growth rate was computed to show the trend in growth of species and graphical representation of the data has been done using MS Excel-2016.

RESULTS AND DISCUSSION

Livestock population

There has been noteworthy growth in livestock population from 1951 (292.80 million numbers) to 2019 (535.76 million numbers). The 19th Livestock census recorded a total livestock population of 529.69 million in 2007 (LC, 2007), which decreased to 512.05 million in 2012 (LC, 2012), marking a decline of approximately 3.33%. The total livestock population as per 20th Livestock Census, 2019 was 535.76 million which showed an increase of 4.8% over Livestock census in 2012 (LC, 2019) (Table 1). In recent years, there has been a positive increase in the number of animals as well as in productivity and the availability of livestock products per person. As far as the scenario of equines is considered, the population of horses and ponies showed a marginal increase from 2007 to 2012, followed by a significant decrease from 2012 to 2019 (LC, 2007, 2012 and 2019). Simultaneously, the population of mules had a notable surge from 2007 to 2012, which was followed by a notable decline from 2012 to 2019 (LC, 2007, 2012 and 2019). Conversely, donkeys were continuously seen to be declining over both intercensal periods (Figure 1).

Horses and ponies

There are eight breeds of horses in India viz, Bhutia (Sikkim), Kathiawari and Kachchhi-Sindhi (Gujarat), Manipuri (Manipur), Marwari (Rajasthan), Spiti (Himachal Pradesh), Zanskari (Jammu and Kashmir) and Bhimthadi (Maharashtra). Breed wise comparative population of all breeds in 2013 and 2022 is given in Fig. 2. These breeds are unique due to their ability to adapt to many agroclimatic conditions that exist in the nation as well as their own characteristics including stiffness, durability, potential for endurance, relative disease resistance, and other characteristics. The Indian breeds are largely used by the police services or for recreational purposes. Migratory groups often employ small horses, known as ponies, that are under 150 cm tall, to transport household goods and young animals, such as goats or lambs, from one village or city to another. The population of non-descript horses and ponies is also not negligible compared to descript population (BSR, 2013 and 2022) as can be seen from Fig. 3.

During the period from 2007 to 2012, the total population of horses and ponies increased from 6.12 to 6.25 lakhs. However, the population of horses and ponies in the country was 3.4 lakhs in 2019. Despite the fact that there was a slight rise in population from 2007 to 2012, there was a notable decrease of around 46% between 2012 and 2019. According to 20th livestock census, the states with the highest population of horses and ponies are Uttar Pradesh, Jammu and Kashmir

and Rajasthan (LC, 2007, 2012 and 2019). All major states of country having population of horses and ponies showed variable decrease according to 20th Livestock census except Gujarat; where, population of these species increased by almost 19.5% compared to previous census (LC, 2019) (Table 2). Due to uncontrolled breeding with strange or unremarkable animals and a lack of purebred stallions in need of organized breeding, the number of horses is declining as well as the dilution of the breeds. Development of the road network and mechanization (e-rickshaws replacing tongas), loss of grazing land, urbanization and encroachment of wetlands are considered to be among the key reasons for the decline. Urbanization in India has contributed to a decline in the horse population as it has shifted societal practices, land use patterns, and economic dynamics away from traditional roles that once supported a larger population of horses.

Mules

Mules are mainly reared for load carrying, cart pulling and are used as pack animals in India. Mules are mostly used for loading and transportation work near construction sites, brick kilns *etc*. particularly in northern part of India. The Indian army also uses these animals to transport weapons, ammo and supplies in dangerous and high-altitude environments.

The population of mules was 1.3 lakhs in 2007 and increased by 43.34% to reach 1.96 lakhs in 2012. The total population of mules in the country was just 80 thousand in 2019 which was a major decrease of 57.1% over 2012 livestock census (LC, 2007, 2012 and 2019). The highest mule population is seen in the state of Uttarakhand followed by Himachal Pradesh and Jammu and Kashmir (Table 2). Uttarakhand had the highest population of mules across India, at about 26,000 in 2019 (LC, 2019). The shutdown in brick kiln setups is one of the reasons for the decline in mule population. Wherever brick kilns are available, the mules are being replaced by tractors and trolleys as the road network extends into mountain terrain. Hence, the utility of mules has become limited.

Donkeys

There are three recognized breeds of donkey in India. The Spiti breed is found in northern Indian state of Himachal Pradesh, while Halari and Kachchhi breeds are native to state of Gujarat on western part of India. The Spiti breed contributes with 8.3%. The importance of working donkeys for their owner's livelihood and the economies of developing countries is well known. Generally, donkeys are employed for tasks like hauling sand from rivers and building supplies through urban lanes too small for other forms of motorized transportation. In spite of an important role played by donkeys in the socio-economic fabric of rural and peri-urban areas, not much importance has been accorded to their existence in most parts of the world.

During the period of 2007 to 2012, the population of donkeys in India decreased from 4.38 lakhs to 3.19 lakhs; while, the decline was much too sharp from 2012 to 2019

Table 1. Population of different livestock species & growth in India during 2007, 2012 and 2019 livestock census (Source: LC, 2007, 2012 and 2019)

Species/ Livestock census	2007 (in million)	% growth from 2007 to 2012	2012 (in million)	% growth from 2012 to 2019	2019 (in million)
Cattle	199.08	- 4.10%	190.90	+ 1.3%	193.46
Buffaloes	105.34	+ 3.19%	108.70	+ 1.1%	109.85
Sheep	71.56	- 9.07%	65.07	+ 14.1%	74.26
Goats	140.54	- 3.82%	135.17	+ 10.1%	148.88
Horses & ponies	**0.61**	**+ 2.12%**	**0.62**	**- 45.2%**	**0.34**
Mules	**0.14**	**+ 43.07%**	**0.20**	**- 57.1%**	**0.08**
Donkeys	**0.44**	**- 27.17%**	**0.32**	**- 61.2%**	**0.12**
Camels	0.52	- 22.63%	0.40	- 37.1%	0.25
Pigs	11.13	- 7.54%	10.29	- 12.0%	9.06
Mithun	0.026	+ 12.88%	0.30	+ 29.5%	0.39
Yaks	0.083	- 7.64%	0.08	- 24.7%	0.06
Total	**529.69**	**-3.33%**	**512.05**	**+ 4.8%**	**535.76**

Table 2. Population of working equine in leading states and growth rate during 2012-2019 livestock census (Source: LC,2007, 2012 and 2019)

States	2012 (in lakhs)	2019 (in lakhs)	% change
Horses and Ponies			
Uttar Pradesh	1.52	0.76	-50.14
Jammu & Kashmir	1.44	0.63	-56.17
Rajasthan	0.38	0.34	-10.15
Gujarat	0.18	0.22	+19.42%

Mules			
Uttarakand	0.27	0.26	-2.25
Himachal Pradesh	0.23	0.2	-12.44
Jammu & Kashmir	0.37	0.17	-54.2
Donkeys			
Rajasthan	0.81	0.23	-71.31
Maharashtra	0.29	0.18	-39.69
Uttar Pradesh	0.57	0.16	-71.72

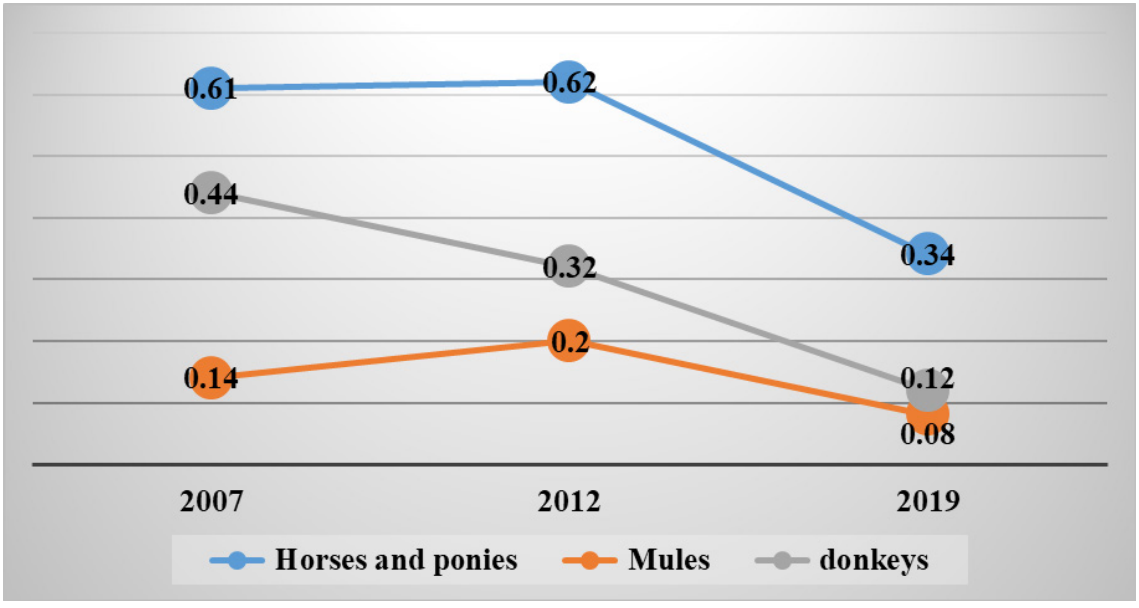

Fig 1. Population trends of working equines during 2007-2012 and 2012-2019 (numbers in lakhs)

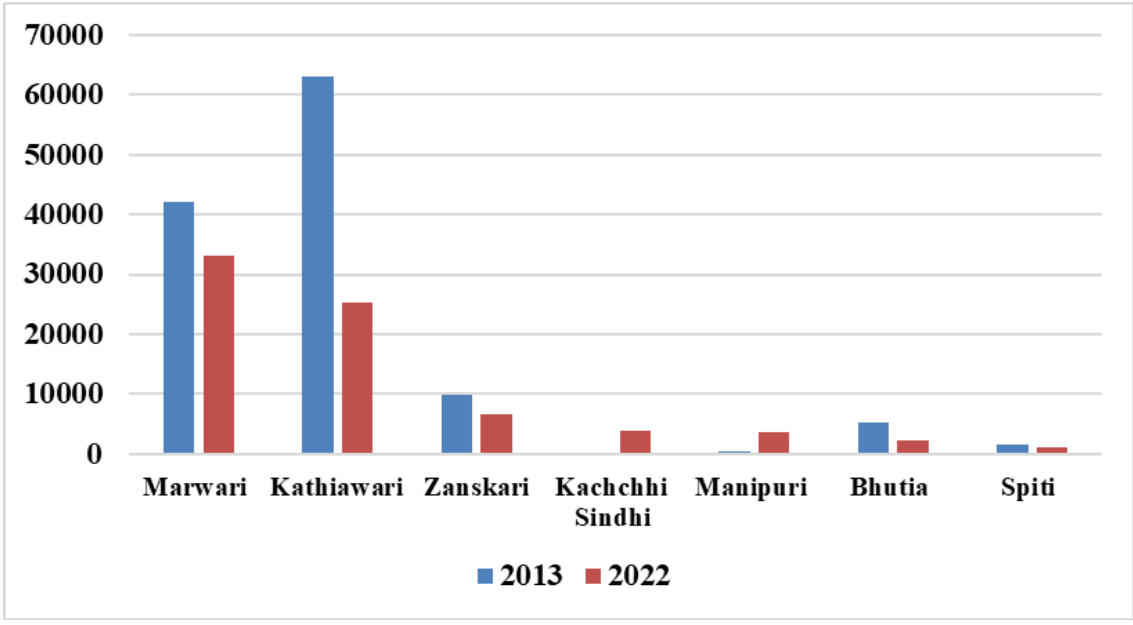

Fig 2. Comparative population of seven equine breeds during (Source: BSR,2013 and 2022)

(3.19 lakhs to 1.24 lakhs). The population in the country showed a decrease of 27.17 % and 61.23% during the period from 2007-2012 and 2012-2019, respectively (LC, 2007, 2012 and 2019). According to the 20th livestock census, Rajasthan had the highest population of donkeys (LC, 2019) (Table 2). A great decline has been observed in donkey population during recent years, India has lost more than half of its donkeys. This decline in the donkey population in India over the last decade may be related to the emerging demand for donkey hide in the Chinese market (Davis, 2019). Donkey hide is used making of 'Ejiao', a gelatin used in traditional medicine of China. Along with this breeding policies and the reluctance of younger generation of the community who used to raise these donkeys for their work, no longer want to do this work.

CONCLUSION

The working horses are the backbone of rural India and many other developing nations, yet national and international policies continue to ignore their importance and contribution. India's equine population is dwindling at a rate faster than never before and is a cause of serious concern. While it might be difficult to measure the output of non-food producing animals like mules, horses, and donkeys, they nevertheless provide important draught energy. Although they don't directly affect nutrition, they do have a financial effect on the country's economy as a whole. There

are challenges to record the data regarding the contribution of working equines to livelihood and economy, various factors which have led to this sharp decline in population and impact of decreasing population on livelihood of various communities involved is needed to be studied. All significant areas of impact like equine as draft animal, their role in tourism development and safe guarding environment should be adequately addressed. Clear strategies, along with comprehensive and multipronged approaches, coupled with awareness among various communities, need to be implemented urgently to address this issue. This category of animals and the stakeholders need to be taken into consideration while making policy decisions.

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