

Strategies of Livestock Feeding and Health Management in Arid Regions of India

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Abstract: The total bovine population in India which includes cattle, buffalo, mithun and yak is 299.9 million in 2012 census and shows a decline of 1.57% over previous census. However, the number of cows and buffaloes in milk has increased from 77.04 million to 80.52 million showing a growth of 4.51% in India. This emphasizes the need of strategic scientific feeding and health management of livestock. Since the country is facing shortage of dry roughages, concentrates and green fodder, we have to look for alternate feed resources like fibrous crop residues, non-conventional feed resources monsoonal weeds to cope up with the feed requirement in arid zone. High fibre crop residues and non-conventional feeds may be subjected to various processing methods such as physical, chemical and biological treatments for their effective utilization. Supplementation of mineral mixtures and common salt is also essential for proper utilization of feeds. Arid zone is registering continuous and increased prevalence of many epidemiologically important diseases of animals which includes prevalent infectious, non-infectious, parasitic, deficiency and production diseases and also toxicity which are of economic importance. These diseases need careful and timely management to assure good health and sustenance of the production. Sustainable integrated farming system models should be developed for different situations to achieve region-wise balance of livestock, environment and human needs.

Key words: Livestock, feeding, health management.

Indian hot arid zone which is about 12% of total geographical area of the landmass of 0.32 million km² has maximum covering in western Rajasthan (61% of the hot arid regions) whereas other states Gujarat, Punjab, Haryana, Andhra Pradesh and Karnataka accounting for 20, 5, 4, 7 and 3%. The cold arid area of 7.1 million ha of the country lies in the state of Jammu & Kashmir covering the Leh and Ladakh region.

The total Indian Bovine population (Cattle, Buffalo, Mithun and Yak) is 299.9 million numbers in 2012 which shows a decline of 1.57% over previous census. The number of animals in milk in cows and buffaloes has increased from 77.04 million to 80.52 million showing a growth of 4.51%. The total Mithun and Yak in the country has registered a growth rates of 12.98% and -7.64%, respectively over the previous census and the Mithuns and Yaks in the country is 0.29 million and 0.07 million in numbers respectively.

The hot arid area is characterized by frequent droughts of 47% of frequency in the last century of moderate to severe nature. Due to higher occurrence frequency of droughts in

this region of state, the livestock assumes great importance as a drought management measure as agriculture is at the mercy of rainfall pattern which is very uncertain in amount as well as distribution coupled with poor soil condition, higher evapotranspiration and higher wind velocity causing the soil erosion. Rearing some of the finest breeds of livestock are known for their endurance making much use of the meagre feed resources which are perennial grasses, herbs, shrubs, tree leaves and cultivated feed and fodder crops. According to the latest (Census, 2012) livestock census, Rajasthan harbors 57.77 million heads of domestic animals while it was 57.89 million in 2007, which showed a little decrease of 0.12 million heads. However the population was 54.35 and 49.1 million in 1997 (Census, 1997) and 2003 (Census, 2003), thus during this period a decrease of 10.08% was observed mainly due to drought years. The hot arid zone of Rajasthan has livestock population of 30.18 million which is about 52.27% of the total population of the state (Census, 2012). Of the total livestock of state, larger number of sheep (76%) and goats (59%) present in the arid districts. The large ruminant production system of cattle and buffalo is dominant in Indira Gandhi Nahar Project (IGNP) irrigated

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