Extension of the National Programme for Bovine Breeding and Dairy Development for Draught Purpose Bovine Breeds of India

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Introduction / Background

Traditionally, bullocks and bovine breeds had been the backbone of Indian agriculture. India has around 70 million draught power animals, comprising of cattle, buffalo, camel, yak, etc. Draught power animals, almost entirely are indigenous breeds, mostly bred and maintained under pastoral systems. Draught power animals in the country are predominantly used in agriculture for ploughing, seedbed preparation, sawing seeds, and drilling, most importantly in intercultural operations, threshing and post-harvest operations and transportation. About 60 - 65% of the cultivated area consisting of 85 million hectare requires draught animal power for cultivation against just 20% managed by tractors.

The Input Census data (2011-12) reveals that large-holding farmers are more mechanized, however, 56% of small and marginal land holders primarily depend on draught energy for farm operations.

The draught energy of the country accounts to an energy equivalent of 18 million kilowatts (KW), which accounts to 4.65%, of the total farm energy available in the country. Although cattle remains the mainstay of draught energy, however, water buffaloes provide about 30% of the animal energy used in agriculture. The total farm available energy is 386.57 million KW, of which tractor based energy accounts to 287.68 million kW, (74.42%). It was estimated that animal power earns between INR 750 to 950 million a day to the country; which is approximately INR 310,250 million a year. Besides, draught power animals are pivotal for saving petroleum worth of INR 215,000 million annually. This is in addition to the other miscellaneous economic benefits they provide in terms of biomass (dung/urine) production and hide and their significant cultural services.

Further, about 60% of the household income of livestock rearers come from the sale of male calves used for draught energy purpose in farm operations. The scale of the economy of traditional sports such as Jallikattu and Kambala, involving indigenous draft bovine breeds remains unavailable and unaccounted. Further, the economy surrounding traditional festivals such as Bailpolu of central Indian and Eruvaka of Andhra Pradesh, Telangana and Odisha states and other similar festivals, involving draught bovine breeds remains neglected and ignored. It is however, difficult to quantify the cultural services provided by the draught power bovine breeds of the country, which needs a special attention altogether.

But the questions remain does India has a bovine breeding policy specifically for the conservation and improvement of indigenous bovine breeds? What is the main focus of the existing bovine breeding policies of the country and what is their impact on the indigenous draught bovine breeds of India?

Methods / Approach

In the above background, a brief analysis of the National Programme for Bovine Breeding and Dairy Development (NBBD) has been attempted to discern its main focus with regards to the breeding and improvement of draft purpose bovine breeds of the country.

Results

From the review it was found that NBBD has the following three components. (1) The National Programme for Bovine Breeding (NPBB); (2) The National Programme for Dairy Development (NPDD); and (3) The Rashtriya Gokul Mission. However, none of the three major components have “specifically” mentioned about the conservation and improvement of the draft purpose bovine breeds of the country. The major of the NBBD remains firmly on promotion of dairy and improvement of milk breeds. It completely ignores the breeding, conservation and improvement of the draught energy bovine breeds of the country.

India has a total of 50 cattle breeds registered as defined breeds, out of which only a handful (approx. 8%) of breeds of Sahiwal, Gir, Red Sindhi, Hariparkar and Rathi have been registered as milk breeds. And the majority (approx. 92%) of the defined cattle breeds are either draught or dual purpose breeds. The Hariana cattle breed is considered as one of the best draught breeds in the world. The Ongole cattle breed immensely popular around the world. The Vechur breed found in Kerala is not only the smallest cattle breed in the world but also produces very hardy and valuable draught bullocks.

The loss of economic relevance of draught energy in the ever increasing mechanization of agriculture, and the indiscriminate state promoted crossbreeding of the native breeds with the exotic taurine cattle like Jersey, Holstein-Friesian and Brown Swiss caused an irreversible damage to the germplasm of the indigenous draught and yet to be defined bovine populations of India. Now, the crossbred cattle constitute 35.9% of total cattle population in Andhra Pradesh, 41.9% in Karnataka, 76.1% in Tamil Nadu and 94.6% in Kerala, as against the national average of 27.7%. Nationally, there is an overall decline of 6% in the total population of the indigenous cattle breeds and the decline is especially in the population of male cattle (30.2%) and He-buffalo (42.35%).

Conclusions / Significance

Despite the huge economic scale of draught energy, socio-cultural significance, genetic merit and importance, the diversity of draught purpose bovine breeds, their dwindling population, genetic erosion, and the imminent threat to their very existence, the NBBD, remains focused on promotion of milk breeds. It neither acknowledges the value and importance nor considers conservation of such breeds through improving the efficiency of draught energy with advancement in research and technological innovations and appropriate market interventions.

References / Links


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Image courtesy: Watershed Support Services and Activities Network (WASSAN), India.