



A Monthly e Magazine
ISSN:2583-2212

Oct, 2023; 3(10), 2521-2525

Popular Article

The livestock industry and veterinary science: A Must for Increase in Farmer's Income

Vishakha Uttam*, Dinesh Kumar Sunwasiya* and Pravin B Purohit*

*Ph.D. Scholar, Animal Genetics & Breeding, ICAR-National Dairy Research Institute, Karnal, Haryana- 132001, India.

<https://doi.org/10.5281/zenodo.8422260>

Abstract

Livestock sector plays a pivotal role in improving the socio-economic conditions of farmers, contributing indirectly to food security by increasing crop output through manure production. Restructuring livestock processes and policy interventions are crucial to increase the farmer's income which would be fulfilled by increasing the gross income, reducing the costs, and stabilizing the income. In India, 70% of livestock population is owned by landless and marginal farmers, providing livelihood to nearly two-third of rural households. So, livestock acts as cushion to the farmers in times of draught as the agricultural farming alone can be risky to farmers specifically in our country due to unpredictability of several factors like weather, crop failure and market availability. Therefore, the domestic animals in terms of generating the diverse economy and monetary benefits to farmers consequently become a dependable bank on hooves for them to fulfil their need of the hour.

Introduction

The goal of doubling farmer's income by 2022 was given by Honourable Prime Minister Shri Narendra Modi on February, 2016 in Bareilly, U.P. As per the latest census *i.e.*, 20th livestock census, the total cattle population in India is 193.46 million, out of which 142.11 million are indigenous or non-descript cattle and only 51.36 million are exotic or crossbred cattle. The livestock population has been increasing gradually over the years as it is observed as 4.6% increase in total livestock number in the current livestock census (Moyo and Swanepoel, 2010). Therefore, to utilize the nation's increasing livestock reserve for the maximum benefits and growth of the farmers, the focus should be shifted to increase the number of productive animals so the productivity would be achieved by regulating the livestock population specifically cattle and buffalo by adopting new and modifying the existing breeding policies.

As per the production statistics, in India, the average milk yield of indigenous cattle is 3.9 kg per day and that of crossbred and exotic cattle is 7.1 kg per day wherein the indigenous cattle contribute only 10% while exotic and crossbred cattle contribute 27% to the total annual milk



production which is almost 2.5 times that of indigenous cattle (DAHDF, 2019). Low genetic potential of the indigenous breeds and poor nutrition due to unavailability of good quality feed or fodder, inferior farm management practices, inefficient execution of existing breeding programmes and inadequate extension services to farmers are the main causes of low productivity. New breeding initiatives like artificial insemination (A.I.) by using superior quality semen is required, however, the A.I. coverage in cattle and buffalo is hardly 35% due to lack of adequate number of trained staffs and lesser supply of good quality semen straws. To achieve adequate A.I. coverage, the required number of semen straws is 160 million whereas the availability is only 81 million, nearly half of the target (Chand, 2017). At present there are only 54 semen production centres and 235 frozen semen storage banks in the whole country which calls for an attention to open more such centres. Other breeding policies such as selective breeding, cross breeding and practical implementation of "Embryo Transfer Technology" (ETT) in field to produce genetically superior productive animals aided by the use of "Advanced reproductive technology" that involves the use of "Sex Sorted" semen will hasten the genetic progress with selective increase in the number of female or male calves as per their requirement. The process of A.I. of farm animals using sex sorted semen is approved by FAO to improve efficiency of farm animals and the farmers. In India, it is standardized for indigenous breeds like Sahiwal, Gir, Haryana and Red Sindhi (DAHDF, 2019). All these aspects are associated to focus on increasing productivity specifically milk production drawing the attention for doubling farmer's income towards "Dairy sector development".

Dairy and poultry sector development

The annual milk production in the country is 187.75 million tonnes. Implementation of dairy entrepreneurship programme would enhance farmer's growth to help them learn to become entrepreneurs and establish their own start-ups to reap huge benefits thereby subsequently contributing in increasing the total production (DAHDF, 2019). The central government has approved a specific fund for "dairy processing and infrastructure development" that involves Rs. 10,881 crores for its utilization in creation, modernization or expansion of dairy processing infrastructure and building an efficient milk procurement system to generate employment opportunities which would benefit 95 lakh farmers in 50,000 villages (DAHDF, 2017). Poultry alone contributes 50% of total meat production in the country and still has a huge demand among consumers therefore; it is another area which farmers can adopt (meat and egg production). The total egg production is 103 billion annually while per capita availability is 79 eggs which is lesser than 182 eggs recommended by ICMR (DAHDF, 2019). The DAHDF provides the farmers with feed and technical facilities like vaccination against deadly diseases of poultry to make their enterprise more profitable and reap great margins. Therefore, dairy and poultry sectors altogether hold a bright future for farmers to utilize maximum benefits and have their own start-ups for multiple benefits.



Livestock-Fish integrated farming

Integration of livestock with fish farming is another profitable option which has already been adopted by various farmers and acts as one of the methods for doubling their profits e.g. chicken or duck along with fish farming or goat rearing with fish farming. It is also an economical method of recycling organic wastes or faecal wastes from poultry or other livestock to be utilized as feed for fish. This reduces the cost of separate supplementary feed for fishes and thus with the rearing cost of one, twin benefits can be obtained by the farmers.

Value addition

Value addition to milk, meat and eggs can actually multiply the farmer's income many folds, also the economic value of livestock products is increased by changing its current place, time and form which are more preferred in the market. Various innovative value-added livestock products from egg, meat and milk like egg jam, egg paneer, egg pickle, instant egg mixes, meat sausages, salamis, loaves, meat pickles, meat patties, mozzarella cheese and varieties of lassi have been developed at GADVASU, Ludhiana and are accepted well by the consumers.

Byproduct utilization

Another underutilized aspect of livestock which can be utilized to increase the profit of the farmers is the use of byproduct which are stated in details as below-

- The cow dung or animal waste can be converted to vermicompost by the action of earthworm and microorganisms for use as fertilizer or farm manure. This makes the farming more economical and subsequently increases the profit. Such byproduct utilization will promote organic farming leading to better returns and marketing options including international markets to the farmers. On an average, 400 Kg bovine dung can be converted to 800-1000 Kg vermicompost annually.
- Biogas, which can be used as a substitute for other non-renewable fuel is produced by anaerobic digestion of the organic waste generated from livestock.
- The dead livestock also never loses its value, if properly utilized it will generate twin benefits to generate some income too. Skin or hide from the dead animals can be sold for further processing and bones can be converted to bone powder which is a source of calcium and phosphorus for animal feed and fertilizer.

Government policies and initiatives

Several central schemes under the Dept. of Animal husbandry, Dairying and Fisheries are being sponsored by the government, of which some are cited below.

- **Animal Husbandry Infrastructure development fund:** In this central fund worth Rs. 15,000 crore, the government has given opportunities to farmers to develop their own enterprises



under Atma Nirbhar Bharat Abhiyan, dividing it into three sectors *i.e.*, a) Dairy Processing and value addition infrastructure, b) Meat Processing and value addition infrastructure, c) Animal feed plant.

- **Livestock health and disease control:** Under this programme, efforts are made to control the spread of deadly diseases and treat the animals from economic diseases.
- **National Animal Disease Control Programme for FMD and Brucellosis:** The Government has launched a new scheme with a financial outlay of Rs. 13,343 crore for five years (2019-20 to 2023-24) by vaccinating 100% cattle, buffalo, sheep, goat and pig population for FMD and 100% bovine female calves of 4-8 months of age for brucellosis to prevent losses of Rs. 50,000 crore. This programme is combined with providing unique PashuAadhar to 535 million animals (cattle, buffalo, sheep, goat, and pig).
- **Rashtriya Gokul Mission:** It aims to improve productivity and production of indigenous cattle breeds for which genetic improvement and designed nutritional approaches are introduced to the native breeds.
- **Pashu Sanjivani:** It is also one such programme run by the government for ensuring animal wellness.
- **Nationwide Artificial Insemination Programme (NAIP):** NAIP for 20,000 bovines per district for 600 districts in the country was launched by the government in September, 2019 to undertake breed improvement to achieve 70% A.I. coverage.
- **Kisan credit cards:** The central government launched this scheme under DAHDF with the aim to benefit all dairy farmers and provide "Kisan credit cards" to 1.5 crore dairy farmers by December, 2020.
- **Digitalization:** The government has initiated digitalization of various schemes to facilitate the farmers to access e-portal (e-Pashuhaat) which is an e-market to facilitate the traceability of high-quality bovine germplasm by connecting the farmers directly to breeders and related agencies.

Role of a veterinarian

Veterinarians play a leading role in creating a liaison between government's plan and policies and their actual implementation at the field level as all the attributes of livestock sector cannot be utilized by farmers to their utmost benefit in doubling their income. Their foremost role is to provide active guidance to farmers about all the diverse options related to livestock to draw the maximum benefits. Veterinarians working in fields are providing awareness about different government schemes and subsidies for the farmers by providing trainings to farmers for different entrepreneurship programmes related to dairy, poultry, piggery and goat units under government schemes through state



animal husbandry department and veterinary universities. These schemes provide push to the farmers to start their own start-ups for better financial gains. Farmers are also given several extension services by organizing Kisan Melas/Divas, free vaccination and deworming camps and also, through print and electronic media. Taking all these facts into concern, it is no denial that a veterinarian plays a vital role in achieving the dream of doubling farmer's income with a focus on livestock sector.

Conclusion

The livestock sector is performing well in the manner of production, value addition, and export of dairy, fishery, wool, poultry, and other products. Apart from its performance, some threats do exist which need to be overcome to grab the global market opportunities. This approach to make agriculture and related activities more remunerative can be achieved if governments at the centre and the states, district and block officials commit to the purpose and work in tandem towards the goal of increasing farmer's income. Also, adopting scientific livestock farming systems, value addition technologies and establishment of marketing channels, encouraging entrepreneurship and utilization of the byproduct will also aid immensely to the goal wherein veterinarians contribute an important part.

Disclosure statement

The study's authors affirm that there were no financial or commercial ties that may be viewed as having a possible conflict of interest.

References

1. Moyo, S. and Swanepoel, F. J. C. (2010). Multifunctionality of livestock in developing communities. In: *The Role of Livestock in Developing Communities: Enhancing Multifunctionality*, edited by Frans Swanepoel, Aldo Stroebel and Siboniso Moyo, Co-published by The Technical Centre for Agricultural and Rural Cooperation (CTA) and University of the Free State, 2010.
2. DAHDF (2019). Dairy Entrepreneurship Development Scheme (Retrieved from www.nabard.org/content.aspx?id.591, dated 13.09.2019).
3. Chand R. (2017). Doubling of farmer's income, Rational, Strategy, Prospect and action plan. Niti Policy Paper: 5-19.
4. Basic Animal Husbandry & Fisheries Statistics (2019). Animal Husbandry Statistics Division, DAHDF, Ministry of Fisheries, Animal Husbandry & Dairying, GOI. DAHDF, 2017. www.transformingindia.in

