

Expectations of livestock sector

from Union Budget in 2019-2020

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Livestock sector is an integral part of Indian agriculture and plays a critical role in the livelihood of rural population, serving as a source for food, more specifically protein for human diet, income and employment. For low-income household, livestock plays multifunctional roles as they serve as store of wealth and insurance mechanism for coping with household-related crisis, provide draught power and organic fertilizer for crop production and means of transport. Rising population, income growth and urbanization are fueling a world-wide change in dietary patterns in favour of livestock food products. This growth in developing country consumption of livestock food products is predicted to continue in the future. Per capita consumption of poultry meat, eggs and milk in India during the last few decades has registered a higher growth than that of pulse and cereal. The distinct increase in the demand for livestock food products not only contributes to nutritional security, but also provides income growth opportunities for rural poor and hence accelerates the pace of poverty reduction.

Key words: Allocation, Livestock, Union Budget

Increasing importance of livestock sector

As a component of agricultural sector, share of livestock in the country's Gross Domestic Product (GDP) has been rising gradually, while that of crop sector has been on a decline. Though the contribution of agriculture and allied sectors to the national Gross Domestic Product (GDP) has declined during the last few decades (about 35% in 1980-81 to about 9.3 % in 2015-16), share of livestock sector to agricultural GDP has increased consistently from about 14% in 1980-81 to about 25.7% in 2015-16. During the last two decades, value of livestock increased at a rate of about 5% per annum which was almost twice the growth in agricultural sector during the same period.

In terms of share in the total value of output from the livestock sector, bovine milk is the most important product in the livestock sector. In 2015-16, milk group accounted for highest share (67%) of total value of production from livestock sector, followed by meat group (20.5%) and

eggs (3.42%). In fact, contribution of milk group to the national GDP is more than other major agricultural products, like wheat, rice and sugarcane.

More equitable distribution of livestock than land: Relentless growth in human population, the number of livestock holdings has increased progressively from 71 million in 1970-71 to 138 million in 2010-11. Consequently, the size of land holding in general has been shrinking steadily over the years, progressively making individual holdings unviable. The proportion of marginal holdings has increased from 57.8% in 1985-86 to 67% in 2010-11. Marginal and small landholders account for 44.5% of total operated area in 2010-11. On the other hand, proportion of medium and large holdings in total holding declined during the same period from 10.2% in 1985-86 to 4.95% in 2010-11. Medium and large farmers account for a major share of total cultivable land area (32%) in 2010-11.

In contrast, livestock sector has a

favourable distributional impact. Marginal producers and smallholders, who account for about 67% of landholdings, constitute the core livestock production sector (they own about 75% of bovines and 79% of ovine population). Medium and large landholders, on the other hand possess on 9.8% of bovine population. Thus, distribution of livestock holding is far less unjust than distribution of land holding. Fig.1 shows that the Lorenze curve for livestock is much closer to the egalitarian line than that of land. Due to more equitable distribution of livestock as compared to land, development of the livestock sector would result in a more balanced development of the rural economy.

A large proportion of farmers in the country is marginal (70%) and for them income from livestock has increased by more than 200%. While contribution of livestock on an average is 12% of total household income in rural areas, the same increases with decrease in wealth status (marginal farmers earn 15-26%

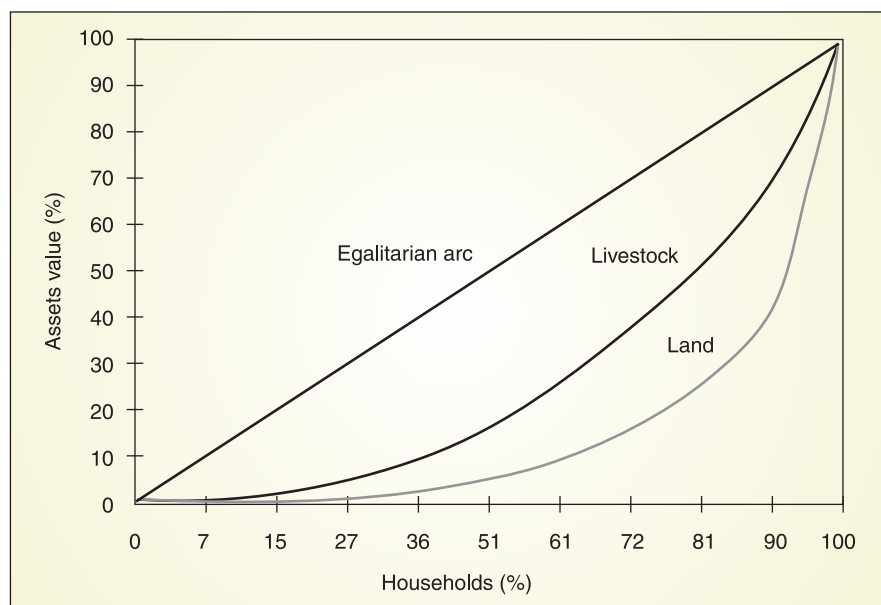


Fig. 1. Lorenz curve showing more egalitarian distribution of livestock than land. Source: BIRTHAL, 2004

of income from livestock, which is next only to wage).

Increasing dietary importance of livestock: Increasing per capita income, urbanization and preference for high protein foods are shifting the dietary patterns in favour of high value food commodities like livestock food products. These driving forces fuelling the growth in demand for animal protein are robust and unlikely to subside in the near future. Average per capita expenditures on livestock food products has increased during the last three decades in both the rural and urban areas in India, while the percentage of expenditure on cereals within food has dropped during the same period.

In urban area, livestock food products are the dominant food source, while in rural areas, after cereal, livestock product clearly are the next important food group. Pulse, edible oil, vegetable and fruit lag considerably behind in importance compared to livestock product, although growth in expenditure share on edible oil, vegetable, and fruit has been quite impressive. As such, the relative importance of livestock food product in the diet of people in India has increased in terms of their share in total nutrients absorbed in the last three decades. In one estimate, it has been revealed that livestock food products are the most important

sources of protein and iron, next to cereal; most important source of β -carotene, next to vegetable; and the most important source of calcium in India.

The total food expenditure does not differ much between the urban and rural areas. The consumption difference in livestock product explains the largest portion of the total food consumption difference. This suggests that there is an enormous potential for an increase in livestock food product consumption if rural income was higher given the huge rural population in India.

Increasing trade potential: India's status has changed since mid-nineties from that of a net importer of livestock product to a surplus nation with high export potential. Within the livestock sector, India has always been a net exporter of meat and meat preparations and eggs. India relied heavily on import of dairy products to meet the domestic demand until early nineties. However, with the opening of Indian economy, subsequent globalization and achievement of self-sufficiency in milk production due to Operation Flood programme, India's dependence on imports of milk products reduced drastically and India became a net exporter of milk and milk products also.

The share of exports from livestock sector in total agricultural

exports has increased consistently during the last two decades, pointing towards increasing importance of livestock sector as a source of foreign exchange compared to other agricultural commodities. On the other hand, share of livestock sector to agricultural import declined continuously during the same period. Although, India is a major player in the international for major livestock products, but it is still to find a foothold in developed countries, especially in Europe and US. Incidence of diseases, especially FMD and lack of traceability are the major reasons for India's failure in this regard. Once, these issues are addressed, there is further scope to leverage India's potential in the international market.

Challenges facing Indian livestock sector

Major challenge in livestock development is the yield gap (ranging between 28-52%). Yield gap based on experimental fields is even more intense (52-79%). Species/breed wise, yield gap is highest for indigenous cow (38%), followed by buffaloes (26%) and crossbred cow (12%). The yield gap varies across region, the highest being in the eastern region (70%), while western, northern and southern regions have yield gaps of 29%, 20% and 25%, respectively. Feed and nutrition is the major contribution factor (50%) for the yield gap, followed by breeding (21%), health (18%) and management (11%).

Dry fodder, green fodder and concentrate are deficient by 11%, 35% and 28% concentrate, respectively. Limited land for cultivation owing to shift of land to other uses, viz. urbanization and industrialization further accentuates the problem of feed and fodder deficiency. It is envisaged that availability of fodder at present can only meet 35-40% of requirement.

Growth in the livestock sector is becoming more number driven as population growth has exceeded productivity growth in recent past. Low operational efficiency of AI centres in the country is a major constraint in the livestock sector resulting in poor success rate of AI



(35-40%).

Only 8% of rural household has more than 4 milch animals and 39% of total milk produced is consumed locally. Out of remaining 61% that goes beyond the locality, only 37% goes to organized sector. The role of organized sector is limited as the organized sector, viz. the milk cooperatives procure only about 10% of the milk produced. Further, there is interstate inequity in procurement by the dairy cooperative network as a major share of total milk procured comes from only a few states like Gujarat and Rajasthan. Development of organized sector is important as a farm gate price in the organized sector has shown an increasing trend in the past. Poor status of livestock market in the country with poor infrastructure and lack of proper price fixation mechanism remains one of the major constraints. Unhygienic slaughtering and retailing practices in many parts of the country is a major problem.

Need for addressing decline in funding

The decline in funding for livestock sector must be reversed. The outlays made in various plans for the animal husbandry and dairying sector in the country have not been commensurate with the contribution of livestock sector to the Indian economy. Major livestock products have registered increasing growth rate during various inter-plan periods (Table 1), while the contribution of livestock to total value of output from agricultural sector has also increased significantly over time (Table 2). In contrast, the outlays made for this sector have been inconsistent throughout the plan

Table 1. Compound annual growth rate of milk and eggs (%)

SN Year	CAGR	
	Milk	Eggs
1. 1950-51 to 1960-61	1.64	4.63
2. 1960-61 to 1973-74	1.15	7.91
3. 1973-74 to 1980-81	4.51	3.79
4. 1980-81 to 1990-91	5.48	7.69
5. 1990-91 to 2000-01	4.11	5.67
6. 2000-01 to 2010-11	4.22	5.58
7. 2010-11 to 2016-17	5.04	5.75

Source: BAHs, 2017, DAHDF, MOA&FW, GOI, New Delhi

Table 2. Growing importance of livestock in Indian agrarian economy (%)

SN	Year	Contribution of agriculture to total GDP	Contribution of livestock to agricultural GDP
1.	1980-81	34.72	13.88
2.	1985-86	299.94	19.86
3.	1986-87	28.62	20.97
4.	1987-88	28.31	21.92
5.	1988-89	29.52	20.85
6.	1989-90	28.24	23.83
7.	1990-91	28.30	22.78
8.	1991-92	28.82	23.54
9.	1992-93	28.21	24.28
10.	1993-94	28.39	22.86
11.	1994-95	27.83	22.61
12.	1995-96	25.88	23.40
13.	1996-97	26.86	22.37
14.	1997-98	25.43	23.17
15.	1998-99	25.43	22.42
16.	1999-2000	22.93	23.12
17.	2000-01	21.24	25.61
18.	2001-02	21.09	24.69
19.	2002-03	18.82	27.00
20.	2003-04	19.03	24.49
21.	2004-05	16.04	25.04
22.	2005-06	15.83	23.75
23.	2006-07	15.30	23.60
24.	2007-08	15.63	23.64
25.	2008-09	15.21	24.85
26.	2009-10	15.20	25.53
27.	2010-11	15.77	24.99
28.	2011-12	12.10	21.80
29.	2012-13	11.80	22.00
30.	2013-14	12.10	21.90
31.	2014-15	11.10	24.70
32.	2015-16	10.50	25.80

Source: NAS, CSO, MSPI, GOI, New Delhi

periods (Fig. 2).

Priority areas for sectorial budget allocation in the livestock sector

Credit needs: Institutional credit at the farm level for livestock production is extremely hard to access on account of procedural complexities, inordinate delay and high interest rate, despite the existence of a vast network of rural credit institution. Lack of good quality credit circumscribes the potential of the smallholders for dairy production. Livestock sector accounts for only 4% of total institutional credit in agricultural sector. Improving the quality of farm level credit and access to credit will enable the lower end of the smallholder spectrum to move up from subsistence farming to progressively viable crop-livestock farming, adoption of intermediate technology (like crossbred cattle) and achievement of progressively higher output and farm income.

Reorganization of credit institution, simplification of procedures, reduction of interest rate and removal of collateral security requirement, are all logical steps in the credit reform process. Microfinance initiatives have in recent times emerged as panacea for the ills associated credit delivery

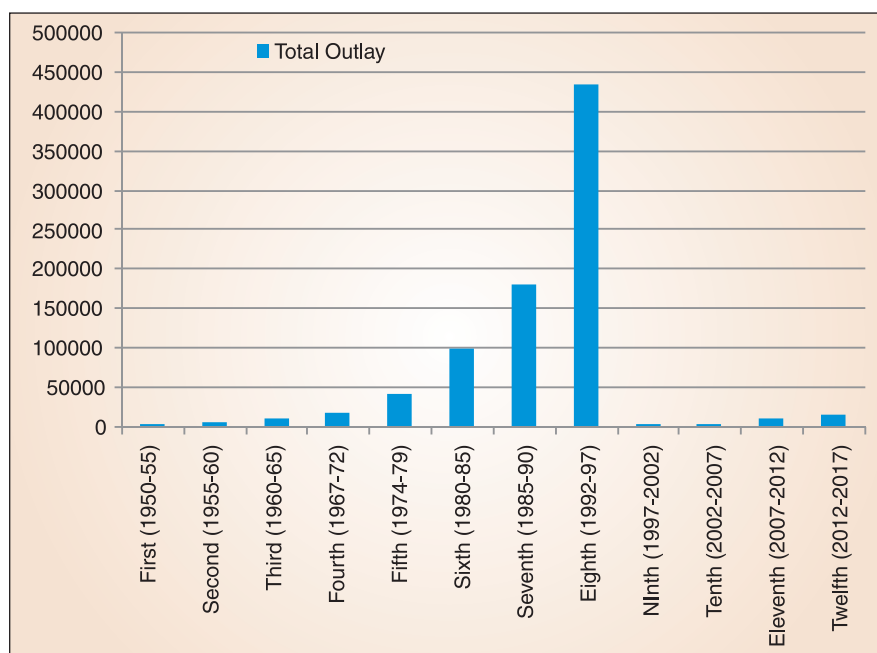


Fig. 2. Total outlays (₹ crore) of central and centrally sponsored schemes under Animal Husbandry and Dairying sector. Source: Plan Coordination Unit, DAHDF, GOI, New Delhi

system in rural India. Livestock farmer can benefit the most from the microfinance programme as this is the only programme which is able to provide support for SHG formation and nurturing, capacity building of member, entrepreneurship training, revolving fund loan and leveraged formal loan for the SHG's. However, recent evidence suggests that microfinance alone does not automatically lead to the desired results of promoting enterprise.

To enhance efficiency of Microfinance programme, focus should be given on devising low-cost ways of reaching the rural poor through the formal sector in the form of introducing flexible product; designing composite financial service, like saving and lending service along with insurance; simplification of procedure to open a bank account, access credit, etc.; better staffing policy and door-step banking and use of technology, for e.g. use of smart card and biometric. Vertical integration with large-scale processor, marketing agency may allow inter-linkage of credit provision with other service.

Transfer of technology: Successful implementation and spread of innovations in livestock production, requires an increase in human capital in the form of new knowledge of appropriate husbandry and management method. Farmer participation in testing and development, together with effective extension support, is essential for the successful introduction of new livestock enterprise or methods of production. There is a need to ensure that proposed new technologies are appropriate, that they accord with producer's objective and constraint and match with consumer demand in accessible market outlet.

The scope of new model of information delivery - for serving distant and marginal areas - involving village community based worker, NGO, providing incentive to agricultural graduate in starting their own clinic and locale specific integrated Information and Communication Technology (ICT) modules need to be explored. Both cost recovery approach and

privatization of initiative towards ICT inclusion of farmer could go hand in hand. The real issue in information uptake by farmer could be its accessibility, given that the amount charged is reasonable and not beyond the reach of poor. Modules of information dissemination involving various stakeholders could go a long way in bridging the information gap and creating a viable and self-sustainable information dissemination system in the region.

Linking small holder livestock producers to market-Institutional innovations: Livestock farming in India would not turn out to be a profitable business until and unless livestock farming is carried out on a commercial line and due attention is given to bringing the smallholders in the organized marketing fold. Development of value added product industry would increase market-avenue and contribute to increased production through better utilization of surplus product. About 40% of total milk produced is handled as liquid milk. The organized dairy industry (made up of three different sectors: government, cooperative and private) accounts for procurement of about 20% of total milk produced in the country. Establishing small-scale ventures for the production of value-added products would go a long way in improving the economics of livestock production and meeting consumer demand.

Livestock producers benefit from institutional innovations that link them with market, like promotion of agribusiness, market reform, organisation of backend and front end and ensuring remunerative pricing. There is a need to explore the

feasibility of alternate market avenue in the form of forward contract and pool marketing. Encourage the States for contract farming under which the buyer can provide the farmer access to modern technology, quality inputs, other support and a guaranteed price.

Three elements that are crucial to scaling up market linkage are:

- Physical infrastructure (road, electricity, communication, refrigerated transport, cold chain, etc.) that can facilitate linkages between production and market. It is essential to reduce transaction cost and post-harvest risk. Poor level of infrastructure results in low level of processing.
- Investment in post harvest processing and value addition, cool chain system for perishable, transport, marketing, commerce and trade.
- An enabling regulatory and legal framework.

Re-orienting Livestock Services Delivery System: Future growth of livestock sector will depend crucially on availability of service that address the problems of low productivity, disease incidence and quality and hygiene issues associated with livestock and livestock product trade. Public health services, such as zoonotic and food-borne disease control, hygiene, food safety and environmental control remain insignificant and in most region non-existent. Privatization in animal health delivery system is being widely advocated on account of public finance rationalization, economic efficiency, equitable social distribution of service and domestic resource mobilization. However, the residual public sector role and

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interaction between public and private sectors must not be neglected. What is necessary before privatization is that private and public animal health services be clearly identified, veterinary department be equipped to make strategic plans and institution and mechanism be in place to minimize market failure. Animal health service delivery to the poor in remote and marginal area requires special consideration and there is need for government to explore new model (Community based animal health worker, Members' organization, SHG, etc.) of delivery of veterinary service to such region, while itself assuming the role of a coordinator and regulator.

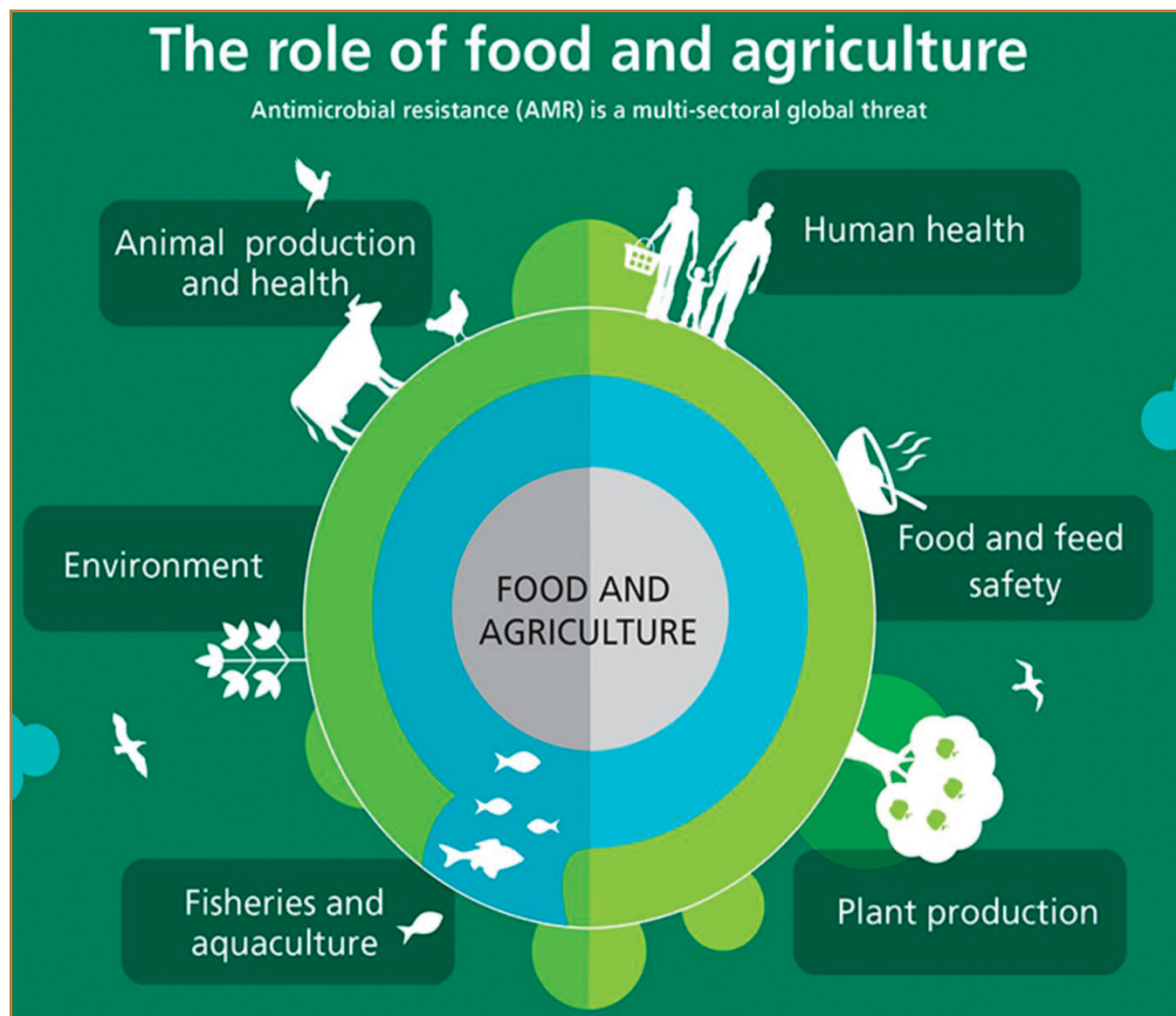
Research funding: More research is needed on animal and veterinary public health, forage crops and utilization of crop by-product,

improved husbandry and production system and on breeding. In addition, socio-economic research is needed into existing production system and institution for land tenure, credit, labour hire, input delivery and product marketing together with method of research prioritization. Increased funding for well-designed policy for trade, pricing, institutional development, research and technological change should yield substantial returns in terms of growth in agricultural income and relief of rural poverty.

Scant research is available in economic literature on quantification of various roles of livestock in the rural household economy, viz. source of insurance, capital investment (banking), energy in agricultural (draught power) and household operation (dung as fuel), food and

nutrition security, income and wealth, thus this is an area which needs further research. More research is needed to quantify the loss during transportation, loss from unutilized slaughter house waste and loss due to disease. There is need for carrying out studies to document the dairy financing sustainability and address economic feasibility of innovation in financed scheme and how milk production can contribute to better farm income in the face of fragmentation of land holdings. There is need for research on how to balance livestock production with ecosystem.

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