

LIVESTOCK SECTOR IN INDIA : AGENDA FOR THE FUTURE

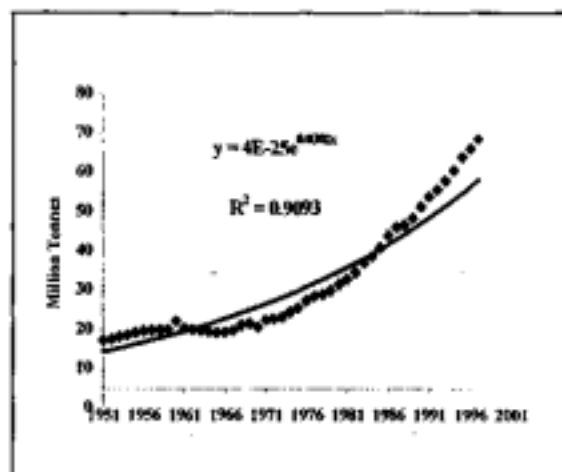
Role and importance

Livestock sector plays a critical role in the welfare of India's rural population. It contributes nine percent to Gross Domestic Product and employs eight percent of the labour force. This sector is emerging as an important growth leverage of the Indian economy. As a component of agricultural sector, its share in gross domestic product has been rising gradually, while that of crop sector has been on the decline. In recent years, livestock output has grown at a rate of about 5 percent a year, higher than the growth in agricultural sector. This enterprise provides a flow of essential food products, draught power, manure, employment, income, and export earnings. Distribution of livestock wealth is more egalitarian, compared to land. Hence, from the equity and livelihood perspective it is considered an important component in poverty alleviation programmes.

Future source of growth : numbers or productivity?

With an annual production of 74 million tonnes in 1998-99, India is the largest producer of milk. Initiation of Operation Flood in early seventies provided a stimulus to milk production, which has never looked back since (Figure 1). The growth is on account of both improvements in productivity and shift in priorities towards buffalo and crossbred cattle. Yet, the productivity is low compared to the potential and world average (Table 1). Meat output grew tremendously since eighties. This has resulted exclusively due to increase in number of animals slaughtered. Productivity of most meat producing species is low and shows no sign of growth. Similar is the case with eggs wherein population largely drives production. In short, excluding milk, other products are lagging behind on the productivity front.

Fig.1 :
Trend in milk production in India



This has implications on several fronts. First, the supply-demand scenario for different products suggests that the demand for livestock products is income elastic and is rising continuously. The demand side is expected to be upbeat as disposable income witnesses sustained growth. Over the next two decades, demand for livestock products is likely to grow faster. Demand for meat and eggs would be adequately met from the domestic supplies if current trends in production growth are

sustained. Lack of productivity growth will impact prices of different products. Real prices of most commodities are expected to increase in excess of an average compound growth rate of five percent.

Table 1 :
Yield levels and growth in outputs of livestock

Items	Growth rate (%)		Average yield (kg/animal annum)	
	1981-96	1992-93		
		India	World	
Milk	4.7	1057	-	
Indigenous cattle	-	572	1993*	
Crossbred cattle	-	2051	-	
Buffalo	-	1263	-	
Egg	6.7	-	-	
Desi layers	.	108	—	
Improved layers	-	237	-	
Beef and veal	11.9	103	203	
Buffalo meat	6.7	138	137	
Mutton and lamb	2.0	12	15	
Goat meat	3.9	10	12	
Pig meat	8.0	35	76	
Poultry meat	9.6	-	-	

*average for cattle

Issues of concern

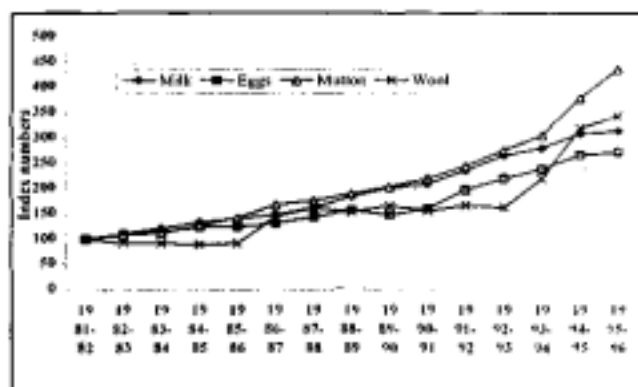
There are many areas of concern that constrain realisation of full potential of this sector. The structure of population is one such issue. Despite significant advances in livestock breeding, the population structure continues to be dominated by local breeds. According to the 1992 Livestock Census, crossbred comprise only 7.5, 4.8 and 14.5 percent of cattle, sheep and pig populations respectively (Table 2). Only one-third of the poultry population represents improved breeds.

Table 2 :
Species-wise percentage of crossbred in total population, 1992

	Rural	Urban	India
Cattle	7.0	20.2	7.4
Sheep	4.7	7.0	4.8
Pig	14.2	16.4	14.5
Poultry	31.8	44.2	32.7

Second issue relates to the organisation of production system. In general the system of production is extensive in nature. Though technological dualism persists (Table 2). The system of dairying in and around the urban areas is based on improved breeds and intensive input use. While the rural system of production is characterised by low input and low technology. It is apprehended that technological change and commercialisation will further accentuate this divide. Meat production is constrained by lack of productivity augmenting technologies and socio-religious taboos. Breeding efforts are yet to capitalise on the genetic stock of the indigenous breeds. The yawning gap between the existing slaughter rates and potential off-take for certain species merits urgent attention. Premature slaughtering of animals for meat is a national waste.

Fig 2.
Trend in wholesale prices



A case in point is that of goat and buffalo improvements in poultry breeds must concentrate on increasing feed efficiency and tropical adaptation. Non-compliance of phyto-sanitary and quality standards in exports of livestock products is another grey area. Ineffective quarantine regime leads to importation of contaminated biologicals and infected livestock species.

Blueprint for future research

Reorientation of research priorities is the need of the hour. In the past, research efforts have been cattle - centred. This has yielded some results, but at the cost of other promising livestock species like the buffalo, sheep and goats. Henceforth, livestock research needs to internalise certain crucial technical parameters. Regarding cattle, a shift in direction is required. The emphasis must be on ecological adaptability and disease resistance of crossbred species. Buffalo holds the promise of raising milk production. Its feed conversion efficiency is remarkable and a breakthrough in buffalo breeding will provide a big push to the livestock economy. Small ruminant meat production is likely to come under pressure unless there is a breakthrough in the genetics of sheep and goat. Genetic evaluation 75-80 percent of goats is yet to be attempted. Therefore, buffalo and small ruminants deserve a greater share in research resources. Research focussing on heat stress in various agro-ecological regions warrants priority. Simultaneously, crop improvement efforts must focus on the forage quality aspects. A farming system perspective needs to be adopted across the board. Research paradigm must be client oriented. Future research agenda therefore, should have an explicit focus on these issues.

Policy initiatives

Till 90s the policy thrust in this sector was rather moderate. In 1991, dairy sector was delicensed in order to attract private investment and new technologies. The policy remains restrictive in the sense that the new entrants are required to develop new milksheds. Restriction on processing of milk into high value products during lean season of production also acts as a disincentive for private investment (Box-1).

Box 1 : Reforms: Conflicting Signals

The co-operative sector is a major player in the organised marketing of milk and its products. In 1991, dairying processing was delicensed with the objective of promoting competition and augmenting technology. This resulted in weakening of the cooperative sector by the onslaught of new entrants. In order to contain this problem, the Milk and Milk Products Order was promulgated in 1992. The MMPO is an example of the policy dilemma that government faces. The intention of promoting viable and vibrant co-operative is a national priority. However, blanket protection to the entire sector may encourage inefficiency in the guise of national interests. Therefore, there is room for reforming the MMPO by rendering it more flexible.

Such restrictions curb competition and market efficiency, which are essential for stimulating investment in productivity-augmenting technologies both at macro and micro levels. The onset of economic reforms programme helped boost exports of livestock products. Buffalo meat export recorded substantial increase in recent years mainly because of its price competitiveness (Box 2). The scope for exports of sheep, goat and poultry meat is constrained by high domestic demand and prices.

Box 2 : WTO : Latent Opportunity

On the-export front, India has a competitive advantage in the world market for many livestock products. However, its share in world trade continues to be meagre. Dairy products export has not been encouraging in the past due to high domestic demand and lack of competitiveness in the world market. With the reduction in subsidies under WTO agreement by the European countries, India's export of dairy products is likely to expand on account of price competitiveness. By 2000 AD member states of the WTO have to reduce export subsidies and volumes of export by 36 and 21 percent respectively.

Health, nutrition and extension support merits special consideration in the process of technological transformation of livestock sector. The current extension system is largely crop oriented. Based on a SWOT analysis of the extension system for crop production, a flexible system for livestock should be evolved. This may involve many actors viz government, private processing industries and non-governmental organisations. In the area of health, smaller animals need greater attention, and so would an appropriate institutional framework. Technological change must be accompanied by policies aimed at population optimisation and enhanced feed fodder supply. In rural areas the potential benefits of technological change are likely to be greater for medium and large farmers 'due to skewed distribution of land, a crucial determinant of size of livestock holding. Strong measures in the form of institutional arrangements and policy intervention would be needed to counter these tendencies.

The private sector is playing a pro-active role in the marketing of livestock products. It has a vital role in strengthening forward linkages and value-addition particularly in areas that have remained neglected. There are however, some constraints that hinder their entry. The much-needed interface between public and private sector is sadly missing. Increasingly, in the years to come, initiatives will be private sector-led (Box 3). The government must restrict its role to providing policy impetus, infrastructure and monitoring. The National Livestock Policy Perspective document details the necessary policy changes required for the livestock sector in the next millennium. Certain critical issues can strengthen this major effort. Explicit focus on agro-climatic and location specific breeding, tightening the quarantine regime, stepping up research investment, arresting the degradation of CPRs, conservation of animal germplasm, processing and market intelligence will yield rich dividends.

Box 3 : Wish- list of the private sector

The following interventions would provide stimulus to private sector participation in production and processing of livestock products: (1) Easing import restrictions on feed like corn (particularly to the traders). (2) Compulsory backward integration for slaughterhouses particularly for male buffalo calves. (3) Provision of decent marketing infrastructure mainly network of cold storage facilities. (4) Incentives for mechanisation of slaughterhouses. (5) Effective disease surveillance mechanisms and establishment of disease free zones for export marketing. (6) Establishment of standards and grading for livestock products. (7) Strengthen interface between public sector and private sector. (8) Access to cheap institutional credit. (9) Import duty reduction for feed additives (10) Promote stall-feeding of small ruminants.

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