

# Livestock Towards Livelihood of Small Farmers in India

In India, of the 72% of the rural population, 57% of the households ((over 100 million)) keep livestock as their only or important source of livelihood. Many of these (32%) small-scale livestock keepers have no access to land and are dependent on livestock as the only source of livelihood and the number of rural landless households is likely to increase due to further subdivision of land holdings. Livestock are thus becoming an increasingly important source of income for smallholders and the landless. Women, in particular, depend on livestock, that is 76% of total workers engaged in livestock are women compared with 37% in cropping agriculture.

According to the Central Statistical Organization (CSO), the value of output from the livestock and fisheries sector was around \$62 billion during the Indian Financial Year 2006/07. The livestock and fisheries sectors together contributed 31.7% to India's agriculture production value (value of output) and represent 5.26% of total GDP. In absolute terms, their contribution increased from 256 billion Indian Rupees (INR) in 1970/71 to INR 934 billion in 2002/03 (at 1993-94 prices) at an annual rate of 4.3%, higher than the growth in the agricultural sector as a whole (2.8%). While with industrialization, the contribution of agriculture to GDP is decreasing it is important to note that

**Table 1: Employment in livestock sector by farm category**

Farm category	Agricultural employment in rural employment (%)		Share of livestock in agricultural employment (%)		Share of women in livestock employment (percent)	
	1993-94	2004-05	1993-94	2004-05	1993-94	2004-05
Landless	62.8	62.5	5.5	2.3	68.0	97.2
Marginal	73.0	65.2	7.1	9.2	69.4	73.4
Small	89.4	88.2	6.1	7.4	72.1	82.1
Medium	92.2	90.8	6.8	7.8	72.8	83.1
Large	93.1	91.4	7.7	8.6	76.7	82.0
All	78.4	72.7	6.8	8.8	70.5	76.6

Source: NSSO [National Sample Survey Organization] 2006

the contribution of the livestock sector to agricultural output is increasing: presently livestock contributes over 25% to the agricultural sector output, up from 16% in 1970/71.

## Changing Markets/Demands

As in most emerging economies, the demand for livestock produce in India is increasing due to economic growth and urbanization. In the past two decades, for example, milk consumption has increased by 30% and total consumption of animal food products almost doubled between 1983 and 1999/2000. Importantly, these increases are seen across a broad range of income groups and in rural as well as urban areas. The increasingly integrated global markets under WTO are also creating opportunities for exporting animal food products.

The phenomenal growth in the dairy and poultry industries is well recognized, but the increasing demand for livestock products does not stop at milk, poultry meat and eggs. Demand for mutton and pork is growing too. For example, the increased demand for pork has pushed prices up by about 20% in real terms in the NE States in the past 5-6 years – good news for the many smallholders who keep a few pigs in their backyards. The opportunities



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for commercial production of goat meat are good in many areas of India but so far little attention has been paid to commercialization of small ruminant production.

## Key Challenges Affecting Small Scale Farmers Engaged in Livestock Sector

Despite its significant contribution as a source of livelihood, nutrition and its contribution to the national economy in India, the livestock sector has not received adequate attention and investment, especially when compared to agriculture sector. The following section highlights some key policy and capacity development needs of the sector.

## Policy

India has no overall livestock policy, although a draft policy has been discussed for many years and one or two states developing their own livestock policy. Development of the livestock sector has been largely

focused on dairy development because of its role in nutrition and its importance to small farmers. But there has been limited recognition of the potential role of other livestock sectors in rural development and poverty reduction. The livestock sector could be assisted generally and be more conducive to small scale farmers, if policies considered the following factors-

§ The first requirement is for stable and reliable market systems for livestock products. As the majority of livestock farmers are small-scale and resource poor, marketing of their produce is one of the biggest challenges. These farmers need support for better access to markets, storage and transfer of their produce. Policies to encourage dissemination of market information and to help farmers to come together for collective actions would be useful. While dairy cooperatives, in some states, have been very successfully implemented, this has not been universal and other forms of market organization need to be explored. These need to go beyond the dairy and incorporate other livestock products. The policies must also recognize that most livestock products are traded through informal markets and provision of support to these markets and agents can improve their effectiveness.

§ Although market demand is the key driver, input supplies and services need to be provided and this is still a key bottleneck in the Indian livestock

sector. In comparison to the crop sector, livestock extension services and inputs supply chains are generally very weak. A large part of the increase in output from livestock in the past has come from increase in animal numbers. This is not sustainable in the long run and the focus now needs to shift to increasing productivity per animal, which will require better feeding, breeding and veterinary care. A recent review of livestock services in India by ILRI and partners has pointed to the need of encouraging private sector and public-private partnerships in livestock services. In addition to feeding, breeding and veterinary services, knowledge of animal management practices and business development services including credit and risk-mitigating mechanisms in the form of livestock insurance need to be promoted. While government has a role in facilitating these services, it need not be the front line provider but it must provide an enabling environment within which others service providers can operate effectively.

§ Livestock, like other agricultural sectors, is a state subject and therefore each state has its own set of rules and regulations. The contribution of livestock to livelihood support varies considerably between regions and types of farmers and communities. A 'one size fits all' policy will not work and tailor-made policies in each state for different agro climatic



regions and different types of livestock producers are needed.

§ Some important elements of the livestock sector, for example backyard poultry, remains to a large extent unorganized. This kind of livelihood activity is particularly for poor and disadvantaged communities (90% of back yard poultry holders in Orissa, for example, are landless farm households belonging to scheduled castes and scheduled tribes). Policy interventions to organize these kinds of sectors would directly benefit underprivileged farmers and help them tap the growing demand for livestock products.

§ Improvements in value addition are necessary to sustain expanding markets, strengthen exports and counteract the threat of cheap imports. This will require public investment in infrastructure and in enhancing skills to ensure better returns for producers. Encouragement to private sector investment is also needed.

§ Policy interventions are needed to improve the credit flow to livestock sector and strengthen insurance support, especially to small livestock producers as to enable them to diversify into livestock production.

§ Appropriate policy and incentive structures are need to attract both public and private sector investment in the livestock sector. Identifying and facilitating clear roles for the public and private sectors and establishing strategic public-private partnerships will be crucial for tackling the present underinvestment in livestock sector. The Planning Commission has designated a financial assistance outlay of \$2.04 billion for the Department of Animal Husbandry, Dairying and Fisheries (DADF), Ministry of Agriculture under the eleventh five-year plan (2007-2012). This aims at achieving a cumulative



growth target of 5% for the dairy sector and 10% each for the meat and poultry sectors. While this is a welcome step, there are evolving policy needs in the context of changing demand, changing market scenarios, globalization, improved technologies and improved understanding, through research of various environmental and climate change issues. With an enabling policy environment there is considerable scope to extend the benefits of this sector to small scale farmers, who are the core livestock producers of the country.

## Capacity gaps

With 485 million livestock and 489 million poultry, India ranks first in global livestock population. However the average productivity per animal is low, due to a significant gap between potential and actual yields. There are some significant capacity gaps in terms of research, infrastructure and access to technologies.

**Table 2. Productivity per animal**

Commodity	Productivity (kg per animal)
<b>Milk</b>	
Cows	1249
Indigenous	719
Cross-bred	2350
Buffalo	1570
<b>Meat</b>	
Buffalo	138
Beef	103
Mutton and lamb	12
Goats	10
Pigs	35

## Eggs (no. per bird)

Indigenous	112
Improved	258

Sources: Basic Animal Husbandry Statistics and FAOSTAT

## Research/ Technology Generation

The emphasis in animal health research has largely been focused on curative treatments with preventive measures having been largely neglected. This area needs investments in terms of technology

development and programme implementation. Research on cost-effective delivery of programs needs to be strengthened by bringing together epidemiologists and economists – animal health economics research is almost non-existent.

Achieving higher levels of production requires more than the feeding of crop residues. Smart ways of providing cost-effective supplements to locally available feeds need to be developed in which better nutrition is provided to selected animals at key times in the production cycle.

Improved genetics will be important. Most efforts have been focused on developing cross-breeding schemes and there have been some notable successes in some parts of India. But AI services still reach only about 10% of the dairy population. While crossbreeding can lift milk yields, there is also a need to explore programmes for improving existing breeds which often show adaptive traits suited to local conditions.

Changes in the way livestock products are procured, processed and retail will place new demands on product quality. Production and marketing systems suitable for smallholder systems will need to be developed, if small scale producers are not to be squeezed out of the market.

Livestock farmers, especially women, have very rich, untapped indigenous knowledge on livestock production, including health remedies. This knowledge needs to be studied, recorded and strengthened by adding scientific knowledge to it.

The key to the development of successful programs and projects for livestock research is to develop the appropriate partnerships involving those responsible for the implementation of livestock development or development of policies in the research process and to recognize that research is only one component in the process of innovation.

## Infrastructure

Livestock output worth Rs.432 billion

(at 2002-03 prices) is lost annually, due to lack of infrastructure. This can be reduced through appropriate investment in transportation, storage facilities, processing, packing etc. requiring the public and private sectors to work together.

## Technology and Service Dissemination

By encouraging the private sector, government can use scarce resources to target more marginal areas and communities which are less attractive to private companies. Government can provide funding, while NGO's or even the private sector provides the services in innovative public-private partnerships. A key component of successful extension is the provision of advice and services in an integrated manner - complete packages that deliver information on breeding, feeding and health coupled with business support services in an integrated way. This needs staffing of a comprehensive understanding of livestock and its role in farming systems and this in turn has implications for the way in which professionals are educated and trained.

## Conclusion

For the sector to achieve its true potential there is a need to strengthen the policy framework, develop innovative market models, invest in infrastructure and capacity development including re-vitalizing input supplies and services and needs-based research programs at national and regional levels. This will only be achieved through the combined efforts of all stakeholders in the livestock sector. With such a framework in place, livestock can provide an important pathway out of poverty for millions of people in India who depend on livestock for their livelihoods and will support the idea of 'Sarvodaya' (rise of all).

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