



# पंचायत



PEOPLE'S EFFORT BRINGS SUSTAINABILITY

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## Panchayat and Livestock Conservation



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The views expressed in the articles are of the writers and not of the IES. Your views are solicited as a feedback, I.E.S. would be pleased to solve your queries.

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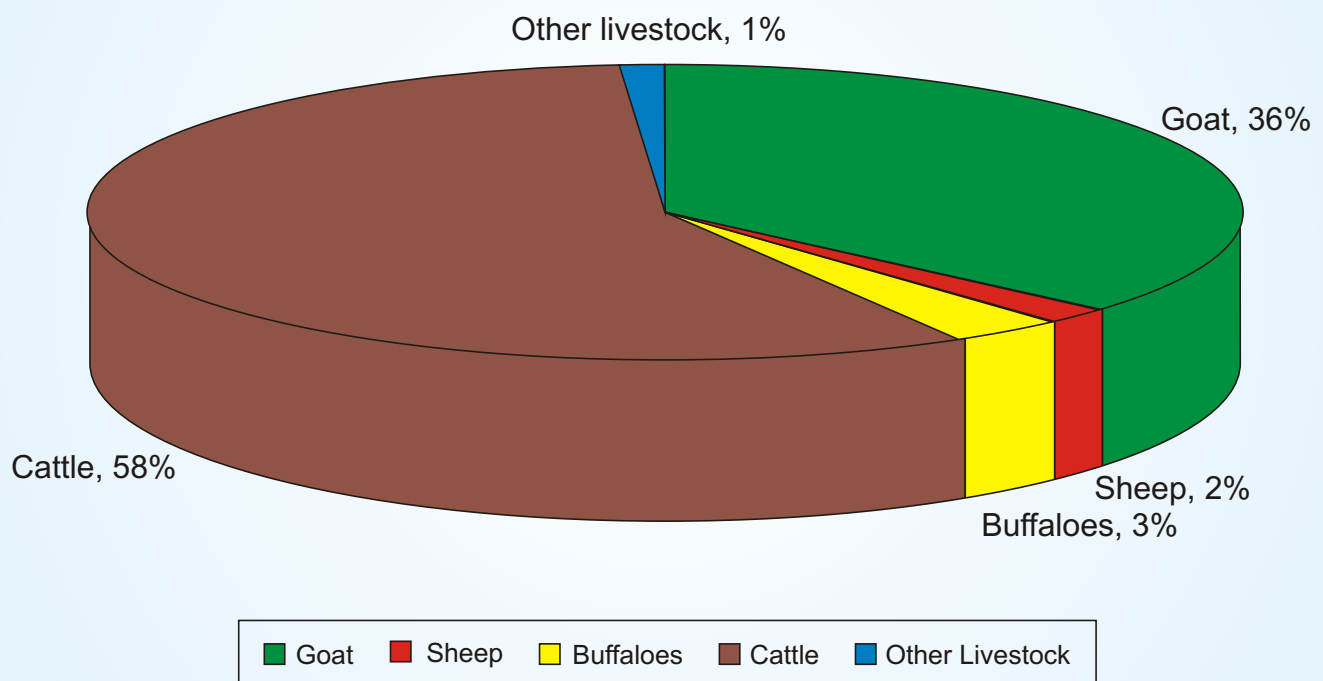
## Do U Know ...

### Livestock Insurance Scheme

It is a Centrally Sponsored Scheme. Under this scheme, crossbred and high yielding cattle and buffaloes are insured at maximum of their market value. The premium of the insurance was subsidized upto 50% by the Central Government, and rest premium was to be paid by the beneficiaries.

This scheme has been formulated with the twin objective of providing protection mechanism to the farmers against any loss of their animals due to the death or other problems.

### Composition of Livestock in India-2003



Articles are invited on the topic of **“Role of Panchayat in Sustainable Consumption”**, for the next issue of this newsletter **“PANCHAYAT”**.

## Editorial

**Livestock** (also **cattle**) refers to one or more domesticated animals raised in an agricultural setting to produce commodities such as food, fibre, labor etc. Generally livestock are raised for subsistence or for profit. Raising animals (animal husbandry) is an important component of modern agriculture. It has been practiced in many cultures since ancient past.

Livestock has much importance like income generation (through animal products such as milk, meat, fibre etc), in agriculture, improving land fertility and many more. Like most of the things, Livestock farming will also come with many positive and negative impacts. It will put impact on land degradation, climate and atmosphere, biodiversity etc. The most serious problem is emission of greenhouse gases. But all these problems are not furious as we can solve these problems through planned action.

Still we have more than 70 % of our population in our rural parts. The source of income for them is mainly agriculture. Rural area has sufficient space and required resources for livestock farming. Promotion of livestock farming in the rural parts will be an added scope for income generation. This will help in avoiding poverty and hunger. Thus we can say that livestock has the potential to provide sufficient contribution for rural development.

Panchayati Raj Institutions (PRIs) are working at grass root level and associated with the rural people. These institutions should be provided with additional resources to promote livestock farming at grass root level for sustainable development. Apart from promoting livestock farming, Panchayat Raj Institution should put effort for marketing of the livestock product.

Apart from the promotion and marketing activities, research activities on “livestock farming for rural development” should be started to find out solution for major problems due to livestock farming. Scientific institutions should be encouraged to come forward for taking the responsibilities to come out with sustainable solutions.

I am sure, the collaborative effort of Panchayati Raj Institutions and Scientific Institutions will able to prove “Livestock Farming” as a best weapon for bringing sustainable development in the rural India. I also hope this newsletter will help for motivating the PRIs, academic and scientific institutions, voluntary organizations etc to join hands for bringing sustainable development in the rural India through successful livestock farming.

**Dr. Desh Bandhu**  
President



## LIVESTOCK, ENVIRONMENTAL PROBLEMS AND SOLUTIONS

*Compiled By: Abhaya Kumar Tripathy, Project Manager, Indian Environmental Society*

Livestock has greater influence on environment and environmental issues. This sector is the one among all significant contributors to the serious environmental problems starting from the local to global level. Though it is a significant contributor for environmental problems its potential contribution to provide solution for the existing problems is equally important. This sector is socio-economically as well as environmentally a very significant sector as it accounts 40 % of agricultural gross domestic product (GDP), employs more than 1.3 billion people and creates lively hoods for one billion of the world's poor. Growing population and income along with changing food preferences are rapidly increasing demand for livestock products. Global production of meat is 229

million tons in 1999/01 is estimated to be increased to 465 million tons in 2050. Similarly, milk production is estimated to increase from 580 to 1043 million tons. If we will see the sector from environment point of view, then we will find it as a complex process of technical and geographical change, which is shifting the balance of environmental problems caused by the sector. Few among them are grazing which causes land degradation, waste generation, pollution etc. This sector also has great importance for the people in rural India as it helps in income generation and helping to meet the food needs of the rural people. This increases the role and responsibilities of Panchayat to act on the sectors like livestock



**Livestock Products**

### LIVESTOCK SECTOR AND ITS IMPACT ON ENVIRONMENT:

Livestock sector is the single largest anthropogenic user of land. The total area occupies by grazing is equivalent to the 26 % of the ice free terrestrial surface of the earth. Expansion of livestock production is a key factor for deforestation in some parts of the world such as Latin America. Over grazing action of livestock causes compaction and erosion. Thus livestock has greater impact on environment. Its impact on different areas related to environment is given below;

#### Related Problems:

##### A) Impact on atmosphere and climate:

These days global warming and climate change is the serious environmental concern. Livestock sector is a major player responsible for 18 % green house gas emission measured in CO<sub>2</sub> equivalent. This global warming gas emission share is even larger than the transport sector. Livestock sector accounts for 9 % of anthropogenic CO<sub>2</sub> emissions. The largest share of this derives from land use changes especially deforestation caused by expansion of pastures land for feed crops. Livestock are responsible for much larger shares of some gases with far higher potential to warm the atmosphere. The sector also emits 37 % of anthropogenic methane (With 23 times Global warming potential of CO<sub>2</sub>) most of

that from enteric fermentation by ruminants. Along with the above emissions, this sector also emits 65 % of anthropogenic nitrous oxide (With 296 times GWP of CO<sub>2</sub>) the great majority is from the manure. Live stock is also responsible for the emission of almost two-third of the anthropogenic ammonia emission which contribute significantly to acid rain and acidification of the ecosystem

##### B) Impact on Water:

Drinking water scarcity is another severe problem that has started threatening the existence of life on earth. At present more than half of world's population expected to live in water stressed basin by 2025. Livestock sector is a key player in increasing water use. It is probably the sector among the largest sectoral sources for water pollution, eutrophication, dead zones in coastal areas, degradation of coral reef, human health problems and many more. The major source of pollutant are animal waste, antibiotics and hormones, chemical fertilizer and pesticides used for feed crop. Livestock also effect the replenishment of fresh water by compacting soil, reducing infiltration, degrading the bank of water courses, drying up flood plains and



lowering water table.

### **C) Impact on Biodiversity:**

The existing problems of the earth have been threatening biodiversity since a long time. Many species has already extinct and many are threatened. Most of the species are going to be treated as a threatened species. Thus, we are in an era of unprecedented threats to biodiversity. The rate of loss of species is estimated to be very high as compared to the rate found in the fossil record. Livestock now account 20 % of the total terrestrial biomass and the 30 % of earth's land surface. These livestock occupied surface was once the habitat for the wild life. Thus, livestock has been playing as a leading player for reducing biodiversity as it promotes deforestation, land degradation, pollution, climate change etc. Some studies and reports of the world also describe livestock as one of the current threat. An analysis of the authoritative World conservation Union (IUCN) Red List of threatened species shows that most of the world's threatened species are suffering loss where livestock are a factor.

### **Solutions for the problems:**

Livestock is promoting several problems related to environment which are described in the early parts of the article. It is the time to find out solutions for the problems. Few ideas for solving those problems are as bellow;

#### **A. For over grazing problem:**

- ❖ Overgrazing can be reduced by grazing fees, better management of grazing system etc

#### **B. For Land degradation problem:**

- ❖ Land degradation can be limited and reversed through soil conservation methods, limits to uncontrolled burning and controlled exclusion from sensitive area

#### **C. For atmosphere and climate related problems**

- ❖ High level emissions open up large opportunities for climate change mitigation through livestock actions.
- ❖ Intensification in terms of increased productivity both in livestock production and feed crop agriculture can reduce green house gas emissions from deforestation and pasture degradation. Restoring historical losses of soil carbon through cover crops, agro-forestry and other measures could sequester up to 1.3 tonnes of carbon per hector per year.
- ❖ Restoration of desertified pastures will also sequester significant amount of carbon



- ❖ Methane emission can be reduced through improved diet to reduce enteric fermentation
- ❖ Improved manure management will provide renewable energy
- ❖ Nitrogen emission wills can be reduced through improved diet and manure management.
- ❖ Developed methodology to make available Clean Development Mechanism (CDM) financial support for other livestock options like soil carbon sequestration through rehabilitation of degraded posture.

#### **D. For Water related problems:**

- ❖ Water use can be reduced through improving the efficiency of irrigation systems.
- ❖ Erosion, sedimentation and water regulation can be solved by addressing measures against land degradation and deforestation
- ❖ Pollution can be solved through better management of animal waste in industrial production unit, better diet to improve nutrient absorption, improved manure management including biogas, better use of processed manure on croplands

#### **E. For Biodiversity related problems:**

- ❖ Most of the threats to biodiversity arise from their impact on main resource sectors like climate, air, and water pollution, land degradation, deforestation etc. the mitigation measures for these problems are listed above which will solve the problems related to biodiversity
- ❖ Reduction of wild life area occupied by livestock can be achieved by intensification, protection of wild areas, buffer zones, conservation easements, penalties and tax credits
- ❖ Improving pastoralists' interactions with wildlife and parks and raising wildlife species in livestock enterprises

### **Role of Panchayat:**

Panchayat has been working at the grass root level and associated directly with the people at the bottom. Thus role of panchayat becomes important as it has to promote livestock production as well as has to stop/ reduce the impact of livestock production. Promoting livestock sector for sustainable development in the rural area is a challenge and Panchayat has to take the responsibility by accepting the challenge. Following are few suggestions that panchayat can do to promote livestock production.

- ❖ Deforestation should be strictly restricted and any one causing deforestation activities should be heavily penalized
- ❖ Grazing area should be decided with a planned manner by having an alternative grazing area. So that overgrazing will not be observed
- ❖ Main focus should be to minimize problems related to

atmosphere, climate and water

- ❖ Manure management plan at panchayat level should be developed and people should be encouraged accordingly
- ❖ Afforestation should be promoted in the locality
- ❖ Local groups/ committees should be formed to monitor the impact from time to time and to take need based action
- ❖ Awareness and education based activities should be organized to improve the awareness and knowledge level of the people at grass root level.

### Conclusion:

As discussed earlier in this article that Livestock sector is one of the important sector which promotes income generation, employment, food benefit and influence the socio-economic condition of the people at grass root level, this sector should be promoted and people should be encouraged to work in this sector. But care should be taken to resolve afore mentioned problems while promoting Livestock. Succeeding to resolve the problems arises due to livestock will lead to sustainable development in the rural area and of grass root people

Source article: *Livestock's long shadow, environmental issues and options- A report prepared By LEAD and FAO*

## LIVESTOCK DEVELOPMENT AND PANCHAYATI RAJ

*Sonal Gupta, Project Associate, IES*

The Livestock in its simplest means is maintaining and domesticating cattles and animals for economic benefits by families residing both in urban as well as rural settings.

Domesticating cattle like cow, buffaloes and maintaining sheep and goats is an important aspect of human civilization and has started from the pre-historic times. Now, the time has changed so as the mindsets and technologies but this important aspect of human

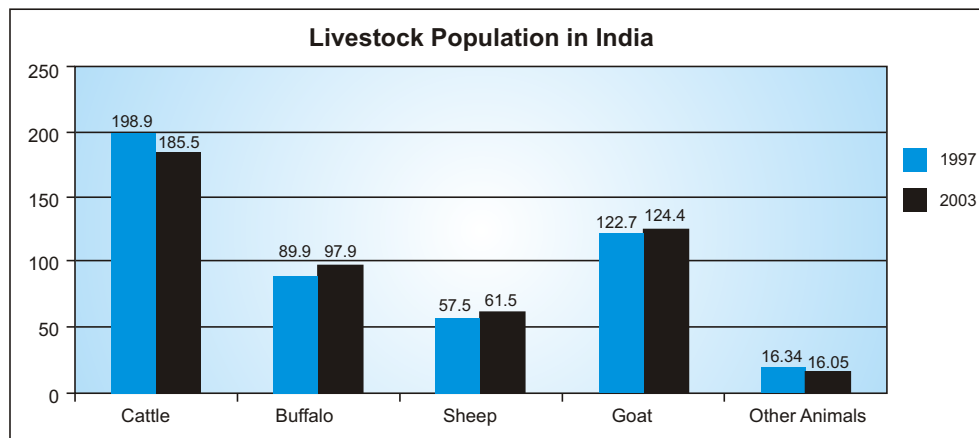
civilization has not changed. It is as fresh as it was in historic times and hopefully, it will remain as it is in the coming ages.

India being a 7<sup>th</sup> largest country in the world and has massive rural area and along with that it has huge population of cattle and buffaloes. India ranks first in cattle and buffalo population, second in goat and third in sheep population.

### Livestock Population in India

Sr. No.	Species	Livestock Population		Growth rate%
		1997	2003	2003 over 1997
1	Cattle	198.9	185.2	6.89
2	Buffalo	89.9	97.2	8.91
3	Sheep	57.5	61.5	6.96
4	Goat	122.7	124.4	1.38
5	Other Animals	16.34	16.05	-1.77
	Total Livestock	485.4	458.0	-0.08

Source: Ministry of Agriculture, Department of Animal Husbandry



**Importance of Livestock:-**

Livestock is an important and vital mode for income generation and income supplementation. Because of the reduction in fertile lands and lack of sustainable irrigation facilities in the country many rural families are now moving to sustainable and feasible occupation. Livestock development and maintenance has become an important mode for income supplementation. In India where over 15-20% families are landless and about 80% of the land holders belongs to the category of being small and marginalized land holders cattle keeping is acting as one of the prime source of livelihood and sustainable life.

Apart for all agricultural benefits the Cattle and other animals provides different products such as milk, wool, meat etc. Land owners generally prefer to keep cattle and buffaloes for the agricultural purposes where as land less generally maintains sheep and goats.

**Constraints in Livestock Development:-**

Availability of feed and fodder is a major constraint in livestock development. Because there is low availability of grazing lands and areas most of the animals normally suffers from malnutrition and nutritional imbalances. Agricultural byproducts and low quality dried grass collected from community wastelands and forests are normally used as a feed for animals and cattle.

**Other constraints:-**

- ❖ Non-availability of superior quality animals.
- ❖ Poor quality of semen produced by many of the laboratories;
- ❖ Inadequate skills of vets and doctors resulting in poor conception and infertility;
- ❖ Shortage of fodder resources;
- ❖ Absence of field oriented conservation strategy for indigenous breeds;
- ❖ Lack of coordination among various agencies engaged in livestock Husbandry.
- ❖ Poor extension services to motivate small farmers to adopt dairy husbandry for income generation.
- ❖ Lack of insight about prevalent Government policies.
- ❖ Non affordance of superior medical facilities by the most of the population.

**Role of Panchayats in Livestock Development:-**

There are 3 major PRI which play major role in Livestock development in rural areas.

**Gram Panchayat:-**

- ❖ Promotion of livestock development in villages.
- ❖ By creating awareness among various sections in villages about running policies.
- ❖ Encourage small farmers and jobless communities to

take livestock rearing as means of livelihood.

- ❖ By sensitizing local people about the animal health and prevailing disease among animals through various means of communication.

**Janpad Panchayat:-**

- ❖ Can create awareness through mass awareness programme.
- ❖ Can disseminate information to local panchayat bodies so that it can be further disseminated to locally residing people.
- ❖ Can help different SHG groups for the livestock rearing and disease control.
- ❖ Can assist financial help from state Governments for setting up of health and awareness activities,.

**District Panchayats:-**

- ❖ Can raise financial help and set up of funds for the livestock development.
- ❖ Can sensitize different Panchayat representatives at Gram level and Janpad Level.
- ❖ Can identify various groups with the help of Janpad and Gram Panchayats for the dissemination of knowledge on Livestock.
- ❖ Can conduct training workshop with the assistance of BODs and experts to sensitize the groups and SHG for the protection of animals against various disease.

**Major activities that have been proposed and undertaken and implemented by the Government under 10<sup>th</sup> five year plan for Livestock development:-**

- ❖ Genetic up gradation of cattle and buffaloes and improvement in breeding inputs and provision of services to farmers including promotion of clean milk production.
- ❖ Extension of dairy development activities in the case of flood or in hilly and backward areas.
- ❖ Provision of nutritious feed and fodder through promotion of fodder crops and fodder trees.
- ❖ Provisions of adequate animal health cover services including creation of disease free zones and control of foot and mouth disease.
- ❖ Provision of credit facilities to farmers.
- ❖ Creation of National animal health and production and development of information system.
- ❖ Development of databases and information on livestock census/population.
- ❖ Provision of Dairy/poultry venture capital fund.
- ❖ Creation of disease free zones.





## LIVE STOCK DEVELOPMENT & CONSERVATION FOR MEETING THE POVERTY OF INDIA

By :- Ravi Rathore, Project Coordinator, Indian Environmental Society

### Introduction

Food production, hunger, poverty, economic growth, and natural resource degradation will continue as the major challenges through out the world especially in the less developed and developing nations. As the global population climbs to an expected 8,000 million by 2025, these problems are going to be more acute than ever before. Today at least 800 million people suffer from chronic hunger. Pervasive poverty remains largely rural.

Ensuring a competitive agricultural economy is critical for reducing poverty, enabling food security, and managing natural resources in a sustainable fashion. The World Food Summit held in Rome in 1996 committed FAO Member States to the 2015 goal of reducing food insecurity by half. It was followed by the World Food Summit: five years later, also held in Rome, in 2001. It is estimated that approximately 790 million people in developing countries-representing about 20 percent of their total population-and 34 million in developed countries, are chronically undernourished. To meet the target of having malnutrition in developing countries by 2015, this number needs to be cut by at least 20 million per year, more than twice as fast as the current reduction of about eight million. With a growing world population, this situation may even worsen very determined and well targeted actions are taken to improve food security.

### Livestock Heritage of India

Our country has a rich heritage of livestock. Traditionally the cows and buffaloes have been of cultural and socio-economic importance. They figure very prominently in Hindu mythologies as well. It is probably due to these mythological and associated religious sentiments that we could not take full advantage of our vast animal resources and congenial conditions for their farming and production. However, the things have changed quite dramatically over the last five decades or so. Our food habits have been changing very rapidly and accordingly there is greater demand for animal products in our diet.

Traditionally, average Indian farmer is 'mixed farmer' with his own combination of crop livestock production system as per his resource endowments. It is also a fact that, traditionally agriculture and animal husbandry are highly complementary but not competitive. In fact, there is growing realization that animal husbandry could be more remunerative system compared to crop farming in major parts of arid, semi-arid and hilly areas capable of sustaining coarse grains, oil seeds and pulses production

along with dairy farming. Thus, it is evident that our heritage supports an integrated production system of crop-livestock interaction, which if taken up more scientifically with good backup from policy, research, education and extension systems can help India out of economic stagnation.

It is often said that agriculture is the backbone of Indian economy. What goes unnoticed and unsaid is the role and contribution of animal husbandry in Indian agriculture. We are indeed lucky to be blessed with largest livestock resources and congenial tropical conditions for animal production and farming. India has vast resource of livestock and poultry, which play a vital role in improving the socio-economic conditions of the rural masses. India ranks first in respect of cattle and buffalo, 2nd in goats, 3rd in sheep and 7th in poultry population in the world. India has 57% of the world's buffalo population. One out of every four large/small ruminants in the world is from

**Table 1: Trend in Livestock Production & Growth**

Sl. No.	Species	Livestock Population (Millions)		Livestock Population (Millions)	
		1997 Cens us	2003 Cens us	2003 over 1997	Annual Compou-nd
1	Cattle	198.9	185.2	-6.89	-1.18
2	Buffalo	89.9	97.9	8.91	1.43
3	Yaks	0.06	0.07	16.67	2.60
4	Mithun a	0.18	0.28	55.36	7.64
5	Total Bovine s	289.0	283.4	-1.95	-0.33
6	Sheep	57.5	61.5	6.96	1.33
7	Goat	122.7	124.4	1.38	0.23
8	Pigs	13.3	13.5	1.58	0.26
9	Other Animal s	2.6	2.2	-22.18	-4.09
10	Total Livesto ck	485.4	485.0	-0.08	-0.01
11	Poultry	347.1	489.0	40.88	5.88

Source: livestock Census, Dept. Of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture, 2004



**Table 1a: Average Annual growth rate of Milk and Egg Production 1950-51 to 2001-01**

Period	Milk (%)	Eggs (%)
1950-51 to 1960-61	1.64	4.63
1960-61 to 1973-74	1.15	7.91
1973-74 to 1980-81	4.51	3.79
1980-81 to 1990-91	5.68	7.80
1990-91 to 2000-01	4.21	4.46

India. The trend in production and growth of major animal products are depicted in Tables 1 and 1a

### Goals of Developing Livestock Sector

On the basis of the livestock sector review 1999, it is apparent that the over arching goals that new livestock sector development should pursue, shall be :

- ❖ Use the livestock sector as an engine for the social and economic development of the rural population enabling steady growth of rural household income, increasing rural employment opportunities and improved quality of life, cutting across caste, class and gender.
- ❖ Enable the small producers to actively participate in the process of development and equip them with information, skills and technologies to transform the growing challenges of the market place, into comparative and competitive advantages through improved livestock quality and higher productivity.
- ❖ Ensure the ecological and environmental sustainability of the livestock sector growth and modernization; constantly monitoring the environmental impact of the growth process and designing policies and programmes to effectively mitigate their adverse impact.
- ❖ To capacitate the marginalized sections, especially women, SCs and STs (tribal) with supplementary inputs and services, so that they are enabled to have equal access to the opportunities offered under this new livestock development and management policy.

### Revolution in Field of Livestock Development & Conservation

In spite of the ill treatment the sector has received in terms of support from governments at centre and states, it has contributed immensely to the overall economic development of our nation.

- ❖ Rinderpest revolution: dislodge the deadly disease

that haunted both crop and animal production.

- ❖ White revolution: transforming country from a deficit to self-sufficiency in milk production.
- ❖ Poultry revolution: to meet the supply of poultry meat as well as egg.

On only one front, we could not achieve what the sector really deserved, i.e., in meat production. In what could have become 'red revolution', we have lost out heavily despite having world's largest ruminant stock owing to 'sentimental' reasons. Though we had tremendous competitive advantage by catering to the 'beef-hungry' nations to earn mammoth foreign exchange, we could not do it.

### Government Initiatives

The vision of International Livestock Research Institute (ILRI) for 2010 sets out determining pathways out of poverty using livestock as a support system. Before determining possible pathways out of poverty in which livestock can play an important role, ILRI examined the innovation process, which it divided into three interrelated components that are dynamic and overlap. These components never develop in a linear fashion but are characterized by dialogue and interaction among all those involved in:

- ❖ Adoption of research products, including new and existing knowledge, technologies and policies,
- ❖ Improvement or adaptation of existing tools, methods and approaches to make them better or more applicable to particular situations, and
- ❖ Strategic research, involving the development of new tool and new approaches.

The X Five Year Plan of the Government of India had identified the following thrust areas in this sector

- ❖ Conservation of native livestock to maintain diversity of breeds.
- ❖ Immunization Programme against important animal diseases and creation of disease free zones.
- ❖ Enhancement of feed/fodder production and improvement of common property resources, and
- ❖ Creation of National Animal Health and Production Information System.

Some of the recent initiatives and proposals to support this sector as per the X Plan were:

- ❖ Withdrawal of Milk & Milk Products Order (MMPO)
- ❖ Introduction of National Project of Cattle & Buffalo Improvement Programme
- ❖ Database & Information Network
- ❖ Creation of disease free zone
- ❖ Feed & Fodder production enhancement

- ❖ Dairy/Poultry venture capital fund
- ❖ Clean Milk Production
- ❖ Conservation of three lend livestock breeds

### Role of Livestock Sector in Poverty Alleviation

The potential of animal husbandry sector to reduce poverty is enormous. Animal resources contribute to the livelihoods of more than two-thirds of the world's rural poor and to a significant minority of the urban poor. The poorest of the poor often do not have livestock, but if they can acquire animals, their livestock can help start them along a pathway out of poverty. Livestock play a major role in day to day lives of human beings. It contributes in food and nutritional security; generate income and are an important, mobile means of storing wealth; they provide transport and on farm power; their manure helps maintain soil fertility; and they fulfill a wide range of socio-cultural roles. A predicted increase in demand for animal food products in developing countries—called the Livestock Revolution—offers the poor, including the landless, rare opportunity to benefit from a rapidly growing market.

Animal food products such meat and milk are concentrated sources of high quality protein and certain vitamins and minerals. When children consume even modest amounts, these products help alleviate poor growth, poor mental development and general ill health. Livestock have a positive effect on diets, health, incomes, financial security, sustainable crops yields, employment prospects and social status. Although livestock keeping is not a universal panacea, if animals are managed properly, they can be an important lever for reducing poverty and boosting the economy in developing countries. The three pillars of agricultural development namely, research, education and extension play pivotal role in making animal husbandry an important instrument of socio-economic development and thereby alleviate poverty in less developed and developing nations.

Livestock contribute in more than one way to economic growth. They are the 'food factories' converting large mass of domestic waste and agricultural waste and by-products in to valuable and protein rich food for human consumption. They are also huge 'fertilizer factories' providing nutrient rich organic manure that is a basic prerequisite in preserving soil productivity and sustainable agriculture. They are huge 'powerhouses' supporting agricultural and rural transport. For a major chunk of our rural populace in our arid, semi-arid and drought prone areas, livestock production system forms a system of landless farming and drought proof mechanism and insurance against total starvation.

What is more revealing is that livestock production system is the domain of our nation's majority peasantry consisting mainly the small and marginal farmers and even landless labours. Seven out of every ten livestock are owned by nearly two-third of farmers of this category. More than three quarters of the total milk produced (76%) comes from weaker sections. The same group owns 90% percent of small ruminants, while entire piggery sector is the virtual monopoly of this category. Livestock constitute 'instruments of social justice' to this socio-economically vulnerable group. It is a stark reality that about 40% of those Indians living below poverty line are heavily dependant on livestock for their precarious survival.

### Conclusion

The contribution of animal husbandry and dairying to total gross domestic product (GDP) was 5.9 per cent in 2000-2001 at current prices. The value of output of livestock and fisheries sectors was estimated to be Rs. 1,70,205 crore during 2000-2001, which is 30.3 per cent of the total value of output of Rs. 5,61,717 crore from the agricultural and allied sectors. The contribution of the milk group alone (Rs. 1,01,990 crore) was higher than wheat (Rs. 47,091 crore) and sugarcane (Rs. 27,647 crore). It is estimated (1993-94) that almost 18 million people are employed in the livestock sector in principal (9.8 million) or subsidiary (8.6 million) status. Women constitute about 70 per cent of the labour force in livestock farming. The overall growth rate in the livestock sector is steady (around 4.5 per cent) in spite of fact that investment in this sector is not substantial. As the ownership of livestock is more evenly distributed with landless laborers and marginal farmers, the progress in this sector will result in a more balance development of the rural economy.

A review of the development of animal sector during the last fifty years or so in free India tells a sad story. The full potential of this sector to propel India as a developed nation have hardly been realized. The sector has virtually been 'shadowed' under the agricultural sector as far as planned interventions like finance; research, education and extension are concerned. It is, however, not too late even now to set the things right. The opportunities stemming out of globalization, urbanization, and market economy place premium on this sector to complement our overall economic development. Hence, a reorientation of our policy, planning, research, and education and extension interventions in this sector is vital to achieve the goals set for 2020 especially an India free from hunger and malnutrition.



## Print Media

## A FARMER'S QUEST FOR A SOLUTION ENDS IN PIG SUCCESS

Farmers, equipped with an acute sense of traditional knowledge and wisdom, find a solution even when scientists seem to give up hope on dealing with some infestations or pest.

“A farmer’s perseverance and determination in finding a cure for his problem has brought about surprising results,” says Dr. G. Namalwar, organic scientist.

Take the case of a farmer named Mr. G. Ranga Prabu at Pudhupatti village in Theni district, Tamil Nadu. With several acres of cardamom plantations and nearly 1,000 local variety coconut trees, Mr. Prabu had nothing to worry about in terms of monetary returns.

#### Difficult solution

But problems started some years back, when several of his coconut trees started to wither. Though a number of reasons were attributed by experts, hundreds of trees in Theni, Bodi and surrounding areas started to die.

“We tried our level best to control this problem by spraying chemicals. But it only aggravated the situation rather than control it. Like me, several farmers were desperate for a solution,” says Mr. Prabu.

Government officials who visited the district advised the farmers to cut the trees and were willing to pay Rs. 250 as compensation for every tree cut to prevent the spread of infestation.

Mr. Prabu had also cut down some trees from his garden. About 100 hybrid white pigs are also grown in the coconut garden. The pig sheds are cleaned at regular intervals by two manual labourers. The dung and urine of the pigs are diverted through a small pipeline which flows into an open well.

“This saved my men a lot of labour, as otherwise they have to manually transport the waste to some other place and dispose it,” says Mr. Prabu. As usual, the well water was used for irrigating the coconut trees.

#### Surprising result

“In about 6-7 months, I was surprised to see many of my sick trees becoming healthy. Even the trees marked for cutting down starting growing. New fronds were noticed

in almost all my trees,” says Mr. Prabu.

In addition, each tree started bearing about 80-100 nuts (a tree under normal conditions bears 60-70 nuts a year). Seeing this transformation, farmers and officials have started visiting his farm.

At present, the coconuts are being sold at Rs.6 each and the demand for the nuts is “encouraging” he says.

#### Some alterations

Mr. Prabu decided to use the same method of using pigs waste on his cardamom plants with some alterations.

Accordingly, he added on litre of diluted effective organisms (EM) along with 10 kg of pigs dung, 40-50 litres of pigs urine, 1 kg of jaggery and virgin soil (soil in which no chemical fertilizers or pesticides are present) each.

“The result was amazing” says Mr. Prabu. “It took 6-7 months to see the results for my coconut trees but when I sprayed the EM solution on my cardamom, “I was able to see the result in 24 hours. All the leaves become dark green in colour, the foliage more dense and the cardamom wick was plucked was well formed, healthy with a pleasant smell.

“But farmers should take care to use water from a bore well or open well for making EM and chlorinated water should be avoided, he emphasises.

#### Price of an animal

In addition Mr. Prabu also sells his pigs. Full grown animals (10 months) reach a bodyweight of 125-135 kg and are sold for Rs.12,500 each (1kg costs Rs.100).

For more information readers can contact Mr. G. Ranga Prabu, No 136/7, Panchayat office street C. Pudhupatti, Theni district, Tamil Nadu.



## WARY OF BANKS, FRENCH START PUTTING THEIR MONEY IN COWS

The French, known for their mistrust of banks, are not just stuffing money into mattresses in these anxious days of recession and minuscule interest rates. They are also putting their cash into cows. For Pierre Marguerit, 60 cows make a safe, secure investment, allowing for long-term growth from a renewable resource.

The cow contracts are hardly new, but go back to Richard the Lionheart; the French word for livestock, "cheptel," is the root for "capital."

These are not exactly cash cows. But investment in Marguerit's Holsteins will bring a 4 to 5 percent return a year after taxes, he said, based on "natural growth" the sale of their offspring. That compares with an interest rate now of 0.75 percent on the basic French bank account. Last year, his business went up by 40 percent, and so far this year, it has "practically doubled," said Marguerit, the managing director of Elevageet Patrimoine, a cattle investment firm in this part of eastern France, near the Alps, and president of Gestel, which works with farmers and investors. "People have saved money and don't want

to waste it," he said. "Stocks have fallen a lot, and people see it. We need some where to put our money for a long-term investment something more stable".

At the moment, there are about 37,000 cows under contract in France at some 880 farms, according to the French Association for Investment in Cattle. But the potential market is huge, Marguerit insists, perhaps as many as one million head in France and six million in Europe as a whole.

A typical couple will buy 10 to 20 dairy cows for about \$1,700 each and can decide to sell the offspring each year or keep them as additional "capital." "At this difficult time, it's a much better investment than real estate and much more tangible than the stock market, Marguerit said. He then proceeded to praise the new interest "in natural, organic and lasting things" among the French, who have always romanticized the countryside and imagined themselves shrewd peasants at heart. "This is part of patrimony," he said. □□□

## CULTURES CLASH AT POPULAR FISH AUCTION IN JAPAN

For workers at the Tsukiji fish market, the final indignity may have been when an intoxicated British tourist licked the head of a frozen tuna. In the now-notorious incident, captured by a Japanese TV crew, an irate market official shouted in English, "Get out! Get out!" as the man patted the tuna's gills.

Every day before dawn, hundreds of visitors gather to witness one of the most popular events on the Tokyo tourist agenda: the daily tuna auction. Clogging passageways, they gawk at the sheer size of a market as big as 43 football fields put together. Each year, the market handles tens of millions of visitors and 600,000 tonnes of seafood in 480 varieties - 1 of every 5 fish caught on the planet.

But some visitors misbehave, infuriating market officials so much they closed Tsukiji to outsiders for several weeks during the busy New Year's buying season. Fish cutter Saito Shiro says many foreigners don't respect his profession.

"They get in the way," says the 75-year-old Tokyo resident, who has worked in the market for more than half a century.

The market relented in January, but the mood is still frosty in the drafty warehouses that make up the market.

"I don't blame them," says tourist Bart Brinkman, a 37-year-old export consultant from the Netherlands, who is already wide-eyed as he wanders the market at 5 a.m. "These people are very serious about their work."

All around him, men in baseball caps zip about on motorised three-wheeled carts. Others in rubber aprons and boots brush past with flashlights and large fish hooks, pointy ends facing outward. Their message - Stay out of my way.

Now that the crowds have returned, the debate has, too: Can tourists be trusted in Tsukiji? The issue symbolises the culture clash between foreign visitors and residents of a nation that prizes manners and orderliness.

"More than 99.9 percent of Japanese know how to obey the rules," says Brinkman, who travels here frequently.

"They're not used to dealing with hordes of often drunken Westerners who see this place as an amusement park.

□□□



## THE KICKING BUFFALO AND OTHER RUSTIC TALES

It has been a challenging afternoon at the vet's. The patient is obstinate.

Dr. Ranvir Prasad (26) is prodding the genitals of a buffalo with a rusted 10-year old castrator, and the animal has already kicked him once from under the rickety, box-like enclosure where farm animals are tied during examinations.

"The Punjab government expects its White Revolution to be managed by doctors with rusted instruments," says Prasad, with a grimace, using the phrase often used to describe the dairy boom.

"Punjab Produces 51.33 million tones of milk every year...10 per cent of the country's total production," says Prasad, who works in Deon village in Bhatinda district, 300 kilometres west of the state capital of Chandigarh. "And yet this is all we get-outdated tools and medicines past their expiry date."

The two-room veterinary hospital is a snapshot of a larger rot setting in across the state's countryside, perceived in the rest of the country as the kingdom of the farmer and milk.

In some ways, it is. Agriculture and livestock are the heart of Punjab's economy-60 per cent of the state's population of 2.44 crore are either farmers, dairy farmers or livestock breeders.

"But the government's policies are anti-people and anti-animal," says the vet, dusting off his hands.

Irrigation and farmer subsidies are still a priority area in India's granary, 40 years after the Green Revolution and White Revolution made agriculture and dairy farming profitable again.

But medical care for the animals behind the turnaround remains rudimentary at best-although millions of lives are connected to livestock.

There are 90 million heads of livestock in Punjab, serviced by just 1,500 veterinary hospitals and 2,500 dispensaries-that's one facility per 22,500 animals.

Over 50 per cent of the 680 veterinary positions in the state are vacant. And most of the animal hospitals in the state are ill-equipped.

"Look around you," says Prasad, gesturing at the 800-square-foot facility. "Is this a hospital?" There is no X-ray machine. In three years, Prasad says he has received supplies twice-both were small batches of antibiotics.

He is the only government vet for Deon's 1,500 cows, 1,000 buffaloes and myriad herds of goats and sheep. The result : infertility, low milk yield & death.

There is an average of two cattle deaths daily in Deon-many of them caused by quacks who have rushed in to fill the gap left by the government.

The only college of veterinary science sees about 120 graduate every year. Over 50 per cent flee the state, most seeking employment abroad.

In Bhatinda city, Prasad's batchmates are on one of their periodic protests.

"My clinic is in the heart of Bhatinda city, but I last got supplies eight months ago," says Dr. Charanjit Sarangal (31). "Every election season sees more promises, but never any action."

In 2006, says Sarangal, Deputy Chief Minister Sukhair Badal, then in the Opposition, met state vets during a fast unto death and promised all would be well when they returned to power.

"The Akali Dal returned to power in 2007, but that promise has not been kept," says Sarangal. "Utility bills for the hospitals are not paid. So many doctors have given up and now have side-businesses to supplement their income."

Back at Deon, Prasad lists his monthly expenses. "Our of Rs. 26,000 per month, I give Rs. 5,000 to the pharmacist, Rs. 2,260 to the Class IV staff and spend about Rs. 1,000 on water and electricity bills. The government has not paid these dues in years."

What he's left with is barely two-thirds of his salary.

So he's become a part-time insurance agent.



**STATISTICAL INFORMATION**  
**TABLE 1 : NUMBER OF LIVESTOCK AND TRY-2003-STATE-WISE**  
**(PROVISIONAL)**

SI No.	State/UTs	Cattle			Buffalos	Sheep	Goats	Pigs	Horses And Ponies	Mules	Don-Eeys	Camel	Yaks	Mithun	Total Live-Poultry Stock	Total
		Cross bere	Indigens Ous	Total												
1.	Andhra Pradesh	1107	8193	9300	10630	21376	6277	570	9	-	33	-	0	0	38895	102278
2.	Arunachal Pradesh	13	445	458	11	19	231	330	7	0	0	01	9	192	799	1743
3.	Assam	440	7999	8440	678	170	2987	1543	12	0	0	0	0	0	5390	21664
4.	Bihar*	1274	9455	10729	5743	382	9490	672	117	4	23	1	0	0	16432	13911
5.	Chhattisgarh	253	8629	8882	1598	121	2336	552	4	-	-	-	0	0	4610	8181
6.	Goa	12	63	76	37	-	11	87	-	0	-	0	0	0	136	566
7.	Gujarat	639	6785	7424	7140	2062	4541	351	18	1	65	53	0	0	14231	8153
8.	Haryana	573	967	1540	6035	633	460	120	25	14	8	50	0	0	7345	13619
9.	Himachal Pradesh	677	1559	2236	774	926	1125	3	18	24	9	-	2	0	2881	767
10.	Jammu & Kashmir	1320	1764	3084	1039	3411	2055	2	172	40	24	2	47	24	6816	5568
11.	Jharkhand	145	7513	7659	1343	680	5031	1108	5	-	-	-	0	0	8167	14429
12.	Karnataka	1602	7936	9539	3991	7256	4484	312	14	-	25	-	0	0	16082	25593
13.	Kerala	1735	387	2122	65	4	1213	76	-	-	-	0	0	0	1358	12216
14.	Madhya Pradesh	317	18595	18913	7575	546	8142	358	32	4	39	8	0	0	16704	11705
15.	Maharashtra	2776	13527	16303	6145	3094	10684	439	40	1	57	-	0	0	20460	37968
16.	Manipur	69	349	418	77	6	33	415	2	0	0	0	0	20	553	2941
17.	Meghalaya	23	744	767	18	18	327	419	2	0	0	0	0	0	785	2821
18.	Mizoram	9	27	36	6	1	17	218	2	-	0	0	0	2	245	1125
19.	Nagaland	243	208	451	34	4	175	644	1	-	0	0	0	40	898	2789
20.	Orisa	1063	12840	13903	1394	1620	5803	662	-	-	9	-	0	0	9489	17611
21.	Punjab	1531	508	2039	5995	220	278	29	29	9	5	3	0	0	6568	10779
22.	Rajasthan	464	10390	10854	10414	10054	16809	338	25	3	143	498	-	0	38284	6192
23.	Sikkim	80	79	159	2	6	124	38	2	0	0	0	7	0	178	322
24.	Tamilnadu	5140	4001	9141	1658	5593	8177	321	25	0	26	-	0	0	15800	86591
25.	Tripura	57	702	759	14	3	472	209	0	0	0	0	0	0	698	3057
26.	Utter Pradesh	1634	16917	18551	22914	1437	12941	2284	154	52	182	16	0	0	39980	11718
27.	Uttaranchal	228	1961	2188	1228	296	1158	33	17	22	1	0	0	0	2755	1984
28.	West Bengal	1119	17794	18913	1086	1525	18774	1301	18	-	-	0	0	0	22704	60656
29.	A & Nicobar	13	51	64	16	0	64	52	0	0	-	0	0	0	132	931
30.	Chandigarh	5	1	6	23	-	1	-	-	-	-	-	0	0	24	152
31.	D & Nagar Haveli	1	49	50	4	-	21	3	-	0	0	-	0	0	28	106
32.	Daman & Diu	0	4	4	1	-	4	-	-	0	0	-	0	0	5	29
33.	Delhi	58	34	92	231	3	17	28	1	1	1	-	0	0	282	459
34.	Lakshadweep	2	2	4	0	0	47	0	0	0	0	0	0	0	47	146
35.	Pondicherry	63	16	78	4	3	48	1	-	0	-	0	0	0	56	244
<b>All India</b>		<b>24686</b>	<b>160495</b>	<b>185181</b>	<b>97922</b>	<b>61469</b>	<b>124358</b>	<b>13518</b>	<b>751</b>	<b>176</b>	<b>650</b>	<b>632</b>	<b>65</b>	<b>278</b>	<b>485002</b>	<b>489012</b>

Note: Date from 2 district are yet to be received from Stat Government.

'-' denotes less than 500.

Source : 17th Livestock Census, Department of animal Husbandry & Fisheries/O Agriculture.

## Messages



This magazine is very useful for social workers, teachers and students. The articles are very knowledgeable. Please send your magazines to our college also so that students may be sensitized towards environment.

*Dr. Qudasia Anjum, (Saharanpur)*



This magazine is very useful for budding Organization to acquire Environment Knowledge.

*Dr. Shanti Singh Chauhan, (Lucknow)*



पंचायत को मासिक पत्रिका के रूप में प्रकाशित किया जाए तथा संस्थाओं के साथ ग्राम पंचायतों के पदअधिकारियों को भेजी जाए तो ये ज्यादा कारगर साबित होगा।

*Dr. Giridhari Bhai (Chitrakoot, U.P.)*



This magazine is very useful source for the NGO and social workers who are participating and working in the field of Panchayat and Environment.

*Mr. Pankaj Kumar, (Ranchi)*



ग्रामीण स्तर पर कार्य करने वाले संगठन पंचायत पत्रिका में छये हुए लेखों का अधिक से अधिक फायदा उठा सकें, ज्ञानवर्धन कर सकें इसके लिए आवश्यकता है कि हम अपनी राष्ट्रभाषा का सम्मान करने हुए इसका प्रकाशन हिन्दी में करें।

*Neha Kumari, (Haridwar)*



Please provide the literature as much as you can and help to improve the knowledge and quality of the society.

*Mr. Hansraj Ramachandra Pantawane Wardha, (Maharashtra)*



कृपया आप हमें ENVIS Newsletter के माध्यम से पंचायती राज व पर्यावरण सम्बन्ध का अधिक समागम प्रस्तुत करें।

*Nikhil Choudhary, (Mathura)*

# Role of Panchayats in Environmental Management

ENVIS Newsletter  
Glimpse of the Website  
[www.iespanchayat.net.in](http://www.iespanchayat.net.in)



## ENVIS CENTRE ON ROLE OF PANCHAYATS IN ENVIRONMENTAL MANAGEMENT

The website has compiled all the relevant data and comprehensive information on different components of Panchayati Raj and Environment. The website contains information on databases developed; geographical distribution of Panchayats; success stories, areas of Panchayati Raj co-operation; elections, finance, query services; bibliography; resource repository etc.

We hope that the information contained in the website will suffice your requirements.

We would appreciate your comments & suggestion about the website so that we can update it as per the requirements of our browsers.

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The Centre invites for Publications :

- Reports on Panchayati Raj (specially related to environmental management).
- Short report on seminars/workshops on the related topics are also invited. Those found suitable will be published in the newsletter.
- Articles for the newsletter "Panchayat" are invited.

### Forthcoming Events

- **Celebration of Earth Day on April 22, 2010 at Indian National Science Academy**
- **International Biodiversity Day Celebration**
- **International Conference on Environmental Education, Climate Change & Global Warming**  
*Date* : July 6-8, 2010, Ljubljana, Slovenia
- **GLOBE Country Coordinator's meeting at Dhaka, Bangladesh**
- **4th National Conference on Environmental Education**  
*Date* : November 1-5, 2010, Goa, India

*For detail log on to [www.environmentevents.org](http://www.environmentevents.org)*

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