



सत्यमेव जयते

NATIONAL LIVESTOCK POLICY, 2013

**Government of India
Ministry of Agriculture
Department of Animal Husbandry, Dairying & Fisheries**

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सत्यमेव जयते

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FOREWORD

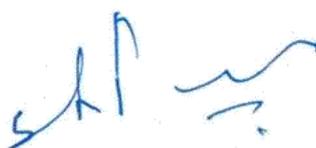
The livestock sector consisting of animal husbandry and dairying activities, plays a vital role in the country's agricultural economy, contributing to about 30% of the GDP of agriculture and allied sector. It also contributes to the food and nutrition security and also to the livelihood of farmers and is registering higher growth compared to other subsectors of agriculture. The sector acts as a best insurance for farmers against vagaries of nature like drought.

However, the livestock sector faces many challenges like prevalence of animal diseases, inadequate availability of feed and fodder for livestock and issues relating to biosecurity and sustainability. In order to address these, it was felt to have a National Livestock Policy to facilitate coordination between States and various policy interventions necessary for addressing some of the critical challenges of the sector. Accordingly, the efforts to draft a national policy were continuing since 1993.

I am happy to inform that the National Livestock Policy, 2013 has finally been approved by Government of India in April, 2013 after wider consultations with the States and other stakeholders.

The primary focus of this policy is on increasing livestock productivity and production in a sustainable manner, while protecting the environment, preserving animal bio-diversity, ensuring bio-security and farmers' livelihood. Needless to say, there is emphasis on increased productivity, profitability, institutional support, and services apart from provisions of appropriate risk mitigation measures and so on. The National Livestock Policy would facilitate better inter-state coordination in control of animal diseases many of which are zoonotic, regulating export and import of livestock and livestock products, enhancing availability of feed and fodder, biosecurity and conservation of indigenous breeds, which are essential for development of livestock sector.

I am confident that the National Livestock Policy, 2013, together with the initiatives already taken by the State and Central Government to implement the policy, would help to accelerate the overall growth of the livestock sector in a sustainable manner and improve the well-being of millions of livestock rearers in the country.


(Sharad Pawar)

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THE NATIONAL LIVESTOCK POLICY, 2013

1. Policy Framework

1.1 The National Policy for Farmers, 2007, which aims to improve viability of farming through sustainable development of agriculture sector with the main goal to improve welfare of farmers and farm income, also provides for sustained development of the livestock and fisheries sectors. The National Livestock Policy, 2013 has been formulated to have a policy framework for improving productivity of the livestock sector in a sustainable manner, taking into account the provisions of the National Policy of Farmers, 2007 and the recommendations of the stakeholders, including the States.

1.2 Under the Constitution of India, livestock development falls within the jurisdiction of the State Government. However, the Central Government supplements and complements the efforts of the State Governments through different schemes and programmes apart from creating an enabling environment to promote sustainable growth of the sector.

2. Need for a National Livestock Policy

2.1 Livestock is an integral part of India's agricultural economy and plays a multifaceted role in providing livelihood support to the rural population. Livestock sector apart from contributing to national economy in general and to agricultural economy in particular, also provides employment generation opportunities, asset creation, coping mechanism against crop failure and social and financial security. Livestock is the main source of animal protein for the population. It is estimated that about 70 million rural households own livestock of one species or the other. Women constitute about 69% of workforce engaged in livestock sector. The resource-poor small and marginal farmers and landless labourers own majority of the livestock resources. Hence sustainable development of the livestock sector would lead to more inclusive development and empowerment of women.

2.2 Past efforts for development of livestock sector included systematic development of organized dairy marketing through appropriate technology and cold chain/ processing logistics by organizing the farmers into cooperatives at village/ district/ state level duly supported by National Dairy Development Board through programmes like Operation Flood. This has also resulted in increased productivity of milch animals and income of farmers apart from making available quality milk to the consumers at a reasonable price. This has also successfully propelled the country to be the highest producer of milk in the world. Development of poultry has been driven mainly by private sector initiatives. Efforts of Government also included initiative for cross-breeding of non-descript cattle with exotic germplasm to improve productivity and steps for control of animal diseases through preventive vaccination and control measures. However, commensurate efforts for other livestock species were lacking. Further, the challenges like comparatively lower productivity, susceptibility of cross-bred cattle to various exotic animal diseases, shortage of feed and fodder and adverse impact on account of climate change need to be addressed to sustain the growth in the sector.

2.3 Livestock production systems in India are mostly based on traditional knowledge, low cost agricultural residues and agro-byproducts leading to lower productivity. There is an urgent need to have a national policy in place, to ensure faster growth of the livestock sector, increased productivity and creation of employment opportunities in rural areas, leading to poverty reduction.

2.4 Livestock sector is facing newer challenges, like increased incidence of emerging and re-emerging animal diseases, vulnerability to exotic diseases, shortage of feed and fodder and need to increase production to meet demand for animal products etc. Many of these challenges like animal diseases, shortage of feed and fodder and dissemination of technology would require an appropriate national strategy to address these with support of the State Governments.

2.5 Livestock species and breeds have ecological distribution and do not follow the geo-specific boundaries of the states. Therefore, sustainable livestock development requires integrated efforts across the states with an overall national perspective.

2.6 The National Livestock Policy would facilitate better inter-state coordination in regulating the export and import of livestock and livestock products, feed and food safety,

biosecurity and conservation of indigenous breeds, which are essential for development of livestock sector.

3. Major Challenges

The livestock sector in India faces the following major challenges which need to be addressed enabling the sector to grow according to its potential:-

3.1 Shortage of Feed and Fodder: While the livestock population is increasing, the gap between the requirement and availability of feed and fodder is increasing primarily due to decreasing area under fodder cultivation and reduced availability of crop residues as fodder. There is continuous shrinkage of common property resources leading to over grazing in the existing grasslands. It is imperative to arrange sufficient good quality feed and fodder for efficient utilization of genetic potential of the various livestock species and for sustainable improvement in productivity.

3.2 Low Productivity: Although India is a major producer of livestock products the average productivity of livestock is lower compared to world average. Inadequate availability of feed and fodder, insufficient coverage through artificial insemination, low conception rates, non-availability of quality males for breeding, poor management practices, high mortality and morbidity losses due to diseases, inadequate marketing infrastructure and unorganized marketing are the other major concerns.

3.3 Livestock Health: A large number of infectious and metabolic diseases prevalent in Indian livestock have serious implication for animal productivity, export potential and safety/ quality of livestock products, and many of these diseases have zoonotic implications. The current efforts of prevention and control of livestock diseases needs to be strengthened. There is a shortage of veterinary and para-veterinary manpower and facilities including mechanisms for diagnosis, treatment, tracking and prevention of the diseases. Adequate infrastructure for ensuring bio-security, proper quarantine systems and services to prevent the ingress of diseases across the states and national borders is not available.

3.4 Livestock and Environment: Climate change and global warming may have serious implications to the livestock sector. These may be manifested in the form of heat stress, loss of animal habitat especially in coastal areas, scarcity of quality feed and fodder, and changes in epidemiological pattern of vector borne diseases, etc., ultimately leading to reduction in production and therefore, economic losses. Mitigating the impact of climate change, calls for critical appraisal of the situation on continuous basis and advance planning.

3.5 Knowledge Gap: Most of the livestock producers being small and marginal farmers, their capacity to mobilize resources required to absorb the latest technologies developed by research institutions are limited. Absence of an effective extension machinery for this purpose compounds the problem. Lack of access to institutional finance is a major constraint in attracting investment required for improving productivity by adopting latest technology.

3.6 Inadequate Infrastructure for Marketing, Processing and Value Addition: The livestock sector is handicapped due to inadequate marketing and processing infrastructure as a result of which the primary producers do not get remunerative prices most of the times. Although various initiatives for dairy development have resulted in vibrant dairy cooperatives in many states, but still large number of dairy farmers are not covered by cooperatives. The dairy cooperatives handle only about 8% of milk production. Still major share of marketable surplus of milk and other livestock products are not handled by organized processing industry, resulting in reduced price realization by farmers and post production losses and wastages.

4. Aims and Objectives of the National Livestock Policy

4.1 The National Livestock Policy (referred as 'policy' hereafter), aims at increasing livestock productivity and production in a sustainable manner, while protecting the environment, preserving animal bio-diversity, ensuring bio-security and farmers' livelihood. With this goal, the main objectives of this policy are as under:

4.1.1 To support the existing low input production systems for improving productivity and income so as to improve socio-economic status of a vast majority of our livestock producers, most of which are women and small farmers.

4.1.2 To support research and development initiatives on issues pertaining to livestock sector for improving production and productivity, bio-security and profitability.

4.1.3 To encourage establishment and growth of self-supporting financially viable, medium and large commercial livestock production units capable of adopting latest technology including facility for processing and value addition.

4.1.4 To improve the productivity of livestock and poultry by promoting and disseminating the technologies developed by the research system.

4.1.5 To promote conservation of animal bio-diversity; conservation and genetic improvement of important indigenous breeds of livestock and poultry in the country.

4.1.6 To increase availability of feed and fodder resources to meet the requirement of livestock to attain optimal productivity.

4.1.7 To strengthen overall animal health cover through prevention, control and eradication of various disease conditions and encourage/enable the dairy cooperatives to extend veterinary services to farmers.

4.1.8 To focus on production of quality livestock products as per the international standards for food safety.

4.1.9 To encourage value addition of livestock products like milk and milk products, eggs, wool and meat & meat products etc.

4.1.10 To expand capacity of milk handled by organized dairy sector including cooperatives.

4.1.11 To ensure transmission and application of improved technology and management practices to the doorstep of the farmers and the entrepreneurs.

4.1.12 To create an enabling environment to attract investment for improving infrastructure support, livestock production, processing, value addition and marketing in the sector.

5. Livestock Research and Development

5.1 To improve the productivity and health of various species of livestock in a sustainable manner while reducing the negative effects on environment, there is need for greater focus on research and development particularly to address problems faced by farmers. The efforts for basic and applied research to generate new knowledge, technology, strategies and application procedures related to the various problems of the livestock sector and farmers would be strengthened.

5.2 Better coordination and convergence in the research efforts of various research and development Institutions including the ICAR, State Agricultural and Veterinary Universities, All India Coordinated Research Projects, National Bureaus, NGOs and private sector R&D institutions will be necessary for optimum utilization of research resources and efforts. State Governments may consider to constitute state level coordination committees for this purpose.

5.3 The research and development activities would focus on various issues related to livestock genetics, breeding, feeding, management, therapeutics, disease prevention, control and eradication, development of thermostable vaccines, biosecurity, environmental pollution and green house gas emission, livestock product diversification and quality control, marketing and business management and extension strategies etc.

5.4 Research management will be improved for effectiveness and efficiency. Demand-driven and farmer-oriented issues will be searched on priority with close co-operation among researchers, industry and the customers.

5.5 Technology, modulated as per needs and suitability to various livestock production systems, plays an important role in improving efficiency and exploitation of production potential of that system. Therefore, research for development and adaptation of technology for various aspects of different production systems prevailing in the country would be promoted. Focus would be on developing area and system specific low cost technologies using locally available resources and knowledge.

5.6 Efforts would be made to identify the skills necessary to be imparted to the farmers and entrepreneurs to facilitate dissemination and adoption of technologies developed through research efforts. The research institution in the areas relating to livestock would take steps to identify such skills, develop the curriculum for short term modular training courses including criteria for evaluation and conduct training of trainers through which the trainings would be imparted to the farmers.

5.7 The research institutions would be actively associated in organising effective demonstration of the technologies developed for the benefit of farmers.

6. Strengthening Infrastructure and Services

6.1 A fairly large infrastructure of veterinary institutions, vaccine and diagnostic production units, semen stations and artificial insemination breeding farms, feed and fodder production units etc. are owned by government. Some of these are not used optimally. These facilities would be restructured and strengthened for effective utilization and for ensuring optimal services. The cooperatives, NGOs, farmers' organizations and other private organizations will be associated to assist in this endeavor. The Government will create enabling environment at the national level and inclusive planning at regional and community level for generation and delivery of these services in the rural and urban areas on the principle of cost recovery basis in a phased manner.

6.2 Livestock marketing facility is inadequate and often unorganized. Lack of proper marketing facility and related infrastructure limit the benefits of livestock enterprises. It is necessary to create necessary infrastructure, policy and procedures to organize animal trade for better returns for farmers and faster growth of livestock sector.

6.3 The processing industry would be encouraged to provide basic services and technology to farmers relating to livestock production and to establish marketing linkages to ensure remunerative returns to the farmers. Public Private Partnership initiatives for this purpose would be supported under ongoing schemes. Livestock farmers would be encouraged to organize as SHGs, Farmer Producers' Organization, Producers' Companies etc. to have better access to credit, inputs and marketing opportunity.

7. Dissemination of Technology/Extension

7.1 Extension and technology transfer have played a crucial role in green revolution. The extension infrastructure for livestock sector, however, is grossly inadequate and needs revamping. Very often, the livestock related technologies developed or modified in the research institutes do not reach the end-users for want of efficient and effective extension mechanisms and procedures. This remains one of the biggest stumbling blocks in the transformation of innovations into practice. Institutional, infrastructural and strategic reorientation will be made to ensure effective percolation and adoption of the various newer, useful technologies in the field. The mode of transfer of technology will be reoriented to ensure that the livestock farmers reap the benefit of investment in livestock research and for this purpose, use of Information and Communication Technology will be encouraged. The efforts of Government will be augmented through involvement of private sector, NGOs and progressive farmers and their organizations.

7.2 The extension services for livestock sector is grossly inadequate and needs radical revamping. Active participation of farmers is an essential prerequisite for the success of the programmes. The need for intervention in livestock sector is so large that the government efforts alone would not be sufficient to meet the requirements. The private sector and NGOs with adequate experience will be encouraged to take active part in extension and development

and transfer of technology. Progressive farmers rearing high quality livestock will be encouraged to act as extension agents by giving them due recognition. Artificial Insemination technicians/paravets will be adequately trained for delivery of extension and other services at the farmers' doorstep. Skill building of the key personal will be taken up at a regular interval.

8. Re-orientation of Breeding Policy for Livestock

8.1 States would be encouraged to review their respective breeding policies for different livestock species. Species-wise breeding programmes will be fine-tuned and implemented for faster growth in production.

8.2 **Breeding Policy for Cattle and Buffalo:** For increasing milk production in cattle and buffaloes and to increase their life time productivity, a broad framework of policy would include the following:-

- i. Selective breeding of defined indigenous breeds of cattle having high milk yield, and those with excellent draft abilities, will be promoted to improve their production and reproduction potential. This will help their proliferation, conservation and genetic upgradation. Efforts will be made to import semen of these breeds if necessary, to avoid/reduce inbreeding. Intrusions of cross-breeding in their defined breeding tracts will be avoided.
- ii. Cross-breeding of non-descript and low producing cattle with high yielding exotic breeds suitable for respective agro-climatic conditions, will be encouraged in selected areas having adequate facility for feed and fodder and marketing facilities etc. Upgradation of non-descript and low producing cattle with defined indigenous breeds in resource deficient areas and the breeding tracts of defined indigenous breeds would be encouraged.
- iii. Buffalo development will aim at improving milk production and to hasten growth, maturity and proliferation. Selective breeding of established native breeds, and

upgrading low producers through breeding with defined high milk yielding breeds will be undertaken. If required, semen may also be imported to reduce inbreeding. Cross-breeding of non-descript buffalo population with improved indigenous breeds will be considered, where appropriate.

- iv. Production of breeding males having high genetic potential will be an essential element of the breeding policy for each species and breed. Formation of breed associations by involving farmers for improvement of indigenous breeds of various species and identification/registration of animals having good genetic potential would be promoted by providing financial, technical and organizational assistance.
- v. There is a need to focus on the hitherto neglected natural mating system and to produce quality disease free high genetic merit bulls for natural service through implementation of massive pedigree selection and progeny testing programmes.
- vi. For the purpose of cross-breeding, semen of progeny tested bulls would be used as far as possible.

8.3 Breeding Policy for Sheep and Goat: This will aim to improve growth, body weight, reproductive efficiency, meat and wool quality and quantity, and to reduce mortality. An area specific approach would be adopted to improve quality and quantity of coarse wool and fine wool. Main focus will be to produce and distribute good quality rams/bucks of quality indigenous breeds which can thrive in different agro-climatic conditions. Artificial insemination would also be encouraged. Cross-breeding with high yielding exotic and other native breeds of goats will also be considered.

8.4 Breeding Policy for Pig: This will focus on improving growth, prolificacy, quality and quantity of meat produced, survivability and utilization of low cost locally available feed and managerial conditions. While efforts will continue to conserve some of the meritorious indigenous breeds of pigs in their defined local tracts, crossbreeding with high yielding, disease resistant exotic breeds will be encouraged, with maximum 50% level of exotic germplasm in crossbreeding.

8.5 Breeding of Yak and Mithun would be supported in high altitude agro climatic regions for preservation and further development through selection, and where necessary, through crossbreeding with exotic germplasm.

8.6 Breeding of Equines: Breeding of horses, mules, and donkeys would be promoted to produce high quality stock for draft power and sports purposes. Selective breeding of indigenous breeds and cross breeding, where necessary, will be considered.

8.7 Breeding of Camels: It will aim at improving their desert specific draft power, milk production, disease resistance and sports traits. Breeding of Double hump camel in high altitude areas would be supported with import of semen to minimize otherwise high chances of inbreeding.

8.8 Breeding Policy for any other Useful Livestock can also be developed as per local need.

9. New Technologies for Livestock Breeding

9.1 Newer breeding and reproductive technologies, including those involving biotechnology and genetic engineering/genetic marker technology developed from time to time, will be adopted for faster implementation of various breed improvement programmes and for increasing production. Efforts will be made to develop semen sexing technology to provide greater choice regarding breeding to farmers. The delivery of breeding services would be regulated by fixing standards with periodic evaluation of service providers.

9.2 Conservation of Animal Bio-Diversity

9.2.1 The country has rich and diverse genetic resources of livestock in the form of a large number of species, breeds, and strains within a species. India has some of the best breeds of cattle and buffaloes with traits for dairy, draught power and dual purposes, several carpet wool breeds of sheep, highly prolific breeds of goats and

adaptive breeds of poultry. These breeds of livestock and poultry are essentially the products of long term natural selection and are better adapted to tropical fodder, environment and diseases, and perform under low and medium inputs. Some of these breeds are suited to particular agro-climatic conditions of the country. Some of these breeds have useful genes for fast growth and prolificacy. Such utility genes and breeds would be identified, conserved and utilized for breeding and research. The focus would be on conservation of indigenous breeds of livestock and poultry.

9.2.2 Pastoral communities, particularly those managing migratory animals like buffaloes, sheep, goats, yaks etc. shall be supported through creation of facilities along their migratory routes for feeding, breeding, healthcare, housing, and market channels for their produce and animals. Indigenous knowledge of pastoral communities about animal maintenance and breeding would be documented with active involvement of communities, breeders' associations, gaushalas and NGOs.

10. Strategy for Enhancing Livestock Production

10.1 Milk

The yield levels for cows and buffaloes of 1281 kg and 1707 kg per year respectively (as on 2011-12) would be improved through increased availability of feed and fodder, genetic upgradation through cross breeding, strengthening progeny testing, selective breeding, converting unproductive animals to productive and improved disease control and surveillance etc. The problem of infertility among improved milch animals would be suitably addressed through provision of area specific mineral mixture and appropriate feed and fodder.

10.2 Meat and Wool

Emphasis on small ruminants and pigs would be to improve nutrition, genetics, breeding strategies and health cover to increase proliferacy, carcass weights, and reduce mortality leading to improvement in quality and quantity of meat, skin and wool. Selection of breeding stocks through large scale screening involving farmers flocks would be taken as a national program. The farmers would be encouraged to be

organized as cooperatives or Farmers' Producers' Organization for better access to inputs and marketing.

10.3 Egg and Poultry

10.3.1 The commercial poultry sector is highly organized and a substantial part of the production of germplasm, feed and vaccines etc., is being undertaken by the private sector. The backyard poultry, which produces 30 to 35% of the eggs and highly important for livelihood and nutritional securities of the rural poor, is, however, facing many problems. The focus, therefore, would be to provide appropriate support to this sector in the form of financial assistance, genetic stocks and improved technologies, scientific advice, extension/awareness, particularly on bio-security measures. Conservation of indigenous poultry breeds would be encouraged for producing poultry birds suitable for backyard poultry.

10.3.2 Appropriate support would be provided to backyard poultry farmers in rural areas to promote clusters or small holder's poultry estates.

10.3.3 To provide remunerative marketing opportunities to farmers, mutually beneficial contracts between the poultry farmers and purchasers and poultry industry would be encouraged so as to minimize the risks of the farmers. Small farmers would be provided opportunities to associate with corporates in an integrated model through self-help groups or co-operatives.

10.3.4 Programmes for other avian species would be encouraged taking into account existing laws and regulations, result of research on economics and likely impact on environment.

11. Dairying

11.1 Strengthening Infrastructure and Handling Capacity

Presently about 16% of milk produced in the country is handled in organized sector. Efforts would be made to set up collection centres along the milk routes to increase procurement in the organized sector to facilitate scientific handling as per the standard quality norms. To ensure that more and more milk is processed, the efforts and resources of both cooperative and private sectors would be synergized. By creating a facilitating environment, self-sustaining viable dairy units would be promoted. To improve quality milk production, necessary veterinary support, infrastructure and cold chain facility would be expanded by suitably encouraging cooperatives and incentivizing the private sector.

11.2 Strengthening Dairy Cooperatives

Greatest strength of the cooperatives has been their primary milk producers and the rural procurement structure. There is need to strengthen their rural base. Since cooperatives carry major share of the organized dairy business in India, effective steps would be taken to make them financially viable and resurgent business organizations. The dairy cooperatives would be assisted to expand their milk routes, procurement infrastructure and processing capability and would be encouraged to provide breeding and veterinary services to farmers.

11.3 Clean Milk Production, Hygiene and Quality Control

There is growing concern on excessive residues of fertilizers, pesticides, antibiotics and other non-biological toxicants in milk and milk products. The policy would promote clean milk production with quality and food safety of international standards for benefit of farmers and consumers. The methods of collection, storage, transport, processing and testing of milk will be modernized to ensure quality. Administrative and regulatory mechanism would be put in place to ensure supply of safe milk as per the standard quality. These would be supported by a network of internationally accredited laboratories for food safety standards and application of total quality management.

11.4 Diversification and Value Addition

With improving standards of living, the consumers are becoming discerning for a variety of products. Diversification of dairy products including probiotics would be promoted to meet local demands and for exports. Public Private Partnership initiatives would be supported to ensure better marketing opportunities and remunerative returns to the dairy farmers.

12 Feed and Fodder

12.1 Enrichment of Straw Quality

12.1.1 Straws, crop residues, stovers and other agricultural by-products are likely to continue to be major input as livestock feed for ruminants. To avoid wastage of large quantity of straw and agro-industrial by-products, enrichment and densification of crop residue would be encouraged by using existing and newly developed technologies. Biotechnological techniques, which can develop recombinant microbes to digest straws, utilize lignin and its by-products and release carbohydrates through a solid state fermentation process, shall be developed by involving research organizations of the government and private sector.

12.2 Cereals and Oil Meals

The area under cultivation of coarse grains has gone down over the years resulting in shortage of feed ingredients and concentrates. Efforts will be made to enhance availability of coarse grains and oil meals for livestock and poultry sector. Steps would be taken in consultation with agriculture department to increase area under high yielding/hybrid varieties of coarse grains including maize to increase its production. Non-conventional animal feed resources would be exploited to make available protein and energy for livestock feeding.

12.3 Production of Fodder and Fodder Seeds

Efforts will be made to increase production of quality fodder seeds through necessary incentives, arranging foundation seeds of different high yielding fodder varieties and modern scientific farming procedures etc. Efforts will also be made to increase area under fodder cultivation, especially through use of barren and fallow lands and silviculture. Appropriate resources and technologies will be made available to ensure quality fodder seed production. Fodder cultivation in degraded land and forest land would be taken wherever possible with the help of farming community. Round the year availability of quality fodder through promotion of hay, silage and fodder banks etc. will be emphasized. Non-conventional sources of feed such as azolla, processed vegetables and fruit wastes etc. will be promoted.

12.4 Compound Feed and Balanced Ration

The quality of compound feed is extremely important for enhancing production and productivity as well as farm economics. Standards will be developed for compound feed for various species of livestock, including cattle, buffalo, pigs, sheep, goats and camels and balanced ration with locally available ingredients will be encouraged. The livestock and poultry owners will be educated about the benefits of quality feed, balanced ration, bypass protein and bypass fat. Feed quality standards would be strengthened. Quality of packaged balanced feeds shall be regulated in accordance with BIS standards. Use of special feed supplements and area specific mineral mixtures and ration balancing would be promoted.

12.5 Development of Pasture Land and Common Property Resources

Common property resources available for grazing in rural areas have not only shrunk in size but have become less productive because of neglect and overgrazing. Physical availability and production potential of pastures and grazing community lands will be assessed and steps will be taken to rejuvenate such lands by planting fodder trees and grasses. Integrated land use planning with livestock as a component will be encouraged through Panchayati Raj Institutions.

12.6 Data for Feed and Fodder

There is a lack of adequate and genuine data on production and availability of various types of fodder and feed grains. Competent agencies will be encouraged to generate real time and time-period data on fodder production, feed grain production, land availability for grassland and other pasture grounds etc.

12.7 Monitoring quality of Livestock Feed

States may collect random samples of different brands/ unbranded commercial livestock feeds sold in the market to check the quality vis-à-vis the approved standards/ quality prescribed by the Bureau of Indian Standards and take action as per law to prevent sale of sub-standard livestock feeds. Farmers may also be informed by disseminating the results of testing. State governments and state agriculture/ veterinary universities would be encouraged to set up feed analytical laboratories to ensure this.

13. Animal Health

13.1 Veterinary Services

13.1.1. Veterinary hospitals, dispensaries, Aid Centers, diagnostic laboratories and veterinary manpower already available are much less than what is required. These services would be improved and expanded and will continue to be provided by the state owned facilities with an appropriate system of recovery of cost wherever feasible. Private investment to improve delivery of animal health services including facilities by private veterinary graduates would be encouraged. Mobile veterinary dispensaries with provision for vaccination and facilities to generate awareness of farmers regarding various livestock management issues would be promoted to improve outreach. For companion animals, state governments may consider to extend the veterinary services on full cost recovery basis.

13.2 Control and Eradication of Infectious Diseases

Diseases and pests not only cause enormous production losses but also hamper export trade in livestock and livestock products. Prevention and control of infectious diseases being a community welfare activity would continue to be emphasized through various programmes supported by government. These prophylactic services would be gradually expanded by involving NGOs, cooperatives and private veterinary practitioners. The existing mechanism for enforcement of laws to prevent spread of infectious animal diseases would be strengthened.

13.3 Disease-Free Zones

Efforts will be made to make the country free from economically important infectious diseases. Since Rinderpest, the premier scourge of cattle, has already been eradicated from India, the focus will be now on control and eradication of Foot and Mouth Disease, Peste des Petitis Ruminants (PPR), Brucellosis, Swine Fever and other diseases having major impact on productivity. Disease free zones as per OIE guidelines will be created in areas with export potential. Efforts for prevention and control of various other bacterial, viral and parasitic diseases of livestock and poultry shall be strengthened. Availability of necessary vaccines and their quality control will be streamlined.

13.4 Diagnosis, Quarantine and Legislative back-up

A comprehensive animal health cover requires adequate facilities for prompt diagnosis of livestock diseases. Facilities for specific and general disease diagnosis shall be strengthened by introducing quality management system. Quarantine facilities would be strengthened to prevent the ingress of exotic diseases. The system of sanitary certification for export would be synchronized with global standards to promote export. To control inter-state transmission of diseases, the movement of livestock from one state to another shall be regulated through Central legislative back-up. Mechanism for emergency preparedness against emerging and exotic diseases would be put in place.

13.5 Disease surveillance and forecasting

There is a need to establish effective and integrated surveillance, vigilance, prevention and control mechanisms designed to protect the productivity and safety of farm animals and an efficient forecasting and management information system on occurrence of diseases, particularly of epidemic and endemic nature. Prompt collection and validation of animal disease information and creation of database would help in launching of various disease control programmes. This system would also help in meeting the international obligation of notification of certain diseases.

13.6 Alternate System of Medicine

13.6.1 Traditional and time tested medicinal practices followed in rural areas for combating various animal diseases require strengthening and documentation. An inventory of traditional Indian medicinal practice for animal health would be prepared for adoption. Other alternate systems of medicine adopted in the country would be used for ailments against which these are effective.

13.6.2 For the traditional medicines, the challenges include foolproof specifications, procurement of pure ingredients and the quality end product. Through understanding and knowledge of the factors and conditions involved, the quality of traditional medicines would be standardized.

13.6.3 The gaushalas and other similar organizations working in the area of animal welfare would be associated for conservation and improvement of indigenous breeds and for popularization of traditional medicines for livestock health.

13.7 Control of Zoonoses

Special emphasis will be laid to create awareness for control of zoonotic diseases and veterinary drug abuse to protect human health. Necessary bio-security measures will be taken to reduce the incidence and spread of such diseases. “One-Health” concept will be strengthened through linkages with other concerned departments, such as Department of Health and Family Welfare.

13.8 Animal Biosecurity

A national institutional mechanism, in collaboration with the ICAR and other institutions would be put in place to deal with the issue of biosecurity in the livestock sector. Breach of this would endanger the livestock populations, ultimately impacting the food security. States would be encouraged to promote responsible use of antibiotics and other medicines harmful to the environment. Necessary legislative back-up for enforcement of biosecurity, strong quarantine facility, appropriate risk analysis and risk mitigation will be integrated in the mechanism. Import of livestock, their products, vaccines and diagnostics will be regulated to prevent ingress of exotic diseases.

13.9 Contingency Plan for Disaster Management

Contingency plans will be prepared to maintain the productivity and welfare of livestock and poultry sector during various types of natural calamities and drought conditions. Such plans would primarily aim at improving veterinary care and making available feed and fodder through greater emphasis on fodder productivity and storage through silage or fodder blocks.

13.10 Animal Welfare

Welfare of animal is an integral part of livestock production system. Compliance of existing laws of the land on animal welfare will be ensured at every stage of value chain including production, transportation, slaughter, care of draught animal and animal handling. Animal welfare will be included as a compulsory subject in the course curricula of animal and

veterinary sciences both for graduation and diploma courses. Research to reduce drudgery of animals will be promoted.

14. Meat Production and Processing

The unorganized slaughter some time may cause environmental and public health problems, apart from often being cruel. The slaughter houses, meat production and processing units should be located keeping in view environmental, social and logistic requirements. Creation of necessary infrastructure for meat production facilities in rural areas will be promoted as forward linkage for animal producers. Integrated modern abattoirs would be encouraged taking into account the legal regulatory provisions for production of quality meat, to ensure zero environmental pollution, minimize wastage of byproducts, utilize edible and inedible byproducts, prevent undue cruelty to animals and to promote use of humane methods of slaughter. The regulatory mechanism for quality meat production should be synchronized with global health standards for domestic consumption as well as for export purposes.

15. Quality Control and Food Safety

15.1 The Food Safety and Standards Authority of India has been set up under the provisions of the Food Safety and Standards Act with the mandate to inter alia lay down the standards and regulate the foods of livestock origin. The principles of food safety will be emphasized in primary production system so that food safety concerns and traceability issues are addressed throughout the entire food chain, viz., livestock rearers and primary producers, food processors as well as marketing networks. Entire food sector is required to ensure quality, safety and suitability of food for human consumption. Livestock origin food and food products have to be free of contaminants, toxins, pathogens, pesticides and antibiotic residues, harmful additives and adulterants.

15.2 In order to improve and encourage quality, the concept of premium on quality would be highlighted. Quality processing, attractive packaging, cold chain and suitable marketing network would be made an integral part of production and processing. States may be encouraged to promote Public Private Partnership initiatives in this regard.

15.3 A system of traceability of livestock products would be promoted.

15.4 The production of organic livestock foods will be encouraged through traceability of methods of feeding, treatment and quality production. Standardization of processes of production and certification of organic farming processes would be established.

15.5 Awareness generation among farmers and consumers regarding food safety standards would be promoted.

16. Institutional Credit and Livestock Insurance

16.1 The livestock sector's ability to fully achieve its growth potential in productivity and output is directly influenced by timely availability and accessibility of institutional credit. Hence, measures to facilitate access to credit especially to small holders would be promoted along with necessary forward and backward linkages. Small holders/farmers would be encouraged/ supported to organize as Self Help Groups or Joint Liability Groups to facilitate access to credit for activities relating to livestock. Farmer Producers' Organizations including producers' companies would be promoted to facilitate flow of credit for activities and projects relating to livestock production and marketing. State governments would be encouraged to collect applications for different livestock activities/ projects from interested farmers in clusters for which the infrastructure would be created or strengthened with government support. Public Private Partnership initiatives to take up such activities in clusters with linkage for institutional finance and marketing would be supported.

16.2 Creation of remunerative livestock production system requires reasonable protection against the risks due to natural calamities and disease outbreaks etc. The insurance coverage for such exigencies will be encouraged. Livestock insurance would be revamped and made accessible to all farmers.

17. Livestock and Environment

17.1 The research on impact of climatic change on livestock production and measures required to mitigate the same would be strengthened.

17.2 Efforts will be made to modify the management and feeding systems so as to reduce emission of green house gases by livestock. Conversion of high fibre fodder into silage and chaffing/chopping of such fodder would be encouraged.

17.3 Use of microbes which can absorb methane to convert it to other products would be promoted.

17.4 Efforts would be made for better management of farm yard manure through composting and bio-gas plants under different programmes.

17.5 Awareness building on improved practices of livestock, feed and waste management would be supported by Government.

17.6 States would be encouraged/ supported to provide assistance to interested gaushalas and NGOs to shelter and take care of the disabled, sterile, old and sick animals to prevent spread of disease and breeding by some of these animals.

18. Information System and Human Resources

18.1 Animal Production and Health Information

The database on animal production and animal health is critical for proper planning. Existing data gaps would be identified and steps would be taken to generate data and disseminate the same for proper planning and programme implementation. Greater emphasis will be laid on collection of accurate and credible data on number of different species of livestock and their breeds, livestock products, fodder and feed grains production, impact of livestock diseases etc. at regular intervals. The data so generated will be analysed to correlate and assess the impact of various programmes towards general welfare of livestock farmers and other entrepreneurs.

18.2 Human Resource and Training

It is recognized that for faster growth of the livestock sector, there is growing need for qualified and trained human resource. Human resource development would be given a high priority in livestock development to meet the qualitative and quantitative shortage of manpower. Steps would be taken to encourage establishment of veterinary colleges in private sector complying the prescribed standards of veterinary education. Emphasis would be given on developing skill sets among farmers required for scientific management of livestock. Optimal requirement of human resource to support various programmes would be worked out and steps be taken to generate the same through involvement of government agencies, reputed NGOs and private sector.

18.3 The focus would be on building strong infrastructure for education, practical training, strengthening of the research and development facilities, harmonization of syllabi and admission process. This would help to produce quality graduates and para-veterinarians, which would effectively support the requirements in the field and help in building strong community of teachers and researchers to man the education and training institutions. A cadre of para-veterinarians would be created by training the progressive livestock farmers and service providers by imparting necessary skill based training in different aspects of livestock management to provide necessary service to farmers, early detection and treatment of diseases and other related issues.

18.4 Training and orientation programmes would be supported for farmers and auxiliary staff to build a responsive rural network.

19. Institutional Mechanism for Implementation

19.1 The states may review and prepare their respective livestock and breeding policies taking into account the National Livestock Policy to suit the local needs. The Department of Animal Husbandry, Dairying and Fisheries would provide necessary assistance to states in this regard, if required by the concerned state government.

19.2 A National Steering Committee would be constituted with representatives of the States and UTs, cooperatives, reputed NGO and private sector stake holders to facilitate

implementation and operationalization of the policy, review and advice on changes in policy as and when necessary.

19.3 States would be requested to constitute Steering Committee at state level for the purpose mentioned in para 19.2.

19.4 Expert Committees will be constituted to advice on research needs and application of recommendations on various aspects of livestock production, livestock health and control of different diseases, nutrition, management, marketing and mitigation of impact of climate change etc.