सत्यमेव जयते

National Dairy
Development Board

NATIONAL DAIRY PLAN

MISSION MILK

THE NEXT REVOLUTION

National Dairy Plan

India is the largest milk producer in the world with a production of 121.8 million tonnes in 2010-11.

Based on the Planning Commission's estimates and subsequent corrections on account of consistently higher growth in GDP, it is expected that demand for milk is likely to be about 155 million tonnes by 2016-17 (end year of 12th Five Year Plan) and around 200 million tonnes by 2021-22. To meet the growing demand it is necessary to maintain the annual growth of over 4 per cent in the next 15 years. It is, therefore, imperative that a scientifically planned multi-state initiative is launched to increase productivity in existing herds through a focused programme for breeding and feeding. The National Dairy Plan (NDP) has been envisaged with a fifteen-year horizon, considering that three to five years are required to produce a more productive animal and the time required to develop and expand systems to increase milk production.

The first phase of the National Dairy Plan to be financed largely by the World Bank will be implemented over a period of six years with the following objectives:

(i) To help increase the productivity of milch animals and thereby increase milk production to meet the rapidly growing demand for milk; and

(ii) To help provide rural milk producers with greater access to the organised milk-processing sector.

Project Outlay – Phase I

Component	Activity	Outlay (₹ in crore)
Component A	Breed Improvement	715
	Animal Nutrition	425
Component B	Village based Milk Procurement Systems	488
Component C	Project Management and Learning	132
	Sub Total *	**1760**
	EIA Contribution	282
	NDDB's Contribution	200
	Grand Total	**2242**

**Source of Funds:*
World Bank – IDA: ₹ 1584 crore
GoI: ₹ 176 crore

Implementing the National Dairy Plan

Phase-I of the Plan consists of a multi-pronged series of initiatives to be implemented over six years commencing 2012-2013.

Increasing Productivity through scientific breeding and nutrition

Breeding

Genetic progress over a larger population can be accelerated if breedable animals are bred through artificial insemination using the semen of a few top High Genetic Merit bulls. The proportion of milch animals bred through AI needs to be raised from 20 per cent to 35 per cent.

➢ **Production of high genetic merit (HGM) and disease-free cattle and buffalo bulls using internationally established practices of Progeny Testing (PT) and Pedigree Selection (PS) and import of Jersey and HF Bulls/embryos or semen**

Expected Outputs

- 2500 HGM bulls of different breeds produced through PT and PS and import of 400 exotic bulls / embryos

Breeds selected for production of bulls through PT:
Buffalo: Murrah and Mehsana
Cattle: Holstein Friesian, Holstein Friesian crossbred, Jersey crossbred and Sunandini

Breeds selected for production through PS:
Buffalo: Jaffarabadi,Banni, Pandharpuri and Nili-Ravi
Cattle: Rathi, Sahiwal, Gir, Kankrej, Tharparkar and Hariana

Young High Genetic Merit Mehsana bulls

➢ **Strengthening A & B graded semen stations and producing high quality disease free semen**

Expected Outputs

- Production of about 100 million disease-free high quality semen doses annually in the terminal year

➢ **Setting up a pilot model for AI delivery service through a professional service provider following Standard Operating Procedures (SOPs)**

Accountability and reliable data collection and tracking processes in AI services will enable the benefits of genetic progress to be quantified.

A modern semen processing lab following GMP

Artificial Insemination services carried out complying with SOPs

Expected Outputs

- About 3000 trained mobile AI technicians will ensure that professional services, including the critical elements of adherence to SOPs and data collection and tracking, are delivered at the farmer's doorstep
- The pilot will lead to a financially self-sustaining model and also introduce a completely new approach to AI delivery
- Four million doorstep AI deliveries per annum will be achieved by the end of NDP
- Reduction in AI per conception from 4 inseminations to less than 2

All this would be possible only if adequate measures for bio-security are put in place to contain and control animal diseases in the bull production areas and semen stations. State Governments need to notify the bull production areas and semen stations as 'disease control areas' under the Prevention and Control of Infectious and Contagious Diseases in Animals Act 2009, conduct regular vaccination and post-vaccination monitoring, identify vaccinated animals through ear-tagging and strengthen disease diagnostic laboratories. This would ensure that disease free high genetic merit semen is used for AI.

Local Resource Person advising a producer about ration balancing

Nutrition

Milch animals will produce milk commensurate with their genetic potential when they are fed a balanced ration. This approach to feeding positively impacts not only their health and productivity but also leads to a significant decrease in cost of production as feed accounts for about 70 per cent of the total cost of milk production, thus increasing the farmer's income. NDDB has developed a user-friendly computerized software for Ration Balancing.

An additional benefit of Ration Balancing is a reduction in methane emission levels which is a significant contributor to greenhouse gases.

➢ **Educate milk producers on ration balancing & nutrients required by their milch animals by providing advisory services at the farmer's doorstep through 40,000 trained Local Resource Persons (LRPs)**

➢ **Increase fodder yields by making available quality fodder seed of high yielding improved varieties to farmers and demonstrate silage making and fodder enrichment**

Expected Outputs

- 40,000 trained LRPs would provide Ration Balancing advisory services for about 2.7 million milch animals in 40,000 villages
- Production of 7,500 tonnes of certified/ truthfully labeled fodder seed

Strengthening village based milk procurement systems

Some 70 million rural households are engaged in milk production, the majority being small & marginal farmers and landless. Dairy cooperatives ensure inclusiveness and livelihoods for small holders, especially women.

It is desirable that the cooperative sector retains the present 50 per cent share of the marketable surplus handled by the organised sector.

➢ **Expand and set up village based milk procurement systems to collect milk in a fair and transparent manner and ensure timely payments**

➢ **Strengthen existing dairy cooperatives and promote Producer Companies or New Generation Cooperatives to put in place village level infrastructure for milk weighing, testing, collection and milk cooling**

➢ **Provide support for creating institutional structures and training**

Expected Outputs

- 23,800 additional villages to be covered

Dairying empowers women

Training and Capacity Building

Skilled and trained human resources will be essential and critical for the successful implementation of the project. Facilitating training and development of field personnel will be an important area for support under the project. Capacity building, training and education campaigns to promote technologies and improved practices at village level will also be a key initiative. It is estimated that about 60,000 personnel at all levels would require training and reorientation under NDP.

Project Management and Learning

The initiatives under the NDP are dispersed over different geographies. It is therefore critical to integrate ICT (information and communications technology) based systems in the operations of various activities.

➢ **Implement ICT based information systems for integration of various activities as well as monitoring and reporting at different levels; to carry out necessary analysis and facilitate necessary changes in project implementation**

➢ **Carry out base-line, mid-term and project completion surveys and other special surveys / studies**

➢ **Facilitate learning and documentation of learning experiences**

Expected Outputs

- Effective monitoring and coordination of project activities
- Timely preparation and implementation of annual plans
- Regular review and reporting of project progress and results

Educating milk producers on better feeding practices

Project Area

NDP will focus on fourteen major milk producing states, viz. Andhra Pradesh, Bihar, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal.

These states account for over 90 percent of the country's milk production, have 87 per cent of the breedable cattle and buffalo population and 98 per cent of the fodder resources.

However, the benefits will accrue across the country. For example, HGM bulls would be available to all A & B graded semen stations and milk producers all over the country would have access to quality disease free semen doses.

Eligibility Criteria

States would be required to commit to providing the necessary regulatory/ policy support to prepare an environment for successfully implementing the programme, such as

- Having in place an appropriate breeding policy;
- AI delivery services not being notified as a Minor Veterinary Service (MVS);
- Charges for AI delivery being raised gradually to cover full cost;
- Semen for AI delivery in the state being sourced only from semen stations graded A or B;
- Adoption of common protocols and SOPs issued by DADF for all breeding activities; and
- Notification of State Rules under the Prevention and Control of the Infectious Diseases in Animal Act (2009).

End Implementing Agencies (EIAs)

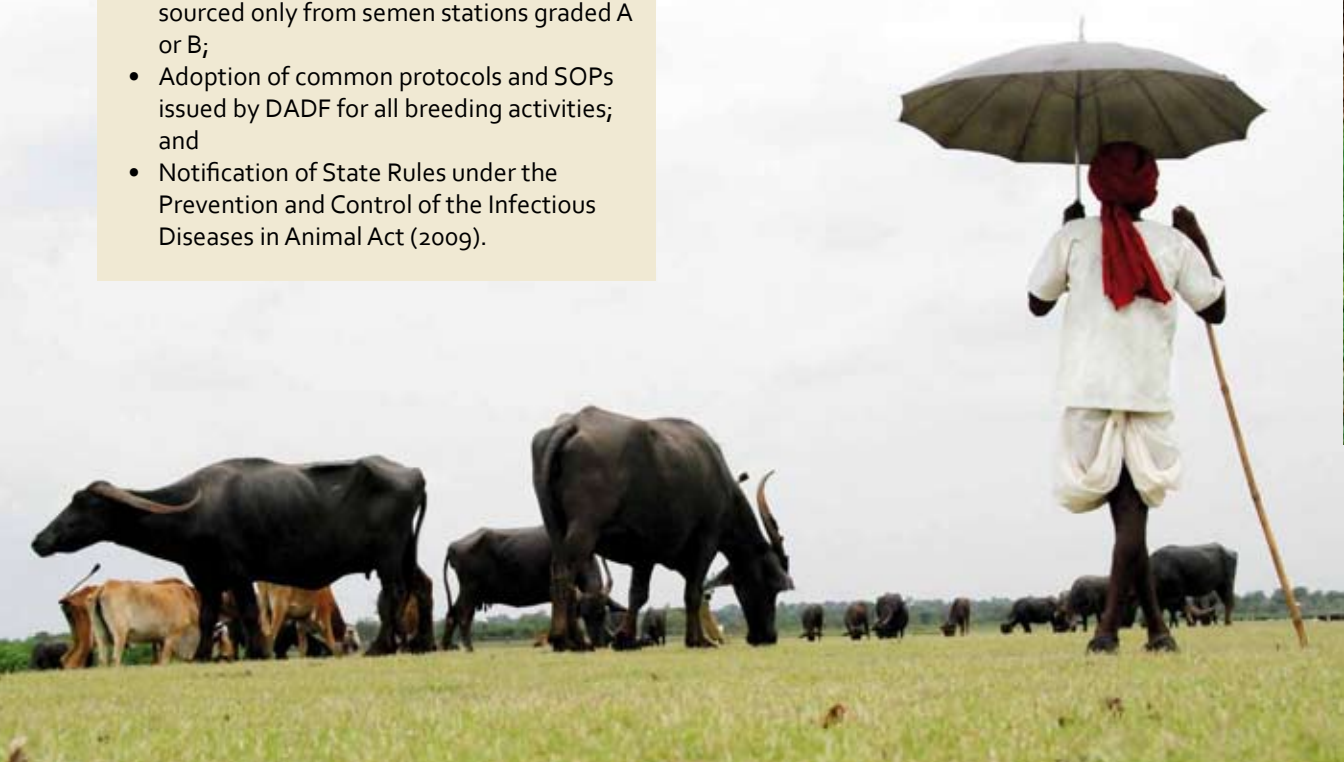
NDP will be implemented by NDDB through EIAs. EIA will be selected based on certain eligibility criteria covering Institutional/ Governance and Financial aspects. In addition, there are detailed criteria covering technical aspects of each component of the NDP.

The EIAs would include State Cooperative Dairy Federations, District Cooperative Milk Producers Unions, Cooperative form of enterprises such as Producer Companies, State Livestock Development Boards, Central Cattle Breeding Farms (CCBF), Central Frozen Semen Production and Training Institute (CFSP&TI), Regional Stations for Forage Production and Demonstration (RSFP&D), Registered Societies/ Trusts (NGOs), Section 25 Companies, subsidiaries of statutory bodies, ICAR Institutes and Veterinary/ Research Institutes/Universities that meet the eligibility criteria for each activity as may be decided by the National Steering Committee (NSC).

Implementation Arrangements

The implementation arrangements consist of:

- National Steering Committee headed by Secretary, DADF, GoI which will provide policy and strategic support.
- Project Steering Committee headed by Mission Director (NDP) which will approve plan and monitor progress
- Project Management Unit, located in NDDB consisting of a multi-disciplinary team which will manage implementation of the project.



Long-term Benefits

In terms of overall benefits, the NDP will put in place a scientific approach and systematic processes which, it is hoped, would take the country on the path to improving the genetics of milk producing animals in a consistent and continuous manner. It will: make much more prudent use of the country's scarce natural resources; have an impact on reducing methane emissions; improve the quality of milk being marketed; help strengthen regulatory and policy measures that will provide an enabling environment for future growth of dairying in the country; and contribute to improving the livelihoods of small holder milk producers who are the bedrock of India's milk production system.

Project Management Unit

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