

National Dairy Plan - Phase I

**Presentation for
Dairy Asia : Towards Sustainability**

March 23-26 2015, Anand

National Dairy Development Board



Indian Dairying-the emerging scenario



- India: largest milk producer in the world
 - ❖ 137.69 million tonnes in 2013-14

- It is estimated that demand for milk is likely to be
 - ❖ About 155 million tonnes by 2016-17
 - ❖ Around 200 million tonnes by 2021-22

- To meet the growing demand
 - ❖ Increase the annual incremental milk production from 4 million tonnes per year in past 10 years to about 7.5 million tonnes in the next 10 years

- NDP I a scientifically planned multi-state initiative to
 - ❖ Increase the productivity of milch animals and thereby increase milk production to meet the rapidly growing demand for milk

National Dairy Plan Phase I (2011-12 to 2016-17)



- World Bank (IDA) assisted Central Sector Scheme of GoI with an outlay of Rs. 2242 Crore (US\$ 362 million) implemented by National Dairy Development Board through End Implementing Agencies, with an IDA credit of US \$ 255 million

Project Objectives:

- Increase productivity of milch animals and thereby increase milk production to meet the rapidly growing demand for milk through scientific breeding and feeding
- Provide rural milk producers with greater access to the organised milk processing sector by strengthening and expanding milk procurement system at village level

NDP I Outlay









Component	Activity	Outlay (Rs. in Crore)	US \$ million
Component A	Breed Improvement	715	115
	Animal Nutrition	425	69
Component B	Village Based Milk Procurement System	488	79
Component C	Project Management and Learning	132	21
Sub Total*		1760	284
EIA Contribution		282	45
NDDB Contribution		200	32
Grand Total		2242	362

**Source of Funds: World Bank- IDA- Rs. 1584 Crore (US \$ 255 million), GoI- Rs. 176 Crore (US \$ 28.4 million)*

National Dairy Plan Phase I

(Key components and expected outputs)



Component A: Productivity Enhancement	
<p>Production of HGM cattle and buffalo bulls</p> <ul style="list-style-type: none"> • Production of 2,500 HGM bulls • Import of 400 exotic bulls/ equivalent embryos 	
<p>Strengthening of “A” and “B” graded Semen Stations</p> <ul style="list-style-type: none"> • Production of 100 million semen doses annually in the terminal year 	
<p>Pilot Model for Viable Doorstep AI delivery Services</p> <ul style="list-style-type: none"> • 3000 MAITs carrying out annual 4 million doorstep AIs by the terminal year 	
<p>Ration Balancing Programme</p> <ul style="list-style-type: none"> • Coverage of 2.7 million milch animals in 40,000 villages 	
<p>Fodder Development Programme</p> <ul style="list-style-type: none"> • Production of 7,500 tonnes of certified/ truthfully labeled fodder seed • 1350 silage making/ fodder conservation demonstrations 	
Component B: Village Based Milk Procurement System	
<p>Strengthening and Expanding Milk Procurement System at Village level</p> <ul style="list-style-type: none"> • 23,800 additional villages to be covered • 1.2 million additional milk producers 	

End Implementing Agencies (EIAs)



- State Cooperative Dairy Federations, District Cooperative Milk Producers Unions, Producer Companies
- State Livestock Development Boards, Registered Societies/Trusts (NGOs)
- ICAR Institutes/ Veterinary Universities
- Central Cattle Breeding Organizations

Project Implementation





Animal Breeding Activities



Production of High Genetic Merit Bulls



Objective

- To meet the demand for disease free high genetic merit bulls of different breeds
- Breeds under Progeny Testing (PT)
 - ❖ Cattle: Pure HF, Cross bred HF, Jersey Cross bred
 - ❖ Buffalo: Murrah, Mehsana
- Breeds under Pedigree Selection (PS)
 - ❖ Cattle: Rathi, Kankrej, Tharparkar, Gir, Sahiwal, Hariana
 - ❖ Buffalo: Pandarpuri, Nili Ravi, Jaffarabadi, Banni

Intervention

- SOPs/MS to be followed:
 - ❖ Each animal to be ear tagged
 - ❖ Data capturing using INAPH
- Male calves born with confirmed parentage and disease free status to be procured
- EIA would provide specialized and trained manpower
- PS projects to be implemented in native tracts of the breed
- Annual evaluation of projects by an expert committee of PMU



Expanding and Strengthening Semen Stations



Objective

- To produce 100 million high quality disease free frozen semen doses to cover 35% of the breedable bovine animals under AI by 2016-17
- Organisations eligible
 - ❖ Semen Stations graded “A” or “B” by the Central Monitoring Unit and
 - ❖ Having required infrastructure

Intervention

- SOPs/MS to be followed
- Bio security measures to be introduced
- Training and capacity building
- Adopt the common software being developed by NDDDB
- Annual evaluation of projects by an expert committee of PMU



Pilot Model for Viable Doorstep AI delivery Services



Objective

- A scientific approach to delivery of AI services at the doorstep of the milk producers is expected to result
 - ❖ in animals conceiving with less than two and a half inseminations
 - ❖ in production of genetically superior calves

Intervention

- To drive synergy, pilot model would be setup in selected villages covered by other interventions
- Setting up a viable model for AI delivery services in a financially self-sustainable manner
- Trained Mobile AI Technicians (MAITs) would carry out AI at full cost recovery basis in progressive manner
- The prescribed SOPs for AI delivery to be followed





Animal Nutrition Activities



Ration Balancing Programme



Objective

- Milch animals produce milk commensurate with their genetic potential only when fed a balanced ration

- Balanced ration helps to
 - ❖ increase milk production
 - ❖ reduce cost of feeding
 - ❖ increase in farmer's income
 - ❖ reduce methane emission

Intervention

- To formulate least cost balanced ration using locally available feed resources, use of user friendly software (INAPH), developed by NDDB

- Local Resource Persons (LRP) to use the software are providing advices at farmer's door step

- Every animal will be ear tagged to facilitate monitoring of LRPs and capturing data to assess impact



Fodder Development Programme



Objective

Green Fodder

- Green fodder is an economic source of nutrients
- Use of truthfully labeled fodder seeds can enhance green fodder production by 50%

Dry Fodder

- Despite perennial deficiency of dry fodder in certain areas, crop residues are wasted in surplus areas
- This valuable biomass can be secured, enriched and densified for use in fodder deficit areas

Intervention

- Support to farmers engaged in fodder seed production by arranging supply of breeders seed
- Setting up seed processing plants for production of truthfully labeled fodder seeds
- Silage making demonstrations
- Demonstration of mowers for securing crop residues
- Setting up straw densification plants after enrichment with deficient nutrients





Village Based Milk Procurement System



Strengthening and Expanding Milk Procurement System at Village Level



Objective

- Expand coverage to enable milk producers to have greater market access by creating village level infrastructure for milk collection
 - ❖ Bulk Milk Coolers, AMCUs, DPMcus, Milk cans, weighing and testing equipment

Intervention

- Introduce transparent and fair operations using IT based solutions
- Ensure inclusive growth with focus on women and small holders
- Training and capacity building of stakeholders





Training and Capacity Building



Training and Capacity Building under NDP I



- Milk producers, village level functionaries and officials will be trained/ oriented.
- NDDB has training facilities at Anand and regional training centres at Siliguri, Jalandhar and Erode.
- Training programmes are also conducted at village and union level as per requirement.
- Selected persons from EIAs will also be provided training/ exposure abroad in the field of Animal Breeding and Animal Nutrition



Activity wise Sub Projects (Status till February 2015)



Activity	Nos. of approved SPPs	Total Outlay	
		in Rs. Crore	In US \$ million
Animal Breeding	53	643	104
<i>Progeny Testing Programme</i>	13	238	38
<i>Pedigree Selection Programme</i>	10	58	9
<i>Strengthening of Semen Stations</i>	22	256	41
<i>Import of Bulls/ Embryos/ Semen/ BPTIE</i>	6	54	9
<i>Pilot AI Delivery Services</i>	2	36	6
Animal Nutrition	118	261	42
<i>Ration Balancing Programme</i>	67	187	30
<i>Fodder Development</i>	51	74	12
Village Based Milk Procurement System	99	619	100
Sub Total	270	1523	246
Project Management & Learning	18	25	4
Total	288	1548	250

Thank You



Animal Breeding Sub Projects



Progeny Testing Programme

- About 2007 bulls to be made available to semen stations by end of project.
- 185 bulls have been produced and distributed till Dec' 2014.

Pedigree Selection Programme

- To make available about 427 bulls to semen stations by end of project.
- 16 bulls have been produced and distributed till Dec' 2014.

Import of bulls/embryos and Bull production through imported embryos

- Import of 2400 embryos of HF and Jersey breeds and 200 bulls of HF and Jersey breeds.
- Till now 76 bulls have been imported and 480 embryos are expected to be imported by March 2015
- Bull production through imported embryos to make available 210 bulls to semen stations across the country

Animal Breeding Sub Projects



Strengthening of Semen Stations

- Production of about 98.67 million doses per annum by the end of the project.
- About 61.83 million doses per annum has been produced in 2013-14 (by 22 approved sub-projects)

Animal Breeding Sub Projects



Pilot model for viable doorstep AI delivery service

- 4868 villages to be covered by 730 Mobile AI technicians.
- About 0.69 million AIs per annum are to be performed with a conception rate of 40%

- Till December 2014 (2014-15)
 - ❖ 3288 villages have been covered through 555 Mobile AI technicians
 - ❖ About 0.08 million AIs have been performed with a conception rate of 52%



Ration Balancing Programme

- About 20400 villages and 1.64 million animals is expected to be covered by local resource persons
- By 15 Mar 2015, about 7900 villages and 0.52 million animals have been covered.
- RBP findings
 - ❖ Average increase in milk (kg/day/animal) – 0.2
 - ❖ Average increase in fat % of milk – 0.12
 - ❖ Average reduction in ration cost (Rs/animal/day) – 16
 - ❖ Percent reduction in feeding cost : 11
 - ❖ Increase in net daily income ((Rs/animal/day) – 25.42
 - ❖ Reduction in methane emission by 10 to 15%

Fodder Development Programme

- ❖ Setting up of 6 seed processing plants and 2 crop residues enrichment and densification plants
- ❖ By end of project, 124 bio mass bunkers to be constructed, 1988 silage making demonstrations to be made and 674 mowers to be procured.
- ❖ Till December 2014, 11 biomass bunkers have been constructed , 358 demonstrations of silage made and 127 mowers procured.

Village Based Milk Procurement System



- Coverage of more than 26000 villages and about 0.7 million new members are expected to be enrolled
- About 9590 villages and about 0.3 million producers have been covered till December 2014.