ASSAM PROJECT ON AGRI-BUSINESS AND RURAL TRANSFORMATION (APART)  
(A A WORLD BANK FUNDED PROJECT)  
ANIMAL HUSBANDRY AND VETERINARY COMPONENT

The Government of Assam through Government of India has applied for a credit of US$200 million from the International Development Association (IDA) (a wing of the World Bank group), for implementation of the Assam Project on Agribusiness and Rural Transformation (APART), which is currently under preparatory stage.

**Project Development Objective (PDO):** “To add value and improve resilience of selected agriculture value chains, focusing on smallholder farmers and agro-entrepreneurs in targeted districts of Assam”.

The project would achieve the PDO by:

- Promoting investments in agri-enterprises, reducing the business and transaction costs, facilitating access to finance for agribusiness entrepreneurs, and, where appropriate, push for process, regulatory and/or policy change;
- Supporting the development of a modern supply chain; improved information communication technologies (ICT) based farm information and intelligence services, and alternative marketing channels; and Improving producer’s access to knowledge, technologies and infrastructure so that they are able to respond to market opportunities and climate variability.
- **Project Beneficiaries:** Farmers, farmer producer organizations, and entrepreneurs especially in the MSME segment in the targeted districts.
- **Key Performance Indicators (KPIs):**
  - Number of beneficiaries with improved resilience
  - Number of new agri-enterprises established
  - Number of jobs created by targeted agri-enterprises, including for women (percent)
  - Increase in value of marketed output at the farmer level
  - Direct project beneficiaries (number), of which female (percentage).

The project broadly focuses on two components:

1. **PORK VALUE CHAIN (PVC):** To be implemented by AHVD
2. **MILK VALUE CHAIN (MVC):** Interventions by AHVD in the Cross Cutting areas under Formal Dairy Sector (by West Assam Milk Union Limited (WAMUL) and Informal Dairy Sector by Dairy Development Department (DDD)
APART Strategy- Pig Sector Intervention

- **Increased production through genetic improvement** of indigenous pigs through selective and crossbreeding – Induction of heterogeneous germplasm on cluster approach.

- **Address the issues related to feed shortage** and improvement of nutrient utilization for enhancing pig production-Ration balancing of locally available feed materials and production area specific low cost concentrate feed and production quality improvement to meet the market requirement.

- **Development of integrated pig health management Programme**- Pulse immunization of the pig herd against CSF & other diseases & regular deworming practices.

- **Post harvest management and value addition** of pork-Introduction of low cost slaughterhouses, linkages of production clusters with modern processing houses, modern pork vending outlets, transformation of the vendors.

- **Promote environment friendly and climate resilient pig farming**- Demonstration and adoption of climate resilient pig housing technology with improve manure management practices.

- **Promoting entrepreneurial development** in forward and backward front of pig production- Incentivizing the entrepreneurs to take up sectoral enterprises like feed production, meat processing & marketing, commercial pig breeding & fattening.

- Address the much needed issue of **Food safety** as per FSSAI norms from production, processing and value addition, cold chain maintenance upto retailing. Assessment of contaminants and residues in pork and formulate a standard SOP for reduction in pork for human consumption.

- **Knowledge, attitude & practice gap analysis** of the all the value chain actors, customized designing of training content for capacity building and massive awareness programme on good production practices & food safety along the value chain.

- Formation of **Farmer Producer Organization (FPO)** in production clusters to undertake the various activities in group basis and organized way which is difficult to perform by an individual farmer

1. **PORK VALUE CHAIN (PVC) : Activities proposed :**

   1. Food safety: Consumer awareness
   2. Traceability: To bring about transparency along the entire chain of pork production
   3. Training need assessment & Capacity Building of market actors
   4. Transformation of vendors: Handholding in obtaining of license to Pork handlers, butchers, retailers/vendors and Structured meat shop
   5. Waste Disposal
6. Market Development: Identification of Livestock market
7. Hassle free transportation
8. Identification of Cluster of minimum 100 families with 2-3 pigs within 3 KM radius
9. Market led Extension services
10. Judicial use of Feed staff: Estimation of nutritive value of the local unconventional feed resource & ration balancing
11. Rationalization of Breeding: Breeding activities at cluster level by community boar management and introduction of AI with heterogeneous germplasm
12. Operationalization of the newly constructed Pig breeding Farms of the AHVD as Nucleus farm for seed development with exotic germplasm
13. Strengthening of existing infrastructure of the AHVD centrally for large scale feed production
14. Formulation of policy for bulk procurement of Maize and other available raw materials at production site
15. Feed testing facilities: Activation of the existing laboratory under AHVD at Khanapara
16. Vaccine production & distribution
17. Contract for bulk procurement of CSF vaccine in place
18. Credit & Insurance
19. Financial services - Awareness of community on opening of bank accounts, book keeping, Credit linkage, KCC etc., Convergence of various schemes i.e. NLM

Financial outlay of the Project: PVC

Pork Value Chain: Project Cost = Rs.6893.72 lakh, No. of Districts: 13
Investments under this sub-component will cover: Production, aggregation, processing, Value Addition & Marketing, Food Safety & Public Health Issues in piggery sector covering 56 Blocks/Clusters under 13 Districts of the State.

2. MILK VALUE CHAIN (MVC): APART Strategy- Dairy Sector Intervention: FORMAL SECTOR

The focus is productivity enhancement by organizing farmers into Milk Producers’ Institutions (MPIs) that eventually will get registered as Dairy Cooperative Societies (DCS) and genetic upgradation of non-descript cows using AI, improved feeding through fodder production demonstrations, bulk supplements provision through DCS and by developing linkages with crop producers (e.g. maize, mustard, legumes for crop residue).

Activities proposed under APART- Formal Milk Sector

1) Doorstep AI Delivery Services: To provide quality AI services, at farmers’ door step using semen doses from high genetic merit bulls available in the country aimed at producing superior calves with higher productivity.
2) Animal Health: The project proposes to cover animal health care services through animal health/fertility camps, vaccinations and disease control activities.
3) Animal Nutrition-Feed & Fodder: To focus on balanced intake of locally available animal feed and fodder as well as intake of processed feed and other feed supplements for the crossbred milch animals to enable them to achieve their full genetic potential of milk yield.

4) Village Based Milk Procurement Systems: Collection of milk through MPIs (Milk Producers Institutions).

5) Processing and Marketing of liquid milk and milk products: Value addition of milk through processing.

6) Capacity Building: By imparting training programmes for milk producers, village level functionaries, BMC and plant operators, marketing supervisors and executives/managers engaged in various project activities.

**INFORMAL SECTOR**

Transformation of the informal dairy sector into the formal one through improvement in resilience in production, quality, safety and standards of milk adding value to the produce with particular focus on informal market actors and dairy-entrepreneurs in targeted districts.

**Activities proposed under APART- Informal Milk Sector**

To provide training to the farmers under informal sector with the help of competent departmental experts in order to enhance the farmer’s capability to adopt new practices of animal health care and management, feeding etc.

1. To provide information to the farmers about the better feeding practices in time for better production and productivity and thereby reducing the cost of milk production.
2. Creation of gainful employment in the organized dairy sector

**Financial outlay of the Project: MVC**

Cross cutting areas of Formal and Informal Milk Sectors:

Project Cost = Rs. 4049.48 lakh, No. of Districts: 16

Investments under this sub-component will cover:
- about 1,25,500 dairy animals covering 56 Blocks/Clusters under 13 Districts of the State under Health Coverage, Skill Development & Mineral Mixture support (the later two only in Informal Milk sector)

**TOTAL PROJECT COST = Rs. 10943.20 lakh**
ACTIVITIES UNDERTAKEN UNDER APART, AHVD

1) Under APART of Pork Value Chain(PVC), 4 batches of Veterinary Officers have been trained successfully at NRC on Pig to act as a master trainer.

Under the capacity building of master trainers they have been taught about GAHP (Good Animal Husbandry Practices), pig production scenario in national & regional aspect, pig genetics resources and breeding strategies, pig farm management and nutrition, reproduction, pig diseases and their management, abattoir construction and hygienic pig slaughter, pork processing and value addition and pig byproduct utilization and abattoir waste management etc.

1st Batch Veterinary Officers

2nd batch Veterinary Officers

3rd batch Veterinary Officers

4th batch –Veterinary Officers

2) Pig Bondhu training:
Pig Bondhu, were selected from the Farmers interest Group (FIG) of APART Districts and trained at NRC on Pig on the improvement of breeding, feeding, healthcare, management and advisory services they will focus on delivery of AI services.

Pig bondhu has been equipped with Artificial Insemination gun and other accessories to carry out their insemination work with liquid boar semen at the doorstep of the farmers. They will be supported with a tablet equipped with tracebility and ration balancing software.

Pic: Training of “Pig bondhu” at NRC pig, Rani

3) Introduction of Exotic Germplasm under Pork value Chain (PVC)

A total of 200 nos of Large White Yorkshire piglets were bought from the government farms of Punjab in two batches and kept in Morigaon farm for quarantine and distributed in four (4) nucleus farm of the Department (Diphu, ALPCo, Sonapur and Rani) with a view to develop multipliers and breeders to supply cross bred piglets to the farmers.
4) **Training Workshop on “Mentoring of Govt pig breeding farms”**

A total of 10 govt pig breeding farm Managers were trained for two days on a course combing face to face and e-learning which includes guidance on breeding strategy, implementation and reporting imparted by ILRI.

5) **A Study tour to Jhansi- IGFRI (Institute of Grassland and Fodder Research Institute)**

A team of two filed veterinary officer, one senior extension specialist from AAU, one subject matter specialist from KVK, one veterinary executive from WAMUL and two persons of dairy and livestock sector from PCU visited Jhansi.

6) **Cluster Level Meeting**

Cluster level meetings have been organized in different APART district successfully to create awareness among FIG members on scientific breeding, feeding, management, artificial insemination and zoonotic diseases.
7) **Feed Sample Collection For Ration Balancing:**

The Veterinary Officers from APART districts organized a “Field Day” for collection of conventional and non-conventional feed samples. The basic idea to find out the nutritional status of non-conventional feed staff. The collected feed sample has been despatch to the National Research Centre on Pig (NRCP) for chemical analysis.

The evaluated nutrient content of the non-conventional feedstuff and ration balancing formulas will be fitted into software to be developed under this project and that will be used through tablets to be provided to pig bondhus. Finally the farmers will get the software based improved service at their doorstep.
Vaccination

**Under Milk Value Chain (MVC):**

Vaccinations of cloven-footed animals are very essential to provide herd immunity. The susceptible animals immunized against the dreaded diseases like HS-BQ and Brucellosis completed successfully in APART districts.

**Under Pork Value Chain (PVC):**

Under PVC Health coverage FMD and Cysticercosis vaccination has been carried out under APART districts. Worm infestation in pigs is not uncommon, which causes stunted growth and debility in the growing and adult pigs. To increase the feed conversion efficiency
and to get better productive/ reproductive life deworming is mandatory for pigs, so, recommended doses were provided for the farmers for administration into pigs. The sow milk is deficient in iron, suckling piglets naturally get affected due to iron deficiency. The iron supplement was provided to the piglets to cope up with the deficiency.