JIVA FIELD REPORT ON

Lead Farmer Technical and handholding support training on Bio-fertilizer preparation, Seed System, BRC, BYP, Pig and its Business model Development

Dates: 25th to 26th February, 2026 | **Location:** Nagrijuli, Tamulpur, Assam

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JIVA Field Report

on

LEAD FARMER TECHNICAL AND HANDHOLDING SUPPORT TRAINING ON BIO-FERTILIZER PREPARATION, SEED SYSTEM, BRC, BYP, PIG AND ITS BUSINESS MODEL DEVELOPMENT

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OVERVIEW AND THE CONTEXT

The JIVA program, as outlined in the Detailed Project Report (DPR), includes provisions for training and support of Lead Farmers through various on-field and handholding for enhancement of technical Knowledge. WASSAN (RSA) have been supporting to each JIVA PFAs location on various topics and themes according to the DPR. In line with this, the Resource Support Agency (RSA) team recently visited the implementation area of Gramya Vikash Mancha in Tamulpur District of Assam, to conduct Lead Farmer training and providing on-ground support.

This training aimed to enhance the capacities of selected Lead Farmers and PFA's staff, prepare them to become Internal Farmer Resource Persons (IFRPs) under the guidance of expert on specific theme from WASSAN (Watershed Support Services and Activities Network). The objective is to strengthen grassroots-level systems and promote the effective implementation of agroecological practices within the project area and established the support service system to the farmers in the landscape.

OBJECTIVE OF THE TRAINING

The training was designed to help Lead Farmers and PFA CRPs transition into IFRPs through on-field demonstration and mentorship. It focused on bio-input/concoction/compost preparation, and technical support and hand holding training on Backyard Poultry, Pig along with its Packages of Practice (PoPs) and understanding the existing farming communities' practices.

STATUS OF JIVA PILOT PHASE

The JIVA program is currently in its pilot phase in Tamulpur District of Assam and is being implemented by the GVM team. The GVM team has initiated the project in 2 villages and under 1 cluster. Lead farmers have been identified from the village. The settlement pattern of the village is just foothills Indian Bhutan border with large paddy fields situated between them. During this pilot phase, the PFA has been working closely with the selected lead farmers.

Even though project is in end stage of Pilot phase, the PFA team is working with the lead farmers closely for the enable them into Natural Farming.

MAJOR ACTIVITIES

The two days of the training focus on combining technical support to PFA CRP's and Lead Farmers with on-field demonstrations. These sessions focused on soil health, seed systems, BRC, and Livestock Business model Development.

The Poultry expert took session on BYP and Breed farm and HH level farming and shelter development and its management. Additionally, the RSA team covered Pig farming, bio-fertilizer preparation (Bamboo Biochar & Compost), Seed System Development including the scientific and systematic indigenous seed preservation through Crop Diversity Block and BRC establishment and its strategic business model development.

The training was facilitated by the RSA team, including) Mr. Kalyanapu Uday Kumar (Expert -Poultry) and Mr Monuhar Pegu (Agroecologist) from WASSAN and organized by the GVM team, represented by Mr. Titus Beck and his team. In the second day DDM, NABARD of Tamulpur District Joined in the training program.

Day 1 (25th February)

LEAD FARMER TECHNICAL & HANDHOLDING SUPPORT TRAINING ON BACKYARD POULTRY AND PIGGERY

The training began with participant introductions followed by an interactive session facilitated by Mr. Uday (WASSAN). Farmers were encouraged to reflect on:

- Types of livestock reared in their villages
- Reasons for selecting specific breeds
- Purpose of rearing (income, nutrition, risk mitigation)
- Benefits and challenges faced

The discussion identified the major livestock systems in the villages as:

- Large ruminants
- Small ruminants
- Desi poultry
- Piggery (swine)
- Ducks

Since nearly 90% of households rear Desi poultry, the training focused primarily on strengthening backyard poultry practices while also touching upon piggery as an important complementary livelihood.

Indigenous Desi Poultry in Assam

Participants discussed locally available indigenous poultry breeds registered under National Bureau of Animal Genetic Resources (NBAGR):

1. **Miri** – Breeding tract in Dhemaji, Lakhimpur, and Sivasagar districts of Assam.
2. **Daothigir** – Found in Nalbari, Bongaigaon, Barpeta, Kokrajhar, and Dhubri districts; predominantly reared by the Bodo community.

The name *"Daothigir"* is derived from the plant *Thigir* (Dillenia indica), whose flower colours resemble the plumage of the birds. In Bodo language, "Dao" means bird.

Farmers highlighted the resilience, natural brooding ability, disease tolerance, and market preference for Desi birds as key reasons for rearing them.

Key Topics Covered

The technical sessions focused on:

- Importance of Indigenous (Desi) poultry for livelihood security and nutrition
- Backyard poultry production systems in tribal areas
- Shed hygiene and sanitation practices
- Nutritional requirements and feeding schedules
- Common diseases, deworming schedules, and preventive measures

PARTICIPATORY GROUP ACTIVITIES

Participants were divided into three groups for practical exercises:

1. **Identification of Healthy and Unhealthy Birds**

   Farmers identified symptoms such as dullness, ruffled feathers, nasal discharge, and reduced feed intake.

2. **Local Disease Mapping**

   Each group mapped:

   - Month of occurrence
   - Local disease name
   - Symptoms
   - Local treatments
   - Mortality percentage

3. Poultry Economics

Groups analyzed:

- One hen and one cock over one year
- Egg production and chicks hatched
- Birds sold and consumed
- Input costs and net income

The exercise helped farmers understand profitability and management gaps. Mr. Uday provided technical clarifications and filled knowledge gaps during presentations.

LOCAL FEED RESOURCE MAPPING

Participants identified locally available feed resources and prepared a low-cost feed formulation:

- **Energy sources (50–70%)**: Maize, broken rice, millets, rice bran
- **Household waste (up to 20%)**: Kitchen leftovers, husk
- **Protein sources (20–30%)**: Groundnut cake, sesame cake
- **Minerals & salt (5%)**
- **Calcium sources (5%)**: Eggshells, fish bones, snail shells

This session emphasized reducing feed costs through local resource utilization.

POULTRY DISEASE MANAGEMENT

A detailed session using PPT and videos covered:

- Classification of diseases (contagious, non-contagious, protozoal)
- Modes of transmission and risk factors
- Preventive and biosecurity measures

Farmers ranked the most common diseases in their villages:

- Newcastle Disease (Ranikhet)
- Fowl Pox
- Diarrhea-related conditions

Awareness was also created on Avian Influenza (Bird Flu), focusing on early reporting and preventive biosecurity.

Special emphasis was given to ethnoveterinary practices. Farmers shared traditional herbal remedies and preparation methods, strengthening integration of local knowledge with scientific management.

VISUAL LEARNING AND PRACTICAL DEMONSTRATIONS

Posters and PPTs were used to explain:

- Chick management practices
- Shed cleaning and hygiene
- Ethnoveterinary practices
- Package of Practices (PoP) for Desi poultry

Practical Demonstrations includes:

- Identification of hatchable eggs
- Detection of cracked eggs
- Assessing egg size, shape, shell quality, and cleanliness
- Differentiation between hatchable and non-hatchable eggs

Following Mr. Uday Kumar BYP Session, Monuhar Pegu took session on Pig farming and its management. His core objectives are:

1. To establish a low-cost, climate-suitable piggery unit at household level
2. To ensure regular income through piglet production and/or fattening
3. To promote use of local materials and reduce capital investment
4. To integrate piggery with household farming through manure recycling

Two major farming types we can see in the villages: one is breeding farm (4:1) and HH level rearing for only fatteners.

Core themes he discussed with the farmers are:

- **Site selection and Layout:** Slightly elevated site to prevent water logging, good drainage and easy access to water and feed, away from household water sources but close enough for daily management and orientation to allow cross-ventilation
- **Housing design and construction (cost-effective)**: Raise 20-30 cm above ground using brick/stone, rough cemented concrete floor with slope for drainage, bamboo/wood wall with mud or cement plaster, GI sheet preferred roof (thatch optional for cost-effect model),
- **Space requirement (indicative):** Boar pen (6–8 m²), sow pen (2-2.5 m²) each covered, farrowing area (2.5-3.5 m²) temporary, weaner pen (4-6 m²), & grower/fattener pen (8-10 m²).

- **Feeding and water management**: Clean drinking water through troughs or nipples, feeding based on locally available resources:
  - Rice bran, maize, broken rice
  - Kitchen waste (properly cooked)
  - Green fodder and crop residues
  - Concentrate feed and mineral mixture for breeders
- **Health care and bio security**: regular vaccination and deworming, footbath at entrance, clean pens and regular disinfection, and quarantine for newly purchased animals
- **Manure and waste management:** Floor drainage into dung pit of fix a drum, composting of pig manure for use in farming field, reduced fly breeding and better sanitation

Monuhar specially suggested to PFA and lead farmers that Community animal health care workers should be trained: youth/women may be selected from the locality and given basic systematic training with the help of Animal Husbandry and Veterinary Dept. they can offer first-Aid, administer vaccinations, conduct de-worming, provide nutritional advice and can help/strengthen the farming system. Initially JIVA should support the health care service provider person gradually within the village farmers can collectively come together and decide the charges of vet services in each animal.

Locally Available Ingredients for Feed Preparation is very crucial

Villages commonly have access to several energy sources, protein, fibre, vitamin, and mineral sources suitable for pig feed. Energy sources include cooked rice, broken rice, crushed maize, tapioca or cassava, sweet potato, banana or banana stem, pumpkin, colocasia (taro), millet, and by-products such as rice bran and wheat bran. Protein sources normally accessible to farmers include fish meals or dried small fish, soybean meals or roasted soybeans, groundnut cake and mustard oil cake. For fibre and vitamins, farmers can use fresh green forage such as banana leaves, sweet potato vines, colocasia leaves, and legume leaves including cowpea, berseem and subabul. Essential minerals can be supplied through mineral mixture, common salt and crushed

eggshell or limestone powder. These ingredients collectively help farmers prepare balanced food, using materials readily available at household or community level.

Day 2 (26th February)

TECHNICAL KNOWLEDGE ON SEED SYSTEM, BRC, AND ENHANCE SOIL FERTILITY

The Day began with the follow-up quick recap of the previous day discussion and start with the preparation of Bamboo bio char using the locally available or waste bamboo for soil health enhancement.

After the theory sessions, farmers participated in hands-on demonstrations, where they learned to prepare each formulation step-by-step using locally available materials. Mr. Monuhar has al so demonstrated the preparation of vermi and dom compost, explaining its proportions, fermentation process, and practical application methods. The farmers worked in small groups, mixing the ingredients themselves, thus gaining confidence and ownership over the learning process.

DOM (Dissolved Organic Matter) composting processing involves the transformation of the most active, bioavailable, and water-soluble portion of organic matter (OM) during the degradation of organic waste. As a key indicator of compost maturity and humification which help to compost easily and ready very soon. Composting and Bamboo biochar offers significant environmental, soil health, and economic benefits by transforming organic waste into a nutrient-rich soil amendment (often called “black gold”)

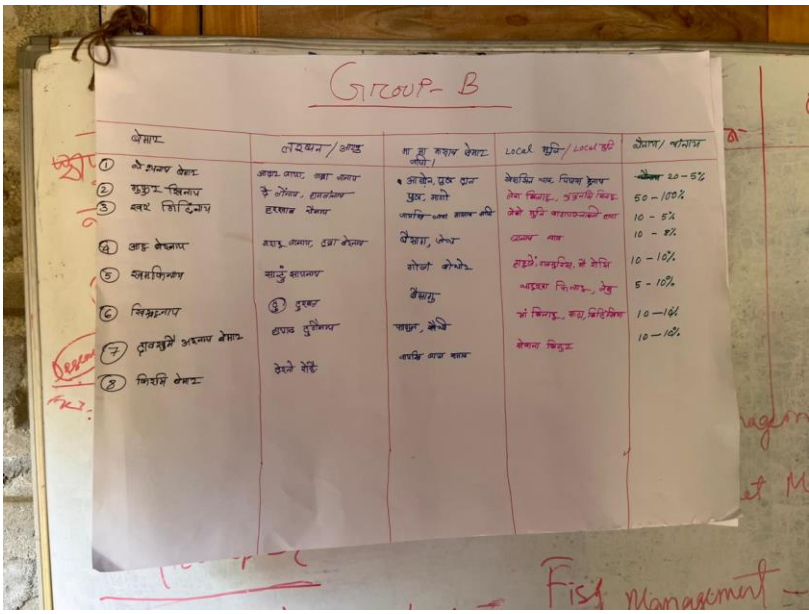
Throughout the demonstrations, the trainers emphasized cost-effectiveness and local adaptability—highlighting how these bio-inputs could replace costly market fertilizers and pesticides without compromising productivity. They also discussed the environmental and health benefits of avoiding chemical inputs, underlining how natural farming aligns with the long-term sustainability of both land and livelihoods.

Following of the practical demonstration, Mr. Monuhar discussion with the lead farmers to enhance indigenous seed system and its preservation:

He shared major idea around Community Seed Bank → way towards conservation of indigenous seed.

Core of Seed Activities are:

- **Seed Production**: Production of farmer preferred varieties and quality seeds
- **Seed Conservation:** On farm conservation, conservation through traditional methods
- **Awareness Creation and Marketing**: Creation of awareness about indigenous varieties and marketing the improved preferred varieties



STRATEGIC ACTIONS

1. Identify SHG, interested Farmer and FPO who connect to them for the initial discussion on how to start.
2. Nominate 1 person who does business on seeds
3. Develop a business plan → Demand, Price, Budget can be decided based on the seasonality within the village
4. Provide capital support to SHG from the JIVA Project in the initial phase to start the business → Procure and sale (procure in bulk quantity)
5. Seed should be different varieties → Cereals, Pulses, Oil seeds, Veg, and other
6. From the second time influence the farmers to start preserving seed in scientific and systematic way → where GVM can start a seed production unit and preservation programme called – CDB (Crop Diversity Block) scientific way to cultivation of seeds and purification of seed varieties and its preservation

BRC SYSTEM DEVELOPMENT

STRATEGIC ACTIONS:

1. Select the individual farmer who has cow
2. Cattle shed lining (concrete flooring - in rough floor) to easily urine collection
3. Discussion with the farmers and share the models with them and take the consent & MOU

4. Training: Engage with the CRP for all the technical knowledge on Bio-input preparation → connect to the nearest KVK for context specific bio-concoction preparation knowledge
5. Business agreement between FPO/SHG and Individual farmers→ based on the local context
    - Price
    - Commodity (different products)
    - Quantity
    - Quality
6. All the bio-input products purchased from the individual farmer by the FRP or SHG group initially then distributed to other farmers to trial the products.
7. Initially financial support was provided from the JIVA project budget.
8. Later FRO or SHG will run the business model to upscale the model to other villages

ACTION PLAN AND WAY FORWARD

The following action points were finalized:

- **Bio-Inputs and NF practices:**
    1. Establish BRC at Khatarbari and kalcheni village
    2. Prepare the bio-inputs
    3. Cattle shed lining for cow urine collection
    4. Closely working with EFRP deployed by the RySS for enable the farmers into NF and established FFS at the Landscape
    5. Continuous follow-up
- **Poultry & Pig:**
    6. Vaccination plan covering Lasota, R2B, and de-worming, identification of local vaccinators
    7. Shelter building and its management including breeding unit development
    8. Selection of interested breed farmers and establishment of one Desi poultry breed farm entrepreneur
    9. Regular household-level training on ethno-veterinary practices
- **Seed and BRC:**
    10. Collection of indigenous seeds
    11. Establish CDB for seed production and its on-farm preservation
    12. Establish Community Seed bank and BRC unit

13. Mobilised farmers to collect indigenous seeds and its cultivation
14. Prepare Bamboo biochar → continuation of the bio-concoction preparation

CONCLUSION

The pilot phase of the JIVA program at Kalcheni and Khatarbari villages in Tamulpur District of Assam, presents promising opportunities but also highlights the need for strategic interventions in key areas. The region's agro-ecological diversity, relatively larger landholdings, motivated farmer base, and abundance of natural resources provide a strong foundation for the successful implementation of Natural Farming practices.

The PFA demonstrates capable leadership and entrepreneurial drive, while the NABARD Officials are energetic and supportive. There is also potential for meaningful convergence with various government departments and allied institutions. It is also necessary to involve KVK and, several departments—such as the Department of Agriculture, and Horticulture in the JIVA program.

It is crucial to strengthen community institutions so that this initiative is not seen merely as a project, but as a collective responsibility and an opportunity for long-term change. With the guidance of the PFA and NABARD's DDM, and through ongoing capacity-building efforts, farmers can be empowered to lead the transition towards an ecologically sound, economically viable, and socially just farming system.

The readiness and engagement shown by the community reaffirm that with the right support structures in place, JIVA has the potential to become a transformative model for regenerative agriculture and sustainable rural livelihoods in the region. The RSA team remains committed to supporting this journey fully.