



## KRISHI VIGYAN KENDRA, SOUTH TRIPURA

(ICAR Research Complex for NEH Region)



### 1. Name of the Centre:

Krishi Vigyan Kendra, Birchandra Manu, South Tripura

### 2. Area of Work:

Krishi Vigyan Kendra (KVK) is a district level institution (Farm Science Centre) engaged in transfer of latest agricultural technologies to the end users for bridging the gap between production and productivity. It works through partnership mode with farmers, allied departments and agencies. The KVK, South Tripura was established on 30<sup>th</sup> May 1984 under the administrative control of the ICAR Research Complex for North Eastern Hill Region. Since inception this KVK has been endeavouring for the upliftment of socio economic condition of the farming community of the district through scientific intervention in the agricultural and allied sectors.

**FACULTY:** The KVK is having well-experienced faculty (Programme Coordinator & SMS) specialized in the discipline of Agronomy, Plant Protection, Fisheries, Animal Science, Horticulture, Agril. Extension and Agril. Engineering. In addition, the resource person/experts in various agricultural and allied sectors field are being invited from ICAR, Agril. Universities and development departments, organization, etc.

**FACILITIES:** Besides demonstration farm (12 ha), the KVK having facilities like training room, visual aids, soil testing laboratory, library, computer, etc.

#### SERVICES

Training Programmes: Training programmes are offered by KVK in the fields of agriculture, horticulture, animal husbandry, fisheries and extension education. The programmes are planned in advance of the ensuing agricultural season taking into consideration the cropping pattern and farming system.

Front Line Demonstrations: The Front Line Demonstrations on oilseeds and pulses have been in implementation, aiming at increasing the productivity of crops like groundnut, cowpea, green gram, black gram, red gram, sesamum, tomato, cauliflower, brinjal, cucumber, okra, etc. by way of introducing low-cost technologies including introduction of new varieties/hybrids.

On Farm Testing: To refine the generated technologies to suit the local situations, "On Farm Testing" is carried out with farmers' participation. Every year 10-15 acres of land is covered under this programme to serve as a result demonstration plot.

Technology Information Spread: To keep the farmers well informed of the programmes and for quick dissemination of technologies, Farmers' Interest Group has been formed. Group meeting are organised at the village level to debate on the agriculture related issues.

Soil, Plant and Animal Health: Subject matter Specialists (SMSs) of KVK are providing diagnostic visits to problematic agriculture fields; seek animals, poultry and fisheries for getting curative & diagnostic recommendations. Farmers can get their soil samples tested at reasonable rates in our soil testing laboratory.

Extension activities: Farmer can participate in Krishi Vigyan Kendra's extension activities such as Kissan melas, study tours, field days, Kisan gosthi, Seminar, Workshop, Technology Week, etc.

Interaction Programme: Interact with the scientists at the Krishi Vigyan Kendra and get advice on issues related to agriculture & allied fields & information on advanced technological options.

Farmers on study tour can see our farm and demonstration units on various crops, vermicompost, mushroom & bee-keeping; horticultural orchards & nursery; integration of livestock with fisheries; and agriculture implements

### 3. Technology/Intervention Available for farmers and others

#### Crop Production

- i) **EXPANSION OF GROUNDNUT AREA IN RAINFED FARMING SYSTEM OF SOUTH TRIPURA:** KVK has trained farmers of the district for cultivation of groundnut both in kharif (upland area) and rabi (lowland areas) through FLDs, training and awareness programmes during 2007-10. The number of farmers increased from 7 ha (2007-08) to 63 ha (2010-11) in three year of demonstration covering three blocks of the district. Using the improved variety (GG-20, GG-7 and TG-37A) with scientific package of practices farmers obtained average yield up to 1900 kg/ ha (60 % higher than local variety). Farmers are earning additional income up to Rs.31,000/- per ha with a BC ratio of 2.88.
- ii) **IMPROVEMENT OF PULSE PRODUCTION IN SOUTH TRIPURA:** Improved variety of Lentil (WBL-58), Green gram (HUM-16), Red gram (UPAS-120) and Cowpea (Kashi Kanchan) were demonstrated covering five blocks of the district. The yield percentage increased from 21.43 to 40 per cent and getting up to Rs. 29,500/ha by selling pulses crops (Demonstration area- 23 ha in last 3 yrs).
- iii) **POPULARISATION OF SYSTEM OF RICE INTENSIFICATION IN BORO PADDY:** KVK has conducted FLDs and OFTS and number of trainings on SRI Techniques along with INM and IPM. Farmers of five blocks has adopted the technology and now boro paddy is being cultivated successfully using SRI techniques along with INM and IPM for nutrient and pest management. Preferred variety of paddy under SRI are Naveen, Samba Masuri, Pusa-44 & BPT 5204, Hybrid (6129/644), Gomati, etc. The yield increase to the tune of 20-27 % (4.5-6.0 t/ha) has been recorded after the use of SRI technology (Demonstration area- 85 ha in last 3 yrs).
- iv) **INTRODUCTION OF IMPROVED VARIETY OF VEGETABLES:** KVK successfully popularized improved variety of vegetable crops like Cowpea (Var. Kashi Kanchan), Tomato (var. Allrounder), Cabbage (var. BC 76, Quisto), Cauliflower (var. Suhasani) and Okra (SG-152, Arka Anamika) along with IPM & IDM technology.
- v) **MANAGEMENT OF SOIL HEALTH AND FERTILITY:** KVK conducted number of field demonstration on “Balanced use of fertiliser in HYV Maize (RCM 1-3)” in Garjee, Dudhpuskarini, Palatana, Murasinghpara and Chandrapur village of South Tripura covering 11 acre areas and “Balanced use of fertiliser in Rice (Var. Gomati) under SRI, ICM & Conventional system” in Dudhpuskarini, Garjee, Matai and Hrishyamukh village of South Tripura covering 30 acre areas under rainfed during 2011-12.
- vi) **INTEGRATED PEST AND DISEASE MANAGEMENT :** KVK spreading the technology of IPM/IDM and as a result farmers has been trained to control leaf folder in rice, stem rot in groundnut, Bacterial wilt in tomato, cut worm in cabbage and shoot & fruit borers in brinjal crops through IPM/IDM.
- vii) **POPULARISATION OF MUSHROOM PRODUCTION:** Farm women of the district are being trained to start mushroom cultivation at their house. More than 178 farm women and about 15 SHG are producing mushroom under the supervision of KVK.
- viii) **POPULARISATION OF USE OF VERMICOMPOST:** Techniques of vermicomposting is being demonstrated to the farmers and 40 number of vermicomposting units (*constructed by Spices Board and State Horticulture department*) are now operational with the help of KVK. Earthworm is also being supplied to the farmers by the KVK.
- ix) **EMPLOYMENT GENERATION THROUGH PRODUCTION OF AMRAPALI MANGO PLANTING MATERIALS BY RURAL YOUTH IN SOUTH TRIPURA:** KVK developed the skills of rural youth for grafting of mango planting materials and as a result every year 50-60 farmers producing about 5000-10000 mango planting materials by each youth farmer and earning about Rs. 20000-100000 per year. The trained youth farmers are also getting employment in the private nursery of Tripura during May-July every year and earning about Rs. 15000-25000 per year. In the vicinity of KVK, 43 youth farmers have well developed mango nursery.

#### Livestock & Fishery

- x) **ESTABLISHMENT OF MINI-DAIRY UNDER PPP MODE:** KVK is providing capacity building for development of Mini-dairy in South Tripura for milk and FYM production. Presently, ten villages running

Mini-dairy programmes covering 128 farmers. All Farmer supply milk to the Gomati Dairy, Agartala. Bio-Gas unit (31 nos.) has also been integrated with Mini dairy in five villages.

- xi) **UPSCALING OF HOMESTEAD FARMING:** KVK has introduced homestead farming by integrating 6 enterprises together in seven villages of Kakraban, Matabari, Bokafa, Satchand and Rupaichari Block. Technology was demonstrated in two farming situations covering 8 farmer families. Each farmer doing poultry (10-15 poultry), Goatary (2 nos.), Vermicompost (1 unit), Mushroom farming (50 cubes) and horticulture (vegetable-spices-fruit) cultivation. A model Homestead Farm has been developed in Dudhpushkarini village.
- xii) **SCIENTIFIC REARING OF DUAL PURPOSE POULTRY BIRDS AND DUCK:** New breeds of poultry i.e. Gram Priya (160-180 eggs) and CARI-Nirbhic (120-130 eggs) and ducks are Khakhi Cambel (180 eggs/yr) and Vigova Super-M (60 eggs/yr & Meat) has been introduced. Presently demonstration on “Duck-cum-Fish” is going on in three villages of Bokafa and Kakraban under NICRA & SWPAL project.
- xiii) **PIG-CUM-FISH FARMING:** KVK popularizing pig-cum-fish farming technology among tribal farmers of the district in both farming situations covering 24 farmers in seven villages under four blocks (Killa, Kakraban, Bokafa, Rupaichari) of the district.
- xiv) **BACKYARD POND AQUACULTURE:** Pre - and post stocking technology of backyard pond aquaculture was demonstrated in four blocks (Hrishyamukh, Bokafa, Kakraban & Killa) of the district. A model Integrated Fish Farm has been developed in Dudhpushkarini village.

#### Home Science

- xv) **FOOD PROCESSING, TAILORING, STITCHING & RURAL CRAFT:** KVK conducting training on value addition of fruits, vegetables & spices, zero cool energy storage, practical demonstration on preparation of ginger, candy, tomato ketchup, lemon squash, jam & jelly of pineapple, guava etc with the help of IICPT (Min of Food Processing & Industries). Vocational training on “Tailoring, Stitching & Rural Craft” is also being conducted at KVK, Birchandra Manu. Other ongoing programmer includes demonstration on “Nutritional Garden” for nutritional security to women and child. Farm women of Chandrapur, Garjee, Dudhpuskarini, Sataria, Bikhora, Palatana and Bagama of South Tripura have been trained.

#### Training, Workshop & Awareness Programme

During the 11<sup>th</sup> plan period, a total of 445 training courses were conducted benefiting 8884 participants which includes 6234 farmers, 1800 Rural youth and 850 extension personals in crop production, soil fertility, vegetable production, vermocomposting,, mushroom farming, fishery, livestock production, poultry, integrated pig-cum-fish farming, homestead farming, crop diversification, water harvesting, productive use of water, nutrition, food processing, tailoring & crafting, farm mechanisation, disease & pest management, seed production, organic farming, integrated nutrient management, etc. Some of the specialised training programmes conducted are given below:

- xvi) **USE OF SOIL HEALTH CARD:** Training on use of soil health card being conducted for the farmers. Soil health card has been given to more than 500 farmers by ICAR under NABARD sponsored programs.
- xvii) **CROP DIVERSIFICATION AND RAIN WATER MANAGEMENT IN MEDIUM AND LOWLAND SITUATION:** Farmers (7 days training) and Extension personnel (14 days training) has been trained on “Rain Water Management” under SWPAL project, Ministry of Agriculture (GOI). Altogether 7 programmes were conducted during 2009-12.
- xviii) **COMMODITY FUTURE MARKET:** Conducted awareness programme for Rubber growers of the district.
- xix) **FARMER’S WORKSHOP ON TECHNOLOGY GAP ANALYSIS:** More than 600 progressive farmers and farm women participated in a workshop entitled “Analysis of Technology Gap in Agriculture and Allied Sectors” during the year 2010-11 to identify the basic technological gaps in agriculture, horticulture, animals & poultry, fisheries and related enterprises.
- xx) **FARMER’S WORKSHOP ON INTEGRATED FISH FARMING:** About 100 farmers participated in workshop for expansion of backyard aquaculture and integrated pig-cum-fish farming in the district.

## Farmer's Innovations

**KVK identify, recognise and promote grass-root innovators of agricultural technologies and help innovative spirit of the farming community.**

- i) Innovation in '**Modified Honey Extractor**' developed by Sri Priya Bandhu Pal of Kariamura village of Matabari block. He participated in National Farm Innovator Meet of ICAR at KVK, Mysore (2010) and Innovative Farmers Meet 2011-12 at ICAR Research Complex for NEH Region, Meghalaya.
- ii) Innovation in development of **Mini-Dairy** by Sri Parmananda Sen of Mogpuskarini village (Kakraban Block) of South Tripura. ICAR Research Complex for NEH Region awarded him during North East Zone Regional Fair 2010-11 at Umiam, Meghalaya.
- iii) Innovation in "**Profitable and novel way of exploiting Integrated Rice-Fish Farming System in Rubber growing areas**" by Sri Jitendra Majumder of Purba Mirza village of Kakraban block. He participated in Rice Innovations - 2011 of ICAR at DRR, Hyderabad (2011) and Innovative Farmers Meet 2011-12 at ICAR Research Complex for NEH Region, Umiam (Meghalaya).
- iv) Innovation in "**Application of Kerosene and Mustard Oil Cake Mix to control EUS fish disease**" by Sri Arun Patari of Manu village (Satchand block) of South Tripura. he participated in Farmer's Scientist Meet- 2011 at CITA, Jaipur; CAU Agri Fair 2012 and Innovative Farmers Meet 2011-12 at ICAR Research Complex for NEH Region, Umiam (Meghalaya) and received Best Innovative Farmer Award.

### 1. RESOURCE GENERATION ACTIVITIES

- i) Seed Production of Groundnut (GG20 & GG7), Green Gram, Rice (Gomati & Naveen)
- ii) Production of Quality Mango Planting Materials (var. Amrapali), Citrus, Banana, Cashew nut, etc.
- iii) Earthworm production for vermicompost

### 2. INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

- i) KVK Website providing regular updates of KVK activities ([www.kvksouthtripura.org.in](http://www.kvksouthtripura.org.in))
- ii) Kisan Mobile Agriculture Advisory Services for 254 registered farmers
- iii) Online Weather based Agriculture Management
- iv) e-Newsletter (half yearly)

### 3. INSTRUCTIONAL-CUM-DEMONSTRATION UNIT

- i) **Hi-tech Horticulture Nursery:** Quality planting material production of fruits, vegetables and spices plants (20000 fruit plants & 10000 vegetable seedlings/year)
- ii) **Protected Vegetable Production Unit:** Shadnet covering an area of 500 m<sup>2</sup>
- iii) **Cropping System:** Oilseeds, pulses, vegetables, fodder, and tuber crop based unit
- iv) **Vermicompost :** Capacity: 3.5 tonnes compost & 10,000 earthworm per year/unit
- v) **Mushroom:** Capacity- 100 kg/season (Sept-Feb)
- vi) **Poultry & Piggery:** 25 duckary and 4 piggery
- vii) **Fisheries:** Area-0.25 ha & production- 350 kg fish & 12000 fish seeds/year
- viii) **Fruit Orchard:** Mango, Litchi, Sapota, Banana, Cashewnut, Pineapple, Guava, Citrus, Coconut, Cinnamon, etc (1900 fruit plants with 4000 pineapple as inter crop)
- ix) **Water Harvesting:** Besides fishery pond (0.25 ha), there are three Jalkund systems for rain harvesting
- x) **Soil Testing Laboratory:** About 500 soil samples per year.
- xi) **Tailoring & Stitching:** A laboratory for farm women training

### 4. IMPORTANT TECHNICAL PUBLICATIONS

- i) Integrated Water Management for Crop diversification in Tripura
- ii) Production of Quality Planting Materials by Rural Youths of South Tripura
- iii) Integrated Fish Farming- A case study of South Tripura
- iv) Comprehensive District Agriculture Plan (CDAP)-South Tripura
- v) Resource Support System in Agriculture and Allied Sectors in South Tripura
- vi) Vision 2020 of KVK South Tripura
- vii) Backyard Aquaculture & Pig-cum-Fish Farming
- viii) Vermicomposting: Using earthworms to recycle farm & food wastes into organic fertilizer
- ix) Moong Cultivation: A good source of protein and nitrogen

- x) Arhar Cultivation: a cheapest source of protein
- xi) Groundnut: Income maximization and soil improvement

**Other Publications**

- 1) Cultivation of Moong
- 2) Improved Package and Practices of Blackgram
- 3) Scientific Production Technology of Sesamum
- 4) Cultivation of Mesta in Tilla Land
- 5) Integrated Pest Management in Rice
- 6) Scientific Way of Duck Rearing
- 7) Scientific Way of Pig Rearing
- 8) Avian Influenza
- 9) Importance of Soil and Water in Fish Culture
- 10) Technology for Fish Production in Tripura
- 11) Composite Culture of Freshwater Prawn and Carps
- 12) Fish Health Management and Disease Control
- 13) In Fish Culture: What to do? When to do?

**For further information please visit our website**

[www.kvksouthtripura.org.in](http://www.kvksouthtripura.org.in)



## Action Photos, KVK, South Tripura



Members of QRT visiting Sataria village, South Tripura



Maize Field Day at Mogpuskarini village, South Tripura



Rice Field Day at Garjee village, South Tripura



Members of SAC visiting KVK Farm, South Tripura



FLD: Sesamum (var. ST1683), South Tripura



FLD: Lime application for Maize and Groundnut



FLD: Brinjal (var. Singhnath), South Tripura



OFT – Paddy-cum-Fish Farming in Garjee village, South Tripura



OFT – Zero Energy Cool Chamber in Palatana village, South Tripura



Demonstration on Homestead Farming System, Dudhpuskarini village, South Tripura