Participatory Rural Appraisal

NAHEP-CAAST-IFS programme of Birsa Agricultural University, Ranchi was started with PRA survey from *Bhagwan Birsa Munda Janamsthali* Ulihatu (Khunti dist.) and published a report on "Development of Indigenous Eco-Green Village, Ulihatu – An integrated farming system approach", which was released by the Hon'ble Governor of Jharkhand on the eve of Birsa Jayanti on 15th November 2019.

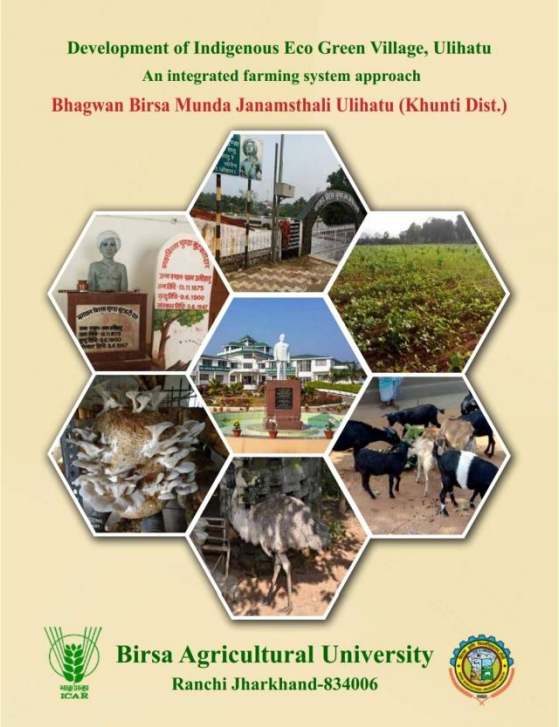
Objective:

1. To formulate technology interventions/modules in respect of prioritized production problems according to different micro-farming situations.
2. To make interventions for on-farm value addition of agricultural products/by-products/ wastes for greater economic dividends.
3. To assess the existing technologies in different farming situations.

About Event:

Development of Bio-Village Bhagwan Birsa Munda Janamsthali, Ulihatu – An Integrated Farming System Approach:

Jharkhand state is broadly classified as low-income or low-middle income. While poverty and hunger remain one of the major challenges before the state. A vast majority of population in the state lives in rural areas and depends upon agriculture for livelihood and sustenance. The main crops of Jharkhand state are paddy, maize, wheat, pulses, oilseeds, potato and vegetables. Birsa Agricultural University, Ranchi has started NAHEP-CAAST project on "Standardization of Integrated Farming System Models for the State of Jharkhand" and started from Bhagwan Birsa Janmsthali, Ulihatu, Dist. Khunti. Jharkhand. An idea to set up a model Indigenous Eco/ Bio-Green village in the Bhagwan Birsa Munda Janamsthali, Ulihatu of District Khunti, Jharkhand and PRA survey has been done. A detail report has been documented and released by Hon'ble Governor Smt. Draupadi Murmu on 15th November 2019.



Ulihatu is a small village in Arki Block in Khunti District of Jharkhand State, India having total 196 families residing; population of 1126 of which 675 are males while 451 females.

Horticulture-based cropping system, goat rearing, backyard poultry farming and piggery, bee keeping, Lac cultivation on *Kusum, Palash* and *Ber* trees, mushroom cultivation, processing and value addition of forest produce like *Imli, Jamun, Ber, Mahua, Kusum* leaf plate making and bamboo craft for income and also women empowerment, about 80 tribal families of the project villages will be directly involved.

PRA has been done under the guidance and supervision of a team of experts comprising scientists of Birsa Agricultural University, Ranchi. Most of the organic farmers in these villages are following the principles of crop diversification, variability in farm operation and integration of crop production system with livestock maintenance. Crop byproducts and wastes are being used as valuable feed to the livestock and livestock wastes like dung and urine are used as resources for providing nutrients as well as managing the pests problems.

Agro Ecosystem Analysis through PRA Techniques:

Keeping this fact, the Agro-Ecological situation and productions problems of the village; Birsa Agricultural University, Ranchi conducted Agro Eco system Analysis through PRA Technique. Several visits of the BAU Scientists along with progressive farmers were arranged for conducting survey in selected villages Ulihatu, consisting of several hamlets. After selection of villages agro- ecosystem analysis was conducted using various tools and techniques of Participatory Rural Appraisal (PRA). In order to develop deep understanding of the existing

farming systems farmer – scientist interface programmes were also organized. After fully understanding the production problems and related causes and constraints as well as delineation of production systems and micro – farming situations.

Problems related to Agricultural crops and livestock:

- Low productivity in upland and lowland rice, normal and late sown condition in wheat, maize, pigeon pea, blackgram, horsegram, rapeseed-mustard, niger, linseed, etc.
- Low yield of vegetables and fruits - tomato, brinjal, capsicum, cauliflower, cabbage, peas, beans, colocasia, jackfruit, guava, mangoes, ber, etc.
- Low milk yield of indigenous cow and buffalo; and low profitability in goatry, piggery, backyard poultry, duckery and fish enterprises.
- Low productivity in kitchen gardens, low profitability in bee keeping, bamboo-based and other cottage industry and underutilized minor forest produce as well as poor profitability in stored grains.
- Scientific technology interventions for doubling income of Village Ulihatu after PRA Survey

Change in cropping pattern:

- Jowar + Pigeon Pea + Cowpea
- Paddy + Okra + Cowpea
- Ragi + Pigeon pea + Cowpea

- Maize + Pigeon pea + Cowpea
- Paddy + Blackgram in bunds

Horticultural crops:

Quality planting materials of Mango, Guava, Papaya, Banana, Litchi, Ber, Aonla, Wood Apple, Custard apple, Jackfruit etc. (25 plants per farmers) will be distributed to each farmer.

Vegetable Cultivation:

Quality seeds of high yielding varieties of Okra, Bitter gourd, Ridge gourd, Spine gourd, Pumpkin, Smooth gourd and Beans will be distributed to each farmer as per the list and training on their improved cultivation practices.

Animal Husbandry:

Intervention with Jharsuk, Jharsim, Murrah Buffalo, Black Bengal goat, Beetal/ Sirohi Buck, Khakhi Campbel duck for production of eggs, Non- descript zebu cattle should be upgraded by Gir breed through artificial insemination.

- Poultry:
  - 50 birds of Jharsim, Vanaraja, Rampuriya breed will be given to 50 families
- Goatry:
  - Two female goats of Black Bengal breed will be given to 50 families. Training will also be provided for their care and management and suggested for packages and practices.
- Piggery:
  - Two female and one male pig of Jharshuk breed will be given to 20 families as per the list of farmers.
  - Training will also be provided for their care and management and suggested for packages and practices.
- Livestock:
  - Two cows will be given to the farmers of Ulihatu village

Bee Keeping:

Bee rearing boxes will be distributed to the farmers of Ulihatu village. Honey extraction unit will be installed in Ulihatu village in future. Training will also be given on bee keeping and extraction of honey

Mushroom Cultivation:

Training on cultivation of Oyster, Milky and Button Mushroom, as well as, Value addition like mushroom pickle, mushroom powder etc. should be provided with standard package of practices.

Lac Cultivation:

Rangini and Kusumi lac culture and suggested for packages and practices.

Agroforestry:

Training will be provided to the farmers on techniques of intercropping of agricultural crops *viz*., mustard, chickpea, linseed, cow pea and other beans, turmeric, ginger etc. with tree crops *viz*., Gamhar, Karanj, Teak, Jackfruit, Bamboo etc. on their farm lands in order to increase the yield per unit area of land.

Bamboo cultivation:

Training will be given to farmers on improved cultivation practices and management of Bamboo along with their value addition and processing. Modern bamboo toll kits will be used by the farmers for fast production of the handicrafts and related materials.

Value addition and processing:

Pickle from forest produces, Mango, Ber, Aonla, Mushroom, Jam-Jelly, Papad, Bamboo produce, Tamarind with seed packaging,

Marketing Strategy:

All the produce of the Indigenous Eco/Bio-Green Village Ulihatu would be sale in nearest market and also at Birsa Complex Ulihatu.