Technologies for Commercialization

ICAR Research Complex for Eastern Region

Patna

भाकृअनुप
ICAR

हर कदम, हर डगर
किसानों का हमसफर
भारतीय कृषि अनुसंधान परिषद

Agrisearch with a human touch

ICAR - RCER, PATNA

ITMU

Institute Technology Management Unit

ICAR Research Complex for Eastern Region

Patna-800014 (BIHAR)

Introduction

ICAR Research Complex for Eastern Region. Patna is a premier institute of Indian Council of Agricultural Research, (ICAR) working in eastern region comprising of plains of Assam, Bihar, Chhattisgarh, eastern U.P., Jharkhand, Odisha, and West Bengal.

The institute was established in 2001 to work on research and technology needs for improving agricultural growth in eastern part of the country. The complex has a broad based mandate in view of emerging opportunities of research in frontier areas, initiative for regional cooperation, globalisation and cost competitiveness. Institute Technology Management Unit (ITMU) functions from its Regional Centre i.e., Farming System Research Centre for Hill and Plateau Region, Ranchi, which is engaged in commercialising and forming public private partnership through signing of Memorandum of Understanding and Agreements as per ICAR guidelines for intellectual property management and technology transfer/ commercialisation effective from October 2, 2006. The Institute has generated several technologies which are in public domain, few selected technologies which are ready for commercialization are listed here.

Swarna Vasundhara Vegetable Soybean

Dr R . S. Pan

- Resistant to rust, Fresh pod yield : 15-20 t/ha.
- Recommended for Jharkhand and Bihar
- Time of sowing : June-July, First harvest 75-80 days after sowing.





Grafted tomato cultivation for rainy season

Dr P.Bhavana

- Tomato hybrid Swarna Baibhav/RCDTH-21 grafted on bacterial wilt resistant brinjal rootstock (HAB-901/HAB-921/HAB-928/HAB-930)
- Tube grafting or wedge grafting
- High demand of grafted seedling
- High yield 127.7 t/ha

Advantages

- Bacterial wilt resistant
- Suitable for rainy season cultivation



Mother block preparation in pointed gourd

Dr A.K.Singh

- Mother block preparation in 1ha area for Swarna Rekha/ Swarna Suruchi/ Swarna Alaukik
- Large scale production of plants using stem cuttings
- High demand of pointed gourd plants in Eastern India

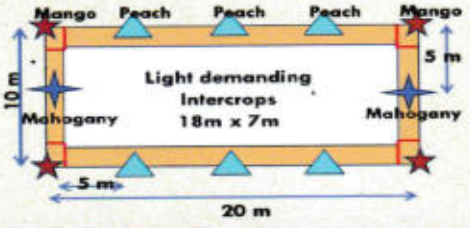


Multitier cropping system for rainfed uplands

Recommended 1 ha Models :

Dr M.K. Dhakar

Model	Top story	Middle story	Filler crop	Inter crop
I.	Mahogany (45 plants)	Mango (Amrapali) (50 plants)	Sub-tropical Peach (120 plants)	Rice
II.	Mahogany (45 plants)	Mango (Amrapali) (50 plants)	Sub-tropical Peach (120 plants)	Finger millet



Novelty	**Cereals-Fruit-Timber-tree based multistory cropping system for optimal yields for light demanding cereals in these systems on a continuous basis. 3-4 times more income over sole crops i.e. Rice and Finger millet**
Soil organic carbon stock (Mg ha-1)	Model I and II: 55-60 Mg ha^{-1} Mono-cropping of paddy: 45 Mg ha^{-1}

Climate Resilient Rice Varieties

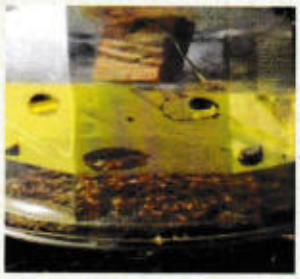
Name of Rice varieties	Duration (Days)	Recommended states	Ecology/Areas	Yield Potential (t/ha)
Swarna Shreya	115-120	Bihar, Chhattisgarh & Madhya Pradesh	Water limited areas	4.50-5.00
Swarna Shakti Dhan	115-120	Bihar, Jharkhand, Odisha, Haryana, Chhattisgarh, Gujarat & Maharashtra	Water limited areas	4.50-5.00
Swarna Samriddhi Dhan	135-140	Bihar	Irrigated and rainfed shallow lowland	5.50-6.00
Swarna Unnat Dhan	115-120	Bihar, Odisha, West Bengal, Madhya Pradesh and Maharashtra	Irrigated ecology	5.00-5.50
Swarna Sukha Dhan	110-115	Jharkhand and Uttar Pradesh	Rainfed midland to upland	4.00-4.50
Swarna Purvi Dhan 3	115-120	Bihar, U.P., Haryana, Chhattisgarh, Rajasthan and Maharashtra	Irrigated ecology	5.00-5.50
Swarna Shusk Dhan	110-115	Uttar Pradesh	Rainfed midland to upland	4.00-4.50
Swarna Purvi Dhan 1	115-120	Jharkhand	water limited areas	4.50-5.00
Swarna Purvi Dhan 2	115-120	Jharkhand	Irrigated ecology	5.00-5.50

Dr Santosh Kumar

Mixed Para-pheromone fruit fly trap for horticultural crops

Dr J.S. Choudhary

- It protects fruit and vegetable crops in mixed cropping with a single trap against all major fruit fly species.
- A cardboard with 3x2x1.5 cm has been used for the absorption of different combinations of mixed lure solutions (cue lure and methyl eugenol) with DDVP as insecticide in the lure solution.
- Low cost plastic cups have been designed for protecting the lures.



Litchi variety Swarna Madhu

Dr Mahesh K. Dhakar

Characters

- Fruit weight-21.40g, Fruit length-30.90mm. Fruit diameter - 34.20mm
- Yield - 25-35 kg/plant
- Swarna Madhu is moderately resistant to seed borer.

Swarna Biodegradable Planting Pots

Dr Kirti Saurabh

- Filed Patent for **"AN ECO-FRIENDLY BIODEGRADABLE PLANTABLE POT AND METHOD OF PREPARATION THEREOF"**
- The said plantable pot has good water absorption as well as drainage capacity, air permeability, and being completely biodegradable, the said pot enables direct transplant of plants into the ground as root can penetrate through the wall, reducing the shock associated to this action.
- In addition, after the plants are transplanted to the field, the said plantable pots degrade and enrich the soil with nutrients, avoiding soil pollution.
- The said composition constitutes a realistic approach for the elimination of agricultural wastes of rice residues, replacing burning which has a negative impact on the environment.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(71) Name of Applicant :
ICAR RESEARCH COMPLEX FOR EASTERN REGION
Address of Applicant: ICAR PARSAR ROAD, P.O.- B.V.
SWARNA BIODEGRADABLE PLANTING POT

Bacterial Wilt Resistant varieties of vegetables

Dr P. Bhavana & Dr A. K. Singh

SWARNA PRAKASH (Tomato variety)

- Red round slightly flattened fruits
- High yielding (45-50t/ha)
- TSS-3.0-3.80brix, Acidity(%)-0.18-0.20,
- Ascorbic acid (mg/100g fruit)-10-15

SWARNA AROHI (Chilli variety)

- Dark green upright fruits
- Average yield: 20-22t/ha
- Fruits long (6-6.5cm)
- High pungency: Total SHU 50431, Capsaicinoids 0.31g/100g dry weight at green chilli stage

SWARNA APURVA (Chilli variety)

- Average yield: 20-25t/ha
- Fruits long (7-7.5cm)
- High pungency: Total SHU 90194, Capsaicinoids 0.56g/100g dry weight at green chilli stage

Mushroom Production Technology for all seasons

Dr A. K. Jha

Oyster mushroom

- *Pleurotus florida*: Aug-Nov, Jan-May
- *P. sajor caju*: Aug-Nov, Jan-Jun
- *P. ostreatus*: Nov-Mar

Milky mushroom

- *Calocybe indica*: Apr-Aug

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