



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

*Agrisearch with a human touch*

# Annual Action Plan (2022-23)

**KRISHI VIGYAN KENDRA, KOKRAJHAR**



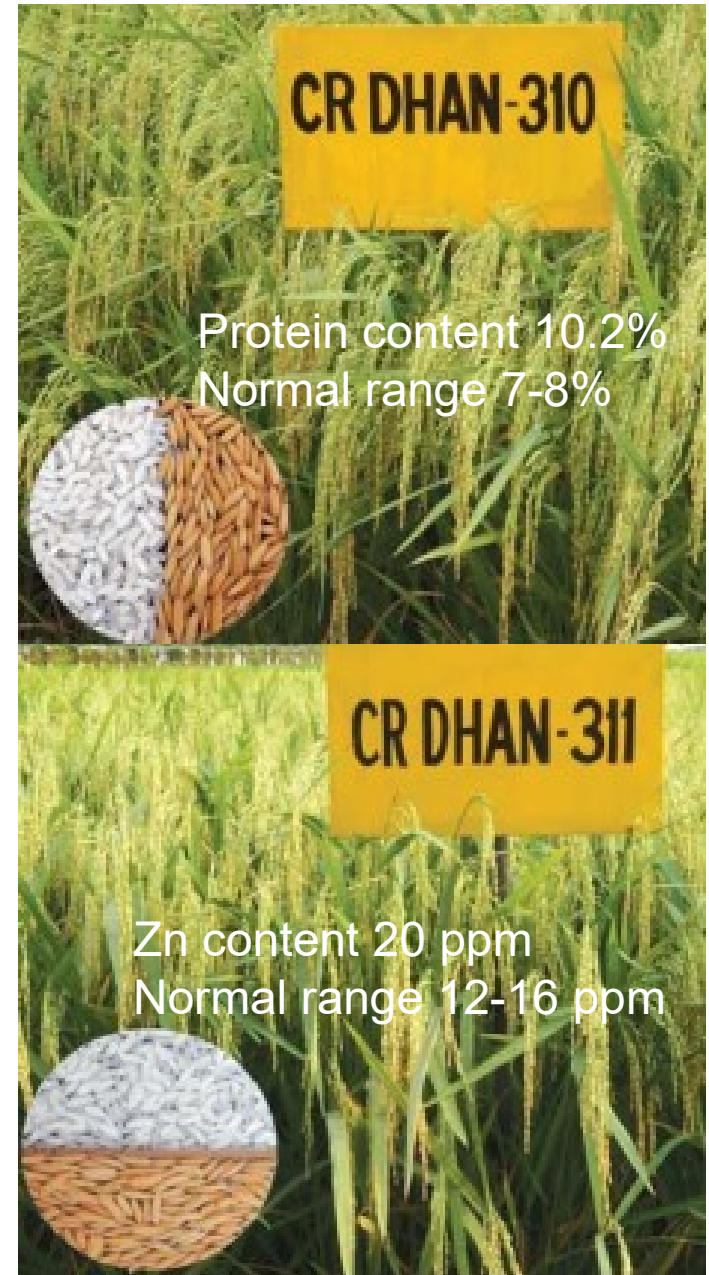
*Assam Agricultural University,  
Jorhat*

# On Farm Testing (Discipline–Wise Summary)

Discipline	Crop	Trials	Discipline	Crop/enterprise	Trials
Agronomy	Paddy	4	Animal Science	Poultry	5
	Rice-Toria-millet cropping sequence	3		Pig	3
Horticulture	Sweet Potato	4	Community Science	Eri yarn tensile strength	3
	Ridge gourd			Pea	3
	Tomato Low cost ripening technology	4		Eri silk worm feeding yarn	3
Soil Science	Potato	5		Product diversification	3
	Scented Rice	3		Eri moutage for cocoon	5
	Hybrid Rice	3			
Plant Protection	Brinjal	3			
	Banana	3			
<b>Total</b>	<b>No. of OFT=14</b>		<b>No. of trial=57</b>		

## On Farm Trial – Agronomy

<b>Title</b>	Evaluation of Bio-fortified paddy varieties CR Dhan 310 and CR Dhan 311
<b>Problem Diagnosed</b>	Existing paddy varieties in Kokrajhar district are low in protein and Zinc
<b>Thematic area</b>	Varietal evaluation
<b>Technology</b>	T <sub>1</sub> =CR Dhan 310 T <sub>2</sub> = CR Dhan 311 T <sub>3</sub> = Check-Numali
<b>Source of Technology</b>	ICAR-NRRI, Cuttack
<b>No. of Trial (Area)</b>	3 (0.39 ha)
<b>Parameters of assessment</b>	Plant height, No. of panicle/hill, 1000 grain wt , grain Yield/ha, Protein(%) and zinc estimation, Pest & disease incidence, B:C ratio ,Farmers reaction,



## On Farm Trial – Agronomy

<b>Title</b>	Evaluation of production potentiality of millet in rice-toria-millet cropping sequence in Kokrajhar district
<b>Problem Diagnosed</b>	The cropping intensity in Kokrajhar district is low (169%) and inclusion millet is less.
<b>Thematic area</b>	Cropping sequence
<b>Technology</b>	Rice var. Numali, Toria var. TS-67, Foxtail millet var. GSCY-1 Check: Rice (Ranjit sub-1)-Toria (TS-67)
<b>Source of Technology</b>	AAU, 2021
<b>No. of Trial (Area)</b>	3 (0.39 ha)
<b>Parameters of assessment</b>	Growth parameters, Yield, Diseases & Insect pest, Economics, Farmers feedback

# On Farm Trial – Horticulture

<b>Title</b>	Evaluation of Bio-fortified Sweet Potato variety Bhu Sona and Bhu Krishna
<b>Problem Diagnosed</b>	Lack of bio fortified sweet potato variety
<b>Thematic area</b>	Varietal evaluation
<b>Technology</b>	T <sub>1</sub> =Bhu Sona T <sub>2</sub> = Bhu Krishna T <sub>3</sub> = Farmer's Variety
<b>Source of Technology</b>	ICAR-CTCRI, Kerela , 2017
<b>No. of Trial (Area)</b>	4 (0.26 ha)
<b>Parameters of assessment</b>	Vine length, No. of tubers/plant, Av. Fruit weight, Yield/plant, Yield/ha, Pest & disease incidence, B:C ,Farmers reaction,



## Sweet Potato: Bhu Sona

(Pure line variety)

**β-carotene**  
14.0 mg/100g

- High β-carotene (14.0 mg/100 g) content as compared to 2.0-3.0 mg/100 g β-carotene in popular varieties
- Tuber yield: 19.8 t/ha
- Dry matter: 27.0-29.0%
- Starch: 20.0%
- Total sugar: 2.0-2.4%
- Adaptation: Odisha
- Developed by ICAR-Central Tuber Crops Research Institute, Thiruvananthapuram, Kerala



## Sweet Potato: Bhu Krishna

(Pure line variety)

**Anthocyanin**  
90.0 mg/100g

- High anthocyanin (90.0 mg/100g) content in comparison to popular varieties which have negligible anthocyanin content
- Tuber yield: 18.0 t/ha
- Dry matter: 24.0-25.5%
- Starch: 19.5%
- Total sugar: 1.9-2.2%
- Salinity stress tolerant
- Adaptation: Odisha
- Developed by ICAR-Central Tuber Crops Research Institute, Thiruvananthapuram, Kerala

Year of release: 2017

## On Farm Trial – Horticulture

<b>Title</b>	Varietal performance of Ridge gourd variety Arka Vikram and Arka Prasan
<b>Problem Diagnosed</b>	Low yield of locally available variety
<b>Thematic area</b>	Varietal evaluation
<b>Technology</b>	T <sub>1</sub> =Arka Vikram T <sub>2</sub> = Arka Prasan T <sub>3</sub> = Farmer's Variety
<b>Source of Technology</b>	ICAR-IIHR, Bengaluru, 2016
<b>No. of Trial (Area)</b>	4 (0.26 ha)
<b>Parameters of assessment/ refinement</b>	Plant height, No. of fruits/plant, Av. Fruit weight, Yield/plant, Yield/ha, Pest & disease incidence, B:C ,Farmers reaction,



Arka Prasan



Arka Vikram

Early flowering hybrid (42-45 for Arka Prasan and 46 days (Arka Vikram) for first picking), green long tender fruits with excellent cooking quality.

Yield: 26 (Arka Prasan)

30 t/ha (Arka Vikram) in 120-135 days.

# On Farm Trial – Horticulture

<b>Title</b>	Low cost ripening technology of tomato
<b>Thematic area</b>	Regulation of ripening (Post harvest technology)
<b>Technology</b>	<b>Demo:</b> Liquid ethrel @2ml/1cum tent Add Alkali (NaOH @ 0.25g/every 1ml ethrel) Enclosing time: 24 hours <b>Check:</b> Farmer's practice
<b>Source of technology</b>	ICAR-IIHR, 2011
<b>Demo (Area)</b>	4 unit
<b>Parameter for assessment</b>	Uniformity in ripening, keeping quality, Yield/ha, B: C ratio



## On Farm Trial – Soil Science

<b>Title</b>	Effect of furrow application of lime on growth and yield of potato in acid soil	
<b>Thematic area</b>	Nutrient management	
<b>Problem diagnosed</b>	Decrease in productivity due to soil acidity and poor use of soil amendments	
<b>Technology</b>	<b>To<sub>1</sub></b>	Lime @ 2 q/ha (based on soil pH) + 50% RDF
	<b>To<sub>2</sub></b>	RDF (NPK @ 60:100:100 kg/ha)
	<b>To<sub>3</sub></b>	Farmers practices
<b>Source of technology</b>	ICAR NEH Barapani	
<b>No. of trial (area)</b>	5 (0.6 ha)	
<b>Parameter for assessment</b>	<ol style="list-style-type: none"> <li>1. Initial and final soil status,</li> <li>2. Crop yield,</li> <li>3. B:C ratio</li> </ol>	



## On Farm Trial – Soil Science

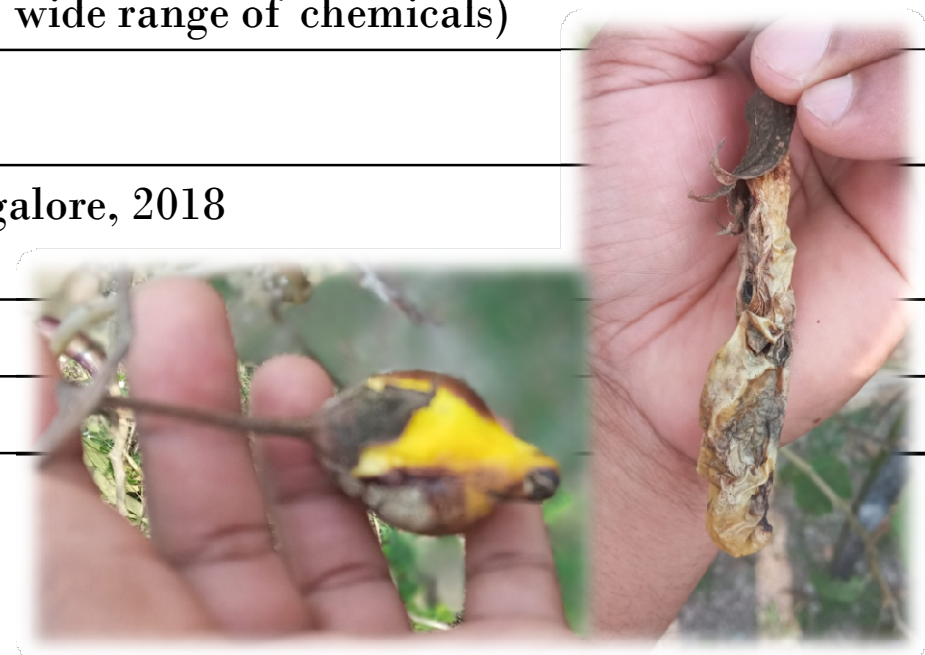
<b>Title</b>	Fertilizer Prescription equations for Targeted Yield of Scented Rice (Kola Joha)	
<b>Thematic area</b>	Nutrient management	
<b>Problem diagnosed</b>	Unaware about judicious fertilizer application	
<b>Technology</b>	<b>To<sub>1</sub></b>	Targeted Yield 40 q/ha IPNS (N, P and K fertilizer based on soil test values + Vermicompost @ 2 t/ha. ). Amount of N, P and K fertilizer will be adjusted after analysis of initial soil and FYM sample
	<b>To<sub>2</sub></b>	Potential Yield 40 q/ha Inorganic (Only N, P and K fertilizer based on soil test values)
	<b>To<sub>3</sub></b>	Farmers practices
<b>Source of technology</b>	AAU, Jorhat	
<b>No. of trial (area)</b>	3 (0.6 ha)	
<b>Parameter for assessment</b>	<ol style="list-style-type: none"> <li>1. Initial and final soil samples treatment-wise</li> <li>2. Grain and straw yield data treatment wise</li> <li>3. Plant samples at harvest</li> <li>4. B: C ratio</li> </ol>	

## On Farm Trial – Soil Science

<b>Title</b>	Combine effect of Zinc & Boron on hybrid rice	
<b>Thematic area</b>	Soil management	
<b>Problem diagnosed</b>	Deficiency of Zn & Boron in soils of some pockets of Kokrajhar district	
<b>Technology</b>	<b>To<sub>1</sub></b>	Zn@7.5 kg/ha +NPK (80:40:40 kg/ha)
	<b>To<sub>2</sub></b>	Zn@ 7.5 kg/ha+ 0.25% B as foliar spray (panicle initiation and milk stage) + NPK (80:40:40 kg/ha)
	<b>To<sub>3</sub></b>	Farmers practices
<b>Source of technology</b>	AAU, Jorhat	
<b>No. of trial (area)</b>	3 (0.6 ha)	
<b>Parameter for assessment</b>	<ol style="list-style-type: none"> <li>1. Initial and final soil samples treatment-wise</li> <li>2. Grain and straw yield data treatment wise</li> <li>3. Plant samples at harvest</li> <li>4. B: C ratio</li> </ol>	

# On Farm Trial – Plant Protection

Title		<b>Bio-intensive management of Brinjal fruit and shoot borer.</b>	
Thematic area		Biological Control	
Problem diagnosed		Use of wide range of chemicals has been the practices which has increased the cost of production and is affecting the environment.	
Technology	T <sub>1</sub>	<ul style="list-style-type: none"> <li>• Pinching of first shoots,</li> <li>• Release of <i>Trichogramma</i> @ 50,000/ha,</li> <li>• Erection of <i>Leucinodes</i> pheromone traps @ 14/ha at a height of 30 cm above crop canopy,</li> <li>• Need based one spray of insecticide (Lamda Cyhalothrin 5% EC)</li> </ul>	
	T <sub>2</sub>	Farmers' practice (Use of wide range of chemicals)	
	T <sub>3</sub>	Control	
Source of technology		IIHR, Hissargatha, Bangalore, 2018	
No. of trial	Area	0.1 ha	
	Trial	3	
Parameter for assessment		<ul style="list-style-type: none"> <li>• No of infected plants</li> <li>• Disease incidence (%)</li> <li>• Yield,</li> <li>• B:C ratio</li> </ul>	



# On Farm Trial – Plant Protection

<b>Title</b>		<b>Efficacy of Trichoderma based bio pesticide for management of fusarium wilt (<i>Fusarium oxysporum</i>) in Banana.</b>
<b>Thematic area</b>		Biological Control
<b>Problem diagnosed</b>		High plant mortality due to soil borne pathogen.
<b>Technology</b>	<b>T<sub>1</sub></b>	T <sub>1</sub> : i) Mix the 30 kg of Biofor- PF with 1 q compost/vermicompost incubate in a heap for 7 days. Apply 200 gm of this mixture at base of the plant before planting, ii) Application of Bifor-PF (3kg/100 lit) at 2,4,6,8 month interval drenching the entire plant,
	<b>T<sub>2</sub></b>	T <sub>2</sub> : Soil drenching with 0.05% Carbendazim (0.5g in 1 litre of water)
	<b>T<sub>3</sub></b>	Farmers' practice (check)
<b>Source of technology</b>		NCIPM 2019
<b>No. of trial</b>	<b>Area</b>	0.39 ha
	<b>Trial</b>	3
<b>Parameter for assessment</b>		<ol style="list-style-type: none"> <li>1. Dates of planting</li> <li>2. Fusarium wilt(%)</li> <li>3. Yield attributes</li> <li>4. Farmers reaction</li> </ol>

# OFT – Animal Science

<b>Title</b>		Varietal evaluation of dual purpose chicken Kamrupa, Gramapriya and Vanaraja in Kokrajhar district
<b>Thematic area</b>		Breed introduction
<b>Problem diagnosed</b>		Low egg and meat production of local poultry
<b>Technology</b>	<b>T<sub>1</sub></b>	Kamrupa
	<b>T<sub>2</sub></b>	Gramapriya
	<b>T<sub>3</sub></b>	Vanaraja
<b>Source of technology</b>		AICRP on poultry breeding, CVSc, AAU, Khanapara & ICAR-Directorate of poultry Research, Hyderabad
<b>No. of trial</b>		6
<b>Parameter for assessment</b>		<ol style="list-style-type: none"> <li>1. Monthly body weight gain</li> <li>2. Mortality</li> <li>3. Disease incidence</li> <li>4. Body weight at first lay</li> <li>5. No of eggs/ month/ year</li> <li>6. B:C</li> </ol>

# OFT – Animal Science

<b>Title</b>		Introduction of Large White Yorkshire (LWY) breed of pig
<b>Thematic area</b>		Breed introduction
<b>Problem diagnosed</b>		Low productivity of the indigenous pigs
<b>Technology</b>	T <sub>1</sub>	T1-Large White Yorkshire T2- HDK-75
	T <sub>0</sub>	Farmers' practice- performance of indigenous pig
<b>Source of technology</b>		NRC-Pig, Rani, Assam
<b>No. of trial</b>		3
<b>Parameter for assessment</b>		<ol style="list-style-type: none"> <li>1. Growth performances</li> <li>2. Age at first heat &amp; conception</li> <li>3. Litter size</li> <li>4. Occurrence of diseases</li> <li>5. B:C</li> </ol>

## On Farm Trial – Community Science

<b>Title</b>	<b>Effect on post harvest treatment of cocoon in tensile strength of Eri yarn</b>
Thematic area	Post harvest technology of yarn/fibre
Problem diagnosed	Poor spinning efficiency leads to wastage of cocoon .
Technology/ Social concept	<p>T<sub>1</sub>-Cooking with Sodium carbonate/ Cooking soda (Alkali)  T<sub>2</sub>- cooking with Plaintain Straw ash extract ( alkali)  T<sub>3</sub>- Cooking with paddy straw ash extract (Alkali)</p> <p>Pre- Treatment- cocoon were soaked in non ionic liquid detergent (slippery substance- easy liquid detergent)(1%) for 12 hours before treatment</p> <p>M:L - 1:20  No. of Cocoon: 400 No.s  Method: Spinning method.  Tool Used: 3 in 1 Solar cum pedal cum electric operated Spinning machine.  Cooking time-30 min Temp- 100 C</p>
Source of Tech.	Department of Sericulture, AAU Jorhat.
No. of trial	3 unit
Parameter	Correct cooking condition, Tensile Strength of eri yarn, Breaking elongation, Tenacity, Spinning Efficiency percentage, raw silk percentage of cocoon

## On Farm Trial – Community Science

<b>Title</b>	<b>Influence on shelf life of fresh pea through different blanching timing on different variety of pea.</b>
Thematic area	Food Preservation
Problem diagnosed	•Lack of proper blanching ,processing and handling of pea.
Technology/ Social concept	<p>T1- Fresh pea blanched for 3 min in open pan and stored .  T2- Fresh pea blanched for 5 min in open pan and stored.  T3- Fresh pea blanched for 8 min in open pan and stored.  T3- Fresh pea without blanching.( control)</p> <p>Temp – 80 degree centigrade.  Stored in Deep freezer.  Variety- Azad Pea-3 and FP</p>
Source of Tech.	Bangladesh Agricultural Research Institute, Gazipur, 2017
No. of trial	3 no.s
Parameter	<ol style="list-style-type: none"> <li>1. Percent pod yellowing during storage.</li> <li>2. Percent pod cracking in storage.</li> <li>3. Percent pod shrivelling during storage.</li> <li>4. Pod rotting during storage.</li> <li>5. Weight loss</li> <li>6. Sensory quality</li> <li>7. Shelf life</li> </ol>



## On Farm Trial – Community Science

<b>Title</b>	<b>Diversified feeding of eri silk worm and its effect on cocoon quality.</b>
<b>Thematic area</b>	Silk worm rearing
<b>Problem diagnosed</b>	Lack of knowledge on standardized feeding pattern effect cocoon quality.
<b>Technology/ Social concept</b>	T <sub>1</sub> - Feeding on Tapioca leaves. T <sub>2</sub> - Feeding on Gamari leaves T <sub>3</sub> - Feeding on Kesseru leaves. T <sub>4</sub> - Feeding on castor ( Control) 3 cycles
<b>Source of Tech.</b>	College of sericulture, AAU, Jorhat.
<b>No. of trial</b>	3 units
<b>Parameter</b>	Effective rate of rearing, 5 <sup>th</sup> instar Larval weight, mean length of larvae, mean length of silk gland, cocoon weight, shell weight, silk ratio, fecundity and hatchability.

Total sericulture village  
In District

- 535
- Eri rearing done is 58%.

% of farmers feed Castor leaves as primary food 100%

% of farmers feed kesseru as secondary food is 37%.

% of farmers feed tapioca and Gamari as tertiary food is 65 and 77 respectively



a) Castor Leaf



b) Kesseru



c) Tapioca



d) Gamari.

## On Farm Trial – Community Science

<b>Title</b>	<b>Fusion of traditional motif and design of <i>Rabha</i> and <i>Bodo</i> community of Assam to produce diversified hand-woven products through CATD</b>
<b>Thematic area</b>	Weaving
<b>Problem diagnosed</b>	Lack of diversified design limit weavers to weave repetitive design.
<b>Technology/ Social concept</b>	<p><b>T<sub>1</sub></b>- Fusion of <i>Bodo</i> and <i>Rabha</i> design through CATD technology.</p> <p>Diversified Handwoven products will be</p> <ul style="list-style-type: none"> <li>• <i>Sadar mekhela</i>.</li> <li>• Cushion covers</li> </ul> <p><b>T<sub>2</sub></b>- Traditional <i>Rabha</i> and <i>Bodo</i> design.</p>
<b>Source of Tech.</b>	TAD, College of Community science, AAU Jorhat.
<b>No. of trial</b>	3 unit
<b>Parameter</b>	<ol style="list-style-type: none"> <li>1. Appropriateness or suitability of motif/ design on particular product(Visual evaluation score test).</li> <li>2. Arrangement of motif and design</li> <li>3. Color combination</li> </ol>



Rabha Design Cushion cover

# On Farm Trial– Community Science

<b>Title</b>	<b>Effect of different mountages used in eri cocoon</b>
<b>Thematic area</b>	Silkworm rearing
<b>Problem diagnosed</b>	<ol style="list-style-type: none"> <li>1. Ununiform size of cocoon</li> <li>2. Low silk percentage due to poor mountage</li> <li>3. More defective cocoon.</li> </ol>
<b>Technology</b>	<p>Treatment of eri silk yarn with natural mordant.</p> <p>T1-Bamboo mountage.  T2- Glossy Paper mountage.  T3- Paper cardboard mountage.  T4- Plastic net Mountage.  T5- Jackfruit leaf mountage.  T6- Dry Banana leaf mountage  T7- Gamari leaf mountage ( Control)</p>
<b>Source of technology</b>	Department of sericulture, AAU, Jorhat.
<b>No of Demo</b>	5 units
<b>Parameter for assessment</b>	<ol style="list-style-type: none"> <li>1. Weight of 50 no.s of cocoon/sq ft of mountage.</li> <li>2. Pupae weight.</li> <li>3. Shell weight.</li> <li>4. Diameter of cocoon.</li> <li>5. Double Cocoon %</li> <li>6. Floss Cocoon %</li> <li>7. Waste cocoon yarn attached in mountage</li> </ol>

## FLD (Discipline–Wise Summary)

Discipline	Crop	No. of demos proposed	Discipline	Crop/enterprise	No. of demos proposed
Agronomy	Rice	5	Animal Science	Poultry	20
	Jute	10		Goat	3
Horticulture	Tomato	10		Fodder	10
	Strawberry	6			
Soil Science	Rice	20	Community Science	Nutrition garden	10
Plant Protection	Tomato	10		Solar tent drier	<b>10</b>
	Potato	5			
	Rice	10			
Fishery Science	Integrated duck fish culture	3		<b>Total</b>	<b>135</b>
	Koi fish	3			

# Front Line Demonstration– Agronomy

<b>Title</b>	Weed management in direct seeded <i>Ahu</i> rice
<b>Thematic area</b>	Weed management
<b>Problem diagnosed</b>	Low production of <i>Ahu</i> rice due to weed infestation
<b>Technology</b>	T <sub>1</sub> : Pre emergence application of Pretilachlor @ 750 g/ha within 5 days of sowing followed by post emergence application of bispyribac-sodium @ 25 g/ha at 25 days after sowing in direct seeded rice. T <sub>2</sub> : Farmer's Practice
<b>Source of technology</b>	AAU, 2021
<b>Demo (Area)</b>	5 (1.33 ha)
<b>Parameter for assessment</b>	Growth parameters, yield, weed population, economics

# Front Line Demonstration– Agronomy

<b>Title</b>	<b>INM in Olitorius jute</b>
<b>Thematic area</b>	INM
<b>Problem diagnosed</b>	Irrational use of fertilizer in Olitorius jute
<b>Technology</b>	T <sub>1</sub> : Application of N, P <sub>2</sub> O <sub>5</sub> and K <sub>2</sub> O @ 75, 25 and 25 kg/ha and FYM @ 5 t/ha along with seed treatment with <i>Azotobacter</i> and PSB each @ 50 g/kg of seed for yield maximization of <i>Olitorius jute</i> . T <sub>2</sub> : Farmer's Practice
<b>Source of technology</b>	AAU, 2021 (RARS, Shillogoni)
<b>Demo (Area)</b>	10 (2.0 ha)
<b>Parameter for assessment</b>	Growth parameters, yield, economics

# Front Line Demonstration– Horticulture

Title	Popularization of Tissue culture strawberry variety Sweet Charlie /Winter Dawn
Thematic area	Varietal performance
Technology	<b>Demo:</b> Tissue culture var. Sweet Charlie / Winter Dawn <b>Check</b> var. runner propagated var. Sweet Charlie /Winter Dawn
Source of technology	POP, AAU, Jorhat
Demo (Area)	6 0.30 ha
Parameter for assessment	yield/ha, B: C ratio



# Front Line Demonstration– Horticulture

<b>Title</b>	Demonstration on High yielding tomato variety Arka Abhed /Arka Samrat
<b>Thematic area</b>	Varietal performance
<b>Technology</b>	<b>Demo:</b> Arka Abhed /Arka Samrat <b>Check:</b> Farmer's Practice
<b>Source of technology</b>	ICAR-IIHR, Bengaluru, 2018
<b>Demo (Area)</b>	10 0.67 ha
<b>Parameter for assessment</b>	Yield/ha, B: C ratio





# Front Line Demonstration– Soil Science

<b>Title</b>	Response of Rice to Zn solubilizing bacteria Zn nutrition (Var.-Ranjit Sub 1)
<b>Thematic area</b>	Nutrient management
<b>Problem diagnosed</b>	Low yield due to Zn deficit in soil and unaware about ZSB
<b>Technology</b>	RD of NPK @ 40:20:20 kg/ha + consortia of ZSB as seedling root dip treatment @ 3.5 kg/ha
<b>Source of technology</b>	AAU, Jorhat
<b>Demo (Area)</b>	5 (2.0 ha)
<b>Parameter for assessment</b>	<ol style="list-style-type: none"> <li>1. Initial and final NPK&amp; Zn status</li> <li>2. Plant height</li> <li>3. Total tillers, effective tillers</li> <li>4. Yield</li> <li>5. B:C</li> </ol>

## Front Line Demonstration– Soil Science

<b>Title</b>	Response of K solubilizing bacteria in reduction of potassic fertilizer in Sali rice (Var.- Ranjit Sub 1)
<b>Thematic area</b>	Nutrient management
<b>Problem diagnosed</b>	Unaware about the use of KSB to reduce the chemical fertilizer
<b>Technology</b>	RD of NPK @ 40:20:10 kg/ha + consortia of KSB as seedling root dip treatment @ 3.5 kg/ha
<b>Source of technology</b>	AAU, Jorhat
<b>Demo (Area)</b>	10(2.0 ha)
<b>Parameter for assessment</b>	<ol style="list-style-type: none"> <li>1. Initial and final NPK status</li> <li>2. Plant height</li> <li>3. Total tillers, effective tillers</li> <li>4. Yield</li> <li>5. B:C</li> </ol>

# Front Line Demonstration – Plant Protection

<b>Title</b>		<b>“Amulya Amrit” for disease and pest management in tomato.</b>
<b>Thematic area</b>		Biological method
<b>Problem diagnosed</b>		Year after year application of chemical pesticides for control of insect pests and diseases has elevated the problems of health of environment, human being and other animals.
<b>Technology</b>	T <sup>1</sup>	•A mixture of cow urine (5 litre), cow milk (0.5 litre), curd (0.5 litre), honey (200 g), Puvhan/Malbhog (ripe) banana (5), coconut paste (1 coconut) and Ghee (50 g) are kept in sealed container. This mixture is kept in shade covered with wet gunny bag for three days. After three days, the gunny bags are removed and the container is opened to release the gas and stirred with stick. After stirring and releasing the gas for another 3-4 days, the fermented solution is filtered through muslin cloth.
	T <sup>2</sup>	Farmers practice (use of ash/wide range of chemical etc)
<b>Source of technology</b>		Farm Innovators 2010, ICAR New Delhi
<b>No. of trial</b>	<b>Area</b>	0.4 ha
	<b>Trial</b>	10
<b>Parameter for assessment</b>		•B:C ratio,

# Front Line Demonstration – Plant Protection

<b>Title</b>		<b>Management of white grub in Potato.</b>
<b>Thematic area</b>		Biological method
<b>Problem diagnosed</b>		Large scale destruction of tubers by white grub is affecting the economics.
<b>Technology</b>	T <sup>1</sup>	• Soil application of Clothianidin 50 WDG @ 80 g a.i./ha against white grub and other soil insects in potato.
	T <sup>2</sup>	Farmers practice (wide range of chemical etc)
<b>Source of technology</b>		AAU, 2015
<b>No. of trial</b>	<b>Area</b>	0.4 ha
	<b>Trial</b>	5
<b>Parameter for assessment</b>		<ul style="list-style-type: none"> <li>•Per cent damage,</li> <li>•Yield and yield attributes,</li> <li>•B:C ratio,</li> <li>•Farmers' reaction</li> </ul>

# Front Line Demonstration – Plant Protection

<b>Title</b>		<b>Management of Stem rot disease in <i>Sali</i> Rice.</b>
<b>Thematic area</b>		Chemical method of pest management
<b>Problem diagnosed</b>		Recurrent appearance of the disease and ineffective of common insecticides.
<b>Technology</b>	T <sup>1</sup>	<ul style="list-style-type: none"> <li>• Spraying of Contaf (Hexaconazole) @ 2 ml/litre at the appearance of disease at 5% disease severity (Lesion with Sclerotia)</li> <li>• 2<sup>nd</sup> and 3<sup>rd</sup> spraying of Contaf at an interval of 10-15 days,</li> </ul>
	T <sup>2</sup>	Farmers practice (wide range of chemical etc)
<b>Source of technology</b>		RARS, Titabor, AAU, 2017
<b>No. of trial</b>	<b>Area</b>	0.4 ha
	<b>Trial</b>	10
<b>Parameter for assessment</b>		<ul style="list-style-type: none"> <li>• No of Infected plants at 10-15 days interval, (3 observations),</li> <li>• Yield record,</li> <li>• B:C ratio,</li> <li>• Farmers' reaction,</li> </ul>

# Front Line Demonstration– Animal Science

<b>Title</b>	<b>Assessment of productive performance of “Kamrupa” bird under backyard system of rearing.</b>	<b>Popularization of BV 380 chicken in semi intensive rearing</b>
<b>Problem diagnosed</b>	Low productivity of the indigenous chicken	Low productivity of the indigenous chicken
<b>Thematic area</b>	Breed introduction	Breed improvement
<b>Technology</b>	Kamrupa chicken as quality chick inputs	BV 380 chicken as quality chick inputs
<b>Source of technology</b>	College of Veterinary Science, AAU, Khanapara, Assam	Venkateshwara Pvt. Ltd., Hyderabad
<b>No of Demo</b>	10	10
<b>Parameter for assessment</b>	<ol style="list-style-type: none"> <li>1. Weight gain at 30 days intervals</li> <li>2. Age at 1<sup>st</sup> lay</li> <li>3. Hens house egg laying</li> <li>4. Occurrence of diseases</li> <li>5. B:C</li> </ol>	<ol style="list-style-type: none"> <li>1. Weight gain at 20 weeks</li> <li>2. Age at 1<sup>st</sup> lay</li> <li>3. Hens house egg laying</li> <li>4. Occurrence of diseases</li> <li>5. B:C</li> </ol>

# Front Line Demonstration– Animal Science

<b>Title</b>	Popularization of oats as fodder
<b>Problem Diagnosed</b>	Low productivity and scarcity of green fodder
<b>Thematic area</b>	Fodder production and quality enhancement
<b>Technology</b>	<ul style="list-style-type: none"> <li>-Cultivation of oats (Variety: JHO-99-2)</li> <li>- Oat: 13 kg/bigha</li> <li>-25-30 cm (Row-row apart) and in furrows at a depth of 4-5 cm</li> <li>-50 % RD of fertilizer + Vermicompost @ 2.5t/ha + FYM @ 2.5 t/ha</li> <li>-N:P:K:: 9:3:3 (kg/bigha)</li> </ul>
<b>Source of technology</b>	AAU
<b>No of Demo</b>	10
<b>Parameter for assessment</b>	<ol style="list-style-type: none"> <li>1. Green fodder yield</li> <li>2. B:C</li> </ol>

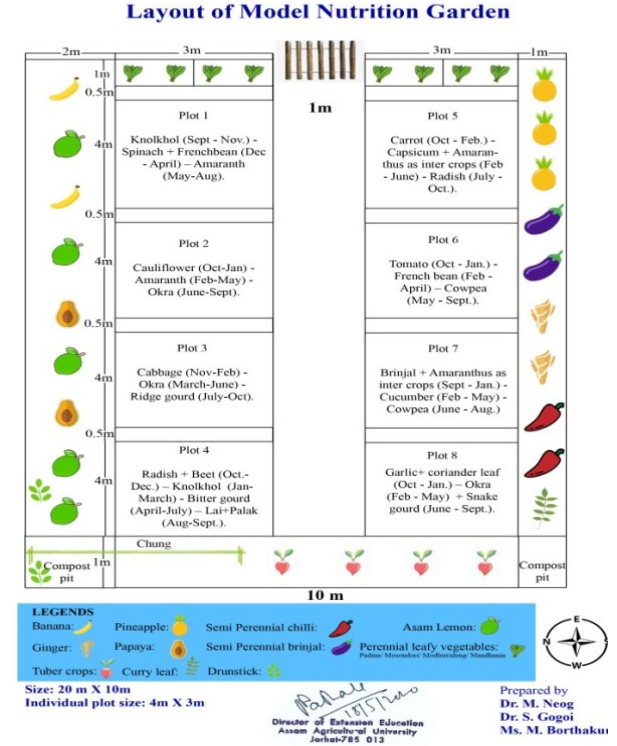
# FLD – Animal Science

<b>Title</b>		Breed upgradation of local goat by introducing Beetal buck through cross breeding
<b>Thematic area</b>		Breed introduction
<b>Problem diagnosed</b>		Low productivity of local goat
<b>Technology</b>	<b>T<sub>1</sub></b>	Cross breeding of beetal buck with local goat
	<b>T<sub>2</sub></b>	Natural mating
<b>Source of technology</b>		GRS, Burnihat
<b>No. of trial</b>		<b>3</b>
<b>Parameter for assessment</b>		<ol style="list-style-type: none"> <li>1. Age at sexual maturity</li> <li>2. Mature B. wt.</li> <li>3. Litter size</li> <li>4. Body weight during birth</li> <li>5. Mortality</li> </ol>



# Front Line Demonstration– Community Science & Horticulture (NARI)

<b>Title</b>	Nutritional Garden- Year round production of fruits and vegetables for nutritional and health security in AWC
<b>Thematic area</b>	Nutrition garden
<b>Problem diagnosed</b>	Improper utilization of kitchen garden area for production of nutritionally rich fruits and vegetables.
<b>Technology</b>	T1- AWC with intervention. ( AAU layout) T 2- AWC without intervention. Specification: 10 students in each AWC of same age group ( 3 years ) and same BMI will be assessed.
<b>Source of technology</b>	AAU Jorhat, Department of Horticulture.
<b>No of Demo</b>	10units
<b>Parameter for assessment</b>	<ol style="list-style-type: none"> <li>1. Per capita availability of nutrient per day before and after intervention (in terms of Protein, iron, Calcium, B-carotene, Vitamin C and folic Acid.)</li> <li>2. Increase in BMI .</li> <li>3. Anganwadi workers reactions.</li> <li>4. Guardian/ parents reactions</li> </ol>



# Front Line Demonstration– Community Science

<b>Title</b>	Low cost Solar tent dryer to dry chilly
<b>Thematic area</b>	Energy saving tool / device
<b>Problem diagnosed</b>	<ul style="list-style-type: none"><li>• Open drying of chilly are susceptible to contamination with foreign materials, insects and fungal infestation which thrives in moist condition</li></ul>
<b>Technology</b>	T1- Low cost solar tent dryer  Farmers Practice: open drying .
<b>Source of technology</b>	CIPHET, Bangalore
<b>No of Demo</b>	10
<b>Parameter for assessment</b>	Utility and drying time required. Farmers reaction B:C ratio

# Front Line Demonstration– Fishery Science

<b>Title</b>	Integrated duck fish culture	Culture of Koi fish in seasonal pond
<b>Thematic area</b>	Integrated Farming System	Diversified Aquaculture practice
<b>Problem diagnosed</b>	High cost of fish feed, Oxygen depletion of fish pond	
<b>Technology</b>	Raising of duck in pond periphery, Negligible to zero feeding to fish.	Culture of Kawoi fish ( <i>Anabus Spp.</i> ) in seasonal ponds, Maintenance of water quality parameter, Feeding with pelleted feed.
<b>Source of technology</b>	POP on Fisheries and Aquaculture in Assam, AAU, Jorhat	POP on Fisheries and Aquaculture in Assam, AAU, Jorhat
<b>Demo (Area)</b>	3 (0.39 ha)	3 (0.09 ha)
<b>Parameter for assessment</b>	<ol style="list-style-type: none"> <li>1. Yield per Ha</li> <li>2. Average weight gain of duck &amp; Egg production.</li> <li>3. BCR</li> </ol>	<ol style="list-style-type: none"> <li>1. Yield per Ha</li> <li>2. Average weight gain of Koi fish</li> <li>3. BCR</li> </ol>

# OTHER PROGRAMME

- ❖ APART-Demonstrations on Sali paddy, Boro paddy, maize, vegetables
- ❖ ARYA- Demonstrations on Sericulture, piggery, mushroom and stevia
- ❖ Biotech Kisan Hub of TERI – Demonstrations on Biofortified sweet potato, Mushroom, Farm biowaste management
- ❖ Biotech Kisan Hub of Bodoland University- Demonstrations on Mushroom
- ❖ CFLD – Demonstrations on pulse and oilseed

# Training Programmes (Farmers)

Discipline	Course (No.)	Farmer Beneficiaries (Nos.)			
		On	Off	Vocational	Total
Agronomy	9	-	200	25	225
Horticulture	7	-	125	50	175
Soil Science	9	-	225	-	225
Plant protection	6	-	150	-	150
Animal science	7	25	150	-	175
Community Science	5	75	50	-	125
Fishery Science	9	9	200	25	225
<b>Total</b>	<b>52</b>	<b>100</b>	<b>1100</b>	<b>100</b>	<b>1300</b>

# Training Programmes (Rural Youth)

Discipline	Course (No.)	Rural Youth Beneficiaries (Nos.)			
		On	Off	Voc.	Total
Agronomy	2	-	50	-	50
Horticulture	4	75	-	20	95
Soil Science	2	-	25	15	40
Plant protection	5	-	75	50	125
Animal science	4	50	25	10	85
Community Science	5	25	50	30	105
Fishery Science	2	-	50	-	50
<b>Total</b>	<b>24</b>	<b>150</b>	<b>275</b>	<b>125</b>	<b>550</b>

# Training Programmes (Extension Personnel)

Discipline	Course (No.)	Extension Functionaries (Nos.)		
		On	Off	Total
Agronomy	1	25	-	25
Horticulture	1	-	20	20
Soil Science	1	-	25	25
Plant protection	2	-	50	50
Animal Science	1	25	-	25
Community Science	2	-	50	50
Fishery Science	1	25	-	25
<b>Total</b>	<b>9</b>	<b>75</b>	<b>145</b>	<b>220</b>

# Extension Activities

Extension Activity	Nos. Proposed	Beneficiaries (No.)			Total
		Farmers	Extn. Personnel	Rural Youth	
Diagnostic visit	110	200	-	100	300
Advisory service	400	250	-	150	400
Training Manual	9	125	25	75	225
Celebration of Important days	6	200	30	70	300
Exhibition	4	250	50	100	400
Exposure visit	8	100	-	50	150
Extension / technical bulletin	16	-	-	-	-
News letter	1	-	-	-	-
News paper coverage	26	-	-	-	-
Research publications	9	-	-	-	-
Success stories	12	-	-	-	-
Farm Science Clubs' Convenors meet	4	150	-	50	200
Farmers' Seminar	4	100	-	100	-
Ex-trainees' meet	2	200	-	50	250
Field day	22	600	40	200	840



# Extension Activities

Extension Activity	Nos. Proposed	Beneficiaries (No.)			Total
		Farmers	Extn. Personnel	Rural Youth	
Film show	4	250	-	150	400
Radio Talk	24	-	-	-	-
TV talk	3	-	-	-	-
Kishan Goshthi	4	200	-	100	300
Group Meeting	15	275	-	100	375
Kishan Mela	3	250	25	100	375
Soil Health Camps	1	75	5	20	100
Awareness camp	10	150	20	50	220
Method demonstration	25	400	-	200	600
Scientists' visit to farmers' field	175	100	-	75	175
Workshop/ Seminar	8	200	-	50	250
Soil Testing	500	500	-	-	500
Water Testing	50	25	-	25	50
Plant Testing	50	25	-	25	50
Manure Testing	50	25	-	25	50
SMS Service	110	1000	-	400	1400
Farmers' Scientist Interaction	15	175	25	75	275

# Mobile Advisory for 2022-23

Message type sent	Crop		Livestock		Weather		Marketing		Awareness		Other Enterprise		Total	
	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary
Text only	90	108630	20	24140	20	24140	5	6035	5	6035	10	12070	150	181050
Voice only	20	24140	5	6035	5	6035	-	-	-	-	10	12070	40	48280
Voice and Text both	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>110</b>	<b>132770</b>	<b>25</b>	<b>30175</b>	<b>25</b>	<b>30175</b>	<b>5</b>	<b>6035</b>	<b>5</b>	<b>6035</b>	<b>20</b>	<b>24140</b>	<b>190</b>	<b>229330</b>

## SEED MATERIALS

Item	Crop	Variety	Proposed quantity
<b>Cereals</b>	Paddy	Ranjit Sub-1	180.0 q
		Gitesh	3.0 q
		Numali	5.0 q
	Buckwheat	Local	12.0 q
	Finger Millet	Local	6.0 q
<b>Oilseed</b>	Sesame	Koliabor Til	1.0 q
	Niger	NG-1	5.0 q
	Toria	TS-67	10.0 q
	Linseed	Sekhar	8.0 q
<b>Oilseed (CFLD)</b>	Rapeseed	TS-67/ TS-36	480.0 q
	Linseed	Sekhar	80.0q
	Sesamum	Koliabor Til	70.0 q
<b>Pulse (CFLD)</b>	Blackgram	PU-31	160.0 q
	Lentil	HUL-57	90.0 q
<b>Spices</b>	Turmeric	Megha Turmeric-1	15 q
<b>Fibre crops</b>	Mesta	HC-583	Seed- 0.50 q
<b>Total</b>			<b>1125.5 q</b>

# PLANTING MATERIALS

Item	Crop	Variety	Proposed quantity (Nos.)
<b>Fruits</b>	Citrus	Assam lemon	2000
	Banana	G Naine	100
	Coconut	Kamrupa	30
<b>Vegetables</b>	Cabbage	-	5000
	Cauliflower	-	5000
	Brinjal	-	5000
	Chili	-	3000
	Broccoli	-	2000
<b>Others -</b>	Gerbera	Red gem	500
	Gladiolus	Many var	200
	Mussenda	-	200
<b>Total</b>			<b>23030</b>

# BIO-PRODUCTS

Item	Product Name	Species	Proposed quantity	
			No.	Kg.
<b>Bio-agents</b>	-	-	-	-
<b>Bio-fertilizers</b>	Azolla	<i>A Nilatica</i>	-	3000
<b>Livestock strains</b>	Pig Goat		12 8	
<b>Others</b>	Vermicompost	-	-	1000
<b>Total</b>			<b>20</b>	<b>4000</b>