

Review of Activities(2023-24)



Presented by
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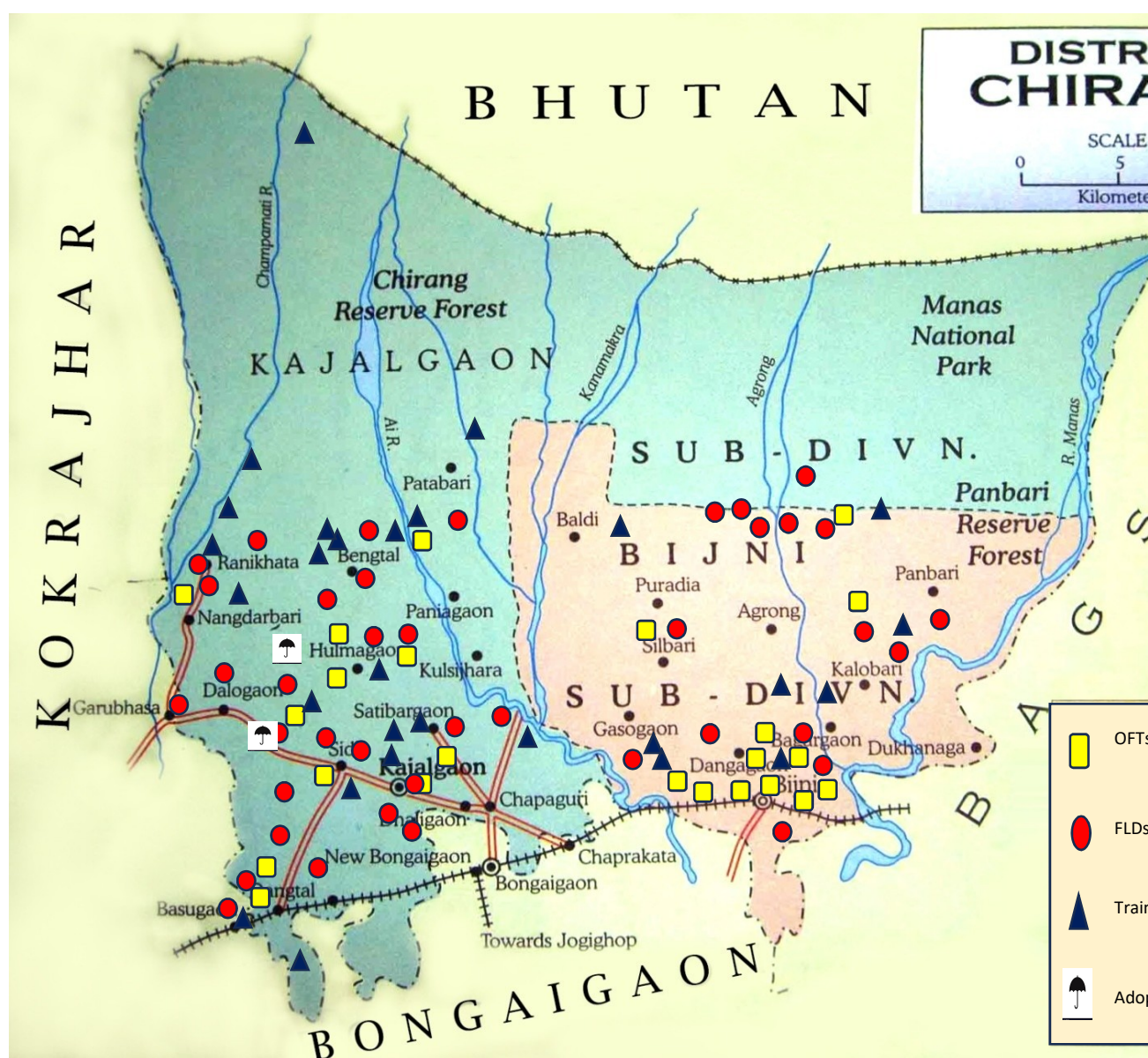
KRISHI VIGYAN KENDRA, CHIRANG
ASSAM AGRICULTURAL UNIVERSITY
KAJALGAON

ETRATION OF KVK ACTIVITIES

ars	Number
sions in the district	2 nos
n the district	2 nos
in the district	508 nos

ars	Number
covered in 2023-24	113
s covered	17577
omen covered	9307
armers covered	11199
ouths covered	4500

CHIRANG : KVK Activities 2023-24



Summary of On Farm Trial

No	Discipline	No of Technology	No of farmers
	Agronomy	3	8
	Horticulture	2	6
	Plant Protection	3	6
	Soil Science	2	6
	Animal Science	2	6
	Total	12	32

On Farm Trial (Discipline: Agronomy)

FT : : Effect of nano DAP formulation on growth and yield of kharif rice

diagnosed : Low yield of rice due to poor and inefficient nutrient management

gy details : Treatments:
T₁: Root dip treatment with nano DAP 0.5% formulation + K₂O @ 40 kg/ ha
T₂: Two spraying of nano DAP 0.5% (5 ml/ lit water) formulation at 25 DAT and 60 DAT + K₂O @
T₃: Farmers' practice (check)

elease : IFFCO and ICAR 2018

t	Plant height (cm)	Effective tiller/hill (no.)	Effective tiller/m ² (no)	Yield (q/ha)	GC (Rs/ha)	GR (Rs)	NR (Rs/ha)
	125	13.2	290	47.6	39000	95200	56200
	119.5	14	307	49.8	39500	99600	60100
	124.5	11.8	263	44.1	38000	88200	50200



Feedback: Farmers found the technology easy to apply and satisfied with the performance

On Farm Trial (Discipline: Agronomy)

FT : : Performance of Pendimethalin in weed management of *Kharif* blackgram

diagnosed : Severe yield reduction due to weed infestation in kharif blackgram

gy details : Treatments:

T₁: Pre-emergence application of Pendimethalin @1 lit/ha one day after sowing

T₂: Pre-emergence application of Butachlor @1 lit/ha one day after sowing

T₃: Farmers' practice-(No herbicide application)

lease : Assam Agricultural University 2015

Plant height (cm)	No of primary branch/plant (no)	No of pod/plant (no)	Weed population (no)	Weed index (%)	Yield (q/ha)	GC (Rs/ ha)	GR (Rs/ha)	NR (Rs/ha)
32.6	5	46	15	10.92	7.0	22000	52500	30500
32.7	5	45	17	11.12	6.6	22000	49500	27500
25.4	3	28	53	29.4	4.8	21000	36000	15000



feedback: Farmers are satisfied with the performance of the chemical herbicides.

On Farm Trial (Discipline: Agronomy)

FT : : Intercropping of blackgram with okra
diagnosed : : Low cropping intensity resulting low income per unit area
gy details : : T₁: Okra + Blackgram (1:1 –Blackgram additive crop in between rows of okra)
 : T₂: Farmers' practice
elease : : TCM Kharif 2023-24

	Plant height	No of fruit/plant	Length of fruit	Yield (q/ha)	GC (Rs./ ha)	GR (Rs./ ha)	NR (Rs./ ha)
	96 cm	8	4-6 cm	56	65000	224000	30500
	88 cm	6	4 cm	41	65000	164000	99000

Plant height	No of primary branch/plant	No of pod/ plant	Yield (q/ha)	GC (Rs./ ha)	GR (Rs./ ha)	NR (Rs./ ha)
9.3 cm	3	22	5.1	18500	38250	19750
7.8 cm	3	29	6.4	22000	48000	26000



feedback: Farmers found the intercropping system profitable over sole cropping

On Farm Trial

(Discipline: Horticulture)

FT	:	Assessment of performance of coloured cauliflower var. Carotena and Valenta in Chirang district
diagnosed	:	Non availability of bio fortified varieties in farmers field
Ag details	:	T1: Carotena, T2: Valenta, Check variety: Girija Sowing time: Sept-Oct, Spacing: 60cm X 60 cm Fertilizer dose: 80:60:60 kg N:P:K/ha Seed source: Syngenta'2020
Release	:	PoP'AAU'2021
	:	0.13 ha
Farmers	:	3

Farmers	Carotena	Valenta	Girija (Check)
Curd formation	52	56	55
1 st harvesting	71	76	75
fruit weight (g)	542.5	534.6	475.0
(ha)	14.1	13.9	12.4
st (Rs./ha)	1,18,000	1,20,000	90,000
turn (Rs./ha)	5,64,000	5,56,000	3,72,000
rn (Rs./ha)	4,46,000	4,36,000	2,89,000
	4.8	4.6	4.1

DOT: 5.11.2023

DOH: 16.1.2024-10

Farmers Feedback

Being early in maturity, farmers are getting a good price from the market. Among the varieties, customers are mostly preferring Carotena. Being a new introduction, it has gained acceptability from buyers for both the varieties, specially the Valenta are yet to reach a large scale.



On Farm Trial
(Discipline: Horticulture)

Object	:	Comparative assessment of early maturing watermelon variety Arka Shyama and Red Chief in farmers' field
Problem diagnosed	:	Farmers face huge loss when rain coincides with harvesting period
Technology details	:	T ₁ : Arka Shyama, T ₂ : Red Chief, T ₃ : NS-34(check) Area: 0.13 ha, Total no of farmers: 3 Fertilizer rate: 60:40:40 kg N:P:K/ha Spacing: 2.0 m x 2.0 m
Year of technology	:	IIHR,2020

Parameters	Arka Shyama	Red Chief	NS 34 (Check)
1 st harvesting	76	85	88
Average fruit weight (kg)	2.8	3.0	2.7
Fruits per plant	4-5	5-6	5-6
Yield (kg/ha)	22.4	30.0	27.0
Cost (Rs./ha)	1,10,000	135,000	1,30,000
Net return (Rs./ha)	3,38,000	4,65,000	4,10,000
Gross return (Rs./ha)	4,48,000	6,00,000	5,40,000
Score	4.1	4.4	4.2

DOS: 12.1.2024

DOT: 28.3.2024-1

Farmers Feedback

Arka Shyama, being early in maturity, is less costly as compared to other varieties like Red Chief, farmers can fetch a good price from the market. Moreover, the seeds can also be stored for next season. Therefore, the variety has good potential in farmers field



On Farm Trial (Discipline: Plant Protection)

Assessment of IDM module against YMV disease in black gram

Diagnosed: Severe crop loss due to YMV infestation in black gram

treatment with thiamethoxam 2S WG @ 5 kg/kg seed
on of yellow sticky trap (YST) @ 50nos./ha
g of yellow Acetamiprid @0.03 % twice at 30 days after sowing at 15 days interval
(Spraying of Diemethoate) 30% EC @2ml/lit) (Var: Local)

	DI(%)	White fly population (no)	Plant Height (cm)	No. of Pods/ Plant	Pod length (cm)	No of seed/pod	Yield (q/ha)
	43.23	9	35.12	28	5.79	7	4.69
	13.44	3	27.13	46	4.12	7	7.89

Gross cost	Gross Return	Net Return	B:C Ratio
25000	35175	10175	1.41
22000	59175	37175	2.69

Feedback: Farmers need HYV of Blackgram having YMV

Source of techno & year of release: C
2019-20

Variety: SBC40

Area:0.39



Treated plot



On Farm Trial

(Discipline: Plant Protection)

Management of bacterial wilt in potato

Diagnosed: High plant mortality due to bacterial wilt

Source of techno & year of release:

ICAR, New Delhi 2014

Variety: **Kufri Jyoti**

Area: 0

Removal and destruction of infected plant debris including tubers from field

Soaking of seed tubers of seed tubers in 0.02 % of streptocycline for 30 min

Application of bleaching powder at 12-15 kg/ha in furrow during sowing

1



Bacterial wilt(%)	Tuber Size(gm)	Yield (q/ha)	Gross cost (Rs/ha)	Gross return (Rs/ha)	Net return (Rs/ha)	B:C ratio
0.00	13.58	75.0	150000	90000	60000	1.66
38.12	7.77	58.0	116000	85000	31000	1.36



Farmers' feedback: Farmers are satisfied with the technology which decreases the wilt disease and increases the production and productivity

On Farm Trial

(Discipline: Plant Protection)

Title: Management of Fall Army Worm(*Spodoptera frugiperda*) and stem borer (*Chilo partellus*) in maize

Diagnosed: High plant mortality due to Fall Army Worm and Stem Borer in Maize

T₁: IPM module comprising of
g 2times at 15 days interval starting after 15 days of germination
ation of emamectin benzoate 3% WG + thiamethoxam 12%WG @ 0.1 %
y application of chlorantraniliprole 18.5 % SC @0.025 % at 7 days interval
ol

	Vegetative stage (30 - 60 DAS)	Tasseling-silking stage (60-70 DAS)	Reproductive stage (75-105 DAS)	Yield (q/ha)
	Infestation(%)			
	21	13	8	64
	35	32	23	43

	Gross cost (Rs/ha)	Gross Return (Rs/ha)	Net Return (Rs/ha)	B:C Ratio
	36000	96000	60000	2.7
	32000	63750	31750	2.0

' feedback: Farmers are satisfied with the
gy which decreases the FAW infestation

Source of techno & year of m
Dept of Entomology,2022
Variety:DKC 9165
Area: 0.39 ha



On Farm Trial (Discipline: Soil Science)

Application of sulphur and boron in toria

Variety: TS

Diagnosed: Soil is deficient in secondary and micronutrients.

Area : 0.6 ha; **Trial** : 3 **Source** : AAU 2021

T₁: Application of Boron as basal @1.5 kg/ha and S @ 20 kg/ha in addition to recommended dose of NPK.
Application of recommended dose of fertilizer in toria.
Farmers' practice.

	Plant Height	Siliqua/Plant	Seed/ Siliqua	Yield (Q/ha)	Gross cost (Rs./ ha)	Gross return (Rs./ ha)	Net return (Rs./ ha)
	85 cm	67	17	9.5	25500	57000	31500
	83 cm	65	16	9.2	25000	55200	30200
	82 cm	55	14	8.5	24500	51000	26500



Soil Fertility Status					
	pH	OC %	N (kg/ha)	P (kg/ha)	K (kg/ha)
Initial	5.4	0.74	332	20.50	145
T1	5.9	0.85	377	29.55	162
T2	5.8	0.79	375	27.45	159
T3	5.8	0.76	342	25.44	148

Feedback: Farmers are satisfied as boron & sulphur leads to good crop growth

On Farm Trial (Discipline: Soil Science)

Low application of lime in potato for improving productivity on acid soils

Diagnosed: Reduction in yield due to soil acidity.

Low application of lime @2-4 q/ha along with recommended dose of NPK fertilizer
Application of 25% of lime requirement along with RDF
without lime application

Yield (q/ha)	Gross cost (Rs/ha)	Gross return (Rs/ha)	Net return (Rs/ha)	B:C ratio
98	107250	254800	147550	2.37
95	122350	247000	124650	2.01
85	103000	221000	118000	2.14



Variety : Kufri Jyoti; Area : 0.6 ha
Trial: 3 Source : ICAR RC NEH

Soil Fertility Status

	pH	OC %	N (kg/ha)	P (kg/ha)
Initial	5.3	0.64	285	21.22
T1	6.0	0.82	379	29.80
T2	6.1	0.85	360	31.44
T3	5.4	0.76	303	24.60

Feedback: Farmers are satisfied as lime application increases the yield of Potato.

On Farm Trial (Discipline: Animal Science)

Assessing technology for enhancing the milk fat and SNF by supplementing sodium bicarbonate and yeast in crossbred dairy animals

Problem diagnosed: Low profitability of dairy farming due to lower milk yield, fat and SNF content

Source of techno & year of release: TA 2021

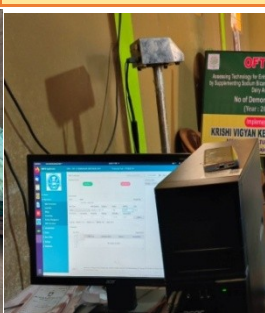
Intervention: Supplementation of **Sodium bicarbonate @ 50g/day/animal** (Sodium bicarbonate is supplemented @ 50 g/day/animal in addition to regular feeding. Milk yield, fat and SNF content are recorded.)

Intervention: Supplementation of **Yeast bolus @ 2 bolus/day/animal**

Intervention: Supplementation of **Sodium bicarbonate and yeast bolus** (Sodium bicarbonate @ 50g/day/animal and yeast bolus 2 nos/day are supplemented in addition to regular feeding. Milk yield, fat and SNF content are recorded.)

Baseline practice: (regular feeding of roughages and concentrate feed)

(3 animals/)	Milk Yield/animal/day (lt)	Fat %	SNF %	Gross cost (Rs./ treatment)	Gross Return (Rs./ treatment)	Net Return (Rs./ treatment)
	6.20	3.8	8.31	3500.00	8800.00	5300.00
	6.33	4.21	8.37	3880.00	10050.00	6170.00
	6.70	4.6	8.54	4300.00	11658.00	7358.00
	5.75	3.6	8.29	3200.00	6210.00	3010.00



Feedback: Farmers are satisfied the technology as there is significant rise in milk fat percentage getting more price value of milk.

On Farm Trial

(Discipline: Animal Science)

Assessment of performance of **Aseel cross** and **Srinidhi chicken** under intensive system of rearing

Diagnosed: Low egg production and low hatchability of existing variety.

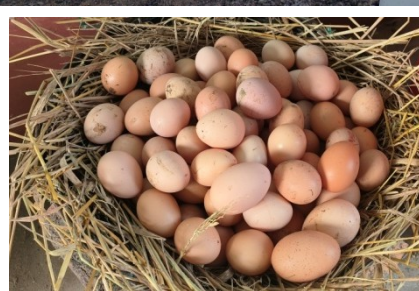
Presence of Aseel cross
Presence of Srinidhi Birds
Practice- (Kamrupa chicken)



Srinidhi Chicken



Aseel Cross Chicken



Srinidhi Eggs

Farmers' feedback: Farmers were well satisfied with the performances of Srinidhi in terms of production and productivity

Source of techno & year of release:

Aseel cross: ICAR-CARI, Izatnagar, 2014
ICAR- DPR Hyderabad, 2015

Parameters	Aseel cross	Srinidhi
Avg. body weight at 0 day	35 g	38g
Avg. body weight at 1 st month	190 g	240g
Avg. body weight at 2 nd month	340 g	512g
Avg body weight at 3 rd month	550 g	980g
Avg. body weight at 4 th month	850 g	1.70g
Avg. body weight at 5 th month	1.38 kg	2.25 kg
Age at 1 st lay of egg	168 days	155 days
Av. Egg production up to 4 month of laying per hen	60 eggs	82 eggs
B:C ratio for egg production	2.56	2.81

Summary of Front Line Demonstration

	Discipline	No of Technology	No of farmers
	Agronomy	3	21
	Horticulture	5	26
	Plant Protection	3	35
	Soil Science	2	15
	Animal Science	5	35
	Total	18	132

Front Line Demonstration (Discipline: Agronomy)

LD : Certified seed production of rice variety Numoli through participatory mode

Ag details : Seed production of variety Numoli grown with recommended dose of fertilizer
(@ N:P₂O₅: K₂O:: 60:20:40 kg/ha)

	Area (ha)	Plant height (cm)	No of effective tiller/hill (no)	No of effective tiller/ m ² (No)	Yield (q/ha)	GC (Rs/ha)	GR (Rs/ha)	NR (Rs/ha)	B-
	2	136	11	254	44.3	39000	88600	49600	2.2
		134	7	216	27.4	38000	54800	16800	1.4



al spread of the technology: The seed production technology of the medium duration paddy variety Numoli has been
farmers covering four villages.

Front Line Demonstration

(Discipline: Agronomy)

D : Demonstration of newly released rice variety Surma Dhan in Chirang district

details : Variety Surma Dhan grown with recommended dose of fertilizer
 (@ N:P₂O₅: K₂O:: 60:20:40 kg/ha)

	Area (ha)	Plant height (cm)	No of effective tiller/ hill	No of effective tiller/ m ²	Yield (q/ha)	GC	GR	NR
han	0.5	132.5	16.3	349	51.8	39000	102400	63400
b 1		126.6	15.2	330	48.7	39000	97400	58400



spread of the technology: The variety Surma Dhan is a newly released one. So far five numbers of farmers from three district have grown the variety during last two years.

Front Line Demonstration

(Discipline: Agronomy)

LD : Certified seed production of rapeseed variety TS-38
y details : Variety TS-38 grown with recommended dose of fertilizer
 (@ N:P₂O₅: K₂O:: 40:35:15 kg/ha)

	Area (ha)	Plant height (cm)	No of siliqua / plant (no)	No of seed/ siliqua (no)	Yield (q/ha)	GC (Rs/ha)	GR (Rs/ha)	NR (Rs/ha)
mo)	2.0	84.2	55	17	8.9	20000	50285	30285
eck)		81.5	38	16	5.3	18000	29945	11945



spread of the technology: The seed production technology of the rapeseed variety TS-38 has been taken up by around covering seven villages.

Front Line Demonstration

(Discipline: Horticulture)

FLD	:	Popularization of disease resistant tomato variety Arka Abhed in Chiranga district
Technology details	:	Crop: Tomato, Variety: Multiple disease resistant variety Arka Abhed Source of technology: IIHR, Bangalore, 2019 Seed rate: 250g/ha Spacing: 60 cm x 60 cm, Fertilizer rate: 75:60:60 kg N:P:K/ha Area: 0.26 ha
Demonstrations proposed	:	4
Farmers	:	4

Parameters	Arka Abhed	Trishul (Check)
Plant height (cm)	88.67	80.33
Fruits per plant (no)	118	92.0
Average fruit weight (g)	72.4	55.8
Yield (kg/ha)	72.7	66.3
Cost (Rs./ha)	1,22,000	1,28,000
Net return (Rs./ha)	7,27,000	6,63,000
Gross return (Rs./ha)	6,05,000	5,35,000
Benefit:Cost ratio	6.0	5.2

DOT: 15.10.2023

DOH: 20.1.2024 -26.2.2024

Horizontal spread of technology:

From market point of view, farmers found Arka Abhed more profitable for high yield and less incidence of diseases as compared to other tomato varieties that were grown earlier. The variety has a vast scope for horizontal spread covering more nos of farmers. But the seed is not available in market. A large no of farmers are interested to go for more coverage of area if seed is made available.

Photographs of the FLD programme



Front Line Demonstration

(Discipline: Horticulture)

FLD	:	Demonstration on Integration of Blackpepper in Arecanut orchard at farmers level
Technology details	:	Crop: Blackpepper Variety: Panniyur-1 Source of technology: PoP, AAU, 2021 Area: 1 ha Spacing: 2.75 mx 2.75 m
Demonstrations proposed	:	8
Adopted by farmers	:	8
Start date with photographs	:	DOP: 10.5.2023. The programme is ongoing
Percentage spread of technology	:	12.6%



Front Line Demonstration

(Discipline: Horticulture)

FLD	:	Demonstration on Assam Lemon for bari development at farm field
Technology details	:	Crop: Assam Lemon Source of technology: PoP, AAU, 2021 Date of planting : 28.8.2023 Spacing: 3 m x 3 m Area:1 ha
Demonstrations proposed	:	7
Farmer	:	7
with photographs	:	The programme is ongoing
Initial spread of technology	:	20.5%



Front Line Demonstration (Discipline: Horticulture)

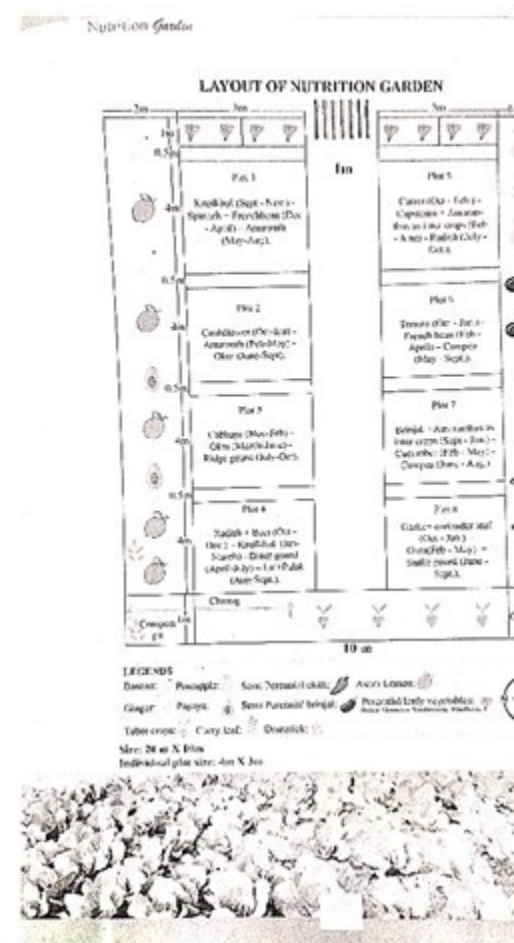
FLD	:	Multistoried cropping in Areaca nut at Farmers' field
Technology details	:	Base Crop : Areaca nut Variety : Local selection Other crops : Assam Lemon, Banana Total area : 0.26 ha Spacing : 2.75m x 2.75m (Base crop)
demonstrations proposed	:	2
farmers	:	2
with photographs	:	The programme is ongoing
ental spread of technology	:	12.3%



Front Line Demonstration

(Discipline: Horticulture)

FLD	:	Establishment of Nutrition Garden in School
Technology details	:	Crop: Seasonal: Cabbage, Cauliflower, Broccoli, Knolkhol, Frenchbean, Tomato, Brinjal, Chilli, Lai, Palak, Amaranthus, Coriander Annual : Papaya, turmeric, ginger Perennial: curry leaf, Assam lemon Area : 200 sq.m No of plots : 12 Plot size : 3m x 2 m Total unit : 5 units (200 sqm each)
Number of demonstrations proposed	:	5
Number of schools	:	5
Support material with photographs	:	Please see in the next slide
Percentage spread of technology	:	5% schools of Chirang district have adopted demonstration on nutrition garden in their school premises



Performance parameters	Results	
	Demo	Local (unorganized)
Yield of vegetable	2.2 q/200 m ²	1.4 q/bari
Gain on Scientific practices	Yes	No definite practices followed
Cost/unit	1142.00	-
Turn/unit	2800.00	-
Profit/unit	1659.00	-
ROI	2.5	-

Front Line Demonstration

(Discipline: Plant Protection)

Protection of Eriworm against insect through mosquito net for better quality and higher production of Eri worm

Technology details: Net size: 6.5ft X 3.0 ft, height: 5 ft , Rearing: 2000 Eri worm/net/year

Treatment	No of unit	Larval duration(days)		Insect infestation (%)		Cocoon yield %	
		Demo	Check	Demo	Check	Demo	Check
Control	20	23	32	5	18	89.12	60.12
Treatment	Gross cost (Rs/ha)		Gross Return (Rs/ha)		Net Return (Rs/ha)		B:C Ratio
Control	35000		1,87,000		152000		5.34
Treated	32000		1,63,000		131000		5.09

Horizontal spread of technology:
No of village covered : 33
No of farmers:170



Front Line Demonstration

(Discipline: Plant Protection)

Scientific bee keeping for increasing productivity of toria

Technology details: Rearing of Indian honey bee hive (ISI A type) @ 5 Nos./ha crop land or 1 bigha/bigha land area .
Species: *Apis cerena*

Op / Enterprise	No of unit	Avg. yield	B:C Ratio (Demos)
Honey bee	10	Average honey production 18 kg/Bee hive per year (@500 per kg honey)	3.00 Net return 6000/-

Horizontal spread of technology
No of village covered: 10
No of farmers :20



Front Line Demonstration

(Discipline: Plant Protection)

Scientific cultivation of oyster mushroom for self Employment

Key details: Cultivation of Oyster Mushroom for economic upliftment and nutritional
benefit of rural community

Sep-March

Var: *Pleauratus ostreatus*

Horizontal spread of tech
No of village covered: 10
No of farmers :150

	Average cost of cultivation	Rate (Rs/Kg)	Avg. Gross Return (Rs/Bed)	Avg. Net Return (Rs/Bed)	B:C Ratio
	Rs.50/-	150.00	345.00	295.00	6.9
	Weight of Mushroom in 1 st picking/bed				950 gm
	Weight of Mushroom in 2 nd picking/bed				650 gm
	Weight of Mushroom in 3 rd picking/bed				450 gm
	Weight of Mushroom in 4 th picking/bed				250 gm
	No of Picking				4 times
	Avg. Yield per Mushroom bed (Kg)				2.3



Front Line Demonstration (Discipline: Soil Science)

Response of rice to zinc solubilizing bacteria for zinc nutrition

: RDF (60:20:40 kg/ha) + Zn solubilizing bacteria @ 3.5

Variety : Ranjit Sub-1
Demo : 5
Area : 2 ha
Source : AAU, 2019

Plant Height (cm)	Tiller /hill (nos)	Effective Tiller /hill (nos)	Grains per panicle (nos)	Yield (q/ha)	Gross cost (Rs/ha)	Gross return (Rs/ha)	Net return (Rs/ha)
120	17	15	201	47	44500	94000	49500
119	16	14	199	45.5	44200	91000	46800



Soil Fertility Status					
	pH	OC (%)	N (kg/ha)	P (kg/ha)	K (kg/ha)
Initial	5.12	0.75	301	21.25	137
Demo	5.7	0.87	387	29.55	169
Check	5.08	0.75	344	26.34	143

Horizontal spread: ZSB is not available in market hence horizontal spread is less.

Front Line Demonstration (Discipline: Soil Science)

Production of vermicompost in low cost vermicompost unit

Units	Yield (q/unit)	Gross Cost (q/unit)	Gross Return (q/unit)	Net return (Rs/unit)
	9.5	3000.00	9500.00	6500.00



of farmers engaged in Vermicomost production in Chirang district



Front Line Demonstration

(Discipline: Animal Science)

Backyard rearing of Rainbow Rooster as dual-purpose chicken

Area: Breed introduction

Diagnosed: Low productivity of indigenous poultry under free range system.

Demonstration : 10

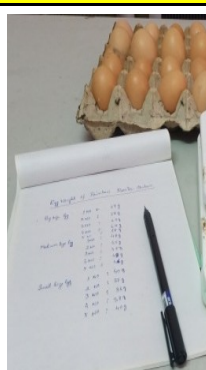
Selection: Rainbow Rooster Chicken
BRO research breeding farms Pvt. Ltd. (2005)

Details: Technology selected was Rainbow Rooster as dual purpose chicken reared under backyard system of management. Data on growth and productive performance of Rainbow Rooster is the expected outcome of the technological outcome



Spread of technology:
Covered : 14
nos: 35

Parameters	Rainbow Rooster
Avg. body weight at 0 day	28.5 g
Avg. body weight at 1 st month of age	356.5 g
Avg. body weight at 4 th month of age	1.70 kg
Avg. body weight at 6 th month of age	2.8 kg
Age at first lay	158 days
Avg egg weight at one month of lay	50.4 g
Mortality rate during artificial brooding	5%
Av. Egg production at 4 month of laying per hen	77 nos
C:B ratio	2.78



Front Line Demonstration

(Discipline: Animal Science)

ring of Assam Hill goat for livelihood security

area: Breed conservation

diagnosed: Dilution of breed characteristics of Assam Hill
to indiscriminate crossbreeding practice with improved goat

onstration : 3 (1 male + 2 female per demo)

gy selection: Assam Hill Goat

Goat Research Station, Barnihat, C.V.Sc Khanapara



Growth Parameters:

Parameters	Value
Avg. body weight at birth	1.57k
Avg. body weight at 3 month	4.58k
Avg. body weight at 6 month	7.66k
Avg. body weight at 9 month	11.01

Economic Parameters:

Parameters	Value
Avg. Age at puberty	27
Avg. age at sexual maturity	29
Length of estrous cycle	21
Avg. age at 1 st kidding	45
Gestation Length	14

Horizontal spread of technology:

No of village covered : 14

No of farmers: 60

Front Line Demonstration

(Discipline: Animal Science)

White Pekin duck rearing for income generation

Intervention: 10 (20 nos ducklings each)

Technology: Evaluation of the growth performance of meat type ducks reared in confinement system for 56 days (8 weeks) under controlled feeding and ration.

Practice: Rearing of low producing desi duck (Pati)



Horizontal spread of technology:

No of village covered : 14

No of farmers : 60

Growth Parameters:

Parameters	Value
Avg. body weight at 0 day	52.5g
Avg. body weight at 1 week	160.2
Avg. body weight at 2 nd week	360 g
Avg. body weight at 4 th week	1.01k
Avg. body weight at 6 th week	2.01
Avg. body weight at 8 th week	2.57

Economic Parameters:

Parameters	Value
Body weight gain at 60 days	2.8
Total feed intake	11
Feed conversion ratio	4.2
Survivability	10
Dressing percentage (Skin intact with the carcass)	70
B:C ratio for meat production	2.9

Front Line Demonstration (Discipline: Animal Science)

Rearing of Guinea Fowl under field condition for meat

Demonstration: 7 (20 nos birds each)

Technology: Evaluation of the growth performance of meat type guinea fowl (CARI, Izatnagar) reared in partial confinement system as an alternative of poultry.



Alternative poultry farming, guinea fowl can be promoted widely as a new source to provide employment opportunities to tribal and improve the socio-economic status of economically weaker section tribal farmers of this region.

Growth & Productive Parameters:

Parameters	Rainbow Rooster
Avg. body weight at 0 day	24.5g
Avg. body weight at 1 week of age	57.5g
Avg. body weight at 5 th week	240g
Avg. body weight at 10 th week	600g
Avg. body weight at 15 th week	850g
Avg. body weight at 20 th week	1250g
Age at first lay egg	160days
Av. Egg production at 4 month of laying per hen	57nos
Feed conversion ration at 15 th week of age	3.9
Mortality rate	5% brood
Sell price per pair of bird at 20 th weeks of age	Rs. 24
C:B ratio for meat purpose per bird	2.66
Horizontal spread of technology:	
No of village covered	: 3
No of farmers	: 10

Front Line Demonstration (Discipline: Animal Science)

**aring of Srinidhi as dual purpose chicken under intensive system of
ment.**

chno & year of release: Srinidhi: ICAR- DPR Hyderabad, 2015

Technology: Evaluation of the growth performance of dual type Srinidhi
ared intensive system of management under controlled feeding with Layer



Growth & Productive Parameters

Parameters	Srinidhi
Avg. body weight at 0 day	40g
Avg. body weight at 1 st month	320g
Avg. body weight at 2 nd month	610g
Avg. body weight at 3 rd month	1050g
Avg. body weight at 4 th month	1.8kg
Avg. body weight at 5 th month	2.6kg
Age at 1 st lay of egg	15 weeks
Avg. weight of egg at 4 month of laying	62g
Av. Egg production up to 4 month of laying per hen	97 eggs
B:C ratio for egg production	2.8

CFLD on Kharif Oilseeds

Name of crop	Area (ha)	Location	No. of farmers	Average (q/ha)
Sesamum (var. ST-1684)	24	Pubkhaarpara Bishnupur, Dadgiri Subaijhar, Shantipur, Tengnamari	75	6.4



Gross Cost (Rs/ha)	Gross Return (Rs./ha.)	Net Return (Rs./ha.)	B:C Ratio
19500.00	64000.00	44500.00	3.2

CFLD- Pulse (Rabi)

Technology demonstrated: Integrated crop management of Lentil in Rice-lentil sequence

Variety	Area (ha)	Plant height (cm)	Primary branch/plant	No of pod/plant	Yield (q/ha)	GC	GR	NR	BCR	Re
PL-9	20	24	4	48	8.9	22500	62300	39800	2.7	



CLUSTER FRONTLINE DEMONSTRATION ON OILSEED(RABI)

Kind of crop	Area (ha)	Location	No. of farmers	Average Yield
Toria r. TS 38	60	Bijni and Sidli Block	140	8.75



Gross Cost (Rs/ha)	Gross Return(Rs./ha.)	Net Return (Rs./ha.)	B:C Ratio
24500	43750	19250	1.79

Mega Project on Rapeseed and Mustard

(Discipline: AGRONOMY)

Crop Demonstration : Mega project on rapeseed-Mustard value chain development through promotion of scientific farming in Assam

Crops: TS-38 (Rapeseed) & PM-28 (Mustard)

Area under rapeseed: 23 ha

Area under Mustard: 22.6 ha

Number of Cluster: 3

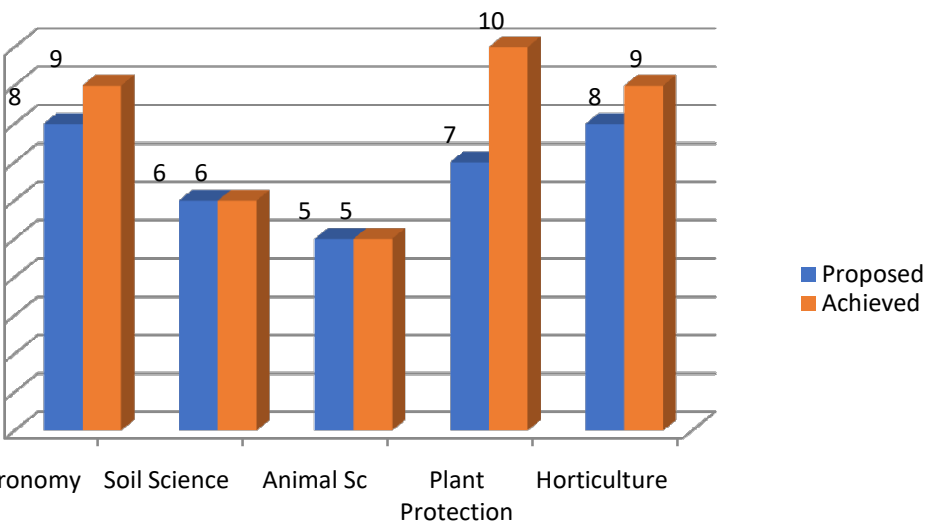
Number of farmers: 88



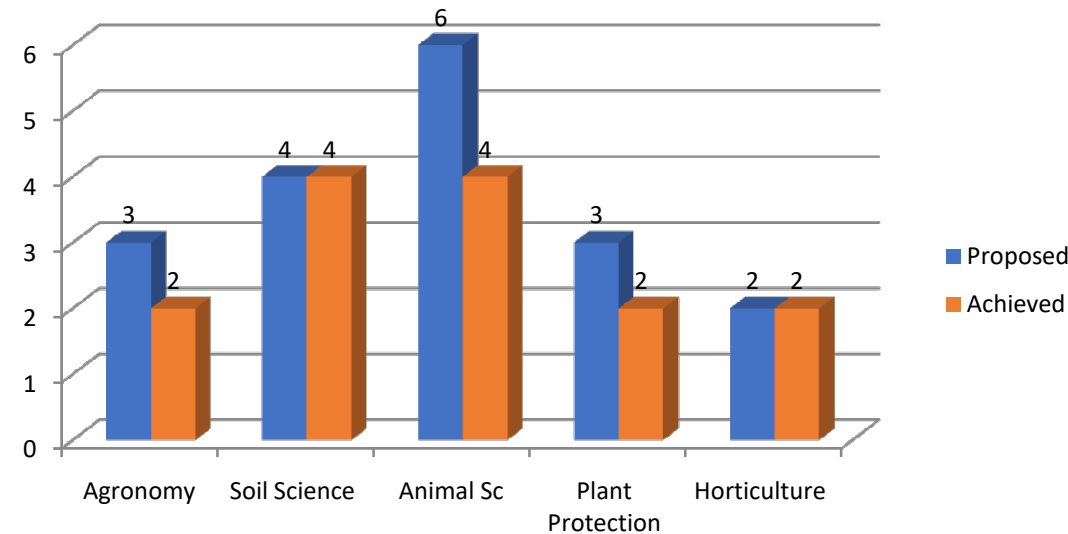
Area (ha)	Plant height (cm)	No of siliqua / plant	No of seed/ siliqua	Yield (q/ha)	GC (Rs/ha)	GR (Rs/ha)	NR (Rs/ha)	B-C Ratio
23	83.2	56	17	9.2	20000	51980	31980	2.6
22.6	134	61	18	9.6	21000	62400	41400	2.9



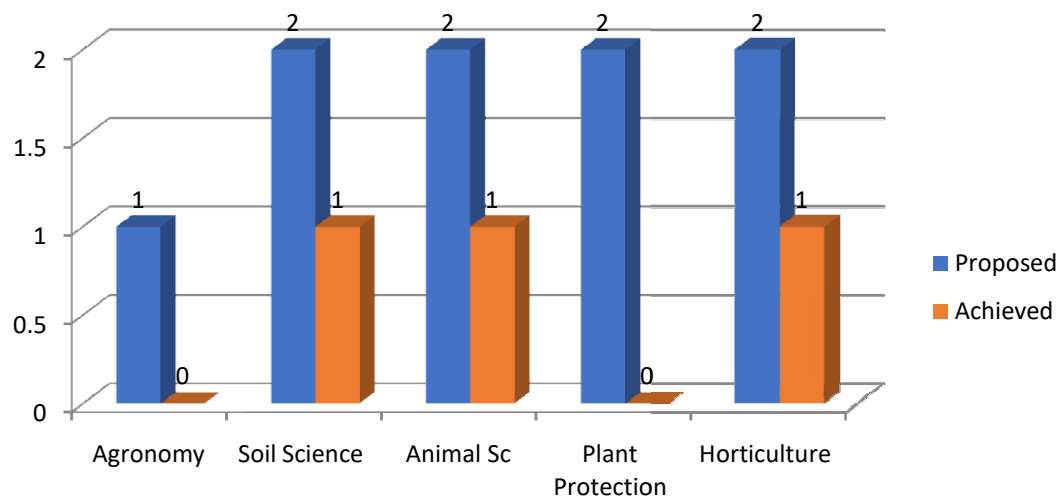
Training for farmers & farm women



Training for rural youth



Training for extension functionaries



Training Programmes

Photographs of Training Programmes



b) Vocational/ Skill training programmes/Certificate course:

Discipline	Target group					
	Farmers/ farm women		RY		EF	
	Nos. Proposed	Nos. achieved	Nos. Proposed	Nos. achieved	Nos. Proposed	Nos. achieved
Plant Protection	-	-	1	1	-	-
Horticulture	1	1	-	-	-	-
Animal Science	-	-	1	1	-	-
Total	-	-	3	3	-	-

Photographs of Vocational Training Programmes



Vocational training on entrepreneurship development of women through processed food products making from locally available fruits and vegetables



Vocational training on entrepreneurship development of women through year round cultivation of mushroom value addition of mushroom at farmers level



Vocational training on entrepreneurship development through goat farming

Percentage of trainees who started their own enterprise:

No.	Discipline	No. of trainees	Nos. converted to Entrepreneurs
	Horticulture	25	1
	Plant Protection	25	1
	Animal Science	25	7
Total		75	9

Eri Rearing: A profitable Enterprise for women Empowerment



During 2019 she learnt about KVK Chirang from her neighbor woman who was the successful grower of mushroom cultivation and accordingly visited KVK office. When she interacted with KVK scientist, as per her interest on sericulture, scientist told the story about “The art of eri rearing, spinning, weaving is introduced by Bodo people in india . She was pleased and thought that she had stepped in the right place which will help her with low land. In due course of time she attended a number of training programmes on sericulture conducted by KVK. Then She started eri rearing activity by traditional way with 100 gm of eri seed

Subila Basumatary
Trechpo Basumatary
Kungkarajhora,
Chirang
No: 8011742420
r no: 873997590142
783393

➤ Since sericulture activities were not new to her therefore she started his eri rearing activity with 100 gm of Eri eggs. And later on other technical support was extended by KVK and department of sericulture.

➤ Availability of eri food plant leads to year round cocoon production and hence castor, kesseru and tapioca plantation encouraged in farmer's field by providing training on cultivation practices and providing of eri egg and mosquito net for proper scientific rearing under OFT and FLD programme

➤ Total income from Eri rearing Rs. 151000/-per yr and Net income Rs. 121000/-.

➤ Reduction of cost : Rs.45,000/- (Purchasing of food plant and eri egg is reduced)

Eri seed production, establishment of eri spinning and weaving centrewoman can make self dependent by adopting sericulture is a part time agri-business.



Livelihood security of rural woman through vegetable cultivation

Background

Since 2010, Mrs Mushahary used to cultivate field crops like rice, toria, potato etc in her field. She cultivated traditional vegetables in a small area. No scientific technology and good quality seeds were practiced in her field. She used to get annual income of about Rs 90,000.00 from field and other components. Although gradually she had diverted her mind to go for commercial vegetable cultivation, she faced problems like non availability of improved vegetable seed and poor technical knowledge. During 2019-20, she came to visit KVK, Chirang in search of potato seeds and thereby came to know about different high yielding varieties of vegetables and their improved cultivation technology from the scientists. She was very happy and interested to try it by herself.

Sumitra Mushahary
Phakan Daimary
Khagrabari, Chirang
HSLC
9678836071

KVK Intervention

- Skill training on scientific nursery raising of rabi vegetables helping her to produce early and disease free vegetable seedlings through which she is earning a good money.
- Demonstration on establishment of nutritional garden though input distribution including seeds, vermicompost, net etc. led her to systematic cultivation of a traditional kitchen garden
- Training on cultivation practices and providing seeds and fertilizers of biofortified cauliflower varieties Carotena and Valentena under OFT programme
- Demonstration on high yielding IIHR varieties like Arka Abhed tomato variety, Arka Sukomal frenchbean variety etc. from which she is getting good price in market.
- Technical guidance on planting material generation of arecanut, assam lemon etc.
- Technical guidance on value addition to local fruits and vegetables through skill training

Conclusion: Total income of Mrs Mushahary from her field is about Rs. 2,50,000/-per year which is 66% initial income. She is recognized and awarded by District Administration also for her outstanding contribution towards farming. She has not only established herself with a good name but also become a role model to other women.





Mr. Jwngshat Basumatary
Basumatary, Vill- No 1
- Tukrajhar, PS-
ist- Chirang Pin-
r: 9101090216
LC

Slatted housed Goat farming: A way of self employment

Introduction:

- Mr. Jwngshat Basumatary after matriculation choosed goat rearing as income generating activity.
- The annual income of his family was around Rs. 2 lakhs which did not meet the family expenses.
- He came to know that the slatted housed scientific goat rearing is a beneficial enterprise.
- Now he rears a herd of 110 goats at his individual efforts

Training & Motivation

- Goat rearing is one of the important aspects in dry land farming system. In rural areas open grazing is practice for rearing of goat flocks.
- Due to the reduction in open grazing there is a need to search another alternate option i.e. stall feeding floor goat rearing method.
- Krishi Vigyan Kendra (KVK), Chirang conducted training programme on slatted floor goat rearing dr He attended the training programme and came to know about slatted floor shed construction, breed goat breed up gradation, green fodder production, concentrated feed production, disease management

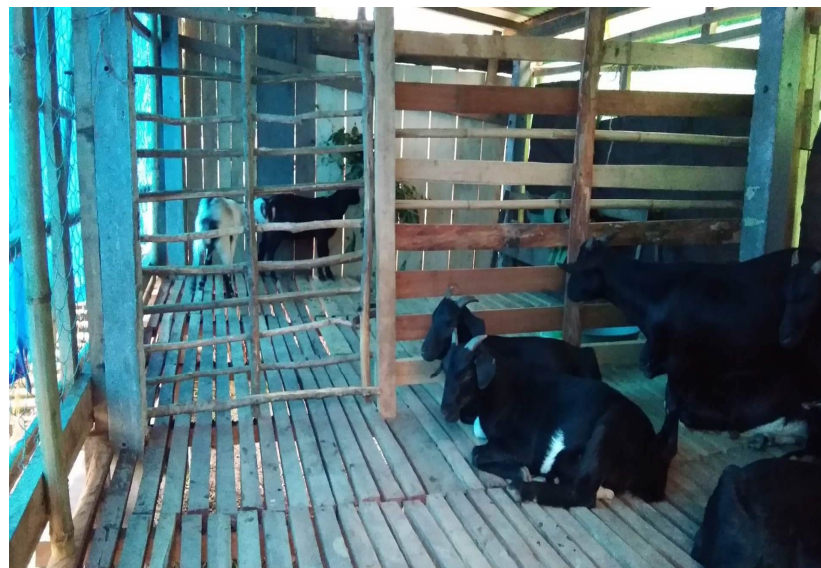
ACHIEVEMENTS:

lly started slatted floor goat rearing shed with 10 female local goats and 5 castrated goats. beginning he sold out the castrated male goats for meat purpose. Gradually he started producing crossbred beetal kids using Beetal bu by KVK under FLD programme. at for breeding purpose are being sold for Rs. 12000/- at 4 month of age and Rs. 10000/- for female from his farm. ent he is maintaining around 60 adult goats & 50 kids in the farm. ating an annual income of Rs. 7,87,500 from the sale of 50 goats (9 months age) at an average weight of 10-12 Kg. He is selling FYM to other identified this goat farm as a model slatted floor goat rearing unit for KVK technical programmes. d mixed fodder cultivation practices like Hybrid Napier, Fodder Sorghum, Rina grass, African tall maize for feeding goats and supplying see mers. lished Mini Concentrate Feed preparation unit and also mineral blocks at farm level to reduce feed cost.

TANCE TO FARMERS:

- His goatery unit plays as inspiration to other farmers to initiate slatted floor Goat farming.
- More than 120 farmers have visited the farm for updating their skill and knowledge on go
- KVK conducted front line demonstration programme on Fodder Cultivation technology

Glimpse of Goat rearing



Entrepreneurship generation through production of vermicompost.

Mrs Jonali Chakraborty is a women with an indomitable spirit and a passion for hardwork. She came in contact with Krishi Vigyan Kendra (KVK), Chirang through a training programme on vermicompost production technology in 2019. She came to know about vermicompost for the first time in the training programme. After understanding the technology she was interested in adopting the production of vermicompost as enterprise.

Jonali Chakraborty
Sugaon, Chirang

9706912880



Under the guidance of KVK Chirang, Mrs Chakraborty initially constructed two vermicompost tank . She harvested 35 q from the two tank and earned Rs 70,000. With the profit earned she constructed 3 more tanks and gradually expanded her enterprise.

- She use to market her product to various nurseries, govt departments in chirang district. She is also looking prospects of supplying vermicompost to other districts.
- Today she has 20 no of vermicompost tanks with a production capacity of 15-20q per tank per year She sells her vermicompost under the brand name Sanchayita enterprise

Year	Production	Cost of production	Gross Return (Rs)	Net Return (Rs)
2020	35 q	8000	70000	62000
2021	90 q	20000	1,80,000	1,60,00
2022	150 q	50,000	3,00,000	2,40,000
2023	300 q	97,000	6,00,000	5,15,000



Vermicompost unit at Mrs Chakraborty's unit supported by KVK , Chirang

Details of Village adoption during 2023-24

No. of village adopted : 01

Interventions initiated :

1. Demonstration of Toria & Mustard
2. Demonstration on Assam Lemon
3. Intercropping of Assam Lemon with Arecanut
4. Demonstration on Fodder
5. Training on Toria & Mustard
6. Field day on Toria & Mustard
7. Plantation of Bamboo in farmers field

Village adoption 2023-24

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7. Plantation of Bamboo in farmers field

ta:
phy
ulation: 1242
: 623
: 619
n: Farming
rich farmer : 16
poor farmer: 299

Time line:

- | | |
|---|------------------|
| 1. Demonstration of Toria & Mustard | : November, 2023 |
| 2. Demonstration on Assam Lemon | : October, 2023 |
| 3. Intercropping of Assam Lemon with Arecanut | : October, 2023 |
| 4. Demonstration on Fodder | : July, 2023 |
| 5. Training on Toria & Mustard | : December, 2023 |
| 6. Field day on Toria & Mustard | : February, 2024 |
| 7. Plantation of Bamboo in farmers field | : October, 2023 |

Farmers motivated to cultivate Mustard & Fodder crop from this year as new enterprise.

Demonstra
Toria, Mus
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Yield of T
9.2 q/h

Yield of Mu
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Farmers are
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cultivatio
Mustard &

Activities under Natural Farming

Type of activity	No. conducted
Demonstration in KVK farm	1
Awareness camps	4



Awareness programme on Natural Farming



Fruit based natural farming model



Exposure Visit

Activities under International Year of Millets

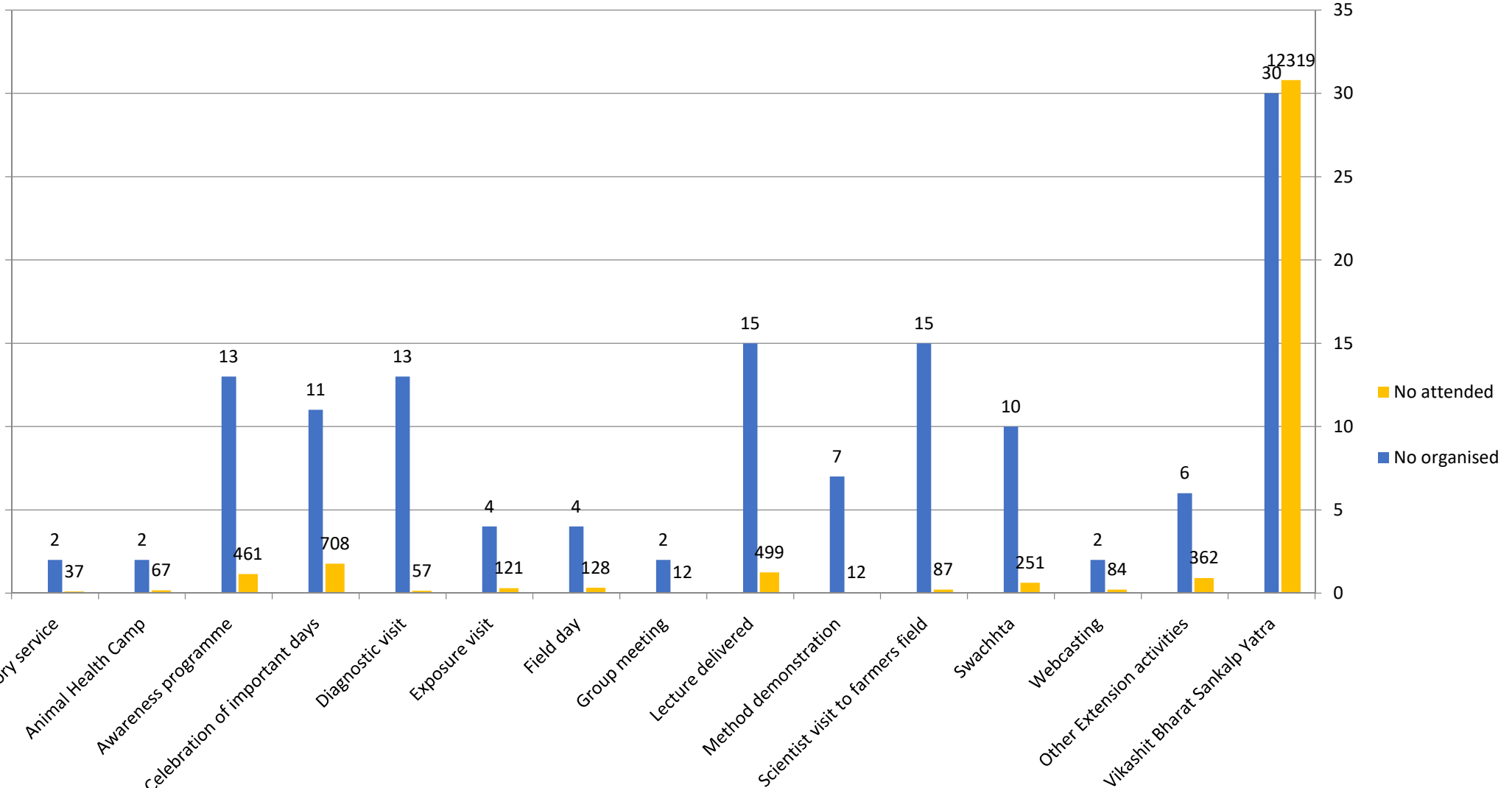
Type of publication	No. of villages covered	No. of farmers/farm women involved
Demonstration conducted	2	14
Post Harvest/Processing/Value addition programmes	-	25
Awareness programme	5	156
Field day	1	54



Other Extension Activities

(with graphical representation)

Total No of Farmers: 16093



Other Extension Activities 2023-24

Photographs of Other Extension Activities



Field day on Mega project on Rapeseed-Mustard



Field day on Sesamum under CFLD on Kharif Oilseed 2023-24



Animal Health Camp



Amrit Brikhya Andolan

Photographs of Other Extension Activities



Awareness programme on nutritional benefits of Millet



Awareness programme on prospects of Millet cultivation in Chirang



Awareness programme on Soil Health Management



Awareness programme on mobilization of farmers to farmer producer companies

Photographs of Other Extension Activities



Celebration of Ayurveda Day



Celebration of Foundation day of KVK Chirang



Celebration of National Fish Farmers Day



Celebration of World Soil Day

Photographs of Other Extension Activities



Celebration Poshan Maah

Photographs of Other Extension Activities



Webcasting



Celebration of ICAR Foundation Day

Photographs of Other Extension Activities



Exposure Visit



District level workshop on Coconut cultivation



PM Kisan Sammelan



Celebration of World Environment Day

Adoption of High Value Horticulture Crops in Farming: A Success Story of Akbor Ali of Chirang District

A 37 yr old progressive farmer of 1 No. Deolguri village of Chirang District. He could not run the family smoothly due to low income from the traditional method of cultivation by his family. Moreover, he was not aware of any improved cultivation practices and modern technologies. After rice harvesting was over, his field mostly remain fallow without any crops. During this period, he had none to work and earn any income. Due to such poor economic condition, Akbor Ali could not continue his education beyond class X. After the class X, he joined in a construction Company to earn his livelihood. But he was not satisfied with the work and left the job from Construction Company and decided to engage himself in farming with innovative ideas and technologies.

After receiving training & various programmes of KVK & Dept of Agriculture, he adopted the following new technologies in his farm:

- Inter cropping of fruit crops
- Installation of Solar Pump, drip & sprinkler irrigation in his farm
- Scientific cultivation of Dragon fruits, Asam Lemon, Arecanut, Orange and it's saplings production
- Scientific cultivation of Apple ber, water melon, banana & pine apple
- Installed Green house and poly house at his farm
- Establishment of Horticulture Nursery at his farm
- Scientific management of fish pond
- Selection of quality planting materials



Income of Akbor Ali

	Net income (Rs)
Dragon fruit	16,00000.00
Apple ber	350000.00
Water melon	300000.00
Asam Lemon	425000.00
Arecanut	175000.00
Planting material Production (per year)	700000.00
Total	3550000.00



Revenue generation:

No.	Activity	Quantity produced	Revenue earned (₹)
	Seed (Sali paddy)- Ranjit Sub1	11.34 q	43000
	Seed (Sali paddy)- Numoli	10.0 q	40000
	Seed (Niger)	0.7 q	2400
	Seed (Toria)	6.41 q	58200
	Planting material (Assam lemon, Black pepper, Dragon fruit, Arecanut etc)	11195 nos	108000
	Livestock production	12 nos (Goat kids)	42000
	Bioinputs	88.57 q (Vermicompost)	132800
	Any other (Hall rent, vegetables, poultry eggs, mushroom spawn, fresh mushroom, milk etc)	-	245200
			574000

nce with other organizations/ departments:

Name of organization	Nature of linkage
ent of Agriculture, Chirang	i) Association KVK scientist as resource person ii) Programme formulation and execution under CSS-ATMA iii) Member of DLCC of PM-Kisan, PMFBY, PMKSY
ate of Agriculture, BTR, Kokrajhar	i) Preparation of Impact point for BTAD at Bimonthly Zonal Workshop ii) Participation at Kisan Mela organized by Director of Agriculture, BTR
ent of Veterinary, Chirang	i) Association KVK scientist as resource person ii) Collaborative training programme
Chirang	i) Entrepreneurship development through training
SBI, Kajalgaon	i) Organization of vocational training programmes for self-employment of Rural Youths ii) Resource person for various training of RSETI iii) Exposure visit to KVK by RSETI trainees
D	i) Mobilization of FPO with NABARD funding
Board, Chirang	i). Organization of sponsored training programme ii). Association KVK scientist as resource person
ent of Fishery Science, Chirang	i). Organization of sponsored training programme ii). Association KVK scientist as resource person
ESTA'	i) Upliftment of rural community through programmes planning, identification of beneficiaries and execution of training, demonstration and awareness programmes ii) Attending the Annual Meeting
e Trust of India	i). Collaborative training to the extension functionaries
lobal Social Service Society	Collaborative HRD programme
T NGO	Delivered lecture as resource person in awareness programme on Scientific cultivation of field and livestock.

Publications

S. No.	Type of publication	Number
1	Research paper	3
2	Abstract	6
3	Book	-
4	Chapter of Book	-
5	Training Manual	-
6	Bulletin	6
7	Newspaper article/Article	6

Extension Videos developed

S. No.	Type of publication	Title of publication
1	Extension Training Video	-
2	Success story video	-
3	Any other (Mobile app etc)	-

Approximate annual requirement of food crop and livestock commodity for Chirang district

Commodity	Annual Requirement	Annual Production	Annual Surplus/ Deficit
	87994.57 MT (@ 0.5 kg/head/day)	116300.62 MT	(+) 28306.06 MT
	10559.35 MT (@ 60 gm/head/day)	2713.47 MT	(-) 7845.88 MT
Meat	3519.78 MT (@ 20 gm/head/day)	13685.37 MT	(+) 10165.59 MT
	5207.35 MT (@ 10.8 kg/head/year)	5826.70 MT	(+) 619.35 MT
	439.97 lakh ltr (@ 250 ml/head/day)	29.29 lakh ltr	(-) 410.68 lakh ltr
	867.89 lakh eggs (@ 180 egg/head/year)	29.52 lakh eggs	(-) 838.37 lakh eggs
	4730 MT	1426 MT	(-) 3304 MT

District Agriculture Office, Chirang
 Animal Husbandry & Vety Office, Chirang
 Fishery Office, Chirang



Thank you

