YEAR – 2020 (January 2020 to December 2020)

Achievements on technologies assessed and refined

OFT-1

1.	Title of On farm Trial	Assessment of BPH tolerant rice varieties in shallow low land situation
2.	Problem diagnosed	Use of Susceptible Variety
3.	Details of technologies selected for assessment/refinement	Farmers Practice (TO-1): MTU-7029 Technology option-I (TO-2): CR Dhan 307 Technology option-II (TO-3): Hasanta
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	OUAT and NRRI
5.	Production system and thematic area	Pest Management
6.	Performance of the Technology with performance indicators	Plant height, No. Of Grains/panicle, No. of BPH/hill, Net Return, B:C ratio
7.	Final recommendation for micro level situation	Technology option-II; Use of resistant variety of rice (Hasanta) successfully minimize the important pest (BPH) hence it is recommended for farmers.
8.	Constraints identified and feedback for research	Maximum lands are medium land hence BPH tolerant/resistant rice varieties for medium land should also be developed.
9.	Process of farmers participation and their reaction	Farmers are interested for cultivation of Hasanta variety after seeing the OFT results in the field of some farmers.

Thematic area:

Problem definition: Use of Susceptible Variety

Technology assessed:

Farmers Practice (TO-1): MTU-7029

Technology option-I (TO-2): CR Dhan 307

Technology option-II (TO-3): Hasanta

Table:

Technology option	No. of trials	Yield component			Disease/ insect pest incidence (%)	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of effective tillers/hill	No. of spikelet per panicle	Test wt. (100 grain wt.) (g)						
(FP): MTU-7029	7	7.60	8.12	26.41	22.31	31.5	37500	58842	21342	1.57
(TO-I): CR Dhan 307	7	14.30	14.21	27.54	5.42	39.45	38000	73693	35693	1.94
(TO-II): Hasanta	7	15.10	18.11	27.91	3.66	40.75	37800	76121	38321	2.01

OFT-2

1.	Title of On farm Trial	Assessment of Eco-friendly management of pod borer in pigeonpea
2.	Problem diagnosed	Low yield of pigeonpea due to high infestation of pod borer during flowering , pod formation and pod maturing stage of the crop
3.	Details of technologies selected for assessment/refinement	TO-1: Application of Traizophous, Chloropyriphos@2.5ml/lit TO-2: Application of Azadirachtin 0.15%@ 1.5 Lit./ ha + Emamectin Benzoate 5SG @ 200gm/ha at 50% flowering and second 15-20 days after 1ST spraying. TO-3: Application of Azadirachtin 0.15%@ 1.5 Lit./ ha + Spinosad 45 SC @ 200 ml / ha at 50% flowering and second 15-20 days after 1ST spraying.
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	OUAT, RRTTS Station Trial, Dhenkanal, 2017
5.	Production system and thematic area	pigeonpea- fallow IPM in pigeonpea
6.	Performance of the Technology with performance indicators	Pod borer incidence No of larvae/plant- 01, Natural Enemy Population- 35%, percent pod infestation at harvest- 2% Yield (q/ha)- 16 Net return (Rs/ha)- Rs. 66,000/- B:C ratio- 3.2
7.	Final recommendation for micro level situation	Application of Azadirachtin 0.15%@ 1.5 Lit./ ha + Emamectin Benzoate 5SG @ 200gm/ha at 50% flowering and second 15-20 days after 1ST spraying gives good result in comparison to TO-3
8.	Constraints identified and feedback for research	Farmers are not applying the recommended dose of pesticide in proper time and advised to apply in proper time after 50% flowering and second application at15-20 days after 1ST application.
9.	Process of farmers participation and their reaction	Farmers are actively participated in the programme and very much happy to see the result after application of proper pesticide in proper time.

Thematic area: IPM in pigeonpea

Problem definition: Low yield of pigeonpea due to high infestation of pod borer during flowering , pod formation and pod maturing stage of the crop

Technology assessed: TO-1: Application of Traizophous, Chloropyriphos@2.5ml/lit

TO-2: Application of Azadirachtin 0.15%@ 1.5 Lit./ ha + Emamectin Benzoate 5SG @ 200gm/ha at 50% flowering and second 15-20 days after 1ST spraying.

TO-3: Application of Azadirachtin 0.15%@ 1.5 Lit./ ha + Spinosad 45 SC @ 200 ml / ha at 50% flowering and second 15-20 days after 1ST spraying

Table

Technology option	No. of trials	Yield component			Disease/ insect pest incidence (%)	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of pod/plant	No. of branch/plant	Test wt. (100 grain wt.)						
TO-1	13	1050	17	61	15	10.1	28100	50,500	22,400	1.7
TO-2		1580	28	72	2	16	30,000	80,000	66,000	2.6
TO-3		1445	23	69	3	14.2	30,000	71,000	41,000	2.3

OFT-3

1.	Title of On farm Trial	Assessment of combine insecticides for management of major insect pest of rice
2.	Problem diagnosed	Low yield of rice due to heavy infestation of rice pest like rice stem borer, gall midge, leaf folder and BPH
3.	Details of technologies selected for assessment/refinement	TO-I: Application ofCartaphydrochloride 2gm/lit, Buprofenzin 1.5ml/LThiomethoxam @1gm/it TO-2 : application ofFlubendiamide 240 SC + Thiacloprid 240 SC (Belt Expert) @ 300 ml/ha twice i.e. at Tillering & P.I. stage for management of rice stem borer, gall midge, leaf-folder and BPH TO-3: Application of Ethiprole 40% + Imidacloprid 40% (Glamore) @ 125 g/ha twice i.e. at Tillering & P.I. stage for management of rice stem borer, gall midge, leaf-folder and BPH
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	OUAT annual report, 2017
5.	Production system and thematic area	Rice-greengram IPM in Rice
6.	Performance of the Technology with performance indicators	Silver shoot %- 2 Dead heart %- 2 WEH %- 2 BPH reduction %-80 LF reduction % - 90 Extent of infestation (%)- 90 Yield (q/ha)- 43 Net return (Rs/ha)- Rs. 44,195/- B:C ratio- 2.2
7.	Final recommendation for micro level situation	Alternate application of Flubendiamide 240 SC + Thiacloprid 240 SC (Belt Expert) @ 300 ml/ha twice i.e. at Tillering & P.I. stage and Ethiprole 40% + Imidacloprid 40% (Glamore) @ 125 g/ha twice i.e. at Tillering & P.I. stage for management of rice stem borer, gall midge, leaf-folder and BPH
8.	Constraints identified and feedback for research	Farmers are unwilling to purchase the pesticide due to high price Consortia may be develop for management of important pest of rice crop
9.	Process of farmers participation and their reaction	Farmers are actively participated in the programme and convinced after alternate application of the pesticide.

Thematic area: IPM in Rice

Problem definition: Low yield of rice due to heavy infestation of rice pest like rice stem borer, gall midge, leaf folder and BPH

Technology assessed:

TO-I: Application ofCartaphydrochloride 2gm/lit, Buprofenzin 1.5ml/LThiomethoxam @1gm/it

TO-2 : application ofFlubendiamide 240 SC + Thiacloprid 240 SC (Belt Expert) @ 300 ml/ha twice i.e. at Tillering & P.I. stage for management of rice stem borer, gall midge, leaf-folder and BPH

TO-3: Application of Ethiprole 40% + Imidacloprid 40% (Glamore) @ 125 g/ha twice i.e. at Tillering & P.I. stage for management of rice stem borer, gall midge, leaf-folder and BPH

Table

Technology option	**No. of trials**	**Yield component**			**Disease/ insect pest incidence (%)**	**Yield (q/ha)**	**Cost of cultivation (Rs./ha)**	**Gross return (Rs/ha)**	**Net return (Rs./ha)**	**BC ratio**
		No. of tiller/Hill	**No. of grain/panicle**	**Test wt. (100 grain wt.)**						
TO-1	13	12	82	23	15	35	35,000	65,275	30,275	1.8
TO-2		21	133	23	3	43	36,000	80,195	44,195	2.2
TO-3		18	124	23	5	39.5	36,000	73,667.5	37,667.5	2.04

OFT-4

1.	Title of On farm Trial	Assessment of suitable Brinjal variety for Kalahandi district
2.	Problem diagnosed	Low return due t o high incidence of wilt in Brinjal
3.	Details of technologies selected for assessment/refinement	TO1- Cultivation of Brinjal var. Blue star TO2- Cultivation of Brinjal var. Swarna Shakti TO3- Cultivation of Brinjal var. Swarna Ajay
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	RCER-ICAR, Patna
5.	Production system and thematic area	Varietal evaluation
6.	Performance of the Technology with performance indicators	Fruit Wt(gm), Plant height(Cm), Yield, Net income(Rs.), BC ratio
7.	Final recommendation for micro level situation	Fruits are oblong, medium length-12.5cm weight-112g and attractive light purple colour Yield- 325.6q/ha
8.	Constraints identified and feedback for research	This trail have been tested in RCER-ICAR, Patna resulting less wilt infestation in comparison to existing hybrids
9.	Process of farmers participation and their reaction	Brinjal var. Swarna Shakti yield- 315.2q/ha and Swarna Ajay yield- 325.6q/ha farmers prefer Swarna Shakti variety of brinjal due to its attractive shiny purple colour as compare to S. Ajay light in colour.

Thematic area: varietal evaluation

Problem definition: Low return due t o high incidence of wilt in Brinjal

Technology assessed: TO1-Cultivation of Brinjal var. Blue star

TO2- Cultivation of Brinjal var. Swarna Shakti (Fruits are oblong, medium length (15-17 cm), weight (250-300 g) and attractive shiny light purple colour, resistant to phomopsis blight and bacterial wilt, seed rate- 150-200g/ha, maturity- 55-65 DAP, Average yield- 70-75 t/ha)

TO3- Cultivation of Brinjal var. Swarna Ajay(Fruits are oblong, medium length (10-12 cm), weight (100-120 g) and attractive light purple colour, resistant to phomopsis blight and bacterial wilt, seed rate- 150-200g/ha, maturity- 50-55 DAP, Average yield- 70-75 t/ha)

Table:

Technology option	**No. of trials**	**Yield component**		**Yield (q/ha)**	**Cost of cultivation (Rs./ha)**	**Gross return (Rs/ha)**	**Net return (Rs./ha)**	**BC ratio**
		Fruit Wt (g)	**Plant Height (Cm)**					
TO1	07	85.2	128.4	236.2	98700	283440	184740	2.8
TO2	07	89.7	98.5	315.2	120000	378240	258240	3.1
TO3	07	112	118.7	325.6	120000	390720	27070	3.2

OFT-5

1.	Title of On farm Trial	Assessment of different plant growth regulator for crop regulation in mango
2.	Problem diagnosed	Alternate bearing in mango orchards
3.	Details of technologies selected for assessment/refinement	TO1-Applicaton of fertilizer @ 110:80:110 gm NPK per plant per year without any hormone application TO2-Application of paclobutrazol@ 0.25g a.i./m^2 canopy spread TO3-Application of ethephon 5-8 sprays @ 200ppm fortnightly interval
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	IIHR, Annual Reports 2016-17 Source: Plant growth regulators, 2012, Directorate of Plant Protection Quarantine and Storage, GOI, MoAgril. (Document source: agritech.tnau.ac.in/crop_protection/pdf/8_Approved_uses_registered_PGR.pdf
5.	Production system and thematic area	Crop Management
6.	Performance of the Technology with performance indicators	Fruit yield per plant Flower Initiation, Yield, Net income(Rs.), BC ratio
7.	Final recommendation for micro level situation	Application of paclobutrazol (PBZ) at lower dose increased the flowering intensity in 6-12 year old mango trees without affecting vegetative growth. Soil application of PBZ through collar drench and ring method was more effective.
8.	Constraints identified and feedback for research	Flower initiation in the above trail has early as compare to farmer practices and result better yield.
9.	Process of farmers participation and their reaction	Farmers getting more yield as compare to their own practices. Application of Paclobutrazole result better than Ethephon application.

Thematic area: CropManagement

Problem definition: Alternate bearing in mango orchards

Technology assessed: TO1-Applicaton of fertilizer @ 110:80:110 gm NPK per plant per year without any hormone application

TO2-Application of paclobutrazol@ 0.25g a.i./m^2 canopy spread

TO3-Application of ethephon 5-8 sprays @ 200ppm fortnightly interval

Table:

Technology option	No. of trials	Yield component		Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		Fruit yield/plant (Kg)	Flower Initiation					
TO1	07	12.2	1st week of January	112	76500	168000	91500	2.1
TO2	07	42.5	2nd week of December	185	101000	277500	176500	2.7
TO3	07	31.8	2nd week of December	164	101000	246000	145000	2.4

OFT-6

1.	Title of On farm Trial	Assessment of different Oil Cakes as Feed Supplement in Cross bred Cow
2.	Problem diagnosed	Low milk production, Low fat and SNF% in milk, Low growth rate in calf
3.	Details of technologies selected for assessment/refinement	**TO1**: Feeding of cow with 2.5 kg concentrate feed and straw per day **T02:** Feeding of cow @ 2.5 kg of concentrate feed + with 1 kg cotton oil cake + 10 kg green fodder per day **T03:** Feeding of cow @ 2.5 kg of concentrate feed + with 1 kg groundnut oil cake+ 10 kg green fodder per day
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	SVVU, Tirupati 2015-16, TNAU Agritech Portal
5.	Production system and thematic area	Semi-intensive, Feed management
6.	Performance of the Technology with performance indicators	Mean Milk Production (L/day), Mean Body weight gain of lactating cow during 60 days (Kg), Mean Body Condition Score (BCS), Mean Fat% , Mean SNF%
7.	Final recommendation for micro level situation	Cotton oil cake @ 1kg with balanced ration improves milk production in dairy cows
8.	Constraints identified and feedback for research	Non-availability of cotton oil cake at farmers dairy farm
9.	Process of farmers participation and their reaction	Farmers show interest for feeding of cotton oil cake to their dairy cows

Thematic area: Feed management

Problem definition: Low milk production, Low fat and SNF% in milk, Low growth rate in calf

Technology assessed:

TO1: Feeding of cow with 2.5 kg concentrate feed and straw per day

T02: Feeding of cow @ 2.5 kg of concentrate feed + with 1 kg cotton oil cake + 10 kg green fodder per day

T03: Feeding of cow @ 2.5 kg of concentrate feed + with 1 kg groundnut oil cake+ 10 kg green fodder per day

Table:

Technology option	No. of trials	Yield component			Mean Body Condition Score (BCS)	Mean Milk Production (L/day)	Cost of cultivation/ Cow	Gross Return /Cow	Net return/Cow	B:C
		Mean Body weight gain of lactating cow during 60 days (Kg)	Mean Fat%	Mean SNF%						
TO1	7	5.07	3.63	7.43	3.0	4.19	3900	6350	2450	1.62
T02	7	6.43	4.88	8.32	4.5	6.05	5925	12850	6925	2.16
T03	7	6.29	4.45	7.93	4.0	5.59	6050	11750	5700	1.94

OFT-7

1.	Title of On farm Trial	**Assessment of multi-enzyme mixture and probiotics on growth of chickens in semi intensive system of rearing.**
2.	Problem diagnosed	**Low body weight gain and high feed conversion ratio in backyard poultry**
3.	Details of technologies selected for assessment/refinement	**T01:-** Feeding of chickens with only commercial broiler feed **T02:** Feeding of back yard chicken with 50 gm of commercial broiler feed (added with probiotic mixture @ 0.05%) **T03:** Feeding of back yard chicken with 50 gm of commercial broiler feed (added with enzyme mixture @ 0.05%)
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	**CIFA annual report, 2015-16**
5.	Production system and thematic area	Semi-intensive, feed managment
6.	Performance of the Technology with performance indicators	Body wt gain, FCR, incidence of infection
7.	Final recommendation for micro level situation	Feeding of poultry bird with Mutienzyme mixture increase their FCR and cumulative body weight gain.
8.	Constraints identified and feedback for research	There is significant increase in body weight gain in compared to their own practice. There is also less feed intake per 1 kg body weight gain Occurrence of infection is also less with compared to untreated group
9.	Process of farmers participation and their reaction	Farmers show interest to feed multienzyme mixture and probioticcs to their poultry birds

Thematic area: Poultry management

Problem definition: **Low body weight gain and high feed conversion ratio in backyard poultry**

Technology assessed:

T01:- Feeding of chickens with only commercial broiler feed

T02: Feeding of back yard chicken with 50 gm of commercial broiler feed (added with probiotic mixture @ 0.05%)

T03: Feeding of back yard chicken with 50 gm of commercial broiler feed (added with enzyme mixture @ 0.05%)

Table:

Technology option	No. of trials	Yield component			Cost of cultivation/ 10 birds	Annual Gross Return (Rs.) /10 birds	Annual Net return (Rs.) /10 birds	B:C
		Cumulative BW gain during 8 wk of feeding (gm)	FCR	Incidence of infection				
TO1	7	351	3.25	5	2480	4430	1950	1.78
T02	7	510	2.8	2	3050	6800	3750	2.22
T03	7	486	2.95	2	3315	6300	2985	1.9

OFT-8

1.	Title of On farm Trial	Assessment of planting time for better market price of Cauliflower
2.	Problem diagnosed	Less monetary return to the farmers at the peak time of harvesting despite of higher production
3.	Details of technologies selected for assessment/refinement	Assessment TO-1 Planting at appropriate time (2nd fortnight of October) TO-2 Advancing of planting time by 30 days (2nd Fortnight of September) TO-3 Delaying of planting time by 30 days (2nd Fortnight of November)
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	--
5.	Production system and thematic area	Vegetable-Vegetable Market led agriculture
6.	Performance of the Technology with performance indicators	TO-2 Price per Kg-50-55/- Gross Return (Rs/ha) 5,00,000 TO-3 Price per Kg-20-25/- Gross Return (Rs/ha) 3,96,000
7.	Final recommendation for micro level situation	Off season planting of cauliflower with optimum technical management yield a higher income despite of lower production due to high market price.
8.	Constraints identified and feedback for research	Standardization of Production practices of cauliflower in rainy season and management of damping off to maintain seedling population.
9.	Process of farmers participation and their reaction	Farmers reaction towards off season cultivation has changed for better and are more aware about market led production than production led agriculture.

Thematic area: Market led agriculture

Problem definition: Less monetary return to the farmers at the peak time of harvesting despite of higher production

Technology assessed: TO-1 Planting at appropriate time (2nd fortnight of October)

TO-2 Advancing of planting time by 30 days (2nd Fortnight of September)

TO-3 Delaying of planting time by 30 days (2nd Fortnight of November)

Table:

Technology option	No. of trials	Yield component			Disease/ insect pest incidence (%)	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of effective tillers/hill	No. of spikelet per panicle	Test wt. (100 grain wt.)						
TO -1	07					255	78500	255000	176500	3.24
TO-2	07					100	125200	500000	378400	4.1
TO-3	07					198	105000	396000	291000	3.7

YEAR – 2021 (January 2021 to December 2021)

1 Achievements on technologies assessed and refined

OFT-1

1.	Title of On Farm Trial	Assessment of foliar application of soluble fertilizers in Greengram
2.	Problem diagnosed	Low yield due to limited use of fertilizer
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	FP: DAP@20 Kg/ha TO1: Foliar application of 2% urea at flower initiation stage and 15 days after 1st spray along with RDF TO2: Foliar application of 2% 19:19:19(N:P:K) at flower initiation stage and 15 days after 1st spray along with RDF. TO3: Foliar application of 2% urea at flower initiation stage and 2% 19:19:19(N:P:K)15 days after 1st spray along with RDF.
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	AICRP, MULLaRP , 2018-19
5.	Production system and thematic area	Paddy-Greengram Nutrient management
6.	Performance of the Technology with performance indicators	No. of pods/plant, No. of seeds/ pods, Yield(q/ha)
7.	Final recommendation for micro level situation	Spraying of NPK 19:19:19 twice increasing the no of pod/plant and yield upto 32%
8.	Constraints identified and feedback for research	In the era of erratic and scanty rainfall and short agriculture window research on foliar application on pulses (long duration crop) to be carried out.
9.	Process of farmers participation and their reaction	Foliar application of NPK at flower initiation stage help the crop for better pod setting hence contribute to yield enhancement

Thematic area: Nutrient management

Problem definition: Low yield due to limited use of fertilizer

Technology assessed: TO1: Foliar application of 2% urea at flower initiation stage and 15 days after 1st spray along with RDF

TO2: Foliar application of 2% 19:19:19(N:P:K) at flower initiation stage and 15 days after 1st spray along with RDF.

TO3: Foliar application of 2% urea at flower initiation stage and 2% 19:19:19(N:P:K)15 days after 1st spray along with RDF.

Table

Technology option	No. of trials	Yield component			Disease/ insect pest incidence (%)	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of pods/plant	No. of seeds/ pods	Test wt. (100 grain wt.)						
FP	7	11.57	4.43			6.22	27710	49760	22050	2.03
TO1	7	14.86	5.86			7.17	29260	57360	28100	2.27
TO2	7	19.43	10.14			8.26	32880	66080	33200	2.35
TO3	7	16.57	7.43			7.59	31620	60720	29100	2.21

OFT-2

1.	Title of On Farm Trial	Assessment of combine insecticides for management of major insect pest of rice
2.	Problem diagnosed	Low yield of rice due to heavy infestation of rice pest like rice stem borer, gall midge, leaf folder and BPH
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	FP: Application of Cartaphydrochloride 2gm/lit, Buprofenzin 1.5ml/lit Thiomethoxam @1gm/lit TO1: Application of Flubendiamide 240 SC + Thiacloprid 240 SC (Belt Expert) @ 300 ml/ha twice i.e. at Tillering & P.I. stage for management of rice stem borer, gall midge, leaf-folder and BPH (Source: OUAT annual report, 2017) TO2: Application of Ethiprole 40% + Imidacloprid 40% (Glamore) @ 125 g/ha twice i.e. at Tillering & P.I. stage for management of rice stem borer, gall midge, leaf-folder and BPH(Source: Annual report, OUAT, 2015-16)
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	TO1: (Source: OUAT annual report, 2017) TO2: (Source: Annual report, OUAT, 2015-16)
5.	Production system and thematic area	Paddy-Paddy Pest management
6.	Performance of the Technology with performance indicators	Yield(q/ha), No. of tiller/Hill, Disease/ insect pest incidence (%)
7.	Final recommendation for micro level situation	Application of combine pesticide in proper time with proper dose is cost effective and successfully manage the important pest in rice and gives 10% higher yield..
8.	Constraints identified and feedback for research	Research on IPM of other important crop of the district should be undertaken
9.	Process of farmers participation and their reaction	Application of Flubendiamide + Thiacloprid increases the no of tiller per hill and the combined pesticide controls the pest and save the crop from damage.

Thematic area: Pest management

Problem definition: Low yield of rice due to heavy infestation of rice pest like rice stem borer, gall midge, leaf folder and BPH

Technology assessed: TO1: Application of Flubendiamide 240 SC + Thiacloprid 240 SC (Belt Expert) @ 300 ml/ha twice i.e. at Tillering & P.I. stage for management of rice stem borer, gall midge, leaf-folder and BPH

TO2: Application of Ethiprole 40% + Imidacloprid 40% (Glamore) @ 125 g/ha twice i.e. at Tillering & P.I. stage for management of rice stem borer, gall midge, leaf-folder and BPH

Technology option	No. of trials	Yield component			Disease/ insect pest incidence (%)	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of tiller/Hill	Disease/ insect pest incidence (%)	Test wt. (100 grain wt.)						
FP	7	12	15		15	35	35000	65275	30275	1.8
TO1	7	21	3		3	43	36000	80195	44195	2.2
TO2	7	18	5		5	39.5	36000	73667	37667	2.04

OFT-3

1.	Title of On Farm Trial	Assessment of IDM in Bacterial Leaf Blight in rice
2.	Problem diagnosed	Low yield due to indiscriminate use of chemicals with improper dose
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	FP: Farmers are only applying Carbendazim with low dose 0.1% TO1: Seed treatment with bleaching powder @ 10g/l/ kg seed + Zinc sulfate @ 2%, spraying of Streptocycline @ 300 ppm + COC @ 0.3% during disease appearance TO2: Seed treatment with Pseudomonas fluorescens @10g/kg of seed, spraying of Streptocycline @ 300 ppm + COC @ 0.3% during disease appearance
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	TO1: Source: TNAU Agr i portal 2015 TO2: Source: Annual report, OUAT, 2015-16
5.	Production system and thematic area	Paddy-Paddy IDM
6.	Performance of the Technology with performance indicators	Yield(q/ha), % Disease incidence
7.	Final recommendation for micro level situation	Use of seed treatment methods and spraying of fungicides during disease development has resulted in more than 20% increase in yield
8.	Constraints identified and feedback for research	--
9.	Process of farmers participation and their reaction	Optimum care since seed treatment and spray of chemical at proper time and recommended dose save the crop from BLB

Thematic area: IDM

Problem definition: Low yield due to indiscriminate use of chemicals with improper dose

Technology assessed:

TO1: Seed treatment with bleaching powder @ 10g/l/ kg seed + Zinc sulfate @ 2%, spraying of Streptocycline @ 300 ppm + COC @ 0.3% during disease appearance

TO2: Seed treatment with Pseudomonas fluorescens @10g/kg of seed, spraying of Streptocycline @ 300 ppm + COC @ 0.3% during disease appearance

Technology option	No. of trials	Yield component			Disease/ insect pest incidence (%)	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of tiller/Hill	Disease incidence (%)	Test wt. (100 grain wt.)						
FP	7		15.4		15.4	34.7	32859	65062	32203	1.9
TO1	7		1.71		1.71	42.8	34590	80250	45660	2.32
TO2	7		1.14		1.14	43.9	35062	82312	47250	2.35

OFT-4

1.	Title of On Farm Trial	Assessment of different plant growth regulators for crop regulation in mango
2.	Problem diagnosed	Alternate bearing in mango orchardsVar- Langra
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	FP: Application of fertilizer @ 110:80:110 gm NPK per plant per year without any hormone application TO1: Application of paclobutrazol 25 SL @ 1 ml/meter canopy spread TO2: Application of ethephon @ 200ppm subsequent spray in fortnightly interval
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	TO1: Source:IIHR, Annual Reports 2016-17 TO2: Source: Plant growth regulators, 2012, Directorate of Plant Protection Quarantine and Storage, GOI
5.	Production system and thematic area	Mango-Mango , Production management
6.	Performance of the Technology with performance indicators	Yield(q/ha), Fruit yield/ Plant(Kg)
7.	Final recommendation for micro level situation	Application of Paclobutrazol 25 SL @ ml/meter canopy spread get more number of flowers and yield- 185q/ha in compared to application of ethephon @200ppm subsequently spray in fortnightly interval
8.	Constraints identified and feedback for research	Research on growth regulators for other horticulture crop to be taken up
9.	Process of farmers participation and their reaction	Application of Paclobutrazol gives more number of flowers and gives 65% higher yield

Thematic area: Production management

Problem definition: Alternate bearing in mango orchard

Technology assessed:

TO1: Application of paclobutrazol 25 SL @ 1 ml/meter canopy spread

TO2: Application of ethephon @ 200ppm subsequent spray in fortnightly interval

Technology option	No. of trials	Yield component			Fruit yield/ Plant (Kg)	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of tiller/Hill	Disease incidence (%)	Test wt. (100 grain wt.)						
FP	7				110.8	112	76500	168000	91500	2.19
TO1	7				154.1	185	101000	277500	176500	2.74
TO2	7				136.6	164	98000	246000	148000	2.51

OFT-5

1.	Title of On Farm Trial	Assessment of Varietal evaluation of Kharif onion
2.	Problem diagnosed	Limited area under kharif onion and less return from rabi onion
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	FP: Cultivation of of onion var. Agifound light Red TO1: Cultivation of onion var. Bhima Super Bulb attain maturity with in 100-105 DAT TO2: Cultivation of onion var. L-883 It is attractive dark red flat globe bulbs. it attains maturity with in 95-100DAT
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	TO1:Source:DOGR, 2009 TO2: Source: NHRDF, 2015
5.	Production system and thematic area	Onion-Onion , Varietal evaluation
6.	Performance of the Technology with performance indicators	Yield(q/ha), Avg. bulb wt (gm)
7.	Final recommendation for micro level situation	Kharif onion should be promoted with suitable varieties as it fetches good price and farmers gets higher return in compared to rabi onion
8.	Constraints identified and feedback for research	Varietal research of short duration onion variety suitable for Kharif season should be experimented
9.	Process of farmers participation and their reaction	Onion var. L-883 is bright red and bulb weight attracts consumer demand besides it gives a higher yield over other dominant varieties.

Thematic area:

Problem definition: Alternate bearing in mango orchard

Technology assessed:

TO1: Cultivation of onion var. Bhima Super Bulb attain maturity with in 100-105 DAT

TO2: Cultivation of onion var. L-883It is attractive dark red flat globe bulbs. it attains maturity with in 95-100DAT

Technology option	No. of trials	Yield component			Avg. bulb wt (gm)	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of tiller/Hill	Disease incidence (%)	Test wt. (100 grain wt.)						
FP	7				52.29	234.29	192000	498000	306000	2.59
TO1	7				57.14	244.00	205500	571250	365750	2.77
TO2	7				66.29	255.00	210200	605000	394800	2.87

OFT-6

1.	Title of On Farm Trial	Assessment of planting time for better market price of Cauliflower
2.	Problem diagnosed	Less monetary return to the farmers at the peak time of harvesting despite of higher production
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	FP: Farmers generally plant the seedlings at 2nd fortnight of October (Hybrid Girija) TO1: Advancing of planting time by 30 days (2nd Fortnight of September) (Hybrid Sighra) TO2: Delaying of planting time by 30 days (2nd Fortnight of November) (Hybrid Suhasini)
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	--
5.	Production system and thematic area	Vegetable-vegetables , Off-season farming
6.	Performance of the Technology with performance indicators	Yield(q/ha), Avg. curd wt (gm), Selling price of farmer (Rs per kg) , Market price (Rs/kg)
7.	Final recommendation for micro level situation	Advanced or delay planting or cultivation helps the farmer getting higher yield form the same patch of land.
8.	Constraints identified and feedback for research	Heavy rainfall and pest incidence sometimes hamper the crop growth.
9.	Process of farmers participation and their reaction	Advanced or delay planting helps the farmer getting higher return but optimum care should be taken on plant population, seedling mortality and pest incidence.

Thematic area: Off-season farming

Problem definition: Less monetary return to the farmers at the peak time of harvesting despite of higher production

Technology assessed:

TO1: Advancing of planting time by 30 days (2nd Fortnight of September) (Hybrid Sighra)

TO2: Delaying of planting time by 30 days (2nd Fortnight of November) (Hybrid Suhasini)

Technology option	No. of trials	Yield component			Selling price of farmer (Rs per kg)	Market price (Rs/kg)	Avg. bulb wt (gm)	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of tiller/Hill	Disease incidence (%)	Test wt. (100 grain wt.)								
FP	7				15	25	860	242	100833	242000	141167	2.4
TO1	7				55	80	352	100	171875	550000	378125	3.2
TO2	7				22	40	620	172	135142	378400	243257	2.8

OFT-7

1.	Title of On Farm Trial	Performance evaluation of low input dual type chicken breeds in semi-intensive rearing system
2.	Problem diagnosed	Low body weight gain (675 g/20 wk) and high feed conversion ratio (3.5)in backyard poultry
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	TO1- Rearing of *Chhabro* breed (21 days old) with feeding @ 70 g/bird/day supported by scavenging feeding. TO2- Rearing of *Kaveri* breed (21 days old) with feeding @ 70 g/bird/day supported by scavenging feeding .
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	CIFA, Annual report, 2015-16
5.	Production system and thematic area	Poultry management
6.	Performance of the Technology with performance indicators	Cumulative BW gain at 20 wk (kg) FP-675±1.24^{a} T1-1050±1.72^{b} T2-970±1.53^{c} Feed Conversation ratio (FCR): FP-3.57 T1-2.7 T2-2.96 B:C FP- 1.81 T1- 2.02 T2-1.9
7.	Final recommendation for micro level situation	Chhabro breed of poultry can be reared in back yard for better income generation
8.	Constraints identified and feedback for research	Lack of availability of Chhabro breed of poultry at farmers field
9.	Process of farmers participation and their reaction	There is significant increase in body weight gain in Chhabro and Kaveri breed of poultry in comparison to local fowl in semi intensive rearing system

Thematic area: Poultry management

Problem definition: Low body weight gain (675 g/20 wk) and high feed conversion ratio (3.5) in backyard poultry

Technology assessed: TO1- Rearing of *Chhabro* breed (21 days old) with feeding @ 70 g/bird/day supported by scavenging feeding.

TO2- Rearing of *Kaveri* breed (21 days old) with feeding @ 70 g/bird/day supported by scavenging feedingTable:

OFT	**No. of trials**	**Cumulative BW gain at 20 wk (kg)**	**FCR**	**Incidence of infection**	**Annual Gross Return (Rs.)/10 birds**	**Annual Net return (Rs.) /10 birds**	**BC ratio**
FP	7	675±1.24[a]	3.25±0.65[a]	5	4130	1850	1.81
T1	7	1050±1.72[b]	2.7±1.29[b]	2	6800	3450	2.02
T2	7	970±1.53[c]	2.95±0.89[c]	2	6300	2985	1.9

OFT-8

1.	Title of On Farm Trial	Assessment of farm made feed formulation for cost effective milk production in cows
2.	Problem diagnosed	High feed cost results in low profit in dairy farming
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	TO1- Feeding of dairy cow with low cost farm made feed @ 3 kg/day (Maize -40%, Oil cake -25%, Rice bran- 20%, chuni-10%, Mineral mix Salt-5% for six months with straw feeding (10 kg) TO2- Feeding of dairy cow with low cost farm made feed @ 3 kg/day (Maize -30%, Soybean meal-10%, Broken rice-10%, Oil cake -25%, Rice bran- 10 %, chuni-10%, Mineral mix Salt-5% for six months with straw feeding (10 kg)
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	Annual report, OUAT (2017-18)
5.	Production system and thematic area	Feeding Management
6.	Performance of the Technology with performance indicators	Mean Milk Production (L/day) FP-5.26±1.98^{a} T1-6.16±0.68^{b} T2-5.89±1.46^{b} SNF% : FP-3.57 T1-2.7 T2-2.96 B:C FP- 1.67 T1- 2.12 T2-1.92
7.	Final recommendation for micro level situation	Feeding of dairy cow with low cost farm made feed @ 3 kg/day (Maize -40%, Oil cake -25%, Rice bran- 20%, chuni-10%, Mineral mix Salt-5% for six months with straw feeding (10 kg) can be practiced to reduce the feeding cost in dairy farming
8.	Constraints identified and feedback for research	Mixing and grinding of the different ingredients is difficult at farmers level
9.	Process of farmers participation and their reaction	There is around 17% of saving of feed cost in farm made feed formulation in comparison to commercial feed

Thematic area: Feeding Management

Problem definition: High feed cost results in low profit in dairy farming

Technology assessed:

TO1- Feeding of dairy cow with low cost farm made feed @ 3 kg/day (Maize -40%, Oil cake -25%, Rice bran- 20%, chuni- 10%, Mineral mix Salt-5% for six months with straw feeding (10 kg)

TO2- Feeding of dairy cow with low cost farm made feed @ 3 kg/day (Maize -30%, Soybean meal-10%, Broken rice-10%, Oil cake -25%, Rice bran- 10 %, chuni-10%, Mineral mix Salt-5% for six months with straw feeding (10 kg)

OFT	**No. of trials**	**Mean Milk Production (L/day)**	**Mean Body Condition Score (BCS**	**Mean SNF%**	**Gross Return /Cow/6 month**	**Net return/Cow/ 6 month**	**B:C**
FP	7	5.26 ± 1.98^{a}	3.0	7.56	28500	11500	1.67
T1		6.16 ± 0.68^{b}	4.5	8.45	38500	20400	2.12
T2		5.89 ± 1.46^{b}	4.0	7.95	36400	17500	1.92

YEAR – 2022 (January 2022 to December 2022)

Achievements on technologies assessed and refined

OFT-1

1.	Title of On Farm Trial	Assessment of foliar application of soluble fertilizers in Greengram
2.	Problem diagnosed	Low yield due to limited use of fertilizer
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	FP: DAP@20 Kg/ha TO1: Foliar application of 2% urea at flower initiation stage and 15 days after 1st spray along with RDF TO2: Foliar application of 2% 19:19:19(N:P:K) at flower initiation stage and 15 days after 1st spray along with RDF. TO3: Foliar application of 2% urea at flower initiation stage and 2% 19:19:19(N:P:K)15 days after 1st spray along with RDF.
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	AICRP, MULLaRP , 2018-19
5.	Production system and thematic area	Paddy-Greengram Nutrient management
6.	Performance of the Technology with performance indicators	No. of pods/plant, No. of seeds/ pods, Yield(q/ha)
7.	Final recommendation for micro level situation	Spraying of NPK 19:19:19 twice increasing the no of pod/plant and yield upto 32%
8.	Constraints identified and feedback for research	In the era of erratic and scanty rainfall and short agriculture window research on foliar application on pulses (long duration crop) to be carried out.
9.	Process of farmers participation and their reaction	Foliar application of NPK at flower initiation stage help the crop for better pod setting hence contribute to yield enhancement

Thematic area: Nutrient management

Problem definition: Low yield due to limited use of fertilizer

Technology assessed: TO1: Foliar application of 2% urea at flower initiation stage and 15 days after 1st spray along with RDF

TO2: Foliar application of 2% 19:19:19(N:P:K) at flower initiation stage and 15 days after 1st spray along with RDF.

TO3: Foliar application of 2% urea at flower initiation stage and 2% 19:19:19(N:P:K)15 days after 1st spray along with RDF.

Table

Technology option	No. of trials	Yield component			Disease/ insect pest incidence (%)	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of pods/plant	No. of seeds/ pods	Test wt. (100 grain wt.)						
FP	7	11.57	4.43			6.22	27710	49760	22050	2.03
TO1	7	14.86	5.86			7.17	29260	57360	28100	2.27
TO2	7	19.43	10.14			8.26	32880	66080	33200	2.35
TO3	7	16.57	7.43			7.59	31620	60720	29100	2.21

OFT-2

1.	Title of On Farm Trial	Assessment of combine insecticides for management of major insect pest of rice
2.	Problem diagnosed	Low yield of rice due to heavy infestation of rice pest like rice stem borer, gall midge, leaf folder and BPH
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	FP: Application of Cartaphydrochloride 2gm/lit, Buprofenzin 1.5ml/lit Thiomethoxam @1gm/lit TO1: Application of Flubendiamide 240 SC + Thiacloprid 240 SC (Belt Expert) @ 300 ml/ha twice i.e. at Tillering & P.I. stage for management of rice stem borer, gall midge, leaf-folder and BPH (Source: OUAT annual report, 2017) TO2: Application of Ethiprole 40% + Imidacloprid 40% (Glamore) @ 125 g/ha twice i.e. at Tillering & P.I. stage for management of rice stem borer, gall midge, leaf-folder and BPH(Source: Annual report, OUAT, 2015-16)
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	TO1: (Source: OUAT annual report, 2017) TO2: (Source: Annual report, OUAT, 2015-16)
5.	Production system and thematic area	Paddy-Paddy Pest management
6.	Performance of the Technology with performance indicators	Yield(q/ha), No. of tiller/Hill, Disease/ insect pest incidence (%)
7.	Final recommendation for micro level situation	Application of combine pesticide in proper time with proper dose is cost effective and successfully manage the important pest in rice and gives 10% higher yield..
8.	Constraints identified and feedback for research	Research on IPM of other important crop of the district should be undertaken
9.	Process of farmers participation and their reaction	Application of Flubendiamide + Thiacloprid increases the no of tiller per hill and the combined pesticide controls the pest and save the crop from damage.

Thematic area: Pest management

Problem definition: Low yield of rice due to heavy infestation of rice pest like rice stem borer, gall midge, leaf folder and BPH

Technology assessed: TO1: Application of Flubendiamide 240 SC + Thiacloprid 240 SC (Belt Expert) @ 300 ml/ha twice i.e. at Tillering & P.I. stage for management of rice stem borer, gall midge, leaf-folder and BPH

TO2: Application of Ethiprole 40% + Imidacloprid 40% (Glamore) @ 125 g/ha twice i.e. at Tillering & P.I. stage for management of rice stem borer, gall midge, leaf-folder and BPH

Technology option	No. of trials	Yield component			Disease/ insect pest incidence (%)	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of tiller/Hill	Disease/ insect pest incidence (%)	Test wt. (100 grain wt.)						
FP	7	12	15		15	35	35000	65275	30275	1.8
TO1	7	21	3		3	43	36000	80195	44195	2.2
TO2	7	18	5		5	39.5	36000	73667	37667	2.04

OFT-3

1.	Title of On Farm Trial	Assessment of IDM in Bacterial Leaf Blight in rice
2.	Problem diagnosed	Low yield due to indiscriminate use of chemicals with improper dose
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	FP: Farmers are only applying Carbendazim with low dose 0.1% TO1: Seed treatment with bleaching powder @ 10g/l/ kg seed + Zinc sulfate @ 2%, spraying of Streptocycline @ 300 ppm + COC @ 0.3% during disease appearance TO2: Seed treatment with Pseudomonas fluorescens @10g/kg of seed, spraying of Streptocycline @ 300 ppm + COC @ 0.3% during disease appearance
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	TO1: Source: TNAU Agr i portal 2015 TO2: Source: Annual report, OUAT, 2015-16
5.	Production system and thematic area	Paddy-Paddy IDM
6.	Performance of the Technology with performance indicators	Yield(q/ha), % Disease incidence
7.	Final recommendation for micro level situation	Use of seed treatment methods and spraying of fungicides during disease development has resulted in more than 20% increase in yield
8.	Constraints identified and feedback for research	--
9.	Process of farmers participation and their reaction	Optimum care since seed treatment and spray of chemical at proper time and recommended dose save the crop from BLB

Thematic area: IDM

Problem definition: Low yield due to indiscriminate use of chemicals with improper dose

Technology assessed:

TO1: Seed treatment with bleaching powder @ 10g/l/ kg seed + Zinc sulfate @ 2%, spraying of Streptocycline @ 300 ppm + COC @ 0.3% during disease appearance

TO2: Seed treatment with Pseudomonas fluorescens @10g/kg of seed, spraying of Streptocycline @ 300 ppm + COC @ 0.3% during disease appearance

Technology option	No. of trials	Yield component			Disease/ insect pest incidence (%)	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of tiller/Hill	Disease incidence (%)	Test wt. (100 grain wt.)						
FP	7		15.4		15.4	34.7	32859	65062	32203	1.9
TO1	7		1.71		1.71	42.8	34590	80250	45660	2.32
TO2	7		1.14		1.14	43.9	35062	82312	47250	2.35

OFT-4

1.	Title of On Farm Trial	Assessment of Effect on foliar application of micronutrient on growth and yield of Bittergourd
2.	Problem diagnosed	No use of micronutrients
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	FP- Only use of NPK, no use of Secondary Nutrients & Micro nutrients To1 Foliar application of mixture of micronutrients involving Zn, Mo, Cu, Fe and Mn (50 ppm of Mo and 100 ppm each of rest 4 micronutrients). To2 Combined application of micronutrients B and Zn @ 100 ppm each.
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	To1- OUAT, Annual Report, 2014-15, To2- IIVR, Annual Report, 2017-18
5.	Production system and thematic area	Bittergourd , Production management
6.	Performance of the Technology with performance indicators	Yield(q/ha), Fruit yield/ Plant(Kg)
7.	Final recommendation for micro level situation	Combined application of micronutrients B and Zn @ 100 ppm each
8.	Constraints identified and feedback for research	Research on micronutrients for other horticulture crop to be taken up
9.	Process of farmers participation and their reaction	Combined application of micronutrients B and Zn @ 100 ppm gives 65% higher yield

Thematic area: Production management

Problem definition: Low yield due to no use of secondary nutrients and micro nutrients

Technology assessed:

To1 Foliar application of mixture of micronutrients involving Zn, Mo, Cu, Fe and Mn (50 ppm of Mo and 100 ppm each of rest 4 micronutrients).

To2 Combined application of micronutrients B and Zn @ 100 ppm each.

Technology option	No. of trials	Yield component			Fruit wt	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of tiller/Hill	Disease incidence (%)	Test wt. (100 grain wt.)						
FP	7				58.2	82.7	76500	168000	91500	2.2
TO1	7				89.4	108.9	101000	277500	176500	2.5
TO2	7				92.3	112.6	98000	246000	148000	2.6

OFT-5

1.	Title of On Farm Trial	Assessment of Varietal evaluation of Kharif onion
2.	Problem diagnosed	Limited area under kharif onion and less return from rabi onion
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	FP: Cultivation of of onion var. Agifound light Red TO1: Cultivation of onion var. Bhima Super Bulb attain maturity with in 100-105 DAT TO2: Cultivation of onion var. L-883 It is attractive dark red flat globe bulbs. it attains maturity with in 95-100DAT
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	TO1:Source:DOGR, 2009 TO2: Source: NHRDF, 2015
5.	Production system and thematic area	Onion-Onion , Varietal evaluation
6.	Performance of the Technology with performance indicators	Yield(q/ha), Avg. bulb wt (gm)
7.	Final recommendation for micro level situation	Kharif onion should be promoted with suitable varieties as it fetches good price and farmers gets higher return in compared to rabi onion
8.	Constraints identified and feedback for research	Varietal research of short duration onion variety suitable for Kharif season should be experimented
9.	Process of farmers participation and their reaction	Onion var. L-883 is bright red and bulb weight attracts consumer demand besides it gives a higher yield over other dominant varieties.

Thematic area:

Problem definition: Alternate bearing in mango orchard

Technology assessed:

TO1: Cultivation of onion var. Bhima Super Bulb attain maturity with in 100-105 DAT

TO2: Cultivation of onion var. L-883It is attractive dark red flat globe bulbs. it attains maturity with in 95-100DAT

Technology option	No. of trials	Yield component			Avg. bulb wt (gm)	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of tiller/Hill	Disease incidence (%)	Test wt. (100 grain wt.)						
FP	7				50.59	142.5	192000	498000	306000	2.3
TO1	7				54.12	158.1	205500	571250	365750	2.4
TO2	7				62.18	172.4	210200	605000	394800	2.6

OFT-6

1.	Title of On Farm Trial	Assessment of planting time for better market price of Cauliflower
2.	Problem diagnosed	Less monetary return to the farmers at the peak time of harvesting despite of higher production
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	FP: Farmers generally plant the seedlings at 2nd fortnight of October (Hybrid Girija) TO1: Advancing of planting time by 30 days (2nd Fortnight of September) (Hybrid Sighra) TO2: Delaying of planting time by 30 days (2nd Fortnight of November) (Hybrid Suhasini)
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	--
5.	Production system and thematic area	Vegetable-vegetables , Off-season farming
6.	Performance of the Technology with performance indicators	Yield(q/ha), Avg. curd wt (gm), Selling price of farmer (Rs per kg) , Market price (Rs/kg)
7.	Final recommendation for micro level situation	Advanced or delay planting or cultivation helps the farmer getting higher yield form the same patch of land.
8.	Constraints identified and feedback for research	Heavy rainfall and pest incidence sometimes hamper the crop growth.
9.	Process of farmers participation and their reaction	Advanced or delay planting helps the farmer getting higher return but optimum care should be taken on plant population, seedling mortality and pest incidence.

Thematic area: Off-season farming

Problem definition: Less monetary return to the farmers at the peak time of harvesting despite of higher production

Technology assessed:

TO1: Advancing of planting time by 30 days (2nd Fortnight of September) (Hybrid Sighra)

TO2: Delaying of planting time by 30 days (2nd Fortnight of November) (Hybrid Suhasini)

Technology option	No. of trials	Yield component			Selling price of farmer (Rs per kg)	Market price (Rs/kg)	Avg. bulb wt (gm)	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of tiller/Hill	Disease incidence (%)	Test wt. (100 grain wt.)								
FP	7				15	25	860	242	100833	242000	141167	2.4
TO1	7				55	80	352	100	171875	550000	378125	3.2
TO2	7				22	40	620	172	135142	378400	243257	2.8

OFT-7

1.	Title of On Farm Trial	Performance evaluation of low input dual type chicken breeds in semi-intensive rearing system
2.	Problem diagnosed	Low body weight gain (675 g/20 wk) and high feed conversion ratio (3.5)in backyard poultry
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	TO1- Rearing of *Chhabro* breed (21 days old) with feeding @ 70 g/bird/day supported by scavenging feeding. TO2- Rearing of *Kaveri* breed (21 days old) with feeding @ 70 g/bird/day supported by scavenging feeding .
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	CIFA, Annual report, 2015-16
5.	Production system and thematic area	Poultry management
6.	Performance of the Technology with performance indicators	Cumulative BW gain at 20 wk (kg) FP-675±1.24^{a} T1-1050±1.72^{b} T2-970±1.53^{c} Feed Conversation ratio (FCR): FP-3.57 T1-2.7 T2-2.96 B:C FP- 1.81 T1- 2.02 T2-1.9
7.	Final recommendation for micro level situation	Chhabro breed of poultry can be reared in back yard for better income generation
8.	Constraints identified and feedback for research	Lack of availability of Chhabro breed of poultry at farmers field
9.	Process of farmers participation and their reaction	There is significant increase in body weight gain in Chhabro and Kaveri breed of poultry in comparison to local fowl in semi intensive rearing system

Thematic area: Poultry management

Problem definition: Low body weight gain (675 g/20 wk) and high feed conversion ratio (3.5) in backyard poultry

Technology assessed: TO1- Rearing of *Chhabro* breed (21 days old) with feeding @ 70 g/bird/day supported by scavenging feeding.

TO2- Rearing of *Kaveri* breed (21 days old) with feeding @ 70 g/bird/day supported by scavenging feedingTable:

OFT	**No. of trials**	**Cumulative BW gain at 20 wk (kg)**	**FCR**	**Incidence of infection**	**Annual Gross Return (Rs.)/10 birds**	**Annual Net return (Rs.) /10 birds**	**BC ratio**
FP	7	675±1.24[a]	3.25±0.65[a]	5	4130	1850	1.81
T1	7	1050±1.72[b]	2.7±1.29[b]	2	6800	3450	2.02
T2	7	970±1.53[c]	2.95±0.89[c]	2	6300	2985	1.9

OFT-8

1.	Title of On Farm Trial	Assessment of farm made feed formulation for cost effective milk production in cows
2.	Problem diagnosed	High feed cost results in low profit in dairy farming
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	TO1- Feeding of dairy cow with low cost farm made feed @ 3 kg/day (Maize -40%, Oil cake -25%, Rice bran- 20%, chuni-10%, Mineral mix Salt-5% for six months with straw feeding (10 kg) TO2- Feeding of dairy cow with low cost farm made feed @ 3 kg/day (Maize -30%, Soybean meal-10%, Broken rice-10%, Oil cake -25%, Rice bran- 10 %, chuni-10%, Mineral mix Salt-5% for six months with straw feeding (10 kg)
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	Annual report, OUAT (2017-18)
5.	Production system and thematic area	Feeding Management
6.	Performance of the Technology with performance indicators	Mean Milk Production (L/day) FP-5.26±1.98^{a} T1-6.16±0.68^{b} T2-5.89±1.46^{b} SNF% : FP-3.57 T1-2.7 T2-2.96 B:C FP- 1.67 T1- 2.12 T2-1.92
7.	Final recommendation for micro level situation	Feeding of dairy cow with low cost farm made feed @ 3 kg/day (Maize -40%, Oil cake -25%, Rice bran- 20%, chuni-10%, Mineral mix Salt-5% for six months with straw feeding (10 kg) can be practiced to reduce the feeding cost in dairy farming
8.	Constraints identified and feedback for research	Mixing and grinding of the different ingredients is difficult at farmers level
9.	Process of farmers participation and their reaction	There is around 17% of saving of feed cost in farm made feed formulation in comparison to commercial feed

Thematic area: Feeding Management

Problem definition: High feed cost results in low profit in dairy farming

Technology assessed:

TO1- Feeding of dairy cow with low cost farm made feed @ 3 kg/day (Maize -40%, Oil cake -25%, Rice bran- 20%, chuni- 10%, Mineral mix Salt-5% for six months with straw feeding (10 kg)

TO2- Feeding of dairy cow with low cost farm made feed @ 3 kg/day (Maize -30%, Soybean meal-10%, Broken rice-10%, Oil cake -25%, Rice bran- 10 %, chuni-10%, Mineral mix Salt-5% for six months with straw feeding (10 kg)

OFT	**No. of trials**	**Mean Milk Production (L/day)**	**Mean Body Condition Score (BCS**	**Mean SNF%**	**Gross Return /Cow/6 month**	**Net return/Cow/ 6 month**	**B:C**
FP	7	5.26 ± 1.98^{a}	3.0	7.56	28500	11500	1.67
T1		6.16 ± 0.68^{b}	4.5	8.45	38500	20400	2.12
T2		5.89 ± 1.46^{b}	4.0	7.95	36400	17500	1.92

YEAR – 2023 (January 2023 to December 2023)

OFT-1

1.	Title of On farm Trial	Assessment of herbicides for weed management in transplanted medium land rice
2.	Problem diagnosed	Low Yield due to heavy weed infestation
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	FP-Application of Butachlor @1kg a.i/ha TO-1-PoE application of pre-mix herbicide (Cyhalofop butyl +Penoxulam) PE application of herbicide Pendimethalin and PoE application of pre-mix herbicide
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	SLREC proceeding , OUAT, 2020
5.	Production system and thematic area	Rice-greengram and Weed Management
6.	Performance of the Technology with performance indicators	WCE(%), Weed index, panicle length, No of grain/panicle, Yield, B:C ratio,Net profit
7.	Final recommendation for micro level situation	The WCE of TO-2 i.e application of herbicide Pendimethalin and PoE application of pre-mix herbicide (Chlorimuron ethyl + metasulfuron methyl performing better than TO-1
8.	Constraints identified and feedback for research	-
9.	Process of farmers participation and their reaction	Group meeting and demonstration

Thematic area:

Problem definition: Low Yield due to heavy weed infestation

Technology assessed: **(TO-I):**Application of pre-mix (Cyhalofop butyl + penoxulam) @135g/ha at 20DAT

(TO-II): Pre-emergence application of pendimethalin @0.75kg a.i/ha followed by Post-emergence application of pre-mix (Chlorimuron ethyl + metsulfuron methyl)@ 4gm/ha @20DAT

Table:

Technology option	No. of trials	Yield component			Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of effective tillers/hill	No. of Seeds/panicle	WCE(%)					
FP	-	12.2	173.8	72.1	35.6	49692	71200	21508	1.45
TO1	7	16.1	196.2	80.3	39.7	45710	79400	33690	1.78
TO2	7	18.8	219.1	85.5	41.8	44805	83600	38795	1.92

OFT-2

1.	Title of On farm Trial	Assessment of Decomposer for residue management in Rice
2.	Problem diagnosed	Residue burning and delayed field preparation
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	FP- Residue burning/ Flooding followed by incorporation. TO1: Prepare PUSA decomposer (750g jaggery + 25 lit water + 250g pulse powder + 20 capsules). After 10days mix with 500l of water and sprinkle for 1 ha. TO2: Make solution of NRRI decomposer 1 kg, Urea 5kg, Cow dung 10kg in 100 litre of water each for 1MT residue. Sprinkle above NRRI decomposer -20 L, Urea-10 L, Cow dung-10 L in 5 layers (15-20cm) of residue. Sprinkle 100-150l water on pile once in 5days.
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	IARI, ICAR,2020 NRRI,2021
5.	Production system and thematic area	Rice-Fallow & Crop Management
6.	Performance of the Technology with performance indicators	Period of decomposition ,soil microbial properties, Soil organic carbon, Yield(q/ha), Net Return, B:C ratio
7.	Final recommendation for micro level situation	-
8.	Constraints identified and feedback for research	The process of application of pusa decomposer is handy
9.	Process of farmers participation and their reaction	Group Discussion

Thematic area:

Problem definition: Residue burning and delayed field preparation

Technology assessed: TO1: Prepare PUSA decomposer (750g jaggery + 25 lit water + 250g pulse powder + 20 capsules). After 10days mix with 500l of water and sprinkle for 1 ha.

TO2: Make solution of NRRI decomposer 1 kg, Urea 5kg, Cow dung 10kg in 100 litre of water each for 1MT residue. Sprinkle above NRRI decomposer -20 L, Urea-10 L, Cow dung-10 L in 5 layers (15-20cm) of residue. Sprinkle 100-150l water on pile once in 5days

Table:

Technology option	No. of trials	Yield component		Decomposition % (Within 2 months)	Period for complete Decomposition	Cost of Investment
		Initial Soil organic Carbon (%)	Fina Soil organic Carbon (%)			
FP	-	0.40	0.40	-	-	0
TO-1	7	0.40	0.44	45%	2-3 months	2400
TO-2	7	0.40	0.41	65%	3-4 months	3200

OFT-3

1.	Title of On farm Trial	Assessment of Effect on foliar application of micronutrient on growth and yield of Bittergourd
2.	Problem diagnosed	Low yield due to no use of secondary nutrients and micro nutrients
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	FP: Use of NPK (120:60:60) as basal application without any micronutrient TO1: Foliar application of mixture of micronutrients involving Zn, Mo, Cu, Fe and Mn (50 ppm of Mo and 100 ppm each of rest 4 micronutrients) TO2: Combined application of micronutrients B and Zn @ 100 ppm each.
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	To1- OUAT, Annual Report, 2014-15, To2- IIVR, Annual Report, 2017-18
5.	Production system and thematic area	Vegetable-Vegetable , Production management
6.	Performance of the Technology with performance indicators	Yield(q/ha), Fruit yield/ Plant(Kg)
7.	Final recommendation for micro level situation	Combined application of micronutrients B and Zn @ 100 ppm each
8.	Constraints identified and feedback for research	Research on micronutrients for other horticulture crop to be taken up
9.	Process of farmers participation and their reaction	Farmer get 36.1 % higher yield in combine application of micronutrient B & Zn @100ppm each

Thematic area:

Problem definition: Low yield due to no use of secondary nutrients and micro nutrients

Technology assessed: TO1: Foliar application of mixture of micronutrients involving Zn, Mo, Cu, Fe and Mn (50 ppm of Mo and 100 ppm each of rest 4 micronutrients) TO2: Combined application of micronutrients B and Zn @ 100 ppm each

Table:

Technology option	No. of trials	Yield component		Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		Fruit wt (g)	No. of Fruit/Plant					
FP	-	58.2	32	82.7	96200	317200	221000	2.2
TO-1	7	89.4	49	108.9	99400	347900	248500	2.5
TO-2	7	92.3	52	112.6	98900	357200	258300	2.6

OFT-4

1.	Title of On farm Trial	Assessment of Bio fortified sweet potato varieties for nutritional security
2.	Problem diagnosed	No supplement of fortified elements
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	FP : Local variety Talmula Kanda To1 : Cultivation of Bhu sona Bhu sona High Beta carotene (14.0 mg/100g) content as compared to 2-3 mg/100g beta carotene in popular varieties , tuber yield 19.8 t/ha, dry matter- 27-29%, starch-20% Total sugar- 2-2.4 To2 : Cultivation of Bhu Krishna Bhu Krishna High anthocyanin (90mg/100 g) tuber yield18t/ha, dry matter- 24.5- 25.5%, starch- 19.5%, total sugar1.9-2.2% and salinity stress tolerant
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	CTCRI, 2017
5.	Production system and thematic area	Paddy- Vegetable,Varietal evaluation
6.	Performance of the Technology with performance indicators	Tuber Yield (q/ha), colour of the flesh, length of the tuber (cm)
7.	Final recommendation for micro level situation	Cultivation of Bhu Krishna Bhu Krishna High anthocyanin (90mg/100 g) tuber yield18t/ha, dry matter- 24.5- 25.5%, starch- 19.5%, total sugar1.9-2.2% and salinity stress tolerant
8.	Constraints identified and feedback for research	Farmers prefers Sweet potato var. Bhu Krishna more taste than Bhu sona
9.	Process of farmers participation and their reaction	-

Thematic area:

Problem definition: No supplement of fortified elements

Technology assessed: To1 : Cultivation of Bhu sona Bhu sona High Beta carotene (14.0 mg/100g) content as compared to 2-3 mg/100g beta carotene in popular varieties , tuber yield 19.8 t/ha, dry matter- 27-29%, starch-20% Total sugar- 2-2.4

To2 : Cultivation of Bhu Krishna Bhu Krishna High anthocyanin (90mg/100 g) tuber yield18t/ha, dry matter- 24.5- 25.5%, starch- 19.5%, total sugar1.9-2.2% and salinity stress tolerant

Table:

Technology option	No. of trials	Yield component		Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		Length of tuber (cm)	Tuber wt (g)					
FP	-	7.9	64.2	89.2	20500	70964	50464	2.4
TO-1	7	8.4	98.7	120.7	52808	184828	132020	2.5
TO-2	7	8.9	102.1	132.4	55500	208580	153080	2.7

OFT-5

1.	Title of On farm Trial	Assessment of management practices for control of foliar disease in ground nut
2.	Problem diagnosed	Severe defoliation and premature aging of plant due to incidence of major foliar diseases
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	Farmers practice: Spraying of Metalaxyl 8%+Mancozeb 64% @ 2-3 gm/litre water after disease appearance. TO1: Seed treatment with Tebuconazole @ 1.5 g/kg followed by furrow application of T. viride @ 4kg enriched in 50kg FYM/ha as basal application, then broadcasting of T. viride @ 4kg enriched in 250kg FYM/ha at 40 DAS & 2 sprays of Tebuconazole @ 1ml/lit. starting from initiation of oliar diseases and 2nd spray at 15 days interval. TO2: Seed treatment with Tebuconazole 2DS @1.5g/ kg seeds + spraying Tebuconazole 50% + Trifloxystobin 25% WG @ 1.32g/L at 40 and 65 DAS)
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	Annual Report, OUAT, 2016, SLREC, AICRP onGround nut 2018, OUAT
5.	Production system and thematic area	Paddy- Greengram, Disease management
6.	Performance of the Technology with performance indicators	Percentage disease index, disease severity
7.	Final recommendation for micro level situation	Seed treatment with Tebuconazole 2DS @1.5g/ kg seeds + spraying Tebuconazole 50% + Trifloxystobin 25% WG @ 1.32g/L at 40 and 65 DAS give 10% more yield
8.	Constraints identified and feedback for research	Research on IDM of other important crop of the district should be undertaken
9.	Process of farmers participation and their reaction	-

Thematic area:

Problem definition: Severe defoliation and premature aging of plant due to incidence of major foliar diseases

Technology assessed: TO1: Seed treatment with Tebuconazole @ 1.5 g/kg followed by furrow application of T. viride @ 4kg enriched in 50kg FYM/ha as basal application, then broadcasting of T. viride @ 4kg enriched in 250kg FYM/ha at 40 DAS & 2 sprays of Tebuconazole @ 1ml/lit. starting from initiation of oliar diseases and 2nd spray at 15 days interval.

TO2: Seed treatment with Tebuconazole 2DS @1.5g/ kg seeds + spraying Tebuconazole 50% + Trifloxystobin 25% WG @ 1.32g/L at 40 and 65 (DAS)

Table:

Technology option	No. of trials	Yield component			Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		PDI in% Collar rot	PDI in% rust	PDI in% Tikka					
FP	-	1.84	3.02	12.86	14.12	23200	72118	48918	2.1
TO-1	7	1.61	2.13	8.00	14.91	23300	79386	56086	2.4
TO-2	7	1.22	1.11	5.71	15.66.	23000	81610	58610	2.5

OFT-6

1.	Title of On farm Trial	Assessment of integrated management of leaf curl diseases in chilli
2.	Problem diagnosed	Severe reduction in leaf area along with stunting of whole plants due to severe infestation of sucking pests in chilli.
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	Farmers practice: Tank mixing of pesticides like Imidacloprid 17.8 SL @ 10ml/15 litre, Chloropyriphos 20 EC @ 2ml/litre, Cypermethrin 25 EC etc TO1: Foliar spray of Spiromesifen 22.9% SC @500 ml/ha TO2: Seed treatment with Imidachloprid 600FS @ 5ml /kg seed and Foliar spraying of spiromesifen 22.9%SC @ 1 ml/ l of water twice at 30and 45 DAT
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	RRTTS, BBSR,2016, SLREC Proc. 2016, SLREC, RRTTS(CZ), OUAT,2019
5.	Production system and thematic area	Paddy- Vegetable, Disease management
6.	Performance of the Technology with performance indicators	% disease index, disease severity
7.	Final recommendation for micro level situation	Spraying of Spiromesifen 22.9% SC @ 1ml/L of water decreases the thrips and mite incidence in plant
8.	Constraints identified and feedback for research	Use of seed treatment methods and spraying of fungicides during disease development has resulted in more than 14% increase in yield
9.	Process of farmers participation and their reaction	-

Thematic area:

Problem definition: Severe reduction in leaf area along with stunting of whole plants due to severe infestation of sucking pests in chilli.

Technology assessed: TO1: Foliar spray of Spiromesifen 22.9% SC @500 ml/ha

TO2: Seed treatment with Imidachloprid 600FS @ 5ml /kg seed and Foliar spraying of spiromesifen 22.9%SC @ 1 ml/ l of water twice at 30and 45 DAT

Table:

Technology option	No. of trials	Yield component		Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		Mites/leaf	Thrips per leaf					
FP	-	2.87	1.66	12.84	12800	36160	23360	1.8
TO-1	7	0.77	0.97	13.91	13800	41340	27540	1.9
TO-2	7	0.23	0.53	14.63	14500	44520	30020	2.0

YEAR – 2024 (January 2024 to December 2024)

Achievements on technologies assessed and refined

OFT-1

1.	Title of On farm Trial	Assessment of weed management practices in cotton
2.	Problem diagnosed	Low yield due to weed infestation
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	TO1- Application of pyrithiabac sodium 6% + Quizalfop ethyl 4% @ 500ml/ha at 20DAS as post emergence spray TO2- Pre emergence application of pendimethalin @330ml/ha and post emergence application of Quizalofop ethyl @1000ml/ha at 20 DAS
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	CICR 2018
5.	Production system and thematic area	Cotton-fallow, Weed management
6.	Performance of the Technology with performance indicators	Pre emergence application of pendimethalin @330ml/ha and post emergence application of Quizalofop ethyl @1000ml/ha at 20 DAS has WCE of 76% with coton yield of 16.1quintals/ha (50.5% yield increase over control
7.	Final recommendation for micro level situation	Pre emergence application of pendimethalin @330ml/ha and post emergence application of Quizalofop ethyl @1000ml/ha at 20 DAS.
8.	Constraints identified and feedback for research	-
9.	Process of farmers participation and their reaction	Farmers participation of neighbour fields and villages

Thematic area: Crop Production

Problem definition: Low yield in cotton due to weed infestation

Technology assessed: Assessment of weed management practices in cotton

Table:

Technology option	No. of trials	Yield component		% Change in Yield	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		Weed count/ m^2	WCE						
FP	-	7	56%	-	10.7	55500.00	80250.00	24750.00	1:1.4
TO1	7	4	64%	24.3	13.3	58600.00	99750.00	41150.00	1:1.7
TO2	7	2	76%	50.5	16.1	60700.00	120750.00	60050.00	1:1.9

OFT-2

1.	Title of On farm Trial	Assessment of herbicides for weed management practices in transplanted rice
2.	Problem diagnosed	Weed problem in rice causes yield loss
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	TO1- Application of Cyhalofop butyl + Penoxsulam @ 135g/ha at 20DAT (OUAT-2020) TO2- Pre-emergence application of Pretilachlor @500 g/ha fb post emergence application of Chlorimuron ethyl + Metsulfuron methyl @ 4g/ha at 20DAT (OUAT-2015)
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	OUAT 2020 and OUAT 2018
5.	Production system and thematic area	Rice-pulses, Weed management
6.	Performance of the Technology with performance indicators	Application of Cyhalofop butyl + Penoxsulam @ 135g/ha at 20DAT has resulted in WCE of 81% with rice yield of 47.8quintals/ha (21% yield increase over control.
7.	Final recommendation for micro level situation	Application of Cyhalofop butyl + Penoxsulam @ 135g/ha at 20DAT has been recommended for weed control in medium transplanted rice for better weed management and high yield
8.	Constraints identified and feedback for research	-The weed should be sprayed with herbicides succulent stage to have better weed control.
9.	Process of farmers participation and their reaction	Farmers participation of neighbour fields and villages, trainings, farmers field days

Thematic area: Weed Management

Problem definition: Weed problem in rice causes yield loss

Technology assessed: Assessment of herbicides for weed management practices in transplanted rice

Table:

Technology option	No. of trials	Yield component			% Change in Yield	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		Weed count/ m^2	WCE	No. of Ear bearing tillers/m2						
FP	-	13	55%	185	-	39.5	61500.00	122450.00	60950.00	1:1.9
TO1	7	3	81%	278	21	47.8	64000.00	148180.00	84180.00	1:2.3
TO2	7	6	73%	264	9.1	43.1	63200.00	133610.00	70410.00	1:2.1

OFT-3

1.	Title of On farm Trial	Assessment sources and application methods of a liming materials on green gram in acid soil
2.	Problem diagnosed	Low productivity of green gram in acid soils due to poor nutrient availability and ineffective nodulation, resulting from soil acidity and suboptimal liming practices.
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	FP: Use of soil test based fertilizers + FYM @2t/ha+Rhizobium inoculation@1.25kg per 25 kg of seed TO1: FP+soil application of lime @ 0.2LR TO2: FP+seed treatment with lime @4kg/25kg seed TO3: FP+ soil application of dolomite @ 0.2LR
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	FP, TO1, TO2- OUAT, 2016 TO3-BCKV, 1996
5.	Production system and thematic area	Rice-Greengram Soil Amelioration and Nutrient Management in Acid Soil
6.	Performance of the Technology with performance indicators	No. of pods/plant, grain yield, soil pH, OC, soil available N, P, K, B:C Ratio
7.	Final recommendation for micro level situation	The technology option TO2: FP+seed treatment with lime @2g/kg seed showed better yield and soil properties compared to TO1 and TO3.
8.	Constraints identified and feedback for research	-
9.	Process of farmers participation and their reaction	Group meeting and demonstration

Thematic area: Soil Amelioration and Nutrient Management in Acid Soil

Problem definition: Low productivity of green gram in acid soils due to poor nutrient availability and ineffective nodulation, resulting from soil acidity and suboptimal liming practices.

Technology assessed: FP: Use of soil test based fertilizers + FYM @2t/ha+Rhizobium inoculation@1.25kg per 25 kg of seed
TO1: FP+soil application of lime @ 0.2LR
TO2: FP+seed treatment with lime @4kg/25kg seed
TO3: FP+ soil application of dolomite @ 0.2LR

Results:

Technology option	No. of trials	No. of pods/plant	Yield (q/ha)	pH (1:2.5)	OC (%)	Available N (kg/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
FP	7	12.92	5.12	5.29	0.40	257	27718	44370	16652	1.60
TO1	7	13.51	6.00	5.45	0.41	261	29693	52200	22507	1.76
TO2	7	14.33	6.30	5.66	0.43	268	28748	54810	26062	1.91
TO3	7	13.95	5.66	5.64	0.45	272	30694	49242	18548	1.60

OFT-4

1.	Title of On farm Trial	Assessment of dual purpose coriander cultivars in Kharif
2.	Problem diagnosed	More demand and get higher market price
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	TO_1: coriander var. Arka Isha Line sowing of treated coriander seeds with Bavistin @ 1gm/100gm with average spacing of 5-10 cm plant to plant & 30 cm from row to row TO_2: coriander var.. Sadhana Line sowing of treated coriander seeds with Bavistin @ 1gm/100gm with average spacing of 5-10 cm plant to plant & 30 cm from row to row
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	IIHR, Bangalore, Annual report OUAT, 2009-10
5.	Production system and thematic area	Vegetable- Vegetable
6.	Performance of the Technology with performance indicators	Yield of green leaves obtained (kg/m^2), No. of cuttings for green leaf , Yield (q/ha) & economics
7.	Final recommendation for micro level situation	The technology option 1 get higher green leaf cuttings(4 cutting in 90 days) as compared to To2 (3 cutting in 90 days)
8.	Constraints identified and feedback for research	Farmer prefers coriander var. Arka Isha for more green leaf cutting
9.	Process of farmers participation and their reaction	Group discussion and Demonstration

Thematic area: varietal evaluation

Problem definition: More demand and get higher market price
Technology assessed: FP- Coriander var. AK-47

TO_1: coriander var. Arka Isha Line sowing of treated coriander seeds with Bavistin @ 1gm/100gm with average spacing of 5-10 cm plant to plant & 30 cm from row to row

TO_2: coriander var.. Sadhana Line sowing of treated coriander seeds with Bavistin @ 1gm/100gm with average spacing of 5-10 cm plant to plant & 30 cm from row to row

Table:

Technology option	No. of trials	Yield component		% Change in Yield	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of cuttings for green leaf	Yield of green leaves obtained (kg/m^2)						
FP	-	-	2.5	-	53.5	51500	125500	74000	2.4
To1	7	4 cutting in 90 days	2.8	58.5	84.8	79800	210700	130900	2.6
To2	7	3 cutting in 90 days	1.5	48.7	79.6	75900	189900	114000	2.5

OFT-5

1.	Title of On farm Trial	Assessment of Effect on foliar application of micronutrient on growth and yield of Bittergourd
2.	Problem diagnosed	Low yield due to no use of secondary nutrients and micro nutrients
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	TO1: Foliar application of mixture of micronutrients involving Zn, Mo, Cu, Fe and Mn (50 ppm of Mo and 100 ppm each of rest 4 micronutrients). TO2: Combined application of micronutrients B and Zn @ 100 ppm each
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	To1- OUAT, Annual Report, 2014-15, To2- IIVR, Annual Report, 2017-18
5.	Production system and thematic area	Vegetable-Vegetable , Production management
6.	Performance of the Technology with performance indicators	Yield(q/ha), Fruit yield/ Plant(Kg)
7.	Final recommendation for micro level situation	Combined application of micronutrients B and Zn @ 100 ppm each
8.	Constraints identified and feedback for research	Research on micronutrients for other horticulture crop to be taken up
9.	Process of farmers participation and their reaction	Farmer get 24.2 % higher yield in combine application of micronutrient B & Zn @100ppm each

Thematic area:

Problem definition: Low yield due to no use of secondary nutrients and micro nutrients

Technology assessed: TO1: Foliar application of mixture of micronutrients involving Zn, Mo, Cu, Fe and Mn (50 ppm of Mo and 100 ppm each of rest 4 micronutrients).

TO2: Combined application of micronutrients B and Zn @ 100 ppm each

Table:

Technology option	No. of trials	Yield component		% Change in Yield	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		Fruit wt (g)	No. of Fruit/Plant						
FP	-	55.8	29	-	83.2	56600	127960	71360	2.2
To1	7	87.6	45	7.8	89.7	61250	146160	84910	2.3
To2	7	93.4	49	24.2	103.4	59000	147520	88520	2.5

OFT-6

1.	Title of On farm Trial	Assessment of effectiveness of various media for dissemination of agriculture information among youths
2.	Problem diagnosed	Improper selection of visual media for awareness of technologies
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	TO_1: Information access from Mass Media(Television/Radio) TO_2: Information access from Mass media+ Social media (YouTube/Facebook/Instagram) TO_3: Information access from Mass media+ Social media+ Print media
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	SLREC proceeding , OUAT, 2023
5.	Production system and thematic area	-
6.	Performance of the Technology with performance indicators	Understandability , Timeliness , Easy to access, Applicability
7.	Final recommendation for micro level situation	Promote write use of social media in agriculture due to its spread, cost effectiveness and reach especially among tech-savvy younger farmers.,
8.	Constraints identified and feedback for research	-
9.	Process of farmers participation and their reaction	Group meeting and demonstration

Thematic area: ICT

Problem definition: Improper selection of visual media for awareness of technologies

Technology assessed:

Technology option-I (TO_1): Information access from Mass Media(Television/Radio)

Technology option-II (TO_2): Information access from Mass media+ Social media (YouTube/Facebook/Instagram)

Technology option-III (TO_3): Information access from Mass media+ Social media+ Print media

Table:

Technology option	No. of Trials	Understandability		Timeliness		Easy to access		Applicability	
		Mean	Gap %	Mean	Gap %	Mean	Gap %	Mean	Gap %
FP	120	1.77	56	1.82	57.67	1.8	57	2.1	67
TO_1		1.7	53.66	1.74	55	1.83	58	1.96	62.3
TO_2		1.46	45.6	1.34	41.6	1.37	42.6	1.3	40.3
TO_3		1.64	49.3	1.6	50.3	1.51	47.3	1.57	49.3

OFT-7

1.	Title of On farm Trial	Assessment of suitable marketing strategies for better marketing of high value crops
2.	Problem diagnosed	Lack of market intelligence and existing marketing channels from low return from high value crop
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	TO-I: Sell to local traders at the farm gate TO-II: Fixing a banner at suitable place, preferably at main road indicating the place of production, monitoring the special quality of the produce with catchy captions and picture to attract the consumers.
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	-
5.	Production system and thematic area	Vegetable-vegetable cropping system, Agri-marketing strategy
6.	Performance of the Technology with performance indicators	Quantity Produced (No.), Quantity Sold , Price (Rs./Kg)
7.	Final recommendation for micro level situation	Creating a catchy banner for a high impact on marketing chaanels especially when promoting high value crops can significantly enhance visibility and bring substantial benefits to growers
8.	Constraints identified and feedback for research	Bumper production and surplus availability of produce lower the price of the commodity.
9.	Process of farmers participation and their reaction	High value crops are more profitable when marketed to nearby districts through direct or spot marketing

Thematic area: Agri-marketing strategy

Problem definition: Lack of market intelligence and existing marketing channels from low return from high value crop

Technology assessed: Farmers Practice (FP): Sell of produce at local market/haat

Technology option-I (TO-I): Sell to local traders at the farm gate

Technology option-II (TO-II): Fixing a banner at suitable place, preferably at main road indicating the place of production, monitoring

the special quality of the produce with catchy captions and picture to attract the consumers.

Table:

Technology option	No. of Trials	Quantity Produced (No.)	Quantity Sold (No.)	Price (Rs./Kg)	No. of Traders	Feed Back
FP	90	17000	1500	75-80	Local Haat/ Mandi	The decline in local market prices is largely due to the price volatility of high value crops along with potential pricing interventions or modifications.
TO_1			6900	80	Regular Traders	Higher price realization can be attained by directly marketing of high value crops
TO_2			8600	100	Attract new traders/traders of Neighboring district to the farm	Complete crop is been sold by the purchaser/trader with a fixed negotiable price.

OFT-8

1.	Title of On farm Trial	Assessing efficacy of ITK on disease pest management of vegetables available locally
2.	Problem diagnosed	Non standardization of available ITK leading to poor dissemination, hence production of vegetables with higher residual toxicity from chemical pesticides
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	TO-I: ITK to be tested in KVK adopted villages TO-II: ITK to be tested in KVK
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	-
5.	Production system and thematic area	Vegetable-vegetable cropping system, Traditional Knowledge system
6.	Performance of the Technology with performance indicators	Timely Availability/ delivery of technology, suitability of technology, ease in handling, Complexity, cost of technology
7.	Final recommendation for micro level situation	ITK in pest and disease ,management in vegetable should be timely & systematically promoted as a complimentary approach to modern practices.
8.	Constraints identified and feedback for research	
9.	Process of farmers participation and their reaction	Group meeting and demonstration

Thematic area: Traditional Knowledge system

Problem definition: Non standardization of available ITK leading to poor dissemination, hence production of vegetables with higher residual toxicity from chemical pesticides

Technology assessed: Farmers Practice (FP): ITK adopted in a micro area, not tested, documented, but has visible role

Technology option-I (TO-I): ITK to be tested in KVK adopted villages

Technology option-II (TO-II): ITK to be tested in KVK

Technology option	No. of Trials	Timely Availability		Delivery of technology		suitability of technology		Ease in handling		Complexity		Cost of technology	
		Mean	Gap %	Mean	Gap %	Mean	Gap %	Mean	Gap %	Mean	Gap %	Mean	Gap %
FP	90	0.66	67	0.89	45	1.14	43	1.11	44.5	0.97	51.5	1.15	42.5
TO_1		0.92	54	1.1	55.5	1.21	39	1.17	41.5	1.43	28.5	1.2	40
TO_2		1.33	33.5	1.21	39.5	1.31	34.5	1.53	23.5	1.46	27	1.33	33.5

OFT-9

1.	Title of On farm Trial	Assessment of performance of different Ragi threshing machines for small and marginal farmers
2.	Problem diagnosed	Labour intensive, Drudgery prone and time-consuming operation in manual threshing
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	TO1: threshing by OUAT mini ragi thresher TO2: threshing by power operated OUAT ragi thresher cum pearler
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	OUAT, 2020
5.	Production system and thematic area	Rainfed upland production system; Thematic Area: Farm mechanization
6.	Performance of the Technology with performance indicators	TO1: TO2: Threshing efficiency – 92%, Time saved – 60%, Labour requirement reduced by 50%,
7.	Final recommendation for micro level situation	
8.	Constraints identified and feedback for research	Constraints: High initial cost of power operated thresher, need for electricity or fuel source. Feedback: Develop low-cost, solar-powered or manually operated hybrid models to suit remote areas.
9.	Process of farmers participation and their reaction	Farmers participated in farm trials. They appreciated time saving and reduced labour. Positive feedback on reduced drudgery and better grain quality. Expressed interest in group ownership or custom hiring models.

Thematic area: Farm mechanization

Problem definition: Manual ragi threshing is labour-intensive, time-consuming, and causes physical drudgery.

Technology assessed: OUAT mini ragi thresher and Power operated ragi thresher cum pearler

Table:

Technology option	No. of trials	Yield component			Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of effective tillers/hill	No. of spikelet per panicle	Test wt. (100 grain wt.)					
FP	7	6	45	2.4	15.75	27675	35516	7841	1.28
T1	7								
T2	7	7	48	2.6	17.5	23300	39475	16175	1.70