OFT-1

1.	Title of On farm Trial	Assessment on organic and inorganic for controlling rhizome rot in ginger.
2.	Problem diagnosed	low yield of Ginger due to high incidence of rhizome rot
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	FP- Seed treatment with T. viridae @ 500g/ 5 q. of rhizome, Nimastra @ 1 litre/25 l of water. TO1- Seed rhizome treatment with Mancozeb 0.3 % for 30 minutes + soil drenching with Mancozeb + Metalaxyl @ 0.2 % TO2- Seed treatment with *Trichoderma harzianum* along with neem cake @ 1 kg/bed
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	**ICAR-IISR, Calicut**
5.	Production system and thematic area	Ginger-fallow and Disease Management
6.	Performance of the Technology with performance indicators	% of disease incidence (PDI), no. of tiller/plant, yields (q/ha)
7.	Final recommendation for micro level situation	By application of Seed treatment with *Trichoderma harzianum* along with neem cake @ 1 kg/bed,the incidence of rhizome rot in ginger had been significantly deteriorated.
8.	Constraints identified and feedback for research	Due to continuous cultivation of ginger in same piece of land without any adoption crop rotation practices , incidence of rhizome rot is recorded very high (85-90 %). Resistant/ tolerant variety must be released to mitigate rhizome rot incidence as a major production constraint in high value spice crop(Ginger)
9.	Process of farmers participation and their reaction	Farmers participated actively during the process of OFT and due to effectiveness of the To2 viz. Seed treatment with *Trichoderma harzianum* along with neem cake @ 1 kg/bed, rhizome rot incidence deteriorated upto 60-65 %

Thematic area:

Problem definition: low yield of ginger due to high incidence of rhizome rot

Technology assessed:

FP- Seed treatment with T. viridae @ 500g/ 5 q. of rhizome, Nimastra @ 1 litre/25 l of water.
TO1- Seed rhizome treatment with Mancozeb 0.3 % for 30 minutes + soil drenching with Mancozeb + Metalaxyl @ 0.2 %
TO2- Seed treatment with *Trichoderma harzianum* along with neem cake @ 1 kg/bed

Table:

	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
		Plant height (cm)	No. of tillers/ plant	Weight of rhizome per plant						
FP	7	67.2	15.2	272.03	11.1	302.26	167625	362712	2,74,068	2.16
TO_1	7	72.5	20.1	299.5	4.1	332.8	171990	399360	3,16,908	2.32
TO_2	7	73.7	24.2	304.8	2.5	338.7	172575	406440	3,26,700	2.35

Results: By application of Seed treatment with *Trichoderma harzianum* along with neem cake @ 1 kg/bed,the incidence of rhizome rot in ginger had been significantly deteriorated.

OFT-2

1.	Title of On farm Trial	Assessment on biofortified sweet potato varieties for nutritional security
2.	Problem diagnosed	Malnutrition among the tribal farmers
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	**Farmers Practice (FP):** Local variety without any biofortification **Technology option-I (TO-I): Bhu Sona** (High β–carotene (14.0 mg/100gm) content as compared to 2 – 3mg/100gm β–carotene in popular varieties, tuber yield 19.8 t/ha, dry matter : 27 - 29%, starch : 20%, total sugar : 2 - 2.4 %) **Technology option-II (TO-II): Bhu Krishna** (High anthocyanin (90mg/100gm) , tuber yield - 18 t/ha, dry matter - 24.5 – 25.5%, starch - 19.5%, total sugar : 1.9 – 2.2% and salinity stress tolerant)
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	ICAR-IIHR Bangalore
5.	Production system and thematic area	Horticulture
6.	Performance of the Technology with performance indicators	Tuber yield (t/ha), colour of the flesh, length of the tuber (cm), circumference of the tuber
7.	Final recommendation for micro level situation	The variety Bhu Sona is greatly preferred by the farmer due to its orange flesh and more consumer preference during marketing
8.	Constraints identified and feedback for research	Planting materials is not plently available as per the demand and is must be biofertified with iron and zinc to alleviate the malnutrition of tribal farmers
9.	Process of farmers participation and their reaction	The variety Bhu sona recorded higher yield over farmer practice and enriched with β–carotene and consumer preference is high in comparision to Bhu krishna

Thematic area: Varietal Evaluation

Problem definition: Malnutrition among the tribal farmers

FP: Local variety without any biofortification

Technology assessed: **TO1- Bhu Sona** (High β–carotene (14.0 mg/100gm) content as compared to 2 – 3mg/100gm β–carotene in popular varieties, tuber yield 19.8 t/ha, dry matter : 27 - 29%, starch : 20%, total sugar : 2 - 2.4 %)

TO2- Bhu Krishna (High anthocyanin (90mg/100gm) , tuber yield - 18 t/ha, dry matter - 24.5 – 25.5%, starch - 19.5%, total sugar : 1.9 – 2.2% and salinity stress tolerant)

Table:

Technology option	No. of trials	Yield component			Avg. tuber yield/plant (kg)	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		Vine length at 60 DAP (cm)	Length of tuber (cm)	No. of tuber/plant (No.)						
FP		139.65	17.46	2.45	258.95	135.4	36000	1,35,400	99,400	3.76
TO_1	7	213.5	15.98	2.44	262.7	148.7	38000	1,48,700	1,10,700	3.91
TO_2	7	198.7	13.85	3.22	252.8	144.9	38000	1,44,900	1,06,900	3.81

Results: The variety Bhu Sona is greatly preferred by the farmer due to its orange flesh and more consumer preference during marketing

OFT-3

1.	Title of On Farm Trial	ASSESSMENT OF CHEMICAL WEED MANAGEMENT IN MAIZE
2.	Problem diagnosed	Low yield due to high incidence of weed
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	Assessed
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	OUAT,2020-21
5.	Production system and thematic area	Irrigated upland & weed management
6.	Performance of the Technology with performance indicators	Grain yield(56.98q/ha) was recorded 22.5% higher yield from FP(46.51q/ha) and TO1 grain yield (52.01qtl/ha) recorded 11.8% higher yield from FP .Significantly Higher Nos of Grains/row(29.4), Rows/cob(14.7) was recorded in TO2 from FP i.e 26.5 & 12.6 respectively. In TO1 Grains/row (27.8), Rows/cob(14.2) was recorded at par with TO2 and FP
7.	Final recommendation for micro level situation	application of Tembotrione 100g/ha + Atrazine 500g/ha at 20 DAS+ one hand weeding at 40DAS was found superior from application of Atrazine @1kg a.i/ha + 1 hand weeding (HW) at 40 DAS and One hand weeding at 20 DAS. So the technology can be recommended to Maize growing farmers.
8.	Constraints identified and feedback for research	-
9.	Process of farmers participation and their reaction	Farmers appreciated the technology

Thematic area:

Problem definition: Low yield due to high incidence of weed

FP: One hand weeding at 20 DAS

Technology assessed:

TO1: Pre emergence application of Atrazine @1kg a.i/ha at 2nd DAS **+ 1 hand weeding (HW) at 40 DAS**

TO2: Post emergence application of Tembotrione 100g/ha + Atrazine 500g/ha at 20 DAS+ one hand weeding at 40DAS

Table:

Technology option	No of trials	Dry weight of weeds(g/m2)				Rows /cob	Grains/ row	Yield (q/ha)	(%) change in yield	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ ha)	BC ratio
		At 30 DAS	At 60 DAS	WCE(%) At 30 DAS	WCE (%) At 60 DAS								
FP	**7**	**1.85**	**3.48**	**74.4**	**66.7**	**12.6**	**26.5**	**46.51**		**53500**	**86967**	**33467**	**1.63**
TO_1	**7**	**1.51**	**2.72**	**79.1**	**74.0**	**14.2**	**27.8**	**52.01**	**11.8**	**54140**	**97253**	**43113**	**1.80**
TO_2	**7**	**1.25**	**2.24**	**82.7**	**78.6**	**14.7**	**29.4**	**56.98**	**22.5**	**55170**	**106546**	**51376**	**1.93**
control		**7.23**	**10.46**										
CD (0.05)		**0.59**	**1.23**	**5.1**	**4.5(S)**	**2.1**	**2.03**	**5.58**					

Results: In TO2 18.4% increase in B:C over FP and In TO1 10.4% increase in B:C ratio over FP. In TO2 additional Net return of Rs17909/ha over FP and In TO1 additional Net return of Rs 9646/ over FP

OFT-4

1.	Title of On Farm Trial	**ASSESSMENT OF AROMATIC RICE VARIETIES**
2.	Problem diagnosed	Low yield due to local aromatic rice
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	Assessed
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	NRRI, 2008
5.	Production system and thematic area	Rainfed medium Land and Varietal Evaluation
6.	Performance of the Technology with performance indicators	**Significantly Higher Nos of EBT /hill(8.15),Grains/panicle(123.4) was recorded in TO2 from FP i.e 7.2 & 119.5 respectively. In TO1 Nos of EBT /hill(18.5),Grains/panicle(122.6) was recorded at par with TO2 and FP. grain yield(46.77q/ha) was recorded 19.45% higher yield from FP(39.15q/ha) and TO1 grain yield (45.93qtl/ha) recorded 17.32% higher yield from FP**
7.	Final recommendation for micro level situation	**Nua Dhusara was found superior from Nua Kalajeera and local Kalajeera in Yield point of view in 1st year.**
8.	Constraints identified and feedback for research	
9.	Process of farmers participation and their reaction	Farmers appreciated the technology

Thematic area: Varietal Evaluation

Problem definition: Low yield due to local aromatic rice

FP-Local var. Kala Jeera (150-160 days)

Technology assessed: **TO1- Aromatic rice var. Nua Kalajeera, (145 days), Late maturing (145 days), plant height (140 cm), photosensitive variety, short bold black husked scented grain, average productivity of 3.0 t/ha, resistance against rice tungro virus (RTV), moderate resistant to leaf blast and sheath rot.**

TO2- Aromatic rice var. Nua Dhusara, Late maturing (145 day) plant height (142 cm) , photosensitive popular variety, short bold grains, average productivity of 3.0 t/ha, resistant against sheath rot, neck blast and RTV, moderately resistant against gall midge.

Table:

Technology option	No of trial	Yield attributes			Yield (q/ha)	% change in yield	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of EBT/ hill	Grains / Panicle (No.)	1000 grain wt (g)						
FP	**7**	**7.2**	**119.5**	**18.2**	**39.15**		**42500**	**79862**	**37362**	**1.88**
TO1	**7**	**8.1**	**122.6**	**18.5**	**45.93**	**17.32**	**42500**	**93695**	**51195**	**2.20**
TO2	**7**	**8.15**	**123.4**	**18.6**	**46.77**	**19.45**	**42500**	**95401**	**52901**	**2.24**
CD(0.05)		**0.6**	**7.1**	**0.5**	**6.13**					

Results: **Nua Dhusara was found superior from Nua Kalajeera and local Kalajeera in Yield point of view**

OFT-5

1.	Title of On farm Trial	Assessment on arka microbial consortium (amc) In black pepper
2.	Problem diagnosed	Yellowing of leaves, spike dropping and death of vines
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	Assessed
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	ICAR- Krishi Vigyan Kendra, Gonikoppal, Kodagu, 2018
5.	Production system and thematic area	Agroforestry
6.	Performance of the Technology with performance indicators	Leaf Yellowing (%), Leaf infection (%), Collar infection (%), wilted vine(%)
7.	Final recommendation for micro level situation	Use of AMC, decreases the yellowing of vive as well as yield increases
8.	Constraints identified and feedback for research	
9.	Process of farmers participation and their reaction	

Thematic area: Forestry

Problem definition: Yellowing of leaves, spike dropping and death of vines

Technology assessed: FP: Application of FYM @ 500g/plant

TO1: Spraying with 1% Bordeaux mixture and drenching of Metalaxyl + Mancozeb @ 2g/lit

TO2: Spraying of Potassium Phosphonate @ 3ml/l and drenching of pepper vines by Arka Microbial Consortium @ 20g/l thrice in a year

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
		Percent leaf yellowing	Percent leaf infection	Percent collar infection	Percent wilted vines					
FP	7	23.90	40.10	26.27	26.22	Trail on progress				
TO1	7	18.2	12.4	13.9	13.9					
TO2	7	7.9	5.4	4.1	1.2					

OFT-6

1.	Title of On farm Trial	ASSESSMENT ON TREE SPECIES USED AS STANDARDS FOR BLACK PEPPER CULTIVATION
2.	Problem diagnosed	Low yield of drupe due to selection of improper standards
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	Assessed
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	KAU, 2020
5.	Production system and thematic area	Agroforestry
6.	Performance of the Technology with performance indicators	Number leaves/vine, Height of Vine (cm), Transmittance (%)
7.	Final recommendation for micro level situation	Trail on progress…….
8.	Constraints identified and feedback for research	
9.	Process of farmers participation and their reaction	

Thematic area: Agroforestry

Problem definition: Low yield of drupe due to selection of improper standards

Technology assessed: FP: Silver Oak as standard for black pepper

TO1: *Acacia mangium as standard for black pepper*

TO2: *Mangifera indica* as standard for black pepper

Table:

Technology option	No. of trials	Number of Leaves (DAI)				Height of Vine (m) (DAI)				Light transmission ratio (%)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		30	60	120	% change	30	60	120	% change					
FP	7	23	25	27	17.3	1.03	1.05	1.12	8.73	39.02	Trail on Progress			
TO1	7	18	19	23	27.7	1.18	1.33	1.38	16.9	34.39				
TO2	7	29	33	37	27.6	1.23	1.28	1.35	9.75	26.89				

Please provide all the OFTs in same format

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