OFT-1 (Horticulture) (Rabi 2023-24)

- **Thematic area: Disease Management**
- **Problem definition/Name of OFT: Wilting in tomato plants, Plant growth retardation**

1.	Title of On farm Trial	Assessment of microbial consortia against wilting in solanaceous crops (Tomato).
2.	Problem diagnosed	Wilting in tomato plants, Plant growth retardation
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	Assessed
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	IIHR, Bengaluru
5.	Production system and thematic area	Disease management
6.	Treatment	FP :Chemical pesticides (Carbendazim). T. O-1: IIHR Consortia (Arka microbial consortia). T.O-2: NRC Litchi consortia.
7.	Performance of the Technology with performance indicators	
8.	Final recommendation for micro level situation	It shows that T.O.1- IIHR Consortia (Arka microbial consortia) net return 142500 and BC ratio 3.31 is better than other two treatments F.P.- Chemical pesticides (Carbendazim) net return 110400 and BC ratio 2.87 & T.O-2: NRC Litchi consortia net return 134700 and BC ratio 3.19. It is found that T.O.-1 and T.O-2 is significant par but there is significant difference in farmers practice from T.O.-1 and T.O-2.
9.	Constraints identified and feedback for research	Consortia is not available easily for farmers

10	Process of farmers participation and their reaction	Random selection

Table-1: Initial plant population in nursery (per 100 seed)

Technology option	10 days	15 days	20 days	30 days
FP :Chemical pesticides (Carbendazim).	91	86	82	80
T. O-1: IIHR Consortia (Arka microbial consortia).	95	93	91	90
T.O-2: NRC Litchi consortia.	93	90	88	87

Initial plant population in nursery observed in 100 seed was recorded after 10 days, 15 days, 20 days and 30 days and highest plant population was found in T.O.-1 : IIHR Consortia.

Table-2: Initial plant population (100 Sqm.=210 plants)

Technology option	15 days	30 days
FP :Chemical pesticides (Carbendazim).	200	190
T. O-1: IIHR Consortia (Arka microbial consortia).	206	202
T.O-2: NRC Litchi consortia.	204	196

First wilting incidence was found after 8 days of transplanting.

Table-3: Wilting incidence in plant population (Days after transplanting)

Technology option	15 days	30 days	45 days	60 days	75 days
FP :Chemical pesticides (Carbendazim).	200	190	180	160	150
T. O-1: IIHR Consortia (Arka microbial consortia).	206	202	196	188	194
T.O-2: NRC Litchi consortia.	204	196	190	183	180

No. of plant population found highest in T.O.-1

Table-4: Wilting percentage

Technology option	15 days	30 days	45 days	60 days	75 days
FP :Chemical pesticides (Carbendazim).	5.8	9.6	14.3	23.82	28.61
T. O-1: IIHR Consortia (Arka microbial consortia).	2.0	3.4	6.7	10.5	12.4
T.O-2: NRC Litchi consortia.	2.9	6.7	9.6	12.8	14.3

Wilting percentage observed after 15 days, 30 days, 45 days, 60 days and 75 days and highest wilting percentage was found in farmers practices i.e. Chemical pesticides (Carbendazim).

B. Results with Table and good quality photographs in jpg.

Thematic area	**Technology options with detailed treatments**	**Area (ha in crop & Fodder)/ Nos (in livestock)**		**Yield**	**Cost of cultivation (Rs./ha)**	**Gross return (Rs/ha)**	**Net return (Rs./ha)**	**BC ratio**
		Proposed	**Actual**	**(q/ha)**				

Disease management	FP :Chemical pesticides (Carbendazim).			282	58800	169200	110400	2.87
	T. O-1: IIHR Consortia (Arka microbial consortia).			340	61500	204000	142500	3.31
	T.O-2: NRC Litchi consortia.			327	61500	196200	134700	3.19

Please provide all the OFTs in same format Photographs in jpg. (Attach separately also with captions)

CD at 5% level of significance- 20.12 and CV- 7.74%.

Results: It shows that T.O.1 IIHR Consortia had better performance than other two options in terms of wilting after 75 days (12.4%) yield (340 q/ha) & BC ratio (3.31), however performance of NRC consortia TO2 was at par (14.3 %, 327 q/ha & 3.19). FP (28.61 %, 282 q/ha & 2.87).

OFT-2 (Horticulture) (Zaid 2022-23)

1.	**Title of On farm Trial**	**Assessment of fruit bagging in guava for quality improvement.**
2.	Problem diagnosed	Guava quality decreased due to insect & fungal infestation
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	Assessed
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	University of Agriculture Science, Dharwad
5.	Production system and thematic area	Rice-Wheat / Disease management
6.	Performance of the Technology with performance indicators	FP- No bagging T.O.1- Perforated polythene bag cover T.O.2- Paper bagging

7.	Final recommendation for micro level situation	In T.O.1 – disease incidence 7.4%, fruit fly damage 3.93%, physical damage 7.69% and BC ratio is observed 8.91. In T.O.2 disease incidence 7.6%, fruit fly damage 5.71%, physical damage 7.88% and BC ratio is observed 4.73 whereas no bagging disease incidence 92.4%, fruit fly damage 96.02%, and physical damage 93.94% and BC ratio is observed 3.9. It is observed that T.O.1 Perforated polythene bag bag cover is better option for bagging of fruit bagging for quality improvement.
8.	Constraints identified and feedback for research	Bagging is not a common practice for guava fruit
9.	Process of farmers participation and their reaction	Random selection

Thematic area: Disease Management

Problem definition: Guava quality decreased due to insect & fungal infestation.

Technology assessed: Assessed

Table -1: Diseases infestation percentage

Technology Option	**Fruit Fly damaged %**	**Diseases incidence%**	**Physical damaged (%)**	**Fruit Wt. loss%**
Farmers Practice: - No bagging	96.02	92.4	93.94	4.18
TO1 :Perforated polythene bag	3.93	7.6	7.69	3.76

TO2 :Paper bagging	5.71	7.6	7.88	2.72

Table-2: Yield and Economics

Treatment	**Yield (Kg/Acre)**	**Cost of Cultivation (Rs)**	**Gross Income (Rs)**	**Net Income (Rs)**	**BC Ratio**
Farmers Practice (FP- No bagging	2572.6	13070	51456	38386	3.9
TO1 :Perforated polythene bag	6444.8	21686	193344	171658	8.91
TO2 :Paper bagging	6444.8	40856	193344	160488	4.73
CD (P=0.05)	0.63	29.26	42.38	34.37	ND

Result: In T.O.1 – disease incidence 7.4%, fruit fly damage 3.93%, physical damage 7.69% and BC ratio is observed 8.91. In T.O.2 disease incidence 7.6%, fruit fly damage 5.71%, physical damage 7.88% and BC ratio is observed 4.73 whereas no bagging disease incidence 92.4%, fruit fly damage 96.02%, physical damage 93.94% and BC ratio is observed 3.9.
It is observed that T.O.1 Perforated polythene bag bag cover is better option for bagging of fruit bagging for quality improvement.

OFT-3 (Soil Science) (Rabi 2022-23)

- **Thematic area: INM**
- **Problem definition/Name of OFT:** Low production

1.	Title of On farm Trial (OFT)	**Improvement of Nitrogen use efficiency in wheat**
2.	Problem diagnosed	Excessive use of chemical fertilizer and Spiraling price of urea leads to increase in cost of cultivation

3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	Assessed
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	OFT Finalization workshop 2022-23
5.	Production system and thematic area	Paddy-Wheat
6.	Treatment Option	**Farmer Practice**: (120:60:40) Kg/ha **Technological Option 1**: 50% of RDN & 100% PK + nano urea @4ml/lt. water (Single spray at 35 DAS). **Technological Option 2**: 50% of RDN & 100% PK + 2 sprays of Nano Urea at (35 DAS) and (60-65DAS) @ 4 ml/lt water.
7.	Performance of the Technology with performance indicators	Plot size (10x10 m_2)/ in each tech. option, soil data before and after (pH, EC, OC, NPK,), Yield data, No. of effective tillers/ m_2,1000 grain wt., Panicle wt., Straw yield and Economics.
8.	Final recommendation for micro level situation	The physico-chemical analysis of experimental soil revealed no significant differences in pH, OC, and K content among treatments, but variations in ECe, N, and P were observed. Additionally, the impact of different treatments
9.	Constraints identified and feedback for research	Farmers is used excessive used of fertilizer without any recommendation
10.	Process of farmers participation and their reaction	Kisan goshthi, Training

Table 1. Physico-chemical Properties of experimental soil (Treatment wise):

Treatments	**Parameters**											
	pH (1:2.5)		**ECe (d Sm^{-1})**		**OC (%)**		**N**		**P**		**K**	
							(Kg $ha^{-1)}$					
	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
FP	6.48	6.52	0.13	0.14	0.43	0.43	179.32	179.32	30.12	29.67	187.54	282.93
TO_1	6.48	6.44	0.13	0.16	0.43	0.42	179.32	172.15	30.12	28.53	187.54	245.73

TO_2	6.48	6.44	0.13	0.18	0.43	0.43	179.32	175.01	30.12	26.44	187.54	240.55
CD (P=0.005)	NS	0.02	NS	0.01	NS	0.02	NS	1.08	NS	0.86	NS	2.48

Table 2: Effect of different treatment on performance of wheat

Treatment	Plant Height (cm)				Tillers (m2)				Dry matter accumulation (g plant-1)	Ear length (cm)	Number of grains ear head-1	Test weight (g)	Grain yield (q ha-1)	Straw yield (q ha-1)	Biological yield (q ha-1)	HI (%)
	30 DAS	60 DAS	90 DAS	At harvesting stage	30 DAS	60 DAS	90 DAS	At harvesting stage								
FP	31.12	69.25	90.37	86.24	182.25	299.35	375.45	342.15	21.28	9.20	25.22	38.45	40.48	33.18	73.66	0.45
TO_1	33.85	71.25	91.38	89.21	202.55	310.25	380.50	352.25	22.48	9.68	25.95	39.50	40.44	36.11	76.55	0.47
TO2	36.28	76.27	94.20	91.87	220.45	332.82	392.10	372.40	23.28	10.06	26.85	41.25	46.20	41.25	87.44	0.47
CD (P=0.005)	1.05	2.02	1.21	0.87	3.02	3.44	4.25	4.12	0.02	0.85	0.02	0.01	1.03	0.04	0.11	NS

Table 3: Effect of different treatment on economics of wheat

Technology options with Treatment	Cost of Cultivation (Rs)	Gross Income (Rs)	Net Income (Rs)	BC Ratio
Farmer Practice: RDF (100:40:20) Kg/ha	31500	74552	43052	2.37
Technological Option 1: 50% of RDN & 100% PK + nano urea @4ml/lt. water (Single spray at 35 DAS).	31110	80770	49660	2.60
Technological Option 2: 50% of RDN & 100% PK + 2 sprays of Nano Urea at (35 DAS) and (60-65DAS) @ 4 ml/lt water.	31450	92266	60816	2.93
CD (P=0.005)	8.52	7.77	5.26	0.01

Result: The physico-chemical analysis of experimental soil revealed no significant differences in pH, OC, and K content among treatments, but variations in ECe, N, and P were observed. Additionally, the impact of different treatments

OFT-4 (Soil Science) (Rabi 2022-23)

- **Thematic area: INM**
- **Problem definition/Name of OFT:** No uses of liquid bio-fertilizers and deficit of soil properties

1.	Title of On farm Trial (OFT)	**Integration of fertilizer in different form on yield of lentil**
2.	Problem diagnosed	No uses of liquid bio-fertilizers and deficit of soil properties
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	Assessed
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	OFT Finalization workshop 2022-23
5.	Production system and thematic area	Paddy-Wheat/Pulse
6.	Treatment Option	**Farmer Practice**: Seed Treatment (Carbendazim)+ RDF (20:40:0) **Technological Option 1**:50% of RDF +WS 18:18:18 @5 gm./ltr water (Single spray at pre flowering stage) **Technological Option 2**: Seed treatment with PSB + Rhizobium, 50% of RDF + WS 18:18:18 @5 gm. /ltr water (Single spray at pre flowering stage) (RDF, concerned SAU/ICAR recommendation)
7.	Performance of the Technology with performance indicators	Plot size (10x10 m^2)/ in each tech. option, soil data before and after (pH, EC, OC, NPK,), Yield data, No. of effective tillers/ m^2,1000 grain wt., Panicle wt., Straw yield and Economics.
8.	Final recommendation for micro level situation	Technology Option TO2 is better than other two option.
9.	Constraints identified and feedback for research	Farmers is not used irrigation in lentil as a common practice

10.	Process of farmers participation and their reaction	Kisan goshthi, Training

Table 1. Physico-chemical Properties of experimental soil (Treatment wise):

Treatments	Parameters											
	pH (1:2.5)		ECe (d Sm^{-1})		OC (%)		N		P		K	
							(Kg $ha^{-1)}$					
	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
FP	6.58	6.56	0.12	0.11	0.48	0.44	216.27	198.25	33.15	33.03	185.97	181.26
TO_1	6.58	6.59	0.12	0.14	0.48	0.50	216.27	225.28	33.15	32.34	185.97	197.03
TO_2	6.58	6.60	0.12	0.19	0.48	0.51	216.27	225.79	33.15	33.46	185.97	198.37
CD (P=0.05)	NS	0.03	NS	0.01	NS	0.05	NS	4.02	NS	0.25	NS	4.85

Table 2: Effect of different treatment on performance of lentil

Technology options with Treatment	Plant Height (cm)	Primary branches / Plant	pods/ plant	1000 seed weight (g)	yield (q ha^{-1})	stalk yield (q ha^{-1})	biological yield (q ha^{-1})	harvest index (%)
Farmers Practice (0:30:0 :: N:P:K with no uses of liquid bio-fertilizers)	25.07	1.97	25.02	21.10	10.05	35.36	46.26	0.28
TO1 : RDF [20:50:0] (80% of N) + 1.0 l/ha Liquid Rhizobium	32.37	2.32	33.38	21.58	11.35	42.58	55.91	0.27
TO2 : RDF [20:50:0] (80% of N+ 80 % P) + 1.0 l /ha Liquid Rhizobium + 1.0 l/ha Liquid PSB)	32.73	2.85	39.37	21.59	12.71	46.02	59.85	0.28
CD (P=0.05)	0.29	0.06	0.24	0.17	0.83	1.09	1.14	0.03

Table 3: Effect of different treatment on economics of lentil

Treatment	Cost of Cultivation (Rs)	Gross Income (Rs)	Net Income (Rs)	BC Ratio
Farmers Practice (0:30:0 :: N:P:K with no uses of liquid bio-fertilizers)	29400	55680	26280	1.89
TO1 : RDF [20:50:0] (80% of N) + 1.0 l/ha Liquid Rhizobium	30150	66480	36330	2.20
TO2 : RDF [20:50:0] (80% of N+ 80 % P) + 1.0 l /ha Liquid Rhizobium + 1.0 l/ha Liquid PSB)	30500	74160	43660	2.43
CD (P=0.05)	59.34	72.38	64.37	ND

Result: The experiment assessed various treatments' impact on lentil performance and economic outcomes. Technological Option 2 (TO2) exhibited substantial improvements in plant height, primary branches, pods per plant, and overall seed yield compared to Farmers Practice and Technological Option 1 (TO1). The addition of Liquid PSB to TO2 demonstrated positive effects, emphasizing the benefits of combining bio-fertilizers. Economic analysis revealed that both TO1 and TO2 outperformed Farmers Practice, with TO2, incorporating Liquid PSB, demonstrating the highest gross income, net income, and benefit-cost ratio. Statistical significance, as indicated by Critical Difference (CD) values at 5 per cent, underlined the observed differences in key economic parameters, reinforcing the economic advantages of the technological interventions. The CD at 5 % indicate that, except for ECe and P content in TO2, there were no significant differences in the measured parameters among the treatments.

OFT-5 (Soil Science) (Kharif – 2023)

- **Thematic area: INM**
- **Problem definition/Name of OFT:** Excessive use of chemical fertilizer and Spiraling price of urea leads to increase in cost of cultivation

1.	Title of On farm Trial (OFT)	**Improvement of Nitrogen use efficiency in rice.**
2.	Problem diagnosed	Excessive use of chemical fertilizer and Spiraling price of urea leads to increase in cost of cultivation
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	Assessed
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	OFT Finalization workshop 2022-23
5.	Production system and thematic area	Paddy-Wheat
6.	Treatment Option	**Farmer Practice**: RDF (100:40:20) Kg/ha **Technological Option 1**:50% of RDN & 100% PK + nano urea @4ml/lt. water (Single spray at pre flowering stage). **Technological Option 2**: 50% of RDN & 100% PK + 2 sprays of Nano Urea at (25 to 30 days) and (60-65 days) @ 4 ml/lt water.
7.	Performance of the Technology with performance indicators	Plot size (10 x10 m^2)/ in each tech. option, soil data before and after (pH, EC, OC, NPK,), Yield data, No. of effective tillers/m_2,1000 grain weight, Panicle weight, Grain and Straw yield and Economics.
8.	Final recommendation for micro level situation	It is evident from the table that TO_2 exhibits the highest grain yield (54.01 qt/ha), followed by TO1 (50.20 qt/ha), as compared to Farmer Practices (FP) with a yield of 49.76 qt/ha. Regarding straw yield, FP achieved the highest yield (60.71 qt/ha), followed by TO_2 (60.49 qt/ha) and TO_1 (56.22 qt/ha).
9.	Constraints identified and feedback for research	Farmers are not used nano urea in Paddy Crop.
10.	Process of farmers participation and their reaction	Kisan gosthi, Training

Table 1. Physico-chemical Properties of experimental soil (Treatment wise):

Treatments	Parameters											
	pH (1:2.5)		ECe (d Sm^{-1})		OC (%)		N		P		K	
							(Kg ha^{-1})					
	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
FP	6.71	6.73	0.21	0.30	0.51	0.51	214.53	216.88	37.63	37.13	167.60	174.06
TO_1	6.71	6.70	0.21	0.35	0.51	0.52	214.53	208.27	37.63	38.06	167.60	185.25
TO_2	6.71	6.70	0.21	0.33	0.51	0.52	214.53	211.35	37.63	38.45	167.60	188.50
CD (P=0.05)	NS	NS	NS	NS	NS	NS	NS	1.02	NS	0.03	NS	2.46

Table 2: Effect of nano urea fertilization on growth attributes of rice

Treatments	Plant height (cm)	No of Tiller Per Plant	Ear bearing Tillers per plant	Panicle length (cm)	Filled grains /panicle	Effective tillers (m^{-2})	Test weight (g)	Lodging (%)
FP	135.05	16.85	14.58	24.05	149.25	208.11	16.02	8.02
TO_1	128.36	13.65	12.37	24.33	152.38	204.35	16.12	02.03
TO_2	130.25	13.25	12.05	25.25	162.15	206.25	16.25	02.81
CD (p=0.05)	1.14	0.25	0.03	0.01	0.28	1.37	0.06	0.07

Table 3: Effect of **nano urea fertilization** on yield of rice

Treatments	Grain yield (qt ha^{-1})	Straw yield (qt ha^{-1})	Harvest Index (%)	Cost of cultivation (Rs ha^{-1})	Gross Return (Rs ha^{-1})	Net Return (Rs ha^{-1})	BC ratio
FP	49.76	60.71	0.45	114545	39600	74945	2.89
TO_1	50.20	56.22	0.47	115049	39300	75749	2.93
TO_2	54.01	60.49	0.47	123794	39700	84094	3.12

CD (p=0.05)	1.22	0.35	NS	4.28	11.65	14.31	0.05

Result: It is evident from the table that TO_2 exhibits the highest grain yield (54.01 qt/ha), followed by TO1 (50.20 qt/ha), as compared to Farmer Practices (FP) with a yield of 49.76 qt/ha. Regarding straw yield, FP achieved the highest yield (60.71 qt/ha), followed by TO_2 (60.49 qt/ha) and TO_1 (56.22 qt/ha). The maximum cost of cultivation was observed with FP, followed by TO_2 and TO_1. Both gross return and net return were highest for TO_2, followed by TO_1 and FP. The benefit-cost ratio was also highest for TO_2 (3.12), indicating superior economic feasibility, likely attributed to lower lodging and well-filled grains in panicles.

It is clear that treatment TO_2 generally performed well across multiple parameters, showing higher grain yield, straw yield, net return, and benefit-cost ratio compared to other treatments. The significance levels provided by the critical difference (CD) test indicate where differences between treatments are statistically significant.

OFT-6 (Fishery Science)

- **Thematic area: Intensive Fish Culture**
- **Problem definition/Name of OFT:** High feed cost in intensive farming of pangas culture

1.	Title of On farm Trial (OFT)	Assessment of different feeding strategies of alternate daily ration in Pangassius fish farming.
2.	Problem diagnosed	High feed cost in intensive farming of pangas culture
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	Assessed
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	CIFA, Bhubneswar
5.	Production system and thematic area	Intensive fish culture
6.	Treatment Options	**F.P:-** Daily feeding @ 5% body weight with 30% protein feed (formulated). **T.O-1:-** Alternate feeding schedule (5H/ 1L, 5 days high ration @ 5% body weight followed by 1 day low ration @ 2.5% body weight with 30% protein). **T.O-2:-**Alternate feeding schedule (6H/ 1L, 6 days high ration @ 5% body weight followed by 1 day low ration @ 2.5% body weight with 30% protein).
7.	Performance of the Technology with performance indicators	Yield, BC ratio, Gross cost, Gross profit, Net profit
8.	Final recommendation for micro level situation	Feeding of fish can be reduced to half on every 7^{th} day without affecting their growth
9.	Constraints identified and feedback for research	Labour cost
10.	Process of farmers participation and their reaction	Random selection

B. Results with Table and good quality photographs in jpg.

In spite of reducing the feed quantity periodically, there was no significant effect on gained body weight. Both feeding schedule (reduction at 6th day as in TO2 & at 7th day as in TO3) in 16ubstantia fish farming outperform the FP in terms of B:C (TO2:1.70 & TO3:1.71 as compared to FP:1.59). The reduced feeding schedule gave 16ubstantial net return of Rs. 5.36 lakh (TO2) & 5.34 lakh (TO2) per acre as compared to Rs. 4.83 lakh in FP.

Treatments	**Yield (q/acre)**	**Cost of Cultivation (Rs acre^{-1})**	**Gross Income (Rs acre^{-1})**	**Net Income (Rs acre^{-1})**	**B C ratio**
TO1 (FP)	123.14	810000	1293025	483024.6	1.59
TO_2	122.95	755000	1291032	536031.7	1.70
TO_3	122.54	752000	1286714	534714.1	1.71

OFT-7 (Fishery Science)

- **Thematic area:** Intensive fish culture
- **Problem definition/Name of OFT:** High feed cost in intensive farming of pangas culture
-

1.	Title of On farm Trial (OFT)	Assessment of growth and survivality of Pangassius fish species through feed probiotic addition in formulated feed.
2.	Problem diagnosed	High feed cost in intensive farming of pangas culture
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	Assessed
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	CIFA, Bhubneswar
5.	Production system and thematic area	Intensive fish culture
6.	Treatment Options	Formulated fish feeding daily @ 2-3 % body weight of stocked fish without any feed probiotic TO1: Formulated fish feeding @ 2-3 % body weight of stocked fish + 0.2 % probiotic inclusion TO2: Formulated fish feeding @ 2-3 % body weight of stocked fish + 0.5 % probiotic inclusion.
6.	Performance of the Technology with performance indicators	Yield, BC ratio, Gross cost, Gross profit, Net profit
7.	Final recommendation for micro level situation	Probiotic inclusion @ 0.5% is best for fish feeding in Pangas culture.
8.	Constraints identified and feedback for research	Mixing feed probiotic each time in feed
9.	Process of farmers participation and their reaction	Random selection

B. Results with Table and good quality photographs in jpg.

The inclusion of probiotic in feed @ 0.5% (TO2) shows best BC ratio (1.79). The fish yield is found to be 116.7 qt/acre in TO2, 99.24 qt/acre in TO1 and 76.67 qt/acre in the farmers practice.

Treatments	weight gm (I0 30 days)	weight gm (If)	weight gain gm (150 days)	Yield (kg acre^{-1})
FP	11.8	386.2	374.4	7667.71
TO_1	11.8	496.4	484.6	9924.60
TO_2	11.8	582.0	570.2	11677.70

Treatments	Cost of Cultivation (Rs acre^{-1})	Gross Income (Rs acre^{-1})	Net Income (Rs acre^{-1})	B C ratio
FP	6,80,000	8,81,786.65	2,01,786.65	1.29
TO_1	7,60,000	11,41,329.00	3,81,329.00	1.50
TO_2	7,70,000	13,42,935.50	5,72,935.50	1.74