On Farm Trial
2020-21

Achievements | Onfarm Trials (OFTs) | KVK, Ariyalur- OFT 1/5

Title	**Assessment of Suitable Paddy varieties for high yield during Samba season**		
Discipline	Agronomy		1st Year
Farming situation	Irrigated		
Problem diagnosed with intensity	• Low Yield with existing varieties (4.5t/ha) • Heavy incidence of blast (35%), leaf spot (27%) and stem borer (25%) • Increasing soil salinity (pH upto 8) leads to reduction in yield upto 15-20%.		
Category, Theme, Crop/Technology	Agriculture crop/Varietal Evaluation/ Paddy		
Technology Option 1	Cultivation of Paddy variety NLR 34449		Source : ARS, Nellore, 2010
Technology Option 2	Cultivation of Paddy variety TKM 13		Source : TNAU, 2016
Farmers practice	Cultivation of Paddy variety CO-43		
Year of initiation	2019		Season : Rabi
No. of locations	5		Area (ha) : 2
Observations recorded	**NLR 34449**	**TKM 13**	**CO-43**
No. of plants/sq.m	18	18	24
No. of productive tillers/hill	48	**63**	42
Green horn caterpillar incidence (%)	18	11	**23**
PDI of blast	10	12	**22**
To be continued / concluded	Concluded		

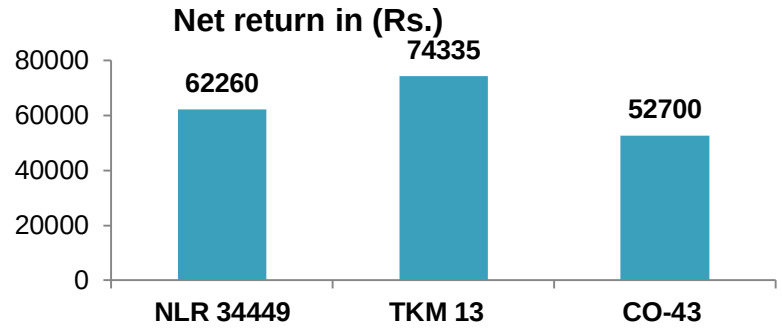
Results of OFT (1/5)

Treatments	Yield (q/ha)	Net returns (Rs./ha)	B:C Ratio	Marketability
TO 1 - Cultivation of Paddy variety NLR 34449	50.4	62,260	2.28	Moderate
TO 2 - Cultivation of Paddy variety **TKM 13**	**52.8**	**74,335**	**2.61**	Good
FP - Cultivation of Paddy variety CO-43	46.3	52,700	2.17	Good

Yield increase – 14 %

Remarks/Feedback

- TKM 13 variety and its straw quality is best than other two varieties
- TKM 13 has less pest and disease problems compared to NLR 34449 & CO-43.
- The merchants interested in buying TKM 13 Paddy.
- NLR 34449 has low cooking quality than TKM 13 and not delicious when compared to TKM 13 and CO-43

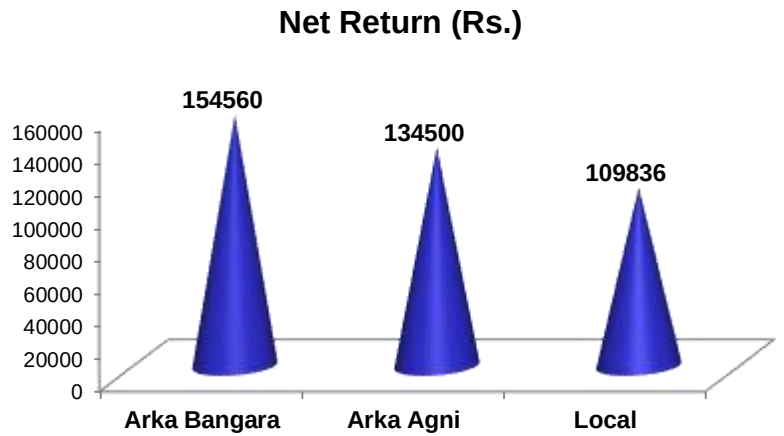


Intervention

Control

Title	**Assessment of Marigold varieties for higher yield**		
Discipline	Horticulture		1st Year
Farming situation	Irrigated		
Problem diagnosed with intensity	• Low yield in existing variety Victor-2 (20 t/ha). • Short petiole, small flower size and dull yellow colour. • Lack of awareness on newly released public sector varieties.		
Category, Theme, Crop/Technology	Horticultural Crop/Varietal evaluation/Marigold		
Technology Option 1	Cultivation of Arka Bangara - 2		Source : (IIHR, Bangalore)
Technology Option 2	Cultivation of Arka Agni		Source : (IIHR, Bangalore)
Farmers practice	Cultivation of Private Hybrid		
Year of initiation	2019		Season : Rabi
No. of locations	3		Area (ha) : 1
Observations recorded	**Arka Bangara - 2**	**Arka Agni**	**Local Variety**
Flower borer incidence %	**11.5**	15	15
To be continued / concluded	Concluded		

Results of OFT (2/5)				
Treatments	Yield (q/ha)	Net returns (Rs./ha)	B:C Ratio	Marketability
TO 1 - Cultivation of **Arka Bangara - 2**	**251.3**	**1,54,560**	**2.6**	Excellent
TO 2 - Cultivation of Arka Agni	231.20	1,34,500	2.39	Good
FP - Cultivation of Local Variety	201.13	1,09,836	2.2	Good



Remarks/Feedback

- Market preference is higher for the yellow colour flower of Arka bangara-2 variety and it was less for yellowish red colour flower variety Arka Agni.
- Planned for mass propagation by terminal cuttings of Arka Bangara - 2.

Yield increase 25%

Intervention

Arka Bangara - 2

Arka Agni

Control

Title	**Assessment of Technologies for management of sucking pest in Chilli**		
Discipline	Plant Protection	1st Year	
Farming situation	Irrigated		
Problem diagnosed with intensity	The average damage due to Thrips is 16-23 %. Due to the incidence of Thrips the approximate yield loss is 15 %.		
Category, Theme, Crop/Technology	**Horticulture Crop / IPM / Chilli**		
Technology Option 1	• Application of neem cake @250 kg/ha. • Intercrop with *Sesbania rostrata* to provide barrier which regulate the thrips • Yellow sticky trap @12/ha. • Spraying of Emamectin Benzoate 5SG@200g/ha		Source : TNAU, 2020
Technology Option 2	• Seed treatment with Imidacloprid 70% WS@12g/kg • Border crop with Maize • Blue sticky trap@12/ha • Foliar application of Neem oil 1%@1000 ml/ha + adjuvant 1ml/lit		Source : IIHR, 2018
Farmer's practice	Spraying of insecticide 1. Monocrotophos 36 SL @1 ml/lit. + Acephate 50%WP @ 2g/lit. 2. Imidachlorprade 70% WS @1 ml/lit.		-
Year of initiation	2020		Season : Rabi
No. of locations	3		Area (ha) : 1
Observations recorded	TO1	TO2	Farmer Practice
Thrips (%)	**10**	11	18
To be continued/ concluded	Concluded		

Achievements | Onfarm Trials (OFTs) | KVK, Ariyalur- OFT 3/5

Results of OFT (3/5)

Treatments	Yield (q/ha)	Net returns (Rs./ha)	B:C Ratio	Marketability
TO 1 - Application of neem cake @250 kg/ha. • Intercrop with *Sesbania rostrata* to provide barrier which regulate the thrips • Yellow sticky trap @12/ha. • Spraying of Emamectin Benzoate 5SG@200g/ha	201.0 (green pods)	1,75,720	3.20	Good
TO 2 - Seed treatment with Imidacloprid 70% WS@12g/kg • Border crop with Maize • Blue sticky trap@12/ha • Foliar application of Neem oil 1%@1000 ml/ha + adjuvant 1ml/lit	188.0	1,81,075	3.01	Good
FP - Spraying of insecticide	165.0	1,54,284	2.83	Moderate

Yield increase 14%

Thrips incidence - 10%

Remarks/Feedback

- The sucking pest incidence is very less and get better yield of chilli by use of recommended technologies than the alternate technologies.
- Reduced the purchase of excess chemical which leads to reduction in cost of cultivation.
- The fruit quality is better than our regular practice adopted in field in recommended technology than alternate technologies and farmer's practices

Intervention

Control

Title	**Assessment of black soldier fly (BSF) larvae as alternate protein source in poultry feed**	
Discipline	Animal Science	1st Year
Farming situation	--	
Problem diagnosed with intensity	Farmers fail to feed good protein rich source like fish meal in poultry feed due to its high cost (Rs.40/kg). Use of locally available feed like sorghum, maize and rice led to poor weight gain and performance of desi chicken Increasing farm and home wastes and their dumping causes environmental degradation	
Category, Theme, Crop/Technology	Animal Science / Nutrition Management/ Poultry	
Technology Option 1	**Conventional feed + 20 percent BSF Larvae**	Source :**NBAIR, 2017**
Farmer's practice	Conventional feed (sorghum, maize and rice)	
Year of initiation	2020	Season : ---
No. of locations	3	Area (ha) : Nil
Observations recorded	**BSF Larvae feed supplement**	**Conventional feed**
Body weight gain at marketable age (g in six months)	**1150**	850
Egg production / year / bird	**95**	76
To be continued / concluded	Concluded	

Results of OFT (4/5)

Treatments	Body weight gain (g/ 6 months)	Net returns (Rs./100 birds)	B:C Ratio	Marketability
TO 1 - BSF Larvae (20%)	1150g	37,000	5.10	Excellent
FP - Conventional feed (sorghum, maize and rice)	850 g	26,000	4.25	Good

Increase in body weight- 35%

Egg production increase - 25%

Remarks/Feedback

- Good conversation of household wastes and farm wastes
- High palatability in desi birds
- On an average of 200g increased body weight gain in 6 months compared to conventional feeds
- Low survivability of instar larvae especially 1 week old larvae
- Poor growth and egg laying capacity of adult BSF flies hence required a small shed for multiplication

Intervention

Control

Achievements | Onfarm Trials (OFTs) | KVK, Ariyalur- OFT 5/5

Title	**Assessment of the performance of Oyster mushroom varieties**		
Discipline	Home Science	1st Year	
Farming situation	Irrigated		
Problem diagnosed with intensity	• Less yield (200 g / kg substrate) from the existing varieties • Short shelf life (one day at ambient condition) • Lack of entrepreneurship opportunity for farm women		
Category, Theme, Crop/Technology	Enterprise / Varietal Evaluation / Mushroom		
Technology Option 1	Cultivation of APK 1	Source : TNAU, 1995	
Technology Option 2	Cultivation of Arka OM	Source : IIHR, Bengaluru 2011	
Farmer's practice	Cultivation of *Pleurotus florida*		
Year of initiation	2020	Season : Rabi	
No. of locations	3	Area (ha) :--	
Observations recorded	Cultivation of APK 1	Cultivation of OM 1	Cultivation of *Pleurotus florida*
Shelf Life	**3 days**	**3 days**	2 days
To be continued / concluded	Concluded		

Results of OFT (5/5)

Treatments	Yield /bag	Net returns (Rs./bag)	B:C Ratio	Consumer Preference
TO 1 - Cultivation of APK 1	0.750 kg	68.5	1.58	Medium
TO 2 - Cultivation of Arka OM 1	0.650 kg	65.5	1.68	Medium
FP - Cultivation of *Pleurotus florida*	1 Kg	212.5	3.13	High

Remarks/Feedback

- Low bio efficiency in Arka OM 1 and APK1
- Not feasible economically as spawn cost is high.
- Pink varieties takes more time for cooking
- Among 4 harvests/bag in pink varieties**, only in 1st harvest the sprouts were big** in size and in the remaining 3 harvests sprouts found small in size.

As APK 1 and Arka OM are pink and less market preference

Intervention

Control