

ICAR- Krishi Vigyan Kendra Hirehalli, Tumakuru



Action Plan Meeting:2018-19

KVK, Kodagu, 22-24, March, 2018

Location of KVK



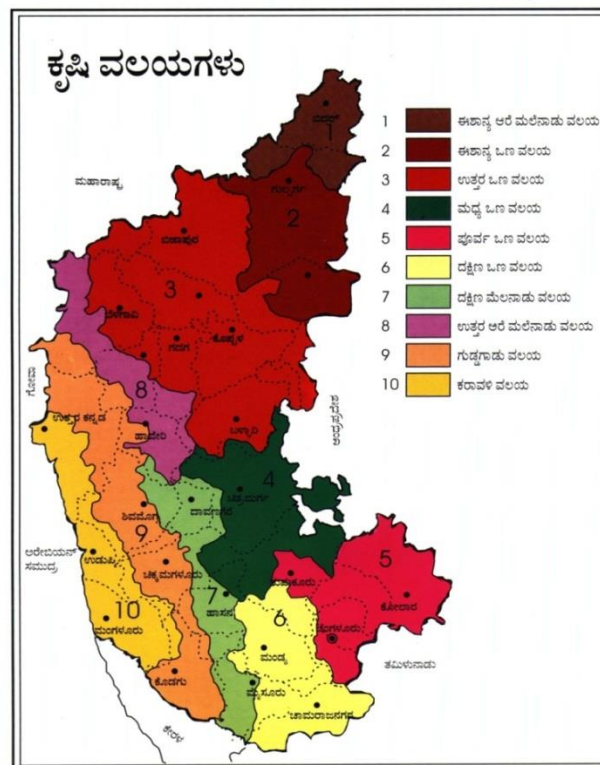
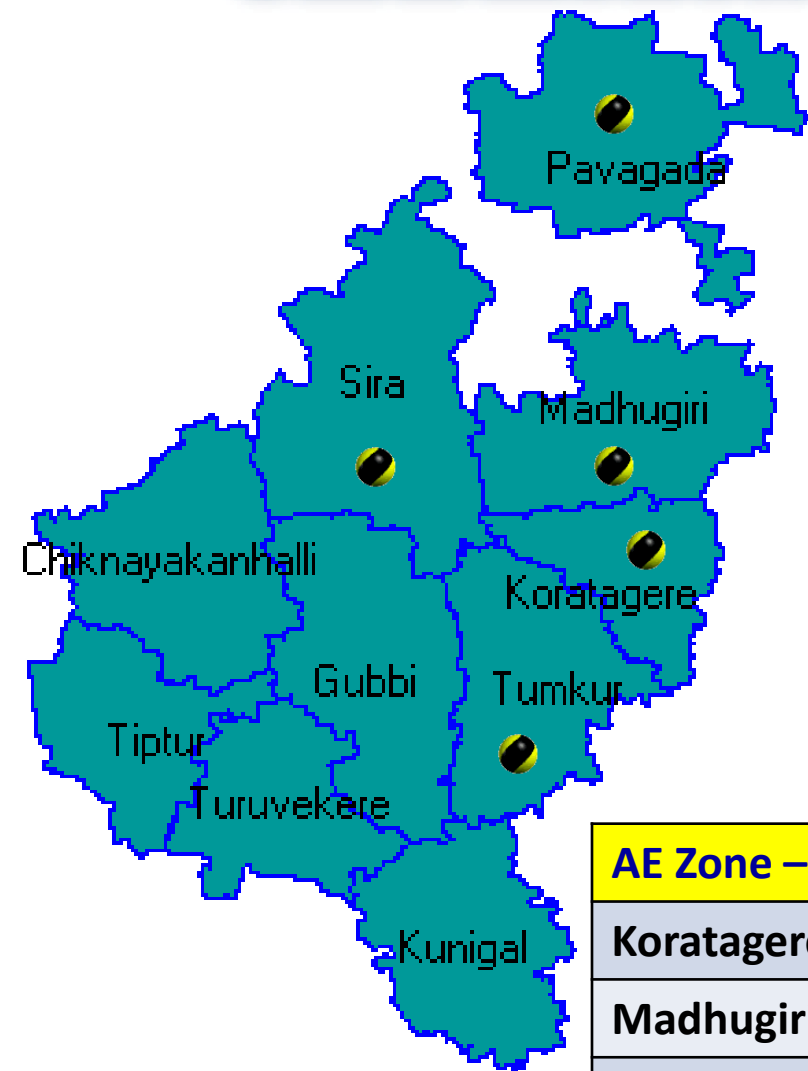


District- At a glance



Name of agro-climatic zone	:	Central and Eastern - Dry Zone
Soil type	:	Red sandy and Red Loamy Soils
Annual rainfall (mm)	:	584 mm
Total Geog Area	:	10,64,755 ha
Population (2011)	:	26,78,980
Total Gram Panchayats	:	321 (172 in our taluks)
Total villages	:	2574 (1272 in our taluks)
Major farming systems/enterprises	:	Dry Land Agriculture, Horticulture & Dairy
Major crops	:	Ragi, Groundnut, Coconut, Arecanut, Fruits and Vegetables
Major irrigation source	:	Bore well, Tank, Canal, Open well

Jurisdiction of KVK , Hirehalli



AE Zone – 4 (Central dry)	AE Zone – 5 (Eastern dry)
Koratagere	Tumakuru
Madhugiri	
Pavagada	
Sira	

KVK Manpower and Facilities

No. of SMS in position	5 out of 6
No. of Prog. Assistants in position	2 out of 3
KVK Farm details	
Total Area (Ha)	27.2
Cultivated area (Ha)	16.2

Operational Area



Name of Taluks	Cluster Villages (FPOs) selected
Tumakuru	Janapanahalli, Ragimuddenahalli,
Koratagere	Vaddarahalli, Halogondanahalli
Madhugiri	Veeranagenahalli, Kodigenahalli,
Pavagada	K.T.Halli, Rangasamudara, Chikkathimmanahatti
Sira	Tippenahalli, Kalambella, Gonihalli, Pujaramuddenahalli

Prioritized Problems and Thrust Areas

Summary of Thrust Areas

- High Yielding varieties / Hybrids
- Soil and Leaf test based fertilizer application
- Integrated Nutrient Management
- Intercropping / Mixed / Multistoried cropping system
- Seed Production Techniques in Vegetables and field crops
- Integrated Pest & disease Management
- Post Harvest Technology in horticultural crops
- Soil and Water Conservation
- Drudgery reduction among women
- Income generating activities and Value addition
- Child and Women care and balanced nutrition



Prioritized Problems and Thrust Areas



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Sl. No.	Major crops & enterprises being practiced in cluster villages	Prioritized problems in these crops/ enterprise	Major Thrust Areas
1.	Ragi	Drought, Use of local varieties and low yield. Lack of knowledge on Processing, value addition and branding of ragi products	Drought management, Processing and Value addition , Soil Management
2.	Pigeonpea	Delayed Monsoon and Pod borer and sterile mosaic disease in red gram.	New variety, Water Management and IPM
3.	Groundnut	Tikka Disease , leaf minor, low income	New variety, IDM
4.	Tomato	Poor Soil and Nutrient Management, Water scarcity, Low keeping quality, Pest and Diseases, Weed Menace	ICM
5.	Onion	Use of local varieties, Non availability of Rabi varieties, low yield.	ICM
6	Cucurbits	Use of local varieties, Downy mildew, Low yield	IPDM



Prioritized Problems and Thrust Areas



6.	Mango	Monocropping, Stem Borer Powdery mildew, Fruit fly and hoppers in Mango, lack of knowledge on PHT in mango.	PHT, IDM
7.	Coconut	Monocropping, Low soil fertility, Stem bleeding, button shedding, Low income	Intercropping, ICM
8.	Pomegranate	Indiscriminate use of Fertilizers, Wilt & Bacterial Blight, Low yield	INM & IPDM
9.	China Aster/Chrysanthemum	Small size flowers, less shelf life and low yield	ICM
10.	Chilli	Local varieties, leafcurl, PM , Mosiac virus, low yield	ICM
11.	Arecanut	Monocropping, Low soil fertility, Anabe Roga, Nut splitting, Low income	ICM, Intercropping
12.	Brinjal	Local varieties, wilting,SFB, low yield	ICM
13.	Fruits and Vegetable Crops	Malnutrition, Non availability of Vegetables, Fruits, Higher Cost	Food Security
14.	Drudgery	Labour Scarcity, More drudgery in weeding	Drudgery
15.	EDP- Tamarind	Lack of Knowledge on PHT, Branding and Marketing.	PHT

Abstract of programmes planned for the year 2018-19

Technical Interventions	Numbers
Continuing OFTs	2
New OFTs	4
FLDs (New Clusters)	03
New FLDs	08
EDP	1



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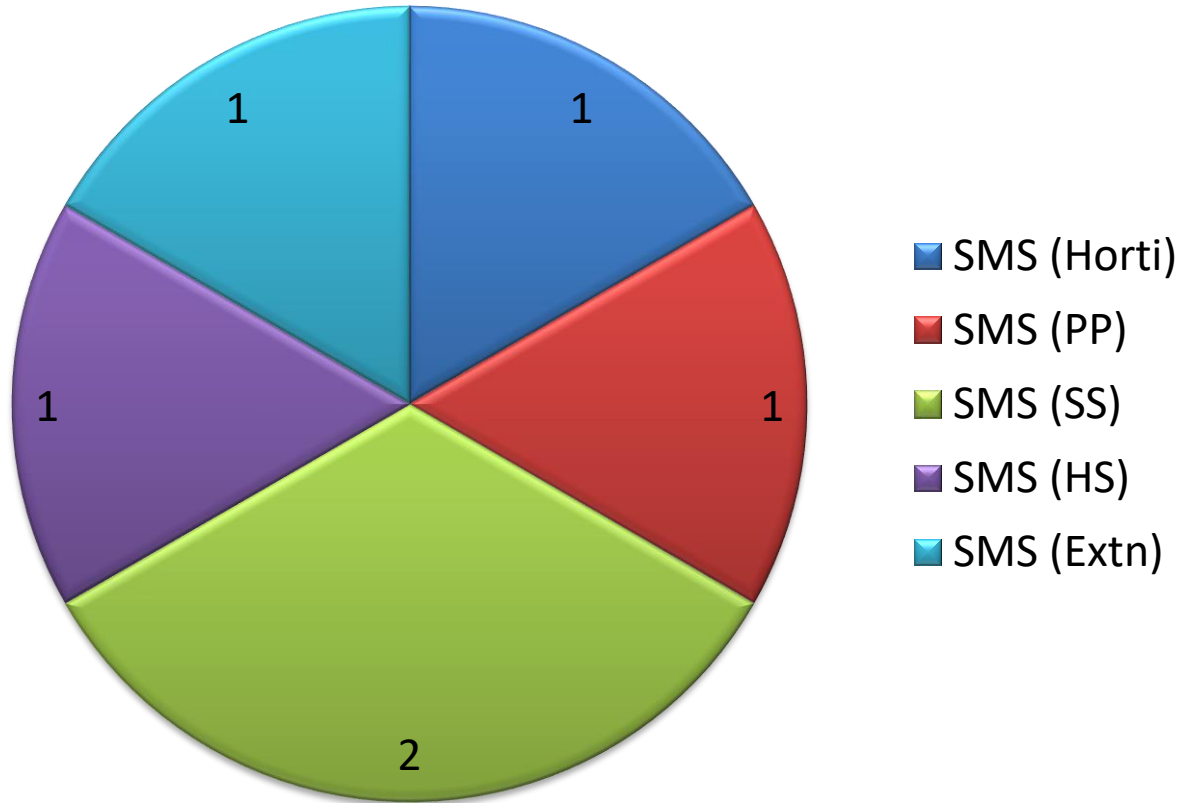
Summary of OFTs

Title	Strategy for DFI	No. of Trials	Budget (Rs.)
1. Assessment of Mustard varieties as alternative oilseed crops	Replacement of existing cropping system	3	2,700
2. Assessment of Onion varieties for Rabi	Yield Enhancement	3	12,600
3. Assessment on Management of Downy mildew in Cucumber	Yield Enhancement	3	14,790
4. Assessment of different storage methods to extend shelf life of Jasmine	Value Addition – Supply chain management	3	7,500
5. Assessment of decomposing cultures in compost preparation*	Cost reduction	3	3,360
6. Assessment of suitable intercrops for Mango orchards	Crop Diversification	3	9,780
Total			50,730

Continuing OFTs

*** Related to Organic Farming**

OFTs – SMS wise





On Farm Testing

1. Assessment of Mustard varieties as oil seed crops

Prioritized problem : Lack of suitable oilseed crop during Rabi season, high pungency

Area under cultivation: **151 ha**

Season: **Rabi**

Team : SMSs: SS, PP

Technology Option 1 : Local

Source: UAS, Bengaluru

Seeds contain less oil content, long duration

Technology Option 2 : PUSA 25

Source: IARI, New Delhi

Yield : 1.5t/ha, seeds contain 39.6% oil, short duration(107days)

Technology Option 3 : PUSA 28

Source: IARI, New Delhi

Yield: 2 t/ha, seeds contain 41.5% oil, short duration(115days)

Technology Option 4 : PUSA 31

Source: IARI, New Delhi

Yield : 2.37 t/ha, seeds contain 40.56% oil, long duration(144 days)

No. of trials : 03 (0.2 ha/trial)

Clusters: Kallambella, Sira ; Ragimuddenahalli, Tumakuru

Assessment of Mustard varieties for Rabi



Results-2017-18 On going



Varieties	Plant Height (cm)	No of branches	No. of Pods per plant
PUSA -25	145	5.8	289
PUSA -28	148	7	316
PUSA -31	161	6.4	699

Budget and Parameters to be studied			
Particulars	Critical Inputs	Qty/trial	Cost / trial (Rs.)
T 2: AP1	Seeds: PUSA-25	1.0 kg	225/-
T 3: AP2	Seeds: PUSA-28	1.0 kg	225/-
T4: AP3	Seeds: PUSA-30	1.0 kg	225/-
T5:AP4	Seeds: PUSA-31	1.0 kg	225/-
		Total	900/-
	Grand Total for 3 trials		2,700/-
	Area		0.6 ha
	Season		Rabi 2018-19
Major Parameters to be studied			
<ul style="list-style-type: none"> Plant height(cm), No. of branches, No. of pods per plant, Yield (q/ha) and Test weight (g) 			

2. Assessment of Onion varieties for Rabi

Prioritized problem : **Non availability of Rabi varieties and Poor storability**

Team : **SMSs: Horti , SS, PP**

Area under cultivation: **650 ha**

Technology Option 1 : Arka Niketan Bulbs globular with thin neck, attractive colour, 46 cm in size. Good keeping quality. Plant matures in 145 days after transplanting. **Source: IIHR Bengaluru**

Technology Option 2 : Bhima Shakti Suitable for *rabi* season. Bulbs attains immediate attractive red colour after harvest. Bulbs have very good storage life up to 5-6 months. Bulbs mature in 130 days after transplanting. **Source: DOG, Pune**

Technology Option 3 : NHRDF L-3 Red Bulbs are attractive dark red in colour. Better storage performance. Mature in 110-120 days. **Source: NHRDF Hubli**

No. of trials : 03 (0.2 ha/trial)

Clusters: kalambella, Sira

Arka Niketan



OFT Plot Field observation



OFT Plots at Tippenahalli Sira



Varieties	Plant Height (cm) 75 DAT	No of leaves 75 DAT	Purple blotch incidence (%)
Arka Niketan	35.80	5.2	18.33
Bheema Shakti	33.08	7.2	23.11
L-3 Red	38.50	5.6	19.77



Budget and Parameters to be studied			
Particulars	Critical Inputs	Qty/trial	Cost / trial (Rs.)
T 1: RPP	Seeds: Arka Niketan	1.0 kg	2,000/-
T 2: AP1	Seeds: Bhima Shakti	1.0 kg	1,200/-
T3: AP2	Seeds: L-3 Red	1.0 kg	1,000/-
		Total	4,200/-
	Total for 3 trials		12,600/-
	Area		0.6 ha
	Season		Rabi 2018-19
Major Parameters to be studied			
<ul style="list-style-type: none"> Plant Height(cm), No of leaves, Bulb size (cm), Purple blotch incidence(%), Yield (q/h) Grading of bulbs and shelf life 			

3. Assessment on Management of Downy mildew in Cucumber

Prioritized problem : Incidence of Downy mildew

Team : SMSs: PP, SS

Area under cultivation: 448 ha

RPP : Spray the crop with Metalaxyl + Mancozeb (0.2%) and Cymoxanil+ Mancozeb (0.2%) - UAS (B) & UHS, Bagalkot

**Technology Option 1: Seed treatment with Captan (2g/kg seeds)
Spray of Mancozeb (0.2%) & Cymoxanil+Mancozeb (0.2%) -IIHR, Bengaluru**

**Technology Option 2 : 1. Seed treatment with Metalaxyl (2g/kg seeds)
2. *Trichoderma harzianum* enriched Farm Yard Manure (@ 1 kg / 100 kg FYM) application
3. Prophylactic Spray with Mancozeb (0.25%) followed by Spraying of Metalaxyl+ Mancozeb (0.25%) and Dimethomorph (0.1%)+ Mancozeb (0.2%) - IIVR, Varanasi**

No. of trials : 03 (0.4 ha/trial)

**Clusters: K.T.Halli, Pavagada Tq.
Thanganahalli, Koratagere Tq.**



Initial stage of DM



Discoloration of leaves

DIFFERENT STAGES OF DISEASES INCIDENCE



Advanced stage of DM

Budget and Parameters to be studied:

Critical Input	Qty./trial	Unit Cost (Rs.)	Cost/ trial
<i>Trichoderma harzianum</i>	10 kg	200	2,000
Metalaxyl	0.2 kg	500	500
Metalaxyl+ Mancozeb	0.5 kg	800	800
Dimethomorph+ Mancozeb	0.2kg+ 1.0 kg	1,630	1,630
		Total	4,930/-
	Grand Total for 3 trials		14,790/-
	Area		0.4 ha
	Season		Rabi 2018-19

Major Parameters to be studied: Length of the branches, Number of Flowers, No. of Fruits, Disease severity (%), Yield, B:C ratio

4. Assessment of different storage methods to extend shelf life of Jasmine (Kakada)

Prioritized problem : Highly perishable, Low price during glut and Lack of knowledge on storage

Team : SMSs: HSc, Horti

Area under cultivation: **1,061 ha**

Technology Option 1 : Farmers Practice: Storage in wet gunny bags

Technology Option 2 : Storage in gunny bags / Polythene bags (200 μ) with 4% boric acid treatment

SOURCE: UAS-Raichur,

Technology Option 3 : Storage in Polythene bags(300 μ) **Source:** TNAU

No. of trials : 03

Clusters: Badavanahalli, Madhugiri

Budget and Parameters to be studied			
Particulars	Critical Inputs	Qty/trial	Cost / trial (Rs.)
T 2: RPP	Boric acid	1kg	1,500
T 3: AP1	Polythene bags (300μ)	5kg	
Total for 5 trials			7,500
Season			Kharif 2018-19
Major Parameters to be studied			
<ul style="list-style-type: none"> • Shelf life (hrs.) • B: C ratio • Physiological weight loss 			

5. Assessment of suitable intercrops for Mango orchards

Problem: Soil erosion due to wind and runoff, Low fertility status of mango gardens, non utilization of in-between space



District area: 50432 ha
Productivity : 8 t/ha
No. of Demos: 03
Demo area: 2.4 ha

Technological Options

Treatments	Technology option	Source of technology
TO1	Mango	Farmer practice
TO2	Mango + Pigeon pea	IIHR, Bangalore
TO3	Mango + Field bean	TNAU, Coimbatore
TO4	Mango + Horse gram	UAS, Bangalore

Clusters: Ragimuddanahalli, Sangalpura

Team : SMSs: SS, Horti

Budget

Critical input	Quantity/ Demo	Cost/ Demo
Seeds - Pigeon pea - Field bean - Horse gram	5 kg each	2,100
Biofertilizers - <i>AMC</i>	4 kg	560
Vegetable special	4 KG	600
Total cost/Demo		3,260
Total cost		9,780

Parameters : Soil nutrient status, Plant ht (cm), Yield of main and intercrop (q/ha), Biomass yield (t/ha)

6. Assessment of decomposing cultures in compost preparation



Problem
traditiona

Treatme

TO1

TO2

TO3

TO4



Seed Treatment



Fertigation with liquid de-composer

Revival of Soil Health



Quick Composting from waste



Pest and Disease control



In-situ composting



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n & PC



Budget

Critical input	Quantity/ Demo	Cost/ Demo
Decomposing Cultures	IIHR :Arka Decomposer (1kg: Rs.100/-) UAS Dharwad : Decomposer (1kg : Rs.250/-) NCOF Uttar Pradesh :Decomposer (50ml: Rs. 20/-)	1,110
Total Cost/Demo		1,110
Total Cost		3,360



Parameters : No. day taken for decomposing and C:N ratio analysis



**Front Line
Demonstrations**



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Summary of FLDs



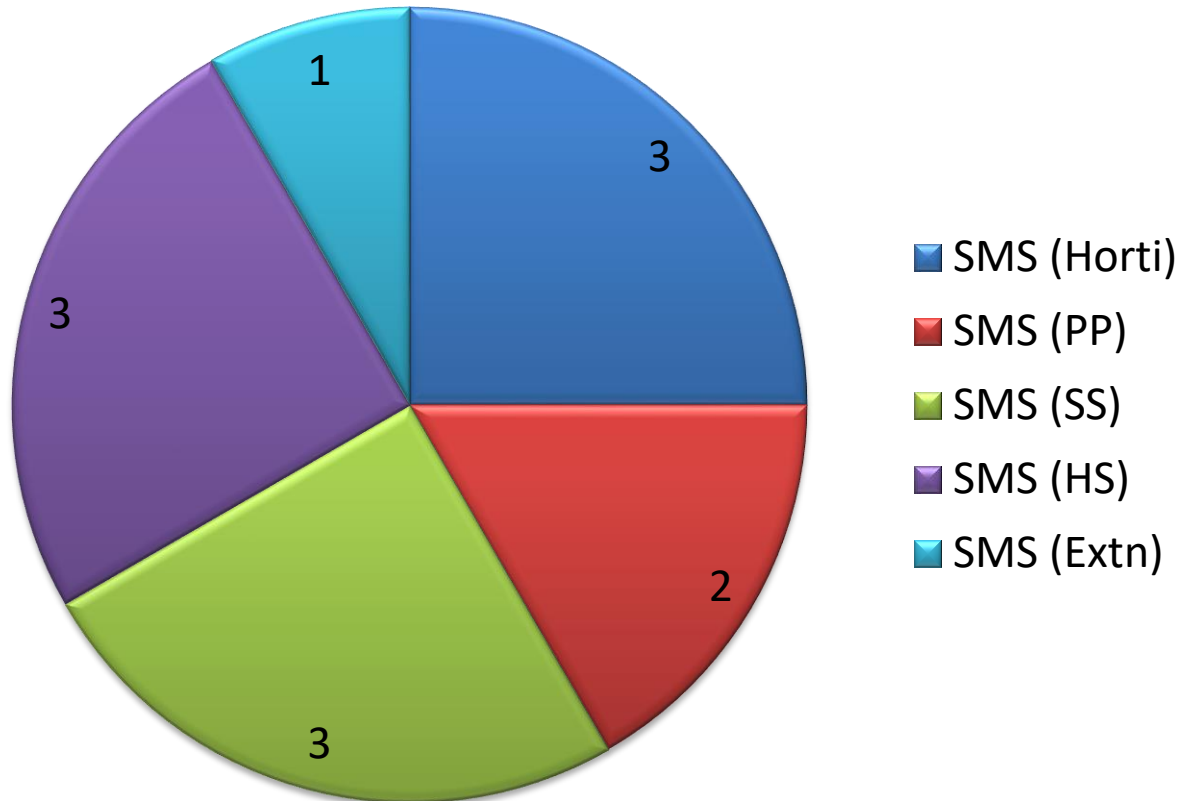
Title	DFI Stagey	Area (ha)	No. of Trials	Budget (Rs.)
1.Demonstration of Arka Actino-Plus (ACP) on Growth and Yield of Brinjal*	Cost Reduction	1	05	7,500
2.Demonstration of Bio-rationals in French bean*	Cost Reduction	1	05	25,000
3.ICM in China Aster– Arka Kamini	Yield Enhancement	1	5	10,350
4.Integrated Pest and Disease Management in Maize	Yield Enhancement	1	05	16,000
5.Integrated Pest and Disease Management in Bhendi	Yield Enhancement	1	05	23,500
6.Integrated Crop Management in Chilli - Arka Kyathi	Yield Enhancement	1	05	8,500
7.Integrated Crop Management in French Bean - Arka Arjun	Yield Enhancement	1	05	9,750

FLDs in new Clusters, * Related to Organic Farming

Summary of FLDs

Title	DFI Stagey	Area (ha)	No. of Trials	Budget (Rs.)
8.Integrated Crop Management in Arecanut	Yield Enhancement	1	5	31,000
9.Oyster Mushroom Production, value addition and Market Linkage	Value addition – Supply chain management	-	5	25,000
10.Demonstration of Finger millet Variety KMR 340 for Value Addition	Value addition – Supply chain management	1	05	17,500
11.Demonstration of Fodder sorghum CoFs29	Crop Diversification	0.5	5	3,900
			Total	1,78,000
EDP: Tamarind :Value Addition, Branding and Market linkage	Value addition – Supply chain management	-	2 SHGs	30,000

FLDs & EDP– SMS wise



1. Demonstration of Arka Actino Plus on growth and yield of Brinjal

Team : SMSs: SS, Horti

Area under cultivation: 418 ha
Season: *Kharif*

Prioritized problem: Low nutrient use efficiency & soil fertility,
Severe incidence of wilt and low yield

FYM – 25 tons /ha,

RDF : 125:100:50 kg/ha NPK,

Seed treatment: ACT-10g/100g of seeds

ACT : 20g / lit of water and apply near root zone on 10th Day after Transplantation

Vegetable Special : Spray 3g / lit after 30 DAT

Pheromone traps : 10 Nos. / acre for shoot and fruit borer

Source: IIHR, Bengaluru

No. of Demonstrations: 05

Area : 1 ha



Critical Inputs

Particulars	Qty. per Demonstration	Cost per Demonstration (Rs.)	Total cost of Demonstration (Rs.)
ACT Vegetable special	10 kg 2 kg	1,500	7,500

Parameters: Plant height (cm), No. of branches, Wilt disease incidence (%) & yield (t/ha)

Cluster: Ragimuddenahalli, Tumakuru ; Halagondanahalli, Koratagere

Results-2017-18



Treatment	Plant Height (cm)	No of branches	Percent Incidence of Wilt	Yield (t/ha)
Demo	3.2	12	5.84	29.5
Control	2.3	8	18.64	25

2. Demonstration of Bio-rationals in French beans

Prioritized problem: Soil & PP related issues in Chemical farming

Team : SMSs: SS, Horti

Area under cultivation: 350 ha
Season: Rabi 2018

Technology to be demonstrated

Arka Suvidha - 40kg/ha

FYM – 25 tons /ha,

N equivalent Compost- 6t/ha

Jeevamrutha- 2000 liter/ha

Vegetable Special- 2gm /lit at 30 DAS and regular 15 days interval



Source: UAS, Bengaluru

No. of Demonstrations: 05

Area : 1 ha

Critical Inputs

Particulars	Qty. per Demonstration	Cost per Demonstration (Rs.)	Total cost of Demonstration (Rs.)
Seeds	16 kg	5,000	25,000
Vegetable special	2 kg		
Jaggery	8 kg		
Gram flour	8 kg		



Cluster: Janapanahalli, Tumakuru, Halagondanahalli, Koratagere

Parameters: Plant height (cm), No. of pods per plant, Rust Disease Incidence (%) and Yield (t/ha)

Results-2017-18

Treatment	Plant Height (cm)	Root length (cm)	Yield (t/ha)
Demo	65	16	4.5
Control	47	12	3.6



3. Integrated Crop Management in China Aster - Arka kamini

Prioritized problem: Small size flowers and diameter, less shelf life, less attractive colour and low yield

Team : SMSs: Horti,SS

Area under cultivation: 550 ha
Season : Rabi/Summer, 2018 -19

Technology to be demonstrated

- ARKA Kamini : Deep pink colored flowers more attractive than the local pink variety. Each plant produces about 50 flowers
- RDF : 63:100:75 **NPK kg/ha**
- AMC : Drenching @ 20gm /lit (25 DAT)
- Neem soap : @ 7 g/lit

Source: IIHR, Bengaluru

No. of Demonstrations: 05
Area : 1 ha





Results 2017-18 On going



Particulars	Plant height (cm) 105 DAT	No of branches	No of Flowers/plant	Days for commencement of flowering	Flower Diameter (cm)	Yield /plant (g)
Demo	48.85	20.22	46.5	52	4.10	146.6
Control	55.21	17.40	32.8	46	3.66	131.4



FLD Plots at Setupalya



Critical Inputs			
Particulars	Qty. per Demonstration	Cost per Demonstration	Total cost of Demonstration (Rs.)
Seeds	150gm		
Bio fertilizer AMC	1 kg	Rs.2,070	Rs. 10,350
Neem Soap	1kg		

Cluster: Halagondanahalli : Koratagere Tq, Janapanahalli : Tumkur Tq

Parameters : Plant Height (cm) Size (cm), Weight (g), No. of Flowers/plant, vase life, Yield (t/ha)

4. Integrated Pest and Disease Management in Maize

- **Prioritized problem:**
Downy mildew and Turcicum leaf blight
Stem borer incidence

Team : SMSs: PP, SS

Area under cultivation: 12580 ha
Season : Kharif, 2018 -19

Technology to be demonstrated :

Demonstration Turcicum leaf blight and *Fusarium* Stalk rot tolerant hybrid: MAH-14-5

Seed treatment with Metalaxil M + Mancozeb (4g/kg of seeds) for Downy mildew

Spraying of Chlropyriphos (2ml/ltr) for stem borer. **Source of Technology : UAS (B)**

Cluster: Kolala, Koratagere

No. of Demonstrations: 05
Area : 01 ha

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Critical Inputs

Particulars	Qty. per Demonstration	Cost per Demonstration (Rs.)	Total cost of Demonstration (Rs.)
Seeds	6 Kg		
Bio fertilizer	10 Kg		
Metalaxyl+	100g	3,200	16,000
Mancozeb			
Chlropyriophos	2.5 ltrs		

Maize Hybrid : MAH-14-5

Parameters: Plant height, Cob size, Cob length, % Stem borer, Downy mildew and Turcicum leaf blight incidence, Yield, B:C ratio

5. Integrated Pest and Disease Management in Bhendi

Prioritized problem:
Higher incidence of Bhendi yellow vein Mosaic, Low yield

Team : SMSs: PP, Horti, SS

Area under cultivation: 175 ha

Technology to be demonstrated

Arka Nikitha -F1 hybrid (125 -130 days duration, tolerant to Bhendi yellow vein Mosaic and Yields 21-24 t/ha ,)

AMC : Drenching @ 10ml /lit

Vegetable Special- 2gm /lit at starts at flower initiation stage and regular 15 days interval

Source: IHR, Bengaluru

Clusters: Kolala, Koratagere

No. of Demonstrations: 05
(0.2ha each)

Critical Inputs			
Particulars	Qty. per Demonstration	Cost per Demonstration (Rs.)	Total cost of Demonstration (Rs.)
Seeds	1.5 Kg	4,700	23,500
AMC	5 litres		
Vegetable special	2 kg		

Parameters: Plant height, No. of flowers, No. of fruits, Fruit length, BYVM %, Yield and B:C Ratio



6. Integrated Crop Management in Chilli - Arka Kyathi

Prioritized problem: Low yield, Local varieties , Imbalanced nutrition,
Disease incidence – Mosaic virus susceptible

Team : SMSs: Horti, SS, PP

Area under cultivation: 1316 ha
Season : Rabi, 2018

Technology to be demonstrated

- Arka Kyathi -F1 hybrid
- FYM – 20 tons /ha,
- RDF : 150:75:75 **NPK kg/ha**
- AMC : Drenching and Spraying @ 10ml /lit (Protray and after transplanting with interval of 15 days)
- Vegetable Special- 3gm /lit at starts at flower initiation stage and regular 15 days interval
- Yellow sticky traps @ 25 sheets /ha
- Planofix – 4ml /16 lit of water at flowering stage

Source: IIHR, Bengaluru

No. of Demonstrations: 05
Area : 1 ha

Critical Inputs			
Particulars	Qty. per Demonstration	Cost per Demonstration	Total cost of Demonstration (Rs.)
Seeds	30g	Rs.1,700	Rs. 8,500
Bio fertilizer AMC	1 lit		
Yellow Sticky traps	05 Nos		
Vegetable special	2 kg		
Neem Soap	2 kg		

Cluster: Hebburu, Janapanahalli : Tumkur tq

Parameters: Plant height(cm), No of fruits /plant, Fruit weight (g), Mosaic Incidence, Yield (t/ha)

7. Integrated Crop Management in French Bean - Arka Arjun

Prioritized problem: Low yield, Use of local varieties, Non use of disease resistance varieties, Improper Nutrient Management

Team : SMSs: Horti, SS, Agri Extn.

Area under cultivation: 275 ha
Season : Rabi/Summer, 2018 -19

Technology to be demonstrated

- Arka Arjun (*YMV resistant, bush type, pods round and stringless*)
- FYM – 25 tons /ha,
- RDF : 63:100:75 **NPK kg/ha**
- AMC : Drenching @ 20g /lit (10 DAS)
- Vegetable Special- 2gm /lit at starts at flower initiation stage and regular 15 days interval
- Neem soap : @ 7 g/lit

Source: IIHR, Bengaluru

No. of Demonstrations: 05

Area : 1 ha

Mosaic symptoms in French bean

Critical Inputs			
Particulars	Qty. per Demonstration	Cost per Demonstration	Total cost of Demonstration (Rs.)
Seeds	4 kg	Rs.1,950	Rs. 9,750
Bio fertilizer	3 Kg		
AMC	2 kg		
Vegetable special	1 kg		
Neem Soap			



Cluster: Halagondanahalli: Koratagere tq, Janapanahalli : Tumakuru tq

Parameters: Plant Height (cm), Pod length (cm), Weight (g), No. of pods /plant, Yield (t /ha) and Mosaic Diseases incidence (%)

8. Integrated Crop Management in Arecanut

Prioritized problem: Monocropping, low nutrient status and low yield, nut splitting, button shedding, stem bleeding and Ganoderma wilt.

Team : SMSs: SS, Horti, PP

Area under cultivation: 22000 ha
Season: Kharif, 2018

Technology to be demonstrated

FYM- 20kg per tree,
Neem cake-2kg per tree,
French bean seeds-10kg/ acre,
RDF-100:40:140 g per plant NPK,
Borax-30 g per tree,
COC- 10g per lit water,
Hexoconazole -3 ml per 100ml water

Source: CPCRI, Kasargodu

No. of Demonstrations: 05
Area : 1 ha

Critical Inputs			
Particulars	Qty. per Demonstration	Cost per Demonstration (Rs.)	Total cost of Demonstration (Rs.)
French bean seeds	10 kg	6,200	31,000
Borax	12 kg		
COC	2 kg		
Hexaconozol	2 kg		

Cluster: Janapanahalli, Tumakuru, Vaddarahalli, Koratagere

Parameters: Nutrient status, Areca nut yield (t/ha), Percent recovery of Ganoderma wilt
Nut splitting incidence (%) and Inter crop yield (t/ha)

9.Oyster Mushroom Production, value addition and Market Linkage

Prioritized problem: Lack of awareness on nutritious foods, lack of knowledge on mushroom cultivation and value addition and low income,

Team : SMSs: HSc, SS



Technology to be demonstrated

- Scientific mushroom production
- Products development (Ready to fruit bag, dried mushroom powder and rasam fortified rasam powder)
- Market linkage

Budget and Parameters to be studied

Critical Inputs	Qty/trial	Cost / trial (Rs.)
Spawn	10 Kg	5,000
PP covers	5 kg	
Sprayer	1 No	
Packing and Labelling		
Grand Total for 5 demonstrations		25,000

Parameters: Biological efficiency, mushroom production economics, mushroom value added products economics

10. Demonstration of Finger millet Variety KMR 340 for Value Addition

Prioritized problem: Less acceptability of value added products from existing varieties due to brown colour

Team : SMSs: HSc, SS

Area under cultivation: 1.87 lakh, ha



KMR 340 seeds

Technology to be demonstrated

KMR-340: white ragi variety

Value addition: Ragi Malt, Ragi hurihittu, ragi chakkuli, Ragi laddu and Ragi mixture

Source: UAS, Bangalore

No. of Demonstrations: 05

WHITE IS A RAGING HIT

- KMR 340 is white ragi (finer millet) variety
- Recommended for late kharif season in southern Karnataka



Credit: University of Agricultural Sciences

- Resistant to blast disease
- Plant height 100-110 cm; flowers in 63-65 days; matures in 95-100 days
- Variety holds promise for bakers, makers of cereal-based snacks and makers of biscuits, cookies, ragi malt, ragi dosa and ragi roti
- Has carbohydrates (81.5%), protein (9.8%), crude fibre (4.3%)

- Mineral content markedly higher than in wheat and rice
- Protein relatively better balanced; contains more lysine, threonine and valine than other millets

Budget and Parameters to be studied		
Critical Inputs	Qty/trial	Cost / trial (Rs.)
KMR-340 seeds	10 kg	3,500
Packing materials	5kg	
Labels	400 Nos	
Total for 5 demonstrations		17,500
Season		Kharif 2018-19

Cluster: Tanganahalli : Koratagere Tq

Parameters: Yield parameters, economics , BCR, Consumer Acceptability & Market linkage

11. Demonstration of Fodder sorghum CoFS 29

Prioritized problem: Fodder Maize, Low nutrient status and low yield

Area under cultivation: 412 ha
Season: *Kharif, 2018*

Team : Agril.Exten & PC



Source: TNAU,Coimbatore

No. of Demonstrations: 5
Area : 2.5ha



Critical Inputs			
Particulars	Qty. per Demonstration	Cost per Demonstration (Rs.)	Total cost of Demonstration (Rs.)
Fodder sorghum CoFS 29 : 5 kg AMC :10 kg	1 Kg 2 Kgs	500 280	3,900

Cluster: Hebbur & Hirehalli Tumakuru

Parameters: Fodder Yield, No. of Tillers, Milk Yield (Before & After)

EDP: Tamarind: Value Addition, Branding and Market linkage

Prioritized problem: Lack of knowledge on processing and value addition, low income

Team : SMSs: HSc, Horti,SS

Area under cultivation: 3310, ha



Technology to be demonstrated

Demonstration on preparation of value added products (tamarind powder, tamarind thokku and tamarind toffi)

Source: TNAU, Coimbatore

No. of Demonstrations: 02 SHG's



Budget and Parameters to be studied		
Critical Inputs	Qty/trial	Cost / trial (Rs.)
Weighing scale	1	10,000
Sealing Machine	1	
Packing materials	2 kg	
Labels	200	
Total for 3 SHGs		30,000
Season		Rabi 2018-19

Cluster: Tippanahalli, Sira and Nagenahalli, koratagere



Parameters: Quantity of different value added products, BCR, consumer acceptability and Income

Trainings



Abstract of Training programmes planned for the year 2018-19

<i>Particulars</i>	<i>Numbers</i>
<i>Training for Farmers/ Farm Women</i>	<i>19</i>
<i>Training for Rural Youth</i>	<i>04</i>
<i>Trainings for Extension Personnel</i>	<i>07</i>
<i>Vocational trainings</i>	<i>06</i>
<i>Sponsored trainings</i>	<i>04</i>
<i>Total</i>	<i>45</i>



Training for Farmers/ Farm Women during 2018-19



Sl.No.	Training Course Title	No. of Courses	Expected No. of participants
1	ICM in Vegetables – Low Cost Technology	2	60 30
2	Commercial Floriculture - High Value with Less Effort	1	30
3	Production practices in Chilli: Green Chilli to Dry Red Chilli	1	30
4	Earn more from seed production-ICM and seed production techniques in French bean Arka Arjun	1	30
5	Precision farming in Vegetables – Doubling Farmers Income	1	30
6	Good Agricultural practices in Arecanut towards good income	2	60
7	Dry land Horticulture – Diving seat for higher income	1	30
8	Precision farming in Fruits crops – Ultra high density to high income	1	30
9	Ground water recharge (Borewell) – to Maintain Bank Balance	1	25



Sl.No.	Training Course Title	No. of Courses	Expected No. of participants
10	Weed management in Horticulture crops – Weed Menace to reduce Man days in Horticulture	1	30
11	Honey bee rearing - Income with intelligence	1	30
12	Tree Mulberry Management - Shadow to follow	1	30
13	Tree based farming system – Shadow to Biomass	1	30
14	Post-harvest technology in Jasmine	1	30
15	Processing and Value addition in Ragi – Rich Millet	1	30
16	Mushroom production and Value addition – Rich Protein		
17	Tamarind processing and value addition – Tumakuru Tamarind Brand is our Vision	1	30
18	Oyster Mushroom Production – Alternative source of income	1	30
19	Processing and value addition to Minor millets – Make in India	1	30

Training for Rural Youth during 2018-19

Sl.No.	Training Course Title	No. of Courses	Expected No. of participants	Names of the team members involved
1	Method of vermi-compost production	1	30	Prashanth J.M. P R Ramesh & K.N.Jagadish
2	Precision farming in Horticulture crops	1	30	Prashanth J.M.
3	Processing & value addition to Ragi	1	50	Radha R.Banakar, Somashekhar
4	Mushroom cultivation	1	30	Radha R.Banakar, Somashekhar

Training for Extension Personnel during 2018-19

Sl. No.	Training Course Title	No. of Courses	Expected No. of participants
1.	Use of Arka Actino Plus	1	20
2.	Micronutrient management in Horticulture crops	1	20
3.	Seed Production in Vegetables	1	20
4.	IPDM in Arecanut	1	20
5.	IPDM in Paddy	1	20
6.	Health & Nutrition	1	25
7.	IGA for SHG groups	1	25

Vocational Trainings during 2018-19

Sl.No.	Training title	No. of programmes and Duration (days)	Expected No. of participants
1	Production technology of Vermi Compost	1(3)	20
2	Honey bee keeping	1(3)	20
3	Propagation Techniques in Fruit Crops	1(3)	20
4	Mass production of <i>Trichoderma harizianum</i>	1(3)	20
5	PHT in horticultural crops	1(3)	20
6	Mushroom Cultivation and Value addition	1(3)	20

Sponsored Trainings during 2018-19

Sl. No.	Training title	No. of programmes and Duration (days)	Expected No. of participants
1	Organic farming practices	1	30
2	Nutrition garden	1	30
3	Processing and Value addition of Horticultural crops	1	30
4	Value addition to minor millets	1	30

Other Programmes 2018-19

Sl. No.	Title	No. of programmes and Duration (days)	Expected No. of participants
1	Farmers Innovation Meet	1 (One)	30
2	Technology Week	1(Five)	30 Per day
3	Medicinal Plants: Farmers Cum Scientists interface	1(One)	30

Title: Integrated Pest & Disease Management in Cabbage

Area : 410 acre

Problem Definition: Cabbage is the most important remunerative crop of the district. The reduction in the income is mainly due to lack of knowledge on proper P & D Management Practices (DBM, Root Rot, etc.,)

Main Objectives:

IPDM reduce the cost of cultivation

Higher yield, Higher net returns

No. of farmer's: 25

No. of sessions: 7

Village: Belagumba Tumakuru

In-charge: SMS (Extension), supported with all the concerned SMS





Farmer Field School



- Mustard (trap crop)
- Installation of WOTA-T
- Sticky traps
- Spray of Bt (1g/l), Neem Soap (5g/l), Entomopathogenic fungi (*Beauveria bassiana*) (0.2%)
- Emamectin benzoate 5SG (0.05%), Chlorfenapyr 10SC (0.1%), Spinosad 2.5SC (0.15%),



Budget: Rs. 30,000/-

<i>Critical input</i>	<i>Qty.</i>	<i>Unit cost (Rs.)</i>
Mustard seeds	1 kg	80
DBM Traps	8 No.	650
DBM lures	32 No.	500
Sticky traps	10 No.	560
Neem soap	4 kg	800
Bt formulation	200 g	500
<i>Beauveria bassiana</i>	1 kg	550
Spinosad (microbial)	75 ml	1300
Chlorfenapyr	300 ml	800
Ema. Benzoate	100 g	900
AMC	10 kg	1400
Arka vegetable special	10 kg	1500
Total		9540

Parameters:

Pest and diseases incidence, yield & B:C ratio

Integrated Farming System

IFS Farmers	Interventions	Approximate Budget (Rs.)	Source of technology
Mr. Krishnaiah & Mr.Satish Tumakuru	Fishery, Azolla, SRI Paddy, Cono Weeder etc.,	15000	ICAR –KVK Davanegere
Mr. Thipperangappa, Pavagada	Hydroponics	15000	NIANP, Bengaluru
Mr.Ravi, Koratagere	Vermi-compost Unit	10000	UAS, Bengaluru & Dharwad
Mr.Chandrashekar Madhugiri	Sandal Wood system	10000	IWS, Bengaluru

Production of Seeds/Planting Materials

Name of the Crop	Quantity to be Produced		Expected income (Rs)	Expected expenditure (Rs)	Net returns (Rs)
	Seed (kg)	Planting Material (No's)			
Fruits - Mango/ Guava	-	20000	14,00,000	12,40,000	1,60,000
Arecanut seedlings	-	45000	13,50,000	11,25,000	2,25,000
Coconut seedlings	-	4000	3,20,000	2,28,000	92,000
Seeds					
Ragi- ML-365	500	-	20,000	12,000	8,000
Fox tail millet	100	-	10,000	7000	3000
Redgram –BRG 5	200	-	30,000	18000	12000
Tomato	10	-	20,000	12,000	8,000
Brinjal – A	20	-		22000	8000
Shirish		-	30,000		
Chilli – A Suphal	10	-	30,000	20,000	1000
French Bean – Arka Suvidha	500	-	1,25,000	75,000	50,000

Production of Seeds/Planting Materials

Bhendi – A Anamika	200	-	1,00,000	85,000	15,000
Pumpkin – A Chandan	20	-	20,000	15,000	5,000
Ridge gourd –A. Sumeet	50	-	25,000	20,000	5,000
Onion – A.Kalyan	200	-	3,00,000	2,40,000	60,000
Radish –A. Nishant	50	-	25,000	20,000	5,000
Amaranthus- A.Suguna	50	-	25,000	15,000	10,000
Vegetable kits (No.)	5000	-	7,50,000	6,00,000	1,50,000
Fodder Sorghum Seeds	80	-	40,000	25,000	15,000
Drumstick Seedlings	-	5000	50,000	44,500	5,500
Mushroom spawn	1200	-	90,000	60,000	30,000
		Total	47,60,000	38,83,500	8,76,500

Production of Bio-products & Foliar nutrients

Name of the Bio Product	Quantity to be Produced		Expected income (Rs)	Expected expenditure (Rs)	Net returns (Rs)
	Product (kg)	Others (Nos)			
Arka microbial consortium Powder	2000	-	2,80,000	2,00,000	80,000
AMC Liquid	2000 lits	-	5,00,000	4,00,000	1,00,000
Neem Soap	3000	-	4,50,000.00	2,20,000	2,30,000
Pongamia Soap	1000	-	2,00,000.00	1,25,000	75,000
Fruit Fly Traps	-	5000 Nos.	1,00,000.00	75,000	25,000
Lures		5000 Nos.	1,00,000.00	75,000	25,000
Sealer cum Healer	1500	-	2,25,000.00	1,75,000	50,000
Banana Special	5000	-	7,50,000.00	5,50,000	2,00,000
Vegetable Special	5000	-	7,50,000.00	5,50,000	2,00,000
Mango Special	2500	-	3,75,000.00	2,75,000	1,00,000
Citrus Special	2500	-	3,75,000.00	2,75,000	1,00,000
	Total		41,05,000	29,20,000	11,85,000

Home care products, Livestocks

Name of Home product	Quantity to be Produced		Expected income (Rs)	Expected expenditure (Rs)	Net returns (Rs)
	Product (kg)	Others (Nos)			
Amla Squash	1000 Litres	-	1,30,000	60,000	70,000
Amla candy	100 kg	-	30,000	20,000	10,000
Ragi malt	100 kg	-	20,000	8,000	12,000
				Total	92,000

Name of Livestock	To be Produced (Nos) (Target)	Expected income (Rs)	Expected expenditure (Rs)	Net returns (Rs)
Sheep	04	20,000	10,000	10,000
			Total	10,000

SWTL Analysis

Type	No. of samples to be analyzed	Expected income (Rs)	Expected expenditure (Rs)	Net returns (Rs)
Soil	2,500	5,00,000	3,75,000	1,25,000
Water	1,500	1,50,000	1,00,000	50,000
Plant	100	20,000	15,000	5,000
			Total	1,80,000

KVK Instructional Farm Activities

SN	Plot	Season	Area (ha)	Name of the crop	Expected Yield (kg)	Expected Expenditure (Rs)	Expected income (Rs)	Net returns (Rs)
1	B3	Kharif	0.2	Chilli	10	20,000	30,000	10,000
2	B3	Rabi	1.0	French Bean	300	50,000	75,000	25,000
3	C2	Summer	1.0	Bhendi	200	60,000	1,00,000	40,000
4	C1	Rabi	0.2	Pumpkin	20	15,000	20,000	5,000
5	B3	Summer	0.2	Ridge gourd	50	20,000	25,000	5,000
6	B4	Kharif	0.6	Onion	200	2,40,000	3,00,000	60,000
7	B4	Kharif	0.3	Radish	50	20,000	25,000	5,000
8	C2	Summer	0.5	Amaranthus	50	15,000	25,000	10,000
9	C2	Rabi	0.4	Tomato	10	12,000	20,000	8,000
10.	D4	Kharif	0.4	Fodder sorghum	80	25,000	40,000	15,000

Other Projects and Activities

Project Name	Role of KVK	Duration	Project Outlay (Rs)	Additional Man Power to be planned
Technology demonstration component - NICRA	Technology backstopping and implementation of proposed action plant	1 year	4,00,000/-	One SRF

SN	Proposed activities	Expected expenditure (Rs)	Expected income (Rs)	Net Returns (Rs)	Name of the team members involved
1	Empowerment of Rural Women Groups through Nutrition Gardening	7,50,000	10,00,000	2,50,000	Radha Banakar, Prasanth JM, P.R. Ramesh, KN Jagadish



Expected Budget for the year 2018-19



Sl.No.	Details	Budget Estimate (Rs.)
A.	Recurring Contingencies	
1	Pay & Allowances	1,50,00,000
2	Travelling Allowances	1,50,000
3	Contingencies	
a	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter	6,00,000
b	POL, repair of vehicles, tractor and equipments	5,00,000
c	Food/refreshment for trainees (@Rs.75/day/trainee for residential and @ Rs.40/day/trainee for non-residential trainings)	2,50,000
d	Training material (need based materials and equipments for conducting the training)	1,00,000
e	Frontline demonstration (excluding NFSM & NMOOP)	1,78,000
f	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	50,730
g	Integrated Farming System (IFS)	50,000
h	Training of extension functionaries	25,000
i	Extension Activities	50,000
j	Farmers' Field School	30,000

Expected Budget for the year 2018-19

Sl.No.	Details	Budget Estimate (Rs.)
k	EDP/ Innovative Activities	30,000
l	Soil & Water Testing & Issue of Soil Health Cards	25,000
m	Display Boards	10,000
n	Maintenance of building	1,00,000
o	Library (Purchase of Journal, Periodicals, News Paper and Magazines)	5,000
	TOTAL (A)	1,69,75,730
B.	Non-recurring contingencies	
1	Equipments and Furniture	
a	Office Automation	3,00,000
2	Works	30,00,000
3	Vehicle (Mini -tiller)	5,00,000
	TOTAL (B)	38,00,000
	GRAND TOTAL (A+B)	2,07,75,730

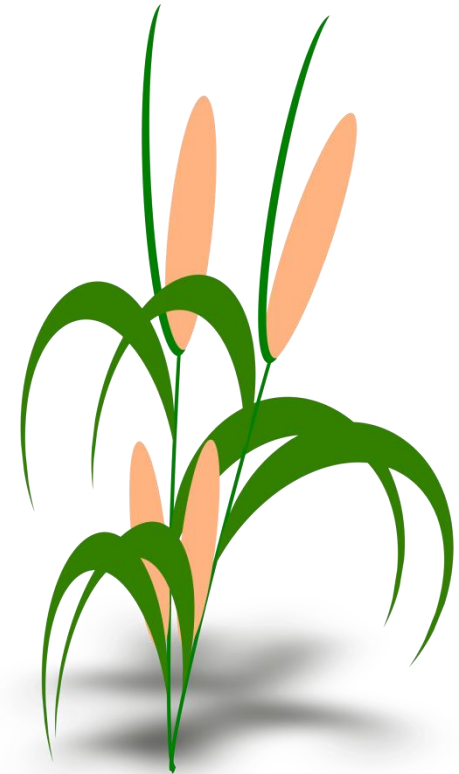


Strategies for Doubling the farmers' income



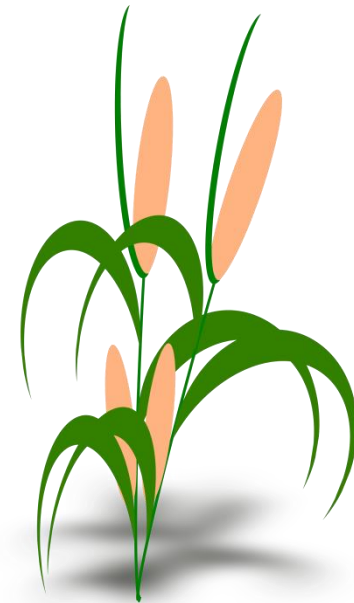
Major Strategies of DFI

- Yield Enhancement



Major Strategies of DFI

- Cost Reduction



Major Strategies of DFI

- Replacement of existing crops



Major Strategies of DFI

- Crop Diversification



Major Strategies of DFI

- Value Addition – Supply chain management



Major Strategies of DFI

- Yield Enhancement
- Cost Reduction
- Replacement of existing Crops
- Crop Diversification
- Value Addition – Supply chain Management

- **Sub-strategies**
 - HY varieties / Hybrids
 - Crop Geometry
 - Nutrient Management
 - Disease Control
 - Pest Control
 - Weed Control
 - Water Management

- **Sub-strategies**
- **Low cost external inputs** – AMC, ACT, Neem Soap, Pheromone traps, IIHR Foliar nutrients etc
- **Organic / Natural farming / ITK / Farm based local solutions** – Jeevamrutha, Panchakavya, Mulching, Green / Green leaf Manuring etc
- **SWC measures** – Natural Resource Management- Farm Ponds, T cum B, Drip irrigation, Aerobic, Hydroponic, Poly-Mulching, Compost and Vermicompost etc
- **Mechanization** - Custom Hiring Centre

Replacement of existing crops

- **Sub-strategies**
- **Replacement of existing annual crops with crops of better income options** – Rabi Ground nut with Mustard, Ragi with Minor millets
- **Partial replacement of Perennial crops-** Rejuvenation of old Mango orchards with improved scions (Grafting)
- **Replacement of failed perennial crops with purely entirely new crops** – Replacing failed Coconut gardens with Dry land Horticulture crops

- **Sub-strategies**
- **Diversification within Perennial Plantation crops** – Coconut garden with Marigold, Moringa and other multi-tier model
- **Diversification within Perennial Fruit Orchards** – Mango Orchard with Redgram, Cow pea, Horse gram, Ground nut, Field Bean etc
- **Diversification in Annual crops with other similar crops**– Ragi with Redgram, Castor, Field bean etc
- **Diversification in Annual crops with Perennial trees**– Dry land Horticulture and Multi purpose trees (Tamarind, Cashew, Mango, Melia etc) in Ragi and Ground nut fields

- **FPO Association**

- Amla – Squash, Candies
- Tamarind – Pickle, Chocolate
- Mango, Banana, Flowers – Processing & Value addition
- Linking with Food park, Tumakuru
- Cold Storage facility at CWC, Tumakuru

- **SHGs Association**

- Ragi & Minor millets– Flour, Malt, Eatables
- Jack – Papad, Chips
- Dry flower products
- Linkage with E-marketing portals (www.ithihas.com)

On farm - Allied Activities, IFS

- Mushroom
- Apiculture
- Sericulture
- Areca leaves sale / plate production
- Areca / Banana fiber products
- Coconut based products – Coir, Cocopeat
- Animal Husbandry (Cattle, Sheep, Goat, Poultry)
- **Integrated Farming System**

Major crops of Tumakuru District

Crop	Area (Ha)	Production (t)	Average Yield of the District	Potential Yield	Yield gap %
Ragi	1,49,734	2,52,488	1475 kg/ha	2000 kg/ha	35.59
Paddy	34,471	1,39,365	4,037 kg/ha	5000 kg/ha	23.85
Redgram	16,796	7,098	611 kg/ha	1250kg/ha	104.60
Groundnut	1,29,117	36,312	381 kg/ha	750kg/ha	96.80
Mango	15,152	1,51,520	10 t/ha	20 t /ha	100
Banana	5,174	1,27,346	24.61 t/ha	37.50 t/ha	52.40
Coconut	1,45,660	12,885	0.09 t/ha	0.14 t/ha	55.55
Areca nut	32,341	43,691	1.35 t/ha	2.0 t/ha	48.10
Tomato	1385	74,202	53.58 t/ha	75 t/ha	40.00
Chilli	912	13,204	14.48 t/ha	25 t/ha	72.65
Onion	600	11,881	19.80 t/ha	25 t/ha	26.30

Strategies for DFI

Crop	Present scenario	Major Strategies	Technology role
Ragi	Local varieties, Poor nutrient management, Poor value addition	Yield enhancement, Value Addition – Supply chain management	Improved variety (ML-365), Application of Bio-fertilizers (AMC)
Paddy	Local varieties, Water intensive cultivation practices	Cost reduction and Yield enhancement	Aerobic method of cultivation (MAS-26), SRI method, Direct sowing, AMC application
Redgram	Local varieties, Poor nutrient and P&D management	Yield enhancement	Improved varieties (BRG-5, GRG-811), Application of Bio-fertilizers (AMC), Vegetable special and improved P&D management (Neem soap)

Strategies for DFI

Crop	Present scenario	Major Strategies	Technology role
Groundnut	Old varieties (TMV-3), Poor ICM practices	Yield enhancement and Replacement of Existing crops	Improved variety (KCG-6), Application of Bio-fertilizers (AMC) and other improved ICM practices, Mechanisation, Replacement with Mustard varieties (Pusa- 25,28,31)
Mango	Poor ICM practices, Poor value addition	Yield enhancement, Cost Reduction, Crop Diversification and Value Addition – Supply chain management	High Density Plantation (HDP), Intercropping, Mango special, Pheromone traps, Sealer cum Healer, Arka Saka Nivarak, Mango Harvester, Ripening Chamber, Packaging and Direct Marketing by branding
Banana	Poor ICM practices	Yield enhancement	Paired row planting method, Banana special, Bunch feeding

Strategies for DFI

Crop	Present scenario	Major Strategy	Technology role
Plantation crops (Coconut, Areca nut)	Poor ICM methods	Yield enhancement, Crop Diversification	Technology for control of Major diseases (<i>Ganoderma</i> , Button shedding, nut splitting), and pests (Rhinceros beetle, BHC, Mites) and nutrient management (AMC, Neem cake, Bordeaux mixture, Boron)
Vegetables	Poor ICM methods	Cost reduction and Yield enhancement	Poly mulching, Improved varieties (Arka Rakshak, Samrat, Kyathi, Kalyan), INM practices (AMC, Vegetable Special)

Yield Enhancement in Ragi

Particulars	Farmers Practice	Technology intervention
Variety	Local	ML-365
Duration (days)	120	105
Drought tolerance	Moderate	Highly
Bio-fertilizer application	No	AMC
Yield (q/ha)	21	28
Fodder yield (q/ha)	37	63
Quality of grains	Average	Superior
Gross Cost (Rs./ha)	7,450	7,800
Gross income (Rs. /ha)	13,250	21,400
Net income (Rs./ha)	5,800	13,600
Cot Benefit Ratio	1.78	2.74
Income increase	-	2.3 times

ML-365 fetches Rs.130 additional price per quintal at market



Cost reduction



Crop	Paddy	
	Farmers Practice	Technology Intervention
Particulars		
Sowing /planting time	July	July
Yield (q/ha)	24	31
Price(Rs. / q)	1550	1400
Seed rate /ha	62.50	7.50
Gross Return (Rs./ha)	37200	43400
Gross Cost (Rs. /ha)	21280	15984
Net returns (Rs./ha)	15920	27416
BCR	1.74	2.70

Technology interventions: Areobic paddy MAS26, Green manure, Cono weeder, Harvester cum bundling, Zinc sulphate.

Crop	French Bean	
	Farmers Practice (Local)	Technology Intervention
Particulars		
Duration (Months)	3	2.5
Yield (t/ha)	8.40	12.5
Price(Rs. / T)	22	23
Gross Return (Rs./ha)	184800	287500
Gross Cost (Rs. /ha)	56500	62470
Net returns (Rs./Ha)	140000	240030
BCR	3.27	4.60

Technology interventions: Arka Suvidha, AMC, Neem soap, Jeevamrutha, vegetable special and IPDM practices

Cost reduction

Crop / Enterprise	Mechanization	
	Farmers Practice	Intervention
Ragi	Manual	Seed drill, Harvester
Paddy	Manual	Harvester
Onion	Manual	Seed Drill, Grader
Flower	Manual	Weeder
Mango	Manual	Harvester, Ripening Chamber
Ground nut	ITK and Manual	Wild Bore Control, Decorticator
Areca nut	Manual	Husk remover
Coconut	Manual	Climbing Machine

Replacement of existing crops

Particulars	Farmers Practice	Technology Intervention
Crop/Variety	Ground nut – TMV 2 (Rabi)	Mustard (Pusa varieties)
Yield (q/ha)	12.0	16.40
Price(Rs. / q)	4750	8000
Gross Return (Rs./ha)	54840	131200
Gross Cost (Rs. /ha)	29360	22250
Net returns (Rs./Ha)	25480	108950
BCR	1.86	5.89
Technology interventions: Pusa 31, AMC, Neem soap, less drudgery compared to ground nut and Less pungency and bitterness , High oil content		

Particulars	Farmers Practice	Technology Intervention
Crop/Variety	Ragi Local	Minor millets Same
Sowing /planting time	June-Aug	Aug
Yield (q/ha)	21.0	9.2
Price(Rs. / q)	1800	7000
Gross Return (Rs./ha)	37800	64400
Gross Cost (Rs. /ha)	14600	18800
Net returns (Rs./ha)	23200	45600
BCR	2.58	3.40
Technology interventions: Same (OLM 203), Processing and packing		



Replacement of existing crops



Particulars	Farmers Practice	Technology Intervention
Crop/Variety	Coconut	Cashew
Sowing /planting time	June	June –July
Economic yield (Years)	Withere d due to drought	4
Yield (q/ha)	-	12
Price(Rs. / q)	-	30000
Gross Return (Rs./ha)	-	360000
Gross Cost (Rs. /ha)	-	65000
Net returns (Rs./Ha)	-	295000
BCR	-	5.5

Technology interventions: Ullal-1,3,5 high yielding varieties and processing

Particulars	Farmers Practice	Technology Intervention
Crop/Variety	Mango (Bengaluru)	Alphonso
Yield (q/ha)	80	120
Price(Rs. / q)	800	1200
Gross Return (Rs./ha)	64000	144000
Gross Cost (Rs. /ha)	29750	37380
Net returns (Rs./Ha)	34250	106620
BCR	2.15	3.85

Technology interventions: Rejuvenation of old orchard through improved mango variety, IHR technology interventions to attain higher yield and income



Crop Diversification in Coconut Orchard



	Farmers Practice	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
Particular	Coconut (Sole crop)	Marigold	Moringa	Navane	Lime	French bean
Variety	Arsikere tall	Double orange	PKM1	RS118	Balaji	Arka Suvidha
Sowing /planting time	June-July	Aug-Sept	June –July	July –Aug	June	Sept
Duration(Months)	-	4	10	3	36	2.5
Harvesting time	Nov -Dec	Oct	Feb – March	Nov	March – April	Dec
Yield (q/ha)	6200 Nos	32	245	3.2	150	35
Price(Rs. / q)	15	20	12	60	12	15
Gross Return (Rs./ha)	93000	64000	294000	19200	180000	52500
Gross Cost (Rs. /ha)	22150	23584	54850	7800	42850	22750
Net returns (Rs./Ha)	70850	40416	259150	11400	137150	29750
BCR	4.20	2.71	5.36	2.46	4.20	2.31

Crop Diversification in Ragi field

	Farmers Practice	Crop 1	Crop 2	Crop 3	Crop 4
Particular	Ragi (Sole crop)	Tamarind	Cashew	Mango	<i>Melia dubia</i>
Variety	Local	PKM-1	Ullal 1,3	Alphanso	Local
Sowing /planting time	July	June	June	June	June
Duration(Months)	4	3yrs	4 yrs	5 yrs	10yrs
Harvesting time	Nov	Feb	April	April	May
Yield (q/ha)	14	30	12	140	620
Price(Rs. / q)	1800	5600	30000	1200	7000
Gross Return (Rs./ha)	25200	168000	360000	168000	4340000
Gross Cost (Rs. /ha)	14750	35000	65000	42380	125000
Net returns (Rs./Ha)	10450	133000	295000	125620	4215000
BCR	1.70	4.80	5.5	3.96	34.72 (For Ten Years)

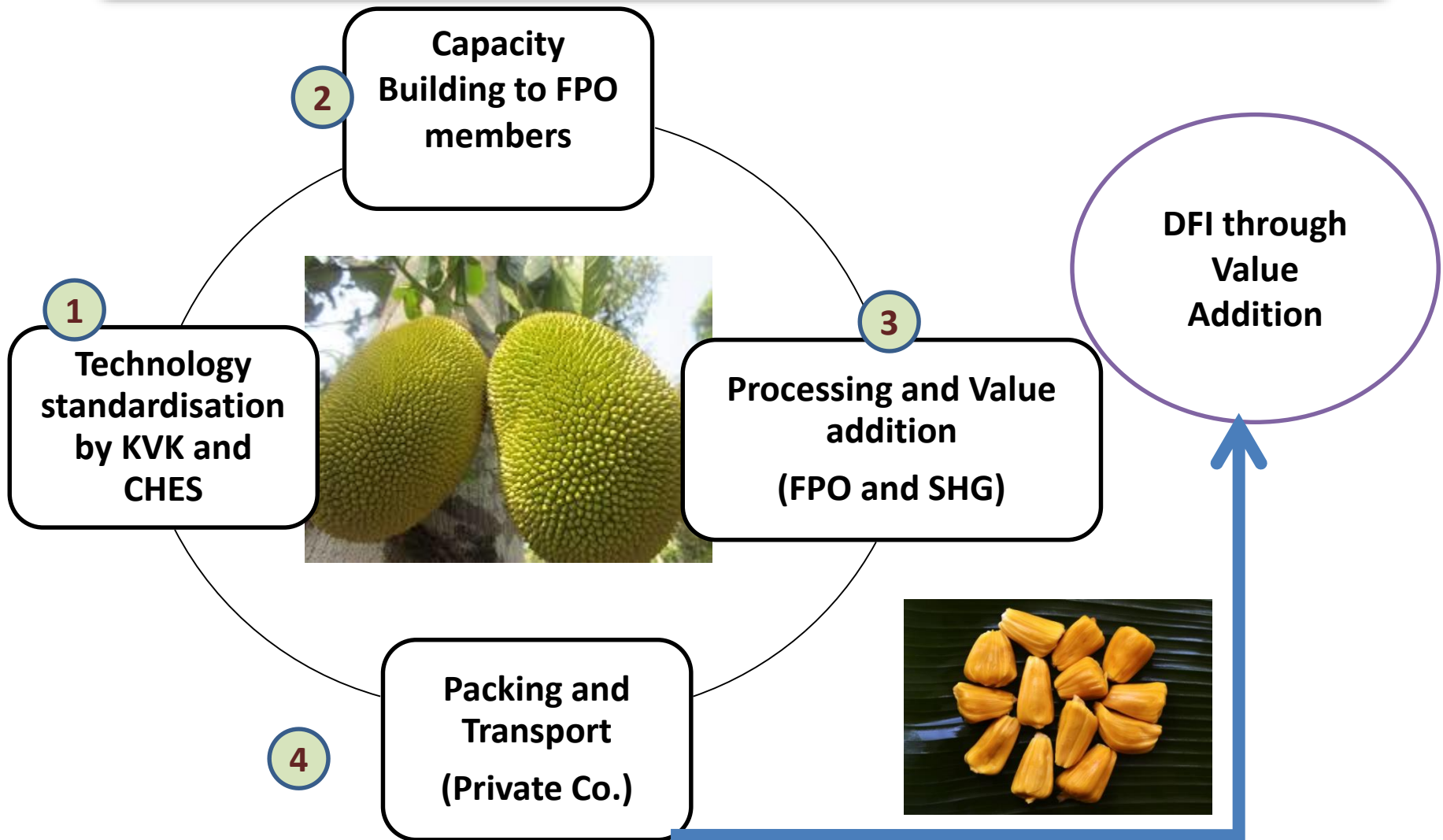
Crop Diversification in Ragi field

	Farmers Practice	Crop 1	Crop 2	Crop 3
Particular	Ragi (Sole crop)	Field bean	Red gram	Castor
Variety	Local	HA-3	BRG-5	DCS-9
Sowing /planting time	July	July	Jun	Jun
Duration(Months)	4	4	140 days	7
Harvesting time	Nov	Nov-Dec	Dec	Jan
Yield (q/ha)	14	20	8.75	6.25
Price(Rs. / q)	1800	2000	6000	6000
Gross Return (Rs./ha)	25200	40000	52500	37500
Gross Cost (Rs. /ha)	14750	13580	26890	26890
Net returns (Rs./Ha)	10450	26420	25610	10610
BCR	1.70	2.94	1.95	1.39

Crop Diversification in Mango Orchard

	Farmers Practice	Crop 1	Crop 2	Crop 3	Crop 4
Particular	Mango (Sole crop)	Red gram	Mucuna	Field bean	Horse gram
Variety	Alphanso	BRG-5	Arka Dhanvant ri	HA-3	PHG-9
Sowing /planting time	June	Jun	Jun	July	Aug
Duration(Months)	5 yrs	140 days	4	4	3-4
Harvesting time	April	Dec	Nov-Dec	Nov-Dec	Dec
Yield (q/ha)	140	8.75	6.25	8.26	6.55
Price(Rs. / q)	1200	6000	6000	4000	5800
Gross Return (Rs./ha)	168000	52500	37500	33040	37990
Gross Cost (Rs. /ha)	42380	26890	18500	16356	11896
Net returns (Rs./Ha)	125620	25610	19000	16684	26094
BCR	3.96	1.95	2.03	2.02	3.19

Supply chain management in Jackfruit on Processing and value addition and linkage with Market



Thank You!!

