

# *Action Plan*

April 2010 – March 2011

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**QUARTERWISE SUMMERY OF ACTION PLAN**

(April 2010- March 2011)

**1. TRAINING PROGRAMME**

S. No.	Subject	On Campus																Total								Grand Total
		P.F.				F.W.				R.Y.				E.F.				On campus				Off Campus				
		I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	
1	Crop Production	2	1	1	2	1	0	1	0	0	0	0	0	0	1	0	0	3	2	2	2	4	3	5	3	24
2	Horticulture	2	1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	3	1	3	2	3	2	4	3	19
3	Extension	1	1	1	1	1	0	0	0	0	0	1	1	0	0	1	1	2	1	3	3	3	2	3	2	19
4	Plant protection	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	1	1	1	1	1	7
5	Live stock production & management	2	2	1	1	0	0	0	0	0	0	1	2	0	0	0	0	2	2	2	3	3	4	3	3	22
6	Home science	0	0	0	0	1	2	2	2	1	0	1	1	0	0	0	0	2	2	3	3	2	2	3	3	20
	<b>Total</b>	<b>8</b>	<b>5</b>	<b>4</b>	<b>6</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>14</b>	<b>8</b>	<b>13</b>	<b>14</b>	<b>16</b>	<b>14</b>	<b>19</b>	<b>15</b>	<b>111</b>

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**2. DEMONSTRATION**

<i>S. No.</i>	<i>Type of Demonstration</i>	<i>Season</i>	<i>Crop</i>	<i>Farming situation</i>	<i>No. of Demonstration</i>	<i>Area (ha)</i>
A.	Front Line Demonstration					
		Kharif				
		• Oilseeds	◆ Sesame	Rainfed	30	15
		• Pulses	◆ Green gram	Rainfed	25	15
		Rabi				
		• Oilseed	◆ Mustard	Irrigated	15	12
B.	Demonstration other than FLD					
		Kharif	◆ Maize	Rainfed	20	15
			◆ Sorghum	Rainfed	25	15
			◆ Cluster bean	Rainfed	15	10
			◆			
		Rabi	◆ Wheat	Irrigated	35	20
			◆ Barley	Irrigated	25	20
			◆ Cumin	Irrigated	20	10
			◆ Vegetable	Irrigated	10	1.0
			◆ Ber	Rain fed	04	110*
			◆			
			◆ Kisan nursery	Rainfed/ Irrigated	950*	4
C.	Others					
	• Compost/ vermi compost				10	-
	• MNFB				10	-
	• Improved Agri. Equipment-				03	-
	•					-
	• Kitchen garden				03	-

\* No. of Plants

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**1. TRAINING PROGRAMMES**

**1.1 On Campus training (For practicing farmers/ farm women & rural youth)**

<i>Quarter</i>	<i>Discipline</i>	<i>Title of Training</i>	<i>Date</i>	<i>Duration (days)</i>	<i>No. of Participants</i>	<i>Type of Participants</i>
1 <sup>st</sup>	Crops	1. Organic farming for sustainable agriculture	5-6 May	2	20	PF
	Horticulture	1. Agro-techniques for arid fruit plants	13-14 May	2	20	PF
		2. Improvement of desi ber plants and rejuvenation of old orchards	24-25 May	2	20	PF
	Extension	1. Mass media for information on improved agrotechniques	10-11 April	2	20	PF/R Y
2 <sup>nd</sup>	Crops	1. Cultivation practices for kharif pulses	14-15 June	2	20	PF
	Horticulture	1. Techniques for propagation of arid fruits plants	18-19 July	2	20	PF
	Animal Science	1. Management and feeding practices of dairy animals	05-06 July	2	15	PF
		2. Prophylactic and control measures of contagious diseases	5-6 August	2	20	PF
	Home Science	1. Bandhej	1-2 August	2	20	FW
3 <sup>rd</sup>	Crops	1. Efficient management of irrigation water	6-7 Sept	2	20	PF
	Home science	1. Basic of food and nutritional balanced diet	15-16 Nov	2	20	FW
		2. Nutrition for mother and children	7-8 Dec	2	20	FW
	Animal Science	1. Role of minerals and vitamins in animal feed	21-22 Dec	2	20	PF
	Extension	1. Sources and procedures for purchase of quality agri-inputs	3-4 Dec	2	20	PF/FW
		2. Entrepreneurship development in agriculture	30-31 Dec	2	20	R Y
4 <sup>th</sup>	Crops	1. Improved cultivation practice for quality fodder production	7-8 Mar	2	20	R Y
		2. Management of saline/ sodic soils	21-22 Mar	2	20	PF
	Horticulture	1. Nursery raising techniques for arid fruit plants	3-4 Feb	2	20	PF
	Home science	1. Value addition to the arid fruit through various preparations	1-2 Mar	2	20	R Y
	Animal Science	1. Scientific sheep and goat rearing	24-25 Feb	2	20	PF
	Extension	1. Govt. programmes for benefit of rural community	15-17 Feb	2	20	PF/R Y
		2. Information on improved agricultural technology using print media	10-11 Mar	2	20	PF/R Y

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**1.2 Off Campus Training (For practicing farmers/ farm women & rural youth)**

<i>Quarter</i>	<i>Discipline</i>	<i>Title of Training</i>	<i>Date</i>	<i>Duration (days)</i>	<i>No. of Participants</i>	<i>Type of Participants</i>	
1 <sup>st</sup>	Crops	1. Improved package of practices for grasses	05.04.2009	1	20	WF	
		2. Seed production of kharif crops	17.04.2009	1	20	PF	
		3. Cultivation practices for sesame	10.05.2009	1	20	PF	
	Horticulture	1. Package & practice of fruit plants	24.05.2009	1	20	PF	
		2. Techniques for training & pruning of ber plants	03.04.2009	1	20	PF	
	Animal Science	1. Role of probiotic ruminant.	22.05.2009	1	20	PF	
		2. Anoestrus in buffalo and its solution	29.05.2009	1	20	PF	
	Home Science	1. Importance of breast feeding for infants	28.06.2009	1	20	FW	
	Extension	1. Mass media for information on improved agrotechniques	7.06.2009	1	20	PF/RY	
		2. Importance of modern information technology for farmers	29.06.2009	1	20		
	Plant protection	1. Seed treatment for improved production	23.06.2009	1	20	PF	
2 <sup>nd</sup>	Crops	1. Moisture conservation for rainfed farming	06.07.2009	1	20	PF	
		2. Weed management in sesame	10.07.2009	1	20	PF	
		3. Vermi-composting	19.08.2009	1	20	WF	
	Horticulture	1. Techniques for In-situ budding of ber plants	10.09.2009	1	20	RY	
		2. Techniques for In-situ budding of aonla plants	13.09.2009	1	20	PF	
	Animal Science	1. Vaccination in animals and its economical importance	03.07.2009	1	20	PF	
		2. Management of heat stroke	09.08.2009	1	20	PF	
	Extension	1. Sources and procedures for purchase of quality agri-inputs	16.08.2009	1	20	PF/FW	
	Home science	1. Reason and precautions from different diseases during childhood	22.08.2009	1	20	FW	
	Plant protection	1. Plant protection measure in kharif pulses	02.08.2009	1	20	PF	
		2. Plant protection measure in kharif crops	20.09.2009	1	20	PF	
	3 <sup>rd</sup>	Crops	1. Agronomical practices for rabi cereals	04.10.2009	1	20	PF
			2. Improved package of practice for mustard	18.10.2009	1	20	PF
3. Water management for rabi crops			20.11.2009	1	20	PF	
4. Fertility management through composting			22.11.2009	1	20	RY	
Horticulture		1. Techniques & tips of vegetable production	18.10.2009	1	20	PF	

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		2. Grading & packing of fruits and vegetables	02.11.2009	1	20	RY
		3. Improved package of practices of cumin production	06.12.2009	1	20	PF
	Animal Science	1. First aid in animal	15.10.2009	1	20	PF
		2. Artificial insemination in animals	14.12.2009	1	20	PF
	Home science	1. Preparation of nutritious food poshak for children	23.12.2009	1	20	FW
		2. Importance and techniques of kitchen gardening	04.12.2009	1	20	FW
		3. Safe drinking water technology	18.12.2009	1	20	RY
	Extension	1. Print media for information on improved agri-techniques	25.11.2009	1	20	PF
	Plant protection	1. Seed treatment for rabi cereals	11.10.2009	1	20	PF
4 <sup>th</sup>	Crops	1. Soil fertility management through composting	03.01.2010	1	20	PF
		2. Rain water harvesting technology for rainfed farming	12.01.2010	1	20	PF
	Horticulture	1. Techniques & tips of lady's finger production	20.01.2010	1	20	PF
		2. Techniques & tips of cucurbits production	07.02.2010	1	20	PF
	Animal Science	1. Quality improvement of roughages by urea treatment	31.01.2010	1	20	PF
		2. Clean milk production	26.02.2010	1	20	FW
	Extension	1. Govt. programmes for benefit of rural community	23.02.2010	1	20	PF/R Y
		2. Mass Media for information for improved Agro techniques	11.2.2010	1	20	PF/FW
	Plant protection	1. Plant protection in rabi oilseeds	07.03.2010	1	20	PF
		2. Plant protection measure in rabi crops	14.03.2010	1	20	PF
	Home Science	1. Training on health and hygiene	15.01.2009	1	20	FW
		2. Use of serrated sickles for drudgery reduction	21.03.2009	1	20	RY/FW

**1.3 In Service Training Programme for Extension Functionaries**

<i>Quarter</i>	<i>Discipline</i>	<i>Title of Training</i>	<i>Date</i>	<i>Duration (days)</i>	<i>No. of Participants</i>	<i>Type of Participants</i>
2 <sup>nd</sup>	Crops	Package & practice for grasses / pasture management	21-23 Mar	3	20	Supervisor of dept. of Agril.
3 <sup>rd</sup>	Extension	Mixed farming system for sustainable resource use	27-28 Jan	3	20	Supervisor of dept. of Agril.

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**2. DEMONSTRATION**

**2.1 FRONT LINE DEMONSTRATION**

<i>Title of Demons.</i>	<i>Objectives</i>	<i>Farming situation</i>	<i>Area (ha)</i>	<i>No. of Farmer</i>	<i>Existing technology</i>	<i>Specific techno. Intervention</i>	<i>Critical Input</i>	<i>Remarks</i>
<b><i>Oilseed</i></b>								
Sesame	To popular new variety, use of fertilizer & PP chemicals	Rainfed	10	25	Use of local tili or available old variety, no line sowing, no use of fertilizer/ pp chemicals	Use of latest variety, line sowing, balance fertilizer & pp chemicals	Seed, bio fertilizer, ssp/dap, pp chemicals	kharif
Mustard	To demonstrate latest technology of mustard	Irrigated	15	15	Using available old variety, imbalance fertilizer use, lower doses of pp measures	Use of latest variety, balance fertilizer, bio fertilizer & proper pp measures	Seed, bio fertilizer/ ssp/dap/urea & pp chemicals	rabi
<b><i>Pulses</i></b>								
Green gram	To demonstrate latest production technology of green gram	Rainfed	10	15	Using old variety, no bio fertilizer/ fertilizer & pp measures	Use of latest variety, bio fertilizer, fertilizer, timely pp measures & weed control	Seed, bio fertilizer, SSP, urea & pp chemicals	kharif

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**2.2 Demonstration other than FLD**

<i>S. No.</i>	<i>Title of Demons.</i>	<i>Objectives</i>	<i>Farming situation</i>	<i>Area (ha)</i>	<i>No. of farms</i>	<i>Existing technology</i>	<i>Specific techno. Intervention</i>	<i>Critical Input</i>
1.	Maize	To demonstrate high yielding short duration varieties	Rainfed	15	25	Use of local seed, no seed treatment, fertilizer / pp application	Use of high yielding variety, seed treatment, bio fertilizer	Seed, bio fertilizer / pp chemicals
2.	Sorghum	To popularize high yielding short duration varieties	Rainfed	20	25	Use of locally available jowar, no seed treatment/fertilizer / bio fertilizer application & no PP measures	Improved seeds of latest variety & bio fertilizer	Seed & bio fertilizer
3.	Cluster bean	To demonstrate performance of high yielding short duration variety	Rainfed	15	25	Use of local seed, no seed treatment, fertilizer / pp application	Use of high yielding variety, seed treatment, bio fertilizer	Seed, bio fertilizer / pp chemicals
4.	Wheat	To demonstrate performance of high yielding variety	Irrigated	30	30	Use of local seed, no seed treatment, imbalance use of fertilizer, no weeding practice is followed	Improved variety seed, seed treatment, bioferti. / balance fertilizer & chemical weed control	Seed, bio ferti. Seed treatment chemicals & weedicide
5.	Barley	To popularize high yielding variety under saline soils	Irrigated	20	25	Use of local seed, no seed treatment no fertilizer use,	Improved variety seed, seed treatment, bio ferti./ balance fertilizer	Seed, bio ferti. Seed treatment chemicals
6.	Cumin	To demonstrate performance of high yielding variety	Irrigated	10	15	Use of local seed, no seed treatment	Improved seed, pp measures	Seeds
7.	Vegetable	Grow the vegetable in kitchen garden	Irrigated	4	20	Not grow vegetable	Grow the vegetable as kitchen garden	Seed, insecticide, pesticides &



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								fertilizer
8.	Okra (NHM)	Demonstrate performance of high yield variety	Irrigated	2	10	Practice and package	Improved seed	Seed, insecticide, pesticides & fertilizer
9.	Binjal (NHM)	Demonstrate performance of high yield variety	Irrigated	2	8	Practice and package	Improved seed	Seed, insecticide, pesticides & fertilizer
10.	Tomato (NHM)	Demonstrate performance of high yield variety	Irrigated	1	5	Practice and package	Improved seed	Seed, insecticide, pesticides & fertilizer
11.	Ber	To improve the quality & quantity of ber fruits	Rainfed	150 Nos.	15	No adopted any improved technology	Budded technology	Buds, insecticides & pesticides
12.	Ber (NHM)	To develop the orchard	Irrigated	10	10	Practice and package	Grafted planting	Plant insecticide manure and digging the pits
<b>Others than crops</b>								
1.	Compost/ vermi compost	To popularize compost technology for improvement of soil fertility	-	-	15	Kept at open place near the house	Improved compost/ vermi compost technology	Super phosphate, PSB culture & worms
2.	Multi nutrient feed block	Supplementary feeding to malnourished animals	-	-	10	Demonstrate MNFB	Multi nutrient feed block/ mixture	MNFB/mixture
3.	Multi nutrient feed block	Supplementary feeding to malnourished animals	-	-	10	Demonstrate MNFB	Multi nutrient feed block/ mixture	MNFB/mixture

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**3. EXTENSION ACTIVITIES**

<i>S. No.</i>	<i>Type of Activity</i>	<i>Quarter</i>				<i>Total</i>
		<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	
1.	Field day	0	02	01	03	<b>06</b>
2.	Farmers day/ Vichar goshti	03	03	04	02	<b>12</b>
3.	Agril. Exhibition	0	02	01	02	<b>05</b>
4.	Scientist farmers interaction	0	01	01	01	<b>03</b>
5.	Farm science club	0	01	01	01	<b>03</b>
6.	Ex trainees meeting	0	03	03	02	<b>08</b>
7.	World food day	0	01	0	0	<b>01</b>
8.	Women in agril day	0	0	01	0	<b>01</b>
9.	World Environment Day	01	0	0	0	<b>01</b>
10.	Diagnostic service					
	◆ Farmers visit to KVK	04	04	04	04	<b>16</b>
	◆ Scientist visit to farmers field	04	03	04	04	<b>15</b>
11.	Lectures on other programme	05	05	06	03	<b>19</b>
12.	Campaigns					
	◆ Grain storage	0	01	0	01	<b>02</b>
	◆ Composting	01	0	03	01	<b>05</b>
13.	Publication					
	◆ Research paper to be published	-	-	-	-	<b>-</b>
	◆ Popular articles to be published	01	01	01	01	<b>04</b>
	◆ Extension bulletin	0	01	0	01	<b>02</b>
	◆ Pamphlets/ folder	02	0	02	0	<b>04</b>

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14.	Poster/ Charts	0	0	01	04	<b>05</b>
15.	Communication media					
	◆ Radio talk	04	02	03	03	<b>12</b>
	◆ TV/ film show	04	06	05	08	<b>23</b>
	◆ News paper coverage	10	10	15	13	<b>48</b>

**4. PROPOSED PLAN OF WORK FOR INSTRUCTIONAL FARM**

<i>S. No.</i>	<i>Name of Unit</i>	<i>Season</i>	<i>Crop</i>	<i>Area (ha)</i>
1.	Crop production	Kharif	◆ Crop museum of grasses	0.50
			◆ Crop museum of kharif crops	0.50
		Rabi	◆ Crop museum of rabi crops	0.50
2.	Seed Multiplication Programme	Kharif	✓ Sesame	1.00
			✓ Guar	1.00
			✓ Sorghum	1.00
			✓ Green gram	1.00
			✓ Okra	0.50
3.	Horticulture	Kharif	◆ Ber	1000 Nos. seedlings

**5. INFRA STRUCTURAL DEVELOPMENT**

<i>S. No.</i>	<i>Infrastructural development/ particulars</i>	<i>Existing</i>	<i>Proposed during the year (20010-11) with cost (Rs lakh)</i>	<i>Justification</i>
1.	Building (office and farmers Hostel) - White wash & colour	01	1.0	Need maintenance
2.	Vehicle (Mini bus)	Nil	10.5	Required for trainings purposes
3.	Tractor	01	5.0	Need replacement
4.	Soil testing lab	Nil	5.5	Needed for providing service to farming community
7.	Automatic Weather Station	Nil	3.88	Needed for weather data

## **6. SAC MEETING PROPOSED: 15.06.2011**

### **7. ON FARM TRIALS**

#### **1. Agronomy**

**Title:** *Low productivity of Chickpea*

**Location:** Giradhda

The village Giradhda has been selected under the OFT programme where the productivity of gram goes on decreasing. village Giradhda is situated about 22 km away from the KVK. The soil of the village is sandy loam. The main crops of the area are pearl millet, sesame, moong & guar in kharif and gram, mustard, wheat in rabi season. The area under wheat is limited and all the farmers gave more emphasis to gram and mustard. At present farmers of adopted area grown predominantly use local variety of gram as seed and yield of the gram is also decreasing day by day. Some of the farmers use FYM once in 3-4 years in a limited area and not applying recommended doses of NPK. The FYM used by the farmers are also not welldecomposed.

In kharif season, if timely monsoon is available the farmers grow kharif crop, otherwise the farmers conserved the moisture for rabi crops like gram and mustard. The soil of the area is saline alkaline in nature. The farmers use very low seed rate per ha. As compared to recommended practices. The average yield of gram per ha. Range from 4-5 q/ha.

#### **Reason for low yield**

1. Use of local seed
2. Use of very low seed rate
3. Crop grown under conserved moisture
4. Limited use of organic manure
5. No use of efficient rhizobium culture
6. Rare use of PP Chemicals
7. Improper crop geometry
8. Lack of knowledge

#### **Intervening points**

Effect of optimum seed rate on yield of gram

#### **Possible solution**

1. Use of recommended seed rate
2. Use of recommended variety

#### **Treatments**

**T1** 70 kg improved seed

**T2** 55 kg improved seed

**T3** 40 kg Farmers practice

**Plot size:** 0.25ha

**No. of farmers:** 10

#### **Critical input to be supplied**

Improved seed

P P Chemicals for seed treatment

**Duration:** Three years

**Budget required:** The budget required for purchase of critical input is approximate Rs. 12500/ per year.

**Title: *Low productivity of maize***

**Location:** Inderwada

The village Inderwada is situated about 60km from distt. HQ. Maize is the staple food crop of this area occupying nearly 35 per cent of kharif cropped area. The crop is grown under irrigated condition and sown with the onset of monsoon particularly from the end of June to mid of July. Hardly 10-15 per cent area is occupied by improved i.e. hybrid/ compost variety. Rare use of basal dose of phosphatic fertilizer, nitrogen is applied when crop is well established but at sub optimal level. Farmers are maintaining relatively higher plant population in early stage of crop growth which invites competition between the plants. Beside these, crop suffers heavily with acute weed problem at initial stage which ultimately affect the grain production. Plant protection measures are not followed properly.

**Reason for low productivity**

- Poor adoption of improved variety.
- Improper and sub optimum fertilizer use.
- Severe weed infestation.
- Delayed sowing
- Improper crop geometry and higher plant population.

**Intervening points**

- Severe weed infestation
- Rare use of fertilizer at sowing
- Rare use of manure

**Technological intervention**

- Herbicidal weed control in maize crop

**Treatments**

- T1** Farmers practice hand weeding at 15 / 20 days
- T2** Pre-emergence spray of Atrazine 0.5kg/ha.
- T3** Pre-emergence spray of Atrazine 0.5kg/ha.+ one hand weeding at 30 days.

**Plot size:** 0.25ha

**No. of farmers:** 12

**Critical input to be supplied**

1. Improved seed
2. Atrazine
3. Basal dose of fertilizer
4. Top dressing of fertilizer

**Duration:** Three years

**Budget required:** The budget required for purchase of critical input is approximate Rs. 7775/ per year.

**Title:** *Response of gypsum level and organic materials in sodic soil under different cropping sequence*

**Location:** Rampura

The high sodicity and pH adversely affect the soil physical properties. The effects are more prominent after rainfall and or irrigation. The stagnation of water results in serious aeration problem at the field level. Such type of soil remains almost dry, hard below a few centimeter of the surface, due to poor infiltration of water. This affects the growth of roots. High level of pH also leads to reduced availability of plant nutrients like nitrogen and Zinc. The application of gypsum and organic materials reduces sodicity, increase percolation, there by increase in production of crop. The object of the OFT is to create awareness among the farmers about waste organic materials (burn by the farmers at fields) with gypsum levels for increasing crop production.

**Object:** To evaluate the effect of gypsum and organic matter on crop production.

**The cropping sequence will be as follow:**

Pearl millet – Wheat

Cluster bean – Wheat/ Mustard

Green gram – Wheat/ Mustard

**Reason for increasing sodicity in soil**

1. Poor management practices
2. Low rainfall and high evaporation
3. Irrigation with available well water which is problematic
4. Imbalance use of chemical fertilizer
5. Rare use of available FYM

**Possible solution**

Application of gypsum in affected soil

Organic material e.g. FYM/ mustard straw

Deep ploughing

**Treatment**

**T1** No gypsum

**T2** Gypsum – 100 per cent required dose

**T3** Gypsum – 50 per cent + 10 tonnes/ ha mustard straw.

**T4** Gypsum – 50 per cent + 20 tonnes/ ha mustard straw.

**Plot size:** 0.25 ha

**No. of farmers:** 6

List of critical input: Gypsum, FYM, improved seed

**Duration:** Three years

**Budget:** The budget required for purchase of critical input is approximate Rs. 9000/ per year.

## **2. Horticulture**

**Title:** *Low productivity of cumin*

### **Reason of low productivity**

1. Use of local seed due to non availability of quality seeds.
2. No seed treatment
3. Imbalance use of fertilizer
4. Late sowing
5. Poor knowledge of improved package and practices

### **Technology intervention**

1. Timely Sowing
2. Available of quality seeds
3. Treatment of seeds

### **Treatments**

**T1** Farmer practices

**T2** R P

**T3** Timely sowing + improved seeds + mixed mustard straw in soil or Mustard cake

**No of farmers:** 4

**Plots sizes:** 0.5 ha

**Cost of critical inputs:** Rs 10,000

**Times:** Three years

**Title:** *Low quality and quantity of ber fruits*

### **Reason of low quality and quantity of fruits**

1. Lack of nutrients
2. Lack of proper time and method of spraying f insecticides and fungicides
3. Improper time of watering
4. Poor knowledge of package and practices

### **Technology of intervention**

1. Spraying of zinc sulphate and application of organic manure+ fertilizers
2. Timely plant protection measures

### **Treatments**

**T1** Farmers practices

**T2** RDF

**T3** Spraying of zinc sulphate +50% RFD +50% Organic manure

**T4** Timely spraying of insecticides, fungicides + Spraying of zinc sulphate+50% RFD +50% Organic manure

**No of farmers** 2

**Plot sizes** 0.25ha

**Cost of critical inputs** 15,000/-

**Period** Three years

### **3. Animal Science**

**Title :** *Low milk yield in bovine*

#### **Reason of low productivity**

1. Low nutrition status
2. Poor economic condition for supplement feeding
3. Lack of knowledge of supplementary feeding

#### **Technology intervention**

1. Multi nutrient feed blocks
2. Oral calcium

#### **Treatments**

- T1 Farmers practices
- T2 MNFB + Galog bolus
- T3 MNFB + Galog bolus + Oral calcium

**No of farmers:** 4

**Cost of critical inputs:** 8,000/-

**Period:** Three years

### **4. Home Science**

**Title:** *Problem of Anaemia in adolescent girls of Pali district.*

#### **Problem Diagnose:**

Anaemia is a major global problem affecting between 20-70% of the population in various countries. In India it is important public health problem affecting people from all walks of life. In this series Rajasthan is also affected with anaemia and rural areas is severely suffered with it. This problem is severe in Pali district too especially in rural area.

#### **What is anaemia:**

Anaemia is defined as reduction in hemoglobin (Hb) level in circulation and it adolescent girls hemoglobin is required 10-13 mg/dl. Hemoglobin present in red cells contains iron which is needed to carry oxygen to all part of the body. For the formation and normal growth of red cells iron and vitamin like folic acid and B12 are essential. The measure problem of hemoglobin reduction is due to these factors.

1. Lower absorption rate of iron of foods such as legume, cereals due to inhibiting factors such as phytates tanines present in plant.
2. Lower consumption of vitC, calcium and protein rich food. That increases the bio-availability of iron in body.
3. Iron loses during menstruation (15-30mg every cycle) increase the iron requirement of adult women.
4. Demand of iron is substantially increased during pregnancy and growth.

So to emphasis on this problem health expert scientist's, village leaders team make a survey in villages of Pali district and found that there is a number of health problem in adolescent girls such as malnutrition anaemia, vit A deficiency, vit D deficiency, iodine deficiency etc. But on the basis of ranking of these problems we found that anaemia is the major problem of Pali region in adolescent girls. These sign were seen in the target group-



- Pale eyes
- White nails (flat & thin)
- Tired ness
- Irritable behavior
- Prone to infection

**Details of technologies selected for assessment/refinement:**

- Selection of 60 girls from Pali district on the basis of sings of anemia.
- Taking their hemoglobin (< 10 mg/dl is selected for trial) and dietary assessment.
- Treatment selected.
  - T<sub>1</sub> – Control – (20girsl) no iron supplementation
  - T<sub>2</sub> – Experimental – (20 girls) iron enriched aonla candy supplementation as per dietary requirement of target group for 100 days.
  - T<sub>3</sub> – Experimental – (20 girls) Iron tablets supplementation as per doctor consult for 100 days.
- **Preparation of aonla candy-** Aonla rich in vitC & vitC increase the bio-availability of iron in body, so to increase the absorption of dietary iron, aonla candy is prepared and it is enriched by lotus stem powder that contain a good amount of iron.

**Source of Technology:** College of food and dairy technology MPUAT, Udaipur

**Production system and thematic area:** Nutrition management.

**Performance of technology with performance indicator:**

- **Clinical signs-** Pale eyes, thin and flat nails, irritable behavior etc.
- **Dietary survey-** 24 hours recall method for on day.
- **Hemoglobin test-** Clinical method.

**Final recommendation for micro level situation:** After conducting the OFT.

**Constraints identified and feed back for research:** After conducting the OFT.

**Process of farmers participation and their reaction:** After conducting the OFT.