

Action Plan

April 2009 – March 2010

KRISHI VIGYAN KENDRA
CAZRI, PALI-MARWAR 306 401

QUARTERWISE SUMMERY OF ACTION PLAN

(April 2009- March 2010)

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	1	1	1	2	0	0	0	0	0	0	0	0	0	1	0	0	1	2	1	2	3	3	4	2	18
2	Horticulture	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	1	2	2	3	2	13
3	Extension	1	0	1	1	0	0	0	0	0	0	1	1	0	0	1	0	1	0	3	2	2	1	1	2	12
4	Plant protection	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	2	6
5	Live stock production & management	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	2	2	2	2	12
6	Home science	0	0	0	0	0	0	2	0	1	0	0	1	0	0	0	0	1	0	2	1	1	1	3	2	11
	Total	4	4	3	5	0	0	2	0	1	0	1	2	0	1	1	0	5	5	7	7	11	11	14	12	72

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	20	10
			◆ Moth	Rainfed	20	10
		Rabi				
		• Oilseed	◆ Mustard	Irrigated	10	10
B.	Demonstration other than FLD					
		Kharif	◆ Maize	Rainfed	20	10
			◆ Sorghum	Rainfed	30	15
			◆ Clusterbean	Rainfed	20	10
			◆ Cotton	Irrigated	04	02
		Rabi	◆ Wheat	Irrigated	30	15
			◆ Barley	Irrigated	30	15
			◆ Cumin	Irrigated	20	05
			◆ Vegetable	Irrigated	05	0.25
			◆ Ber	Rain fed	05	100*
			◆ Aonla	Irrigated	02	50*
			◆ Kisan nursery	Rainfed/ Irrigated	1000*	2
C.	Others					
	• Compost/ vermi compost				04	-
	• MNFB				04	-
	• Improved Agri. Equipment-				03	-
	• Jatropha				03	-
	• Kitchen garden				04	-

* No. of Plants

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 st	Crops	1. Organic farming for sustainable agriculture	22-23 May	2	20	PF
	Horticulture	1. Agro-techniques for arid fruit plants	15-16 May	2	20	PF
		2. Improvement of desi ber plants and rejuvenation of old orchards	20-21 May	2	20	PF
	Home Science	1. Bandhej (Tie and die)	24-25 April	2	20	RY
	Extension	1. Mass media for information on improved agrotechniques	11-12 April	2	20	PF/RY
2 nd	Crops	1. Cultivation practices for kharif pulses	16-17 June	2	20	PF
	Horticulture	1. Techniques for propagation of arid fruits plants	15-16 July	2	20	PF
	Animal Science	1. Management and feeding practices of dairy animals	03-04 July	2	15	PF
		2. Prophylactic and control measures of contagious diseases	11-12 August	2	20	PF
3 rd	Crops	1. Efficient management of irrigation water	25-26 Sept	2	20	PF
	Home science	1. Basic of food and nutritional balanced diet	09-10 Nov	2	20	FW
		2. Nutrition for mother and children	15-16 Dec	2	20	FW
	Animal Science	1. Role of minerals and vitamins in animal feed	14-15 Dec	2	20	PF
	Extension	1. Sources and procedures for purchase of quality agri-inputs	17-18 Dec	2	20	PF/FW
		2. Entrepreneurship development in agriculture	22-23 Dec	2	20	RY
4 th	Crops	1. Improved cultivation practice for quality fodder production	11-12 Mar	2	20	RY
		2. Management of saline/ sodic soils	18-19 Mar	2	20	PF
	Horticulture	1. Nursery raising techniques for arid fruit plants	12-13 Feb	2	20	PF
	Home science	1. Value addition to the arid fruit through various preparations	09-10 Mar	2	20	RY
	Animal Science	1. Scientific sheep and goat rearing	4-5 Feb	2	20	PF
	Extension	1. Govt. programmes for benefit of rural community	15-17 Feb	2	20	PF/RY
		2. Information on improved agricultural technology using print media	26-27 Mar	2	20	PF/RY

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 st	Crops	1. Improved package of practices for grasses	08.04.2009	1	20	WF
		2. Seed production of kharif crops	16.04.2009	1	20	PF
		3. Cultivation practices for sesame	8.05.2009	1	20	PF
	Horticulture	1. Package & practice of fruit plants	28.05.2009	1	20	PF
		2. Techniques for training & pruning of ber plants	9.04.2009	1	20	PF
	Animal Science	1. Role of probiotic ruminant.	06.05.2009	1	20	PF
		2. Anoestrus in buffalo and its solution	2.05.2009	1	20	PF
	Home Science	1. Importance of breast feeding for infants	23.06.2009	1	20	FW
	Extension	1. Mass media for information on improved agrotechniques	26.06.2009	1	20	PF/RY
		2. Importance of modern information technology for farmers	28.06.2009	1	20	
Plant protection	1. Seed treatment for improved production	02.06.2009	1	20	PF	
2 nd	Crops	1. Moisture conservation for rainfed farming	22.07.2009	1	20	PF
		2. Weed management in sesame	03.07.2009	1	20	PF
		3. Vermi-composting	10.08.2009	1	20	WF
	Horticulture	1. Techniques for In-situ budding of ber plants	03.09.2009	1	20	RY
		2. Techniques for In-situ budding of aonla plants	17.09.2009	1	20	PF
	Animal Science	1. Vaccination in animals and its economical importance	08.07.2009	1	20	PF
		2. Management of heat stroke	07.08.2009	1	20	PF
	Extension	1. Sources and procedures for purchase of quality agri-inputs	10.08.2009	1	20	PF/FW
	Home science	1. Reason and precautions from different diseases during childhood	25.08.2009	1	20	FW
	Plant protection	1. Plant protection measure in kharif pulses	12.08.2009	1	20	PF
2. Plant protection measure in kharif crops		23.09.2009	1	20	PF	
3 rd	Crops	1. Agronomical practices for rabi cereals	07.10.2009	1	20	PF
		2. Improved package of practice for mustard	21.10.2009	1	20	PF
		3. Water management for rabi crops	20.11.2009	1	20	PF
		4. Fertility management through composting	20.11.2009	1	20	RY
Horticulture	1. Techniques & tips of vegetable production	08.10.2009	1	20	PF	

		2. Grading & packing of fruits and vegetables	17.11.2009	1	20	RY
		3. Improved package of practices of cumin production	18.12.2009	1	20	PF
	Animal Science	1. First aid in animal	08.10.2009	1	20	PF
		2. Artificial insemination in animals	20.12.2009	1	20	PF
	Home science	1. Preparation of nutritious food poshak for children	17.12.2009	1	20	FW
		2. Importance and techniques of kitchen gardening	09.12.2009	1	20	FW
		3. Safe drinking water technology	26.12.2009	1	20	RY
	Extension	1. Print media for information on improved agri-techniques	16.11.2009	1	20	PF
	Plant protection	1. Seed treatment for rabi cereals	24.10.2009	1	20	PF
4 th	Crops	1. Soil fertility management through composting	21.01.2010	1	20	PF
		2. Rain water harvesting technology for rainfed farming	19.01.2010	1	20	PF
	Horticulture	1. Techniques & tips of lady's finger production	24.01.2010	1	20	PF
		2. Techniques & tips of cucurbits production	03.02.2010	1	20	PF
	Animal Science	1. Quality improvement of roughages by urea treatment	06.01.2010	1	20	PF
		2. Clean milk production	25.02.2010	1	20	FW
	Extension	1. Govt. programmes for benefit of rural community	11.02.2010	1	20	PF/R Y
		2. Mass Media for information for improved Agro techniques	18-2-2010	1	20	PF/FW
	Plant protection	1. Plant protection in rabi oilseeds	25.03.2010	1	20	PF
		2. Plant protection measure in rabi crops	23.03.2010	1	20	PF
	Home Science	1. Training on health and hygiene	06.01.2009	1	20	FW
		2. Use of serrated sickles for drudgery reduction	31.03.2009	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 nd	Crops	Package & practice for grasses / pasture management	02-07 Mar	6	20	Supervisor of dept. of Agril.
3 rd	Extension	Mixed farming system for sustainable resource use	07-12 Dec	6	20	Supervisor of dept. of Agril.

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>
<i>Oilseed</i>								
Sesame	To popular new variety, use of fertilizer & PP chemicals	Rainfed	15	30	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	10	10	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
<i>Pulses</i>								
Green gram	To demonstrate latest production technology of green gram	Rainfed	10	20	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
Moth	To popularize new variety, use of fertilizer & PP measure	Rainfed	10	20	Using old variety, no bio fertilizer/ fertilizer & pp measures	Use of latest variety, bio fertilizer, fertilizer, timely pp measures	Seed, bio fertilizer, dap, urea & pp chemicals	kharif

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 farmers</i>	<i>Existing technology</i>	<i>Specific techno. Intervention</i>	<i>Critical Input</i>
1.	Maize	To demonstrate high yielding short duration varieties	Rainfed	10	20	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	15	30	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	10	20	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	15	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	15	30	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	5	05	Use of local seed, no seed treatment	Improved seed, pp measures	Seeds
7.	Cotton	To demonstrate performance of	Irrigated	02	04	Use of desi cotton seed or available seed, no seed	Improved seed, pp measures	Seeds

		high yielding variety				treatment		
8.	Vegetable	Grow the vegetable in kitchen garden	Irrigated	0.25	05	Not grow vegetable	Grow the vegetable as kitchen garden	Seed, insecticide, pesticides & fertilizer
9.	Okra (NHM)	Demonstrate performance of high yield variety	Irrigated	3 ha	12	Practice and package	Improved seed	Seed, insecticide, pesticides & fertilizer
10.	Binjal (NHM)	Demonstrate performance of high yield variety	Irrigated	3 ha	12	Practice and package	Improved seed	Seed, insecticide, pesticides & fertilizer
11.	Tomato (NHM)	Demonstrate performance of high yield variety	Irrigated	3 ha	12	Practice and package	Improved seed	Seed, insecticide, pesticides & fertilizer
12.	Ber	To improve the quality & quantity of ber fruits	Rainfed	100 Nos.	05	No adopted any improved technology	Budded technology	Buds, insecticides & pesticides
13.	Ber (NHM)	To develop the orchard	Irrigated	10 ha	10	Practice and package	Grafted planting	Plant insecticide manure and digging the pits
14.	Aonla	To popularize the aonla crops	Irrigated	50 Nos.	02	Not grow aonla crops	Sustainable cultivation	Grafted plants
15.	Kisan nursery	Planting grafted plants on farmers field	Rain fed/ Irrigated	1000 Nos.	02	No produce the grafted plants	Propagation technology	Seeds, buds, polythene bags, fungicide
Others than crops								
1.	Com post/ vermi comp ost	To popularize compost technology for improvement of soil fertility	-	-	05	Kept at open place near the house	Improved compost/ vermi compost technology	Super phosphate, PSB culture & worms
2.	Multi nutritie	Supplementary feeding to	-	-	05	Demonstrate MNFB	Multi nutrient feed block/ mixture	MNFB/mixture

	nt feed block	malnourished animals						
3.	Multi nutrient feed block	Supplementary feeding to malnourished animals	-	-	05	Demonstrate MNFB	Multi nutrient feed block/ mixture	MNFB/mixture
3.	Jetropha	To popularize jetropha plant as a boundary plantation	-	-	02	No boundary plantation of economic plants	Boundary plantation of jetropha solve fencing problem as well as provide additional income	Seed
4.	Improved Agril. Equipment	To popularize serrated sickle and peg weeder for efficient agril. Operation and time saving.	-	-	02	Low working efficiency with old sickle & kudali	Improved equipment	Improved sickle & peg weeder

3. EXTENSION ACTIVITIES

S. No.	Type of Activity	Quarter				Total
		I	II	III	IV	
1.	Field day	0	02	0	02	04
2.	Farmers day/ Vichar goshti	1	2	1	1	05
3.	Agril. Exhibition	0	1	0	1	02
4.	Scientist farmers interaction	0	0	01	0	01
5.	Farm science club	0	01	01	0	02
6.	Ex trainees meeting	0	01	01	01	03

7.	World food day	0	0	0	0	1
8.	Women in agril day	0	1	01	0	01
9.	National Science day	0	01	0	0	01
10.	Diagnostic service					
	◆ Farmers visit to KVK	-	-	-	-	-
	◆ Scientist visit to farmers field	1	2	1	2	06
11.	Lectures on other programme	2	3	3	2	10
12.	Campaigns					
	◆ Grain storage	0	01	0	0	01
	◆ Composting	0	0	02	0	02
13.	Publication					
	◆ Research paper to be published	-	-	-	-	-
	◆ Popular articles to be published	01	01	01	01	04
	◆ Extension bulletin	0	01	0	01	02
	◆ Pamphlets/ folder	02	0	02	0	04
14.	Slides	5	0	10	0	15
15.	Poster/ Charts	0	0	0	05	05
16.	Communication media					
	◆ Radio talk	01	01	01	01	04
	◆ TV/ film show	01	01	01	01	04
	◆ News paper coverage	02	03	03	02	10

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	0.25
			◆ Crop museum of kharif crops	0.25
		Rabi	◆ Crop museum of rabi crops	0.25
2.	Seed Multiplication Programme	Kharif	✓ Sesame	1.00
			✓ Guar	1.00
			✓ Sorghum	1.00
			✓ Green gram	1.00
			✓ Okra	0.50
3.	Horticulture	Kharif	◆ Aonla different variety	50 Nos. seedlings
			◆ 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 (2008-09) 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)	01	9.5	Need maintenance
3.	Soil testing lab	Nil	5.5	Needed for providing service to farming community
4.	Equipments (Photocopier, Digital SLR camera, TV and DVD player, Handy cam)	Nil	3.0	Needed for better training facilities
5.	Seed Grading Unit	Nil	26.0	Needed for seed multiplication programme
6.	Model Nursery	Nil	18.0	Needed for multiplication of seedlings
7.	Automatic Weather Station	Nil	3.88	Needed for weather data

6. SAC MEETING PROPOSED: 06.05.2010

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. Besides these, crop suffers heavily with acute weed problem at initial stage which ultimately affects 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.
 - T₁ – Control – (20girsl) no iron supplementation
 - T₂ – Experimental – (20 girls) iron enriched aonla candy supplementation as per dietary requirement of target group for 100 days.
 - T₃ – 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.