

ACTION PLAN

(April-2015 to March-2016)

OF

**KRISHI VIGYAN KENDRA
JUNAGADH AGRICULTURAL UNIVERSITY
TARGHADIA (RAJKOT)**



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TARGHADIA (Rajkot) – 360 003**

Action plan (2015-2016) (April – 2015 to March– 2016)

It is proposed to organize following batches of training programmes for farmers, farm women, rural youth and extension functionaries during April 2015 to March 2016

A. Training Programmes :

1. On Campus training (For practicing farmers, farm women and rural youth):

Subject	Title of Training	Duration Days	No.of Parti.	Type of Parti.
1	2	3	4	5
I. Quarter : (1st April to 30th June, 2015)				
Crop Production	- Minimize risk with intercropping in <i>kharif</i> crops	2	25	Farmers
Plant Protection	- Different types of Seed treatment for insect pests and diseases management.	2	25	Farmers & Farm Women
Animal Science	- Quality improvement of roughages by Urea treatment	2	25	Farmers
Horticulture	- Improved cultivation practices for important fruit crops	2	25	Farmers
Agril. Engg.	- Selection, maintenance and use of improved farm implements and machinery	2	25	Farmers
Home Science	- Preparation of bakery products with the help of Solar Cooker	2	25	Farm Women
	- Use of sprouted pulses in preparation of low cost nutrition diet.		25	Farm Women
II. Quarter : (1st July to 30th September, 2015)				
Crop Production	- Importance of micronutrient in crop production	2	25	Farmers
Plant Protection	- Integrated insect pests and diseases management in <i>kharif</i> crops	2	25	Farmers
Animal Science	- Management of reproductive and metabolic disorders in animals	2	25	Farmers
	- Fodder management in animal round the year.		25	Farmers
Horticulture	- Different propagation methods for fruit crops suitable for arid and semi arid region.	2	25	Farmers
Agril.Engg.	- In-situ moisture conservation practices in dry land agriculture	2	25	Farmers
Home Science	- Importance of green leafy vegetables in diet and preparing recipes from vegetables.	2	25	Farm women
III. Quarter : (1st October to 31st December, 2015)				
Crop Production	- Production technologies for major <i>Rabi</i> crops.	2	25	Farmers
Plant Protection	- Integrated insect pests & disease management in <i>Rabi</i> crops.	2	25	Farmers
Animal Science	- Control of ecto and endo parasites in cattle	2	25	Farmers
Horticulture	- Production technologies for <i>rabi</i> vegetables.	2	25	Farmers
Agril. Engg.	- Operation and maintenance of micro irrigation system	2	25	Farmers
Home Science	- Value addition in anola.	2	25	Farm women
IV. Quarter : (1st January to 31st March, 2016)				
Crop Production	- Importance of Organic manure and bio fertilizers for crop production.	2	25	Farmers
Plant Protection	- Storage grain pest and their management	2	25	Farmers
Animal Science	- Veterinary first aid & control of infectious diseases	2	25	Farmers
Horticulture	- Improved cultivation practices for summer vegetables.	2	25	Farmers
Agril. Engg.	- Importance of secondary agriculture	2	25	Farmers
Home Science	- Squash making from fruits.	2	25	Farm women

2. Off Campus training (For practicing farmers, farm women and rural youth)

Subject	Title of Training	Duration Days	No.of parti.	Type of Parti.
I. Quarter : (1st April to 30th June, 2015)				
Crop Production	- Crop Contingency planning.	1	25	Farmers
	- Importance of soil analysis for higher yield.	1	25	Farmers
Plant Protection	- Safe food and seed storage	1	25	Farmers
	- Management of soil arthropods in groundnut.	1	25	Farmers
Animal Science	- Vaccination schedule against contagious diseases in animals and poultry.	1	25	Farmers
	- Importance of mineral mixture in feeding for cattle and buffaloes	1	25	Farmers
Horticulture	- Importance of drip irrigation in horticultural crops.	1	25	Farmers
Agril. Engg.	- Rain water harvesting and their efficient use in crop production	1	25	Farmers
	- Small scale processing and value addition	1	25	Farmers
Home Science	- Preparation of milk products	1	25	Farm women
	- Proper methods for cooking	1	25	Farm women
II. Quarter : (1st July to 30th September, 2015)				
Crop Production	- Nutrient management in <i>Kharif</i> crops.	1	25	Farmers
	- Importance of organic farming	1	25	Farmers
Plant Protection	- Emerging insect pests & disease of <i>Bt.</i> cotton & their management.(pink boll worm ,mealy bug ,Stem weevil, mites)	1	25	Farmers
	- Integrated insect pests and diseases management in <i>kharif</i> crops	1	25	Farmers
Animal Science	- Deworming and vaccination in live stock	1	25	Farmers
	- Enrichment of low grade dry fodder for cattle	1	25	Farmers
Horticulture	- Preparation of planting materials in nursery	1	25	Farmers
	- Cultivation of vegetable & flower in green house.	1	25	Farmers
Agril. Engg.	- Water harvesting and groundwater recharge technologies	1	25	Farmers
	- Post harvest technology of different field crops	1	25	Farmers
Home Science	- Different methods of tie and dye work	1	25	Rural youth
	- Preparation of milk products	1	25	Rural youth
III. Quarter : (1st October to 31st December, 2015)				
Crop Production	- Quality and higher production technology for wheat and cumin crops.	1	25	Farmers
	- Nutrient management in <i>Rabi</i> crops.	1	25	Farmers
Plant Protection	- Ecofriendly management of insect pests & disease in vegetable crops.	1	25	Farmers
	- Management of disease of spices (<i>Rabi</i>) crops.	1	25	Farmers
Animal Science	- Minimizing the mortality of buffalo calves during winter season	1	25	Farmers
	- Control of common diseases in livestock & vaccination scheduling	1	25	Farmers
Horticulture	- Cultivation practices for onion & garlic.	1	25	Farmers
Agril. Engg.	- Management of salt affected soil	1	25	Farmers
	- Use of small tools and implements for drudgery reduction in agriculture	1	25	Farmers
Home Science	- Home level processing of tomato	1	25	Farm women

1	2	3	4	5
IV. Quarter : (1st January to 31st March, 2016)				
Crop Production	- Importance of soil analysis and method of soil sampling Importance of crop residue and their recycling.	1 1	25 25	Farmers Farmers
Pl. Protection	- Management of insect pest & disease in summer crops. - Different formulation of pesticides and their applications	1 1	25 25	Farmers Farmers
Animal Science	- Optimizing reproductive efficiency & to reduce age of 1st calving (AFC) - Importance of Artificial Insemination in Cattle & Buffaloes	1 1	25 25	Farmers Farmers
Horticulture	- Grading, sorting and pawing of fruits & vegetables.	1	25	Farmers
Agril. Engg.	- Selection, maintenance and safe use of plant protection equipments - Importance of non-conventional source of energy in agriculture	1 1	25 25	Farmers Farmers
Home Science	- Vaseline and bam making - Preparation and preservation of fruits & vegetables	1 1	25 25	Farm Women Farm Women

3. Vocational Training:

Sr. No.	Title of Training	Dura. Days	No. of parti	Type of Parti.
1.	- Preparation and preservation of fruits & vegetables products	6	25	Rural Girls
2.	- Preparation of different masala	4	25	Rural Girls

4. Extension Functionaries Training:

Sr. No.	Title of Training	Dura. Days	No. of parti.	Type of Parti.
1.	- Watershed management	1	25	Extension Functionaries Of DWDU
2.	- Integrated pests management in <i>Kharif</i> crops	1	25	Extension Functionaries of Agriculture Department
3.	- Technique for artificial insemination	1	25	A.I. Workers
4.	- Fruit & vegetable production technology	1	25	Extension Functionaries of ATMA

5. Sponsored/ Collaborative Training with Other Organizations:

Sr. No.	Title of Training	Dura. Days	No. of parti.	Type of Parti.	Sponsoring Agency
1.	- Scientific Dairy management	1	25	Farmers	ATMA-Rajkot
2.	- Nutritional management in Mother and Child	1	25	Farmers	PHC
3.	- Cottage level food processing entrepreneurship for farmers	1	25	Rural youth	IICPT
4.	- Integrated pest management in vegetable crops	1	25	Farmers	ATMA-Rajkot
5.	- Irrigation management in Rabi crop.	1	25	Farmers	FTC-Rajkot
6.	- INM in <i>Bt.</i> Cotton	2	35	Ext. workers	Cotton connect
7.	- IPM in <i>Bt.</i> Cotton	2	35	Ext. workers	Cotton connect

Training Programme : Quarter wise Summary :

Sr. No.	Subject	On Campus					Off Campus					G.T.
		*1	2	3	4	T	1	2	3	4	T	
1.	Crop Production	1	1	1	1	4	2	2	2	2	8	12
2.	Pl. Protection	1	1	1	1	4	2	2	2	2	8	12
3.	Animal Science	1	2	1	1	5	2	2	2	2	8	13
4.	Horticulture	1	1	1	1	4	1	2	1	1	5	9
5.	Agril. Engineering	1	1	1	1	4	2	2	2	2	8	12
6.	Home science	2	1	1	1	5	2	2	1	2	7	12
	Total	7	7	6	6	26	11	12	10	11	44	70

T = Total , G.T. = Grand Total , * 1, 2, 3,4 = Quarter

Summary of Training programme :

Sr. No.	Subject	On campus	Off campus	Total
1.	Crop Production	4	8	12
2.	Plant protection	4	8	12
3.	Animal Science	5	8	13
4.	Horticulture	4	5	9
5.	Agril. Engineering	4	8	12
6.	Home science	5	7	12
	Total	26	44	70
1.	Vocational training	1	1	2
2.	In service training	4	-	4
3.	Sponsored Training	7	-	7
	Grand Total	38	45	83

B. Front Line Demonstrations (Proposed)

Sr. No.	Crop	Variety	Objective	No. of Demons.	Area (ha)
Oilseed					
1	Groundnut	GG-20	Management of <i>white grub</i> through seed treatment.	10	4.0
Pulses					
1	Chickpea	GJG-3/ GJG-5	To test yield potentiality of newly released Chickpea variety	10	4.0
Cereals					
1	Wheat	GW-366/ GW-496	Fertilizer management in wheat crops.	5	2.0
Other Crops					
1	Cumin	GC-4	Management of wilt through bio agent	10	4.0
2	Bt. cotton	BG-II	Nutrient management in Bt. cotton	10	4.0
3	Onion	Guj.1	Crop diversification	5	2.0
4	Garlic	GG-4	Crop diversification	5	2.0
FLD Other than crops					
1	Animals	Chelated Mineral mixture powder	To balance the deficiency of minerals in animals	20	-
2	Fodder Crop	Lucerne (Anand-2/3)	To introduce new fodder crop variety	10	1.0
3	Solar energy	Box type solar cooker	To Introduce solar cooker in rural area	10	-
4	Small hand tool	Improved sickle	Drudgery reduction	10	-
Total				105	23.0

C. ON FARM TESTING (OFTs)

OFT-1

Title : Low yield of cotton

Objective : To increase the yield by balance fertilization

Treatments:

1. Farmer's practices
2. Recommended dose of fertilizer 240 – 50 – 150 + 50 ZnSO₄ and three spray of KNO₃
 - (i) 240 Kg N in four equal split first as a basal second, third and fourth at 30, 60 and 90 days after sowing.
 - (ii) 50 Kg P₂O₅ as basal dose.
 - (iii) 150 Kg K₂O as basal or in two equal split.
 - (iv) Three spraying of KNO₃ at 15 days interval starting from flowering.
3. T₂ + 25 Kg/ ha MgSO₄ + 500 kg /ha Castor cake. (Intervention)

OFT-2

Title : Management of White grub in Groundnut.

Objective: To minimize the infestation of grub in Groundnut.

Treatments :

1. Sowing of groundnut without Seed treatment. (Farmers practice)
2. Seed treatment with chlorpyrifos 25 E.C. @ 25 ml/kg seed.(GAU Reco.)
3. Seed treatment with clothanidin 50 WDG 2 g/kg seed (AINP on White grub and Other Soil Arthropods, , RARI, Department of Entomology Durgapura, Jaipur 2008)
4. *Metarhizium anisopli* @ 1.5 Kg + 250 Kg Castor cake/ha. Furrow application at the time of sowing

OFT-3

Title : Low yield in groundnut due to improper tillage practice

Objective: Soil moisture conservation through deep plowing up to 20 cm depth

Treatments :

1. Shallow ploughing with 5-6 inter culturing (Farmers method)
2. Deep ploughing with 2-3 inter culturing (Recommended Practice)
3. Medium deep ploughing with 3-4 times inter culturing (Intervention)

OFT-4

Title	:	Assessment of Fertility improvement in Buffalo
Problem diagnose	:	Long inter calving period
Objective	:	To manage the infertility in buffalo
Treatments	:	
<i>T1- Farmers practice</i>	:	FP - No any intervention
<i>T2- Recommended Technology</i>	:	Treated by "OVSYNCH" protocol as per NDRI Karnal
<i>T3- Technology Assessed</i>	:	Treated with Mineral Mixture + deworming tablets + Bio-Heat tablets.
Number of replication	:	06
Source of technology	:	NDRI Karnal
Thematic area	:	Dairy Management
Indicator/Parameter	:	Occurrence of heat, conception rate and no. of insemination/animal

OFT- 5

Title :- Comparison of solar cooker with traditional cooking system

Items:-

1. Murbba,
2. sweet potato,
3. sweet corn,
4. Roasted groundnut

Objective:-

- (1) To improve quality of Prepared items
- (2) To reduce drudgery of farm women
- (3) To reduce time and fuel consumption

Treatment: - Item no. 1

- (1) Preparation by traditional method
- (2) preparation by sunlight heat
- (3) preparation by solar cooker

Treatment: - Item no. 2-4

- (1) Preparation by traditional method
- (2) Preparation by roasting
- (3) Preparation by solar cooker

No. of Replications: - 4

Observations:-

- (1) Time consumption
- (2) Fuel consumption
- (3) Movement
- (4) Cost saving
- (5) Organoleptic test
 - a. Colour
 - b. Texture,
 - c. Test
 - d. Consistency
 - e. Overall acceptance
- (6) Keeping quality

OFT – 6

Title : Use of *Trichoderma* for wilt disease management in cumin

Objective : Application of biological control agent *Trichoderma* for managing the disease problem in cumin.

Treatments :

1. No use of trichoderma or fungicide at the time of sowing. But they use fungicides viz., carbendazim, hexaconazole, difenconazole, tebuconazole, propiconazole, , etc after of initiation of diseases. (Farmers practices.)
2. Application of *Trichoderma* @ 5 kg /ha with organic manure @1000 kg / ha at the time of sowing.. (Recommended practices.)
3. Application of *Trichoderma* @ 5 kg /ha along with organic manure @1000 kg / ha at the time of sowing and second application of *Trichoderma* @ 5 kg /ha along with organic manure by broadcasting method at 15 days after germination. (Refinement).

No. of Replications: - 3

Observations :-

1. Per Cent Plant infestation within 1x1 m² quadrat from each plot at 45 days after germination.
2. Record yield per hectare.

OFT – 7

Title : Effect of different type of mulching materials for water management in Cotton

Problem Diagnosed / Defined : Decreasing productivity of cotton due to water scarcity in the region

Thematic area : Use of plastic in agriculture

Treatments :

- T1 - Farmers' practice : No use mulching materials
T2 - Recommended Technology : Black plastic mulch (50 micron) under drip irrigation system
T3 - Technology assessed or Refined : Wheat straw or Groundnut shell mulch (0.5 mt. around the plant under drip irrigation system)

Number of trial : 2 (Farmers)

Observation : Yield, Soil moisture content

OFT-8

Title: Effect of salt & oil on spoilage of mango pickles

Problem Definition: Spoilage in mango pickle

Technology Assessed: Prevention of spoilage in mango pickles

- Objective:**
1. To prevent spoilage in mango pickle
 2. To increase self life of mango pickle
 3. Cost saving

Treatments:

Common ingredients use for all the treatments:- Mango 1 kg, turmeric powder 5 gm, jaggary/sugar 600 gm, fenugreek 50 gm, mustard 30 gm, asafetida (hing) 5 gm, coriander 30 gm, funnel 30 gm, red chili powder 30 gm.

1. Salt 12% (120 gm) + Rapeseed Oil 800ml/ kg mango (Local practices)
2. Salt 15% (150 gm) + Rapeseed Oil 250ml/ kg mango (Recommended practices)
3. Salt 20% (200 gm) + Rapeseed Oil 200ml/ kg mango (Refinement)

No. of Replication: - 3 (Farm women)

Observations:- Self life (days), Colour, Texture, Cost

OFT-9

1. Title : **To assess the effect of probiotic and prebiotic on milk production.**
2. Problem diagnose/define : Improper mixing and proportion of cereals, legumes and concentrate in animal feed leads to imbalance microbial activity and result in to low digestibility which leads to decrease milk production.
3. Details of technologies selected for assessment : T1 -*Farmers practice* (Dry and green fodder, concentration and cotton seed cake)
T2 - *Assessment* : T1 + Use of Probiotic & prebiotic in animal feed (Sacchromyses cerevisiae + Lactobacillus sporogenes+ Aspergillus oryzae+ Fructo oligosaccharide+ Biotin+ DL Methionine + Zinc Sulphate + Cobalt Sulphate Copper Sulphate) two bolus per day

- for 60 days
4. Source of technology : SAU,Gujarat
 5. Production system : -
 6. Thematic area : Feed Management
 7. Performance of the Technology with performance indicators : 1. Milk production per lactation
 8. Final recommendation for micro level situation : First year.
 10. Process of farmers participation and their reaction : Farmer : 10 , Group meetings and field visits

D. Extension Activities:

Sr. No.	Activity	Proposed No.
1	Kisan Mela	1
2	Field Day	5
3	Kisan Ghosthi	12
4	Radio Talk	As and when require
5	TV Show	As and when require
6	Film Show	12
7	Animal Health Camp	4
8	Improved implements demonstration	5
9	Khedut shibir	10
10	Kisan mahila meeting	2
11	News paper Coverage	As and when require
12	Popular Articles	16
13	Extension Literature	5
14	Advisory Service	As and when require
15	Ex-Trainee Sammelan	1
16	Seminar	1
17	Pashu Mela	1
18	Exhibition	1
19	Night meeting	6