

ACTION PLAN
(April-2014 to March-2015)
OF
KRISHI VIGYAN KENDRA
JUNAGADH AGRICULTURAL UNIVERSITY
TARGHADIA (RAJKOT)



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KVK, RAJKOT

Action plan (2014-2015) (April – 2014 to March– 2015)

It is proposed to organize following batches of training programmes for farmers, farm women, rural youth and extension functionaries during April 2014 to March 2015.

A. Training Programmes :

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

<i>Subject</i>	<i>Title of Training</i>	<i>Duration Days</i>	<i>No.of Parti.</i>	<i>Type of Parti.</i>
1	2	3	4	5
I. Quarter : (1st April to 30th June, 2014)				
Crop Production	- Production technologies for major summer crops	1	25	Farmers
Plant Protection	- Seed treatment for insect pests and diseases management.	1	25	Farmers & Farm Women
Animal Science	- Quality improvement of roughages by Urea treatment	1	25	Farmers
Horticulture	- Improved cultivation practices for important fruit crops	1	25	Farmers
Agril. Engg.	- Protected cultivation technology in agriculture (Green house technology)	1	25	Farmers
	- Rain water harvesting and their efficient use in crop production	1	25	Farmers
Home Science	- Preparation of bakery products with the help of Solar Cooker	1	25	Farm Women
	- Use of sprouted pulses in preparation of low cost nutrition diet.	1	25	Farm Women
II. Quarter : (1st July to 30th September, 2014)				
Crop Production	- Production technologies for major <i>kharif</i> crops.	1	25	Farmers
Plant Protection	- Integrated insect pests and diseases management in <i>kharif</i> crops	1	25	Farmers
Animal Science	- Management of reproductive and metabolic disorders in animals	1	25	Farmers
	- Fodder management in animal round the year.	1	25	Farmers
Horticulture	- Different propagation methods for fruit crops suitable for arid and semi arid region.	1	25	Farmers
Agril.Engg.	- Operation and maintenance of micro irrigation system	1	25	Farmers
Home Science	- Importance of green leafy vegetables in diet and preparing recipes from vegetables.	1	25	Farm women
III. Quarter : (1st October to 31st December, 2014)				
Crop Production	- Production technologies for major <i>Rabi</i> crops.	1	25	Farmers
Plant Protection	- Integrated insect pests & disease management in <i>Rabi</i> crops.	1	25	Farmers
Animal Science	- Control of ecto and endo parasites in cattles	1	25	Farmers
Horticulture	- Production technologies for <i>rabi</i> vegetables.	1	25	Farmers
Agril. Engg.	- Insitu moisture conservation practices in dry land agriculture	1	25	Farmers
Home Science	- Value addition in anola.	1	25	Farm women
IV. Quarter : (1st January to 31st March, 2015)				
Crop Production	- Importance of bio fertilizers in Agriculture	1	25	Farmers
Plant Protection	- Control measures of insect pest in protected cultivation	1	25	Farmers

1	2	3	4	5
Animal Science	- Veterinary first aid & control of infectious diseases	1	25	Farmers
	- Care for clean milk production.	1	25	Farmers
Horticulture	- Improved cultivation practices for summer vegetables.	1	25	Farmers
Agril. Engg.	- Selection, repair and maintenance of plant protection equipments	1	25	Farmers
	- Rain water harvesting in farm pond and well recharging	1	25	Farmers
Home Science	- Squash making from fruits.	1	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, 2014)				
Crop Production	- Importance of primary tillage.	1	25	Farmers
	- Importance of soil health card in crop production	1	25	Farmers
Plant Protection	- Safe food and seed storage	1	25	Farmers
	- Seed treatment for insect pest & disease management.	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
	- Selection, maintenance and use of improved farm implements and machinery	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, 2014)				
Crop Production	- Fertilizer 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.cotton</i> & their management.	1	25	Farmers
	- Pest and disease management in protected cultivation. (Green house technology)	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.	- Selection and use of interculturing operational tools	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, 2014)				
Crop Production	- Irrigation management in cotton crop.	1	25	Farmers
	- Irrigation management in <i>Rabi</i> crops.	1	25	Farmers
Plant Protection	- Ecofriendly management of insect pests & disease in vegetable crops.	1	25	Farmers
	- Different formulation of pesticides and their applications	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

1	2	3	4	5
Agril. Engg.	- Management of salt affected soil	1	25	Farmers
	- Importance of non-conventional source of energy in agriculture	1	25	Farmers
Home Science	- Home level processing of tomato	1	25	Farm women
IV. Quarter : (1st January to 31st March, 2015)				
Crop Production	- Value addition in wheat & cumin	1	25	Farmers
	- Importance of soil analysis and method of soil sampling	1	25	Farmers
Pl. Protection	- Management of insect pest & disease in summer crops.	1	25	Farmers
	- Integrated management of non insect pests in field condition.	1	25	Farmers
Animal Science	- Optimizing reproductive efficiency & to reduce age of 1st calving (AFC)	1	25	Farmers
	- Importance of Artificial Insemination in Cattle & Buffaloes	1	25	Farmers
Horticulture	- Grading, sorting and pawing of fruits & vegetables.	1	25	Farmers
Agril. Engg.	- Rain water harvesting in farm pond and well recharging	1	25	Farmers
	- Importance of secondary agriculture	1	25	Farmers
Home Science	- Vaseline and bam making	1	25	Farm Women
	- Preparation and preservation of fruits & vegetables	1	25	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	2	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 sucking insect pests management in Bt. Cotton	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.	- Protected cultivation in vegetable crops	1	25	Farmers	ATMA-Rajkot
5.	- Importance of Biopesticide and their uses	1	25	Farmers	FTC-Rajkot

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	2	6	2	2	2	2	8	14
4.	Horticulture	1	1	1	1	4	1	2	1	1	5	9
5.	Agril. Engineering	2	1	1	2	6	2	2	2	2	8	14
6.	Home science	2	1	1	1	5	2	2	1	2	7	12
	Total	8	7	6	8	29	11	12	10	11	44	73

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	6	8	14
4.	Horticulture	4	5	9
5.	Agril. Engineering	6	8	14
6.	Home science	5	7	12
	Total	29	44	73
1.	Vocational training	1	1	2
2.	In service training	4	-	4
3.	Sponsored Training	5	-	5
	Grand Total	39	45	84

B. Front Line Demonstrations (Proposed)

Sr. No.	Crop	Variety	Objective	No. of Demons.	Area (ha)
Oilseed					
1	Groundnut	GG-20	Management of major disease of groundnut	10	4.0
2	Sesamum	G.Til-4/ G.Til-10	To test yield potentiality of newly released sesamum varieties	5	2.0
Pulses					
1	Chickpea	GJG-3	To test yield potentiality of newly released Chickpea variety	10	4.0
Cereals					
1	Wheat	GW-366	Quality production of wheat through spraying of fungicide at milking stage.	10	4.0
Other Crops					
1	Cumin	GC-4	Management of wilt through bio agent	10	4.0
2	Bt. cotton	BG-II	To reduce the reddening in 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	Mineral mixture powder	To balance the deficiency of minerals in animals	10	-
2	Lucerne	Anand-2/3	To introduce new fodder crop variety	10	1.0
3	Energy booster	-	To balance the energy in animals	20	-
4	Solar energy	Box type solar cooker	To Introduce solar cooker in rural area	10	-
5	Improved sickle	-	To introduce new equipment	10	-
Total				125	27

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 sucking pests in cotton.

Objective: To minimize the sucking pest in cotton.

Treatments :

1. Continuous spraying of chemical pesticides. (Farmers practice)
2. IPM : alternate spraying of chemical and bio pesticide and intercropping of maize / cow pea with cotton 1:10 Row (Recommended practice)
3. Spraying of chemical pesticide @ half does of recommendation with bio pesticide i.e. Azadirachtin 1500 ppm or *verticillium lecanii* and growing of maize / cowpea as mix crop with cotton. (Intervention)

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 of technology : Integrated Nutrient Management in Onion Crop

Problem Diagnosed / Defined :

1. Farmers applied only nitrogenous and phosphatic fertilizers.
2. Use higher dose of fertilizer.
3. Farmers do not use sulphur fertilizer it is necessary for onion crop.
4. Injudicious use of fertilizer.

Treatments :

- T₁ : Farmers practice (100 to 120 kg DAP/ha + 80 to 90 kg Urea / ha after 30 to 60 days of transplanting)
- T₂ : Recommended (Use of NPK as a 125 kg N/ha, 50kg P/ha, and 50kg K/ha with 20 kg S/ha)
- T₃ : Intervention (NPK as recommended dose + 40 kg S/ha)

No of trial : Two

OFT – 7

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, proticonazole, , etc after of initiation of diseases. (Farmers practices.)
2. Application of *Trichoderma* @ 2.5 kg /ha with castor cake @ 500 kg / ha at the time of sowing with the help of multipurpose seed drill. (Recommended practices.)
3. Application of *Trichoderma* @ 2.5 kg /ha along with compost or castor cake 500 kg / ha at the time of sowing and second application with compost / castor cake by broadcasting method at 15 days after germination. (Refinement).

No. of trial : - 3 (Farmers)

Observations :-

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

OFT – 8

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 : 3 (Farmers)

Observation : Yield, Soil moisture content

OFT-9

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-10

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