ACTION PLAN (FROM OCTOBER - 2008 TO SEPTEMBER - 2009)

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It is proposed to organize **86** batches of training programmes for farmers, farmwomen, rural youth and extension functionaries during period from October 2008 to September 2009.

A. Training Programmes :

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

Subject	*Title of Training*	*Dura Days*	*No.of Parti.*	*Type of Parti.*
I. Quarter : (1st October to 31st December, 2008)				
Crop Production	– Improved cultivation practices of major rabi crops	1	25	Farmers
Plant Protection	– Integrated insect-pest and disease management in Rabi crops	1	25	Farmers
Animal Science	– Role of Minerals & Vitamin in Animal ration & preparation of conception rates in Animals – Clean milk Production	1 1	25 25	Farmers Farmers
Horticulture	– Importance of drip irrigation in horticultural crops	1	25	Farmers
Agril. Engg.	– Efficient use of drip and sprinkler irrigation system.	1	25	Farmers
Home Science	– Preparation and Preservation of Lemon – Use of sprouted Pulses in preparation of low cost nutritional Diet	1 1	25 25	Rural Women Rural Women
II. Quarter : (1st January to 31st March, 2009)				
Crop Production	– Irrigation and weed management in summer g'nut	1	25	Farmers
Plant Protection	– Integrated insect pest and disease management in Summer crops	1	25	Farmers
Animal Science	– Important Cattle breeds, their characteristics & selection for Milk purpose	1	25	Farmers
Horticulture	– Improved cultivation practices of important flower crops	1	25	Farmers
Home Science	– Value addition in Aonla – Nutrition recepies for child	1 1	25 25	Rural Girls Farm Women
Agril.Engg.	– Processing and preservation of food grains and seed.	1	25	Farmers
III. Quarter : (1st April to 30th June, 2009)				
Crop Production	– Importance of soil analysis and method of soil sampling	1	25	Farmers
Plant Protection	– Use of bio-pesticides for the management of insect - pest	1	25	Farmers
Animal Science	– Control of common diseases in livestock & vaccination scheduling – Care and Management of Pregnant farm Animals	1 1	25 25	Farmers Farmers
Horticulture	– Production technology of major arid fruit crops	1	25	Farmers
Home Science	– Preparation of decorative items from waste material	1	25	Rural Girls
Agril. Engg.	– Use of improved agricultural implements for sowing, harvesting and threshing.	1	25	Farmers
IV. Quarter : (1st July to 30th September, 2009)				
Crop Production	– Fertilizer management in kharif crops – Drought management in kharif crops	1 1	25 25	Farmers Farmers
Plant Protection	– Integrated insect-pest and disease management in Kharif crops	1	25	Farmers
Animal Science	– Training on green fodder production round the year	1	25	Farmers
Horticulture	– Cultivation practices of medicinal and aromatic plants – Grading, sorting and packing of fruits and vegetables	1 1	25 25	Farmers Farmers
Agril. Engg.	– Selection and maintenance of plant protection equipments.	1	25	Farmers
Home Science	– Fancy patch work and hand work stitches	1	25	Farm women

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

Subject	*Title of Training*	*Dura Days*	*No.of parti.*	*Type of Parti.*
I. Quarter : (1st October to 31st December, 2008)				
Crop Production	– Use of bio-fertilizers in major rabi cereals	1	25	Farmers
	– Production technology of cumin	1	25	Farmers
Plant Protection	– Control measures of insect and diseases in Rabi crops	1	25	Farmers
Animal Science	– Feed & Feeding in Live stock	1	25	Farmers
	– Breeding problems in Buffaloes	1	25	Farmers
Horticulture	– Off season vegetable production technology	1	25	Farmers
	– Seedling raising and transplanting of important Rabi vegetables	1	25	Farmers
Agril. Engg.	– Importance of non-conventional sources of energy.	1	25	Farmers
	– Handling and maintenance of power threshers.	1	25	Farmers
Home Science	– Vegetable pickle making (different types)	1	25	Farm women
	– Preparation of different Bakery items	2	25	Rural Girls
II. Quarter : (1st January to 31st March, 2009)				
Crop Production	– Production technology of summer sesamum	1	25	Farmers
	– water management in major summer crop	1	25	Farmers
Pl. Protection	– Management of insect pest & diseases in summer crops	1	25	Farmers
Animal Science	– Scientific Dairy farming & Genetic Improvement through Artificial Insemination	1	25	Farmers
	– Quality improvement of roughages by Urea treatment	1	25	Farmers
Horticulture	– Cultivation Practices of Summer Vegetables	1	25	Farmers
	– Improved cultivation practices of fruit crops	1	25	Farmers
Agril. Engg.	– Technical know how about wire fencing.	1	25	Farmers
	– Repair & maintenance of bullock drawn implements.	1	25	Farmers
Home Science	– Income generation through cleaning powder, soap and detergent making	2	25	Farm women
	– Preparation of Milk Products	1	25	Farm women
III. Quarter : (1st April to 30th June, 2009)				
Crop Production	– -Vermi compost techniques	1	25	Farmers
Pl. Protection	– Pest management in stored products	1	25	Farmers
	– Use of biopesticides for the management of insect - pest	1	25	Farmers
Horticulture	– Seedling raising and transplanting of vegetable crops	1	25	Farmers
	– Package of practices for improved chili cultivation	1	25	Farmers
Animal Science	– Care and Management of Cow and Buffalo during heat and Breeding	1	25	Farmers
	– Importance of Artificial Insemination	1	25	Farmers
Home Science	– Different Cooking methods	1	25	Farm women
	– Preparation of Nutritional diet for pre-School children	1	25	Farm women
Agril. Engg.	– Important techniques of soil and moisture conservation	1	25	Farmers
	– Selection and use of intercultural operational tools.	1	25	Farmers
IV. Quarter : (1st July to 30th September, 2009)				
Crop Production	– Production technology of cotton	1	25	Farmers
Pl. Protection	– Management of pest in Kharif crops	1	25	Farmers
	– Management of diseases in Kharif crops	1	25	Farmers
Animal Science	– Utilization of locally available fee for formulation	1	25	Farmers
	– Deworming and Vaccination in Live stock	1	25	Farmers
Horticulture	– Different propagation methods for fruit crops suitable for arid and semi arid region	1	25	Farmers
Home Science	– Preparation of self help ness group	1	25	Farm Women
	– Supplementary nutrition for child and pregnant women	1	25	Farm Women
Agril. Engg.	– Efficient utilization of irrigation water.	1	25	Farmers
	– Dry land technology (soil and water conservation).	1	25	Farmers

3. Vocational Training :

Sr. No.	*Title of Training*	*Dura.Days*	*No. of parti*	*Type of Parti.*
1.	-Preservation of vegetables and fruits	6	30	Rural Girls

4. In service Training:

Sr. No.	*Title of Training*	*Dura. Days*	*No. of parti.*	*Type of Parti.*
1.	– Scientific Dairy Farming	1	25	Extension Workers
2.	– Nutritional education	1	20	Anganwadi workers
3.	– Importance of micro nutrients in cotton	1	25	Extension Workers
4.	– Integrated Insect Pest management in Cotton	1	25	Extension Workers
5.	– Integrated Disease management in Cumin	1	25	Extension Workers

5. Sponsored Training with Other Organizations :

Sr. No.	*Title of Training*	*Dura. Days*	*No. of parti.*	*Type of Parti.*
1.	– Breed Improvement of Cattle and Buffalo through A.I./ Natural services	1	25	Farmers
2.	– Loans/Subsidies for Dairy farm animals	1	25	Farmers
3.	– Importance and techniques of kitchen gardening	1	25	Farm Women
4.	– Vaccination in mothers and children	1	25	Farm Women
5.	– Post harvest management of fruits	1	25	Farmers
6.	– Protected cultivation of vegetable crops	1	25	Farmers

6. 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/ Soil Science	1	1	1	2	**5**	2	2	1	1	**6**	**11**
2.	Horticulture	1	1	1	2	**5**	2	2	2	1	**7**	**12**
3.	Pl. Protection	1	1	1	1	**4**	1	1	2	2	**6**	**10**
4.	Animal Science	2	1	2	1	**6**	2	2	2	2	**8**	**14**
5	Home science	2	2	1	1	**6**	2	2	2	2	**8**	**14**
6.	Agril. Engineering	1	1	1	1	**4**	2	2	2	2	**8**	**12**
	Total	**9**	**7**	**7**	**8**	**31**	**11**	**11**	**11**	**10**	**43**	**74**

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

7. Summary of Training programme:

Sr. No.	*Subject*	*On campus*	*Off campus*	*Total*
1.	Crop Production	5	6	11
2.	Horticulture	5	7	12
3.	Plant protection	4	6	10
4.	Animal Science	6	8	14
5.	Home science	6	8	14
6.	Agril. Engineering	4	8	12
	Total	**31**	**43**	**74**
1.	Vocational training	-	1	1
2.	In service training	5	-	5
3.	Sponsored Training	-	6	6
	Total	**36**	**50**	**86**

B. Demonstrations : Kharif / Rabi - 2008-09

S.N.	Title / Object	Crop and Variety	No. of farmer	Area (ha)	Existing Tech.	Specific Technology
FLD - Oil Seeds						
1.	To test yield potentiality of groundnut	Groundnut GG-5	20	8.0	Use of Local Variety	Use of new variety
2.	To test yield potentiality of Sesamum	Sesamum GT-2/3	5	2.0	Use of Local Variety	Use of new variety
3	To suppress stem rot disease in groundnut	Groundnut	10	4.0	Use of *Trichoderma* powder	Use of new variety
FLD - Pulses						
1	To test yield potentiality of Mung	Mung G-4	10	4.0	Vary less area under the crop	Improved package of practices with new crop and variety
2	To test yield potentiality of black gram	Black gram GU-1	10	4.0	Vary less area under the crop	Improved package of practices with new crop and variety
3.	To test yield potentiality of Gram	GG-1	10	4.0	Use of Local Variety	Use of new variety in dry condition
FLD Cereals						
1	To test yield potentiality of Wheat	Wheat GW-366	10	4.0	Use of local variety	INM with improved varieties
Other Crops (Spices)						
S.No.	***Title / Object***	***Crop and Variety***	***No of farmer***	***Area (ha)***	***Existing Tech.***	***Specific Technology***
1	To test yield potentiality of Cumin	GC-4	15	6.0	No use of recommended variety & Cultural Practices	Use of wilt resistance variety with proper cultural practices
Other Crops						
Sr.No.	***Title / Object***	***Crop and Variety***	***No of farmer***	***Area (ha)***	***Existing Tech.***	***Specific Technology***
1	To test yield potentiality of Cotton	Hybrid / B.T. cotton	10	4.0	Do not follow recommended plant protection measure for sucking pest	Recommended plant protection measure
Other than FLD						
1	Composting	-	10	-	Local method	Improved method
2	Vermi-compost	-	10	-	Not existing	Wide adoption with scientific technology

C. Extension Activities:

Sr. No.	*Activity*	*Proposed No.*
1.	Kisan Mela	1
2.	Field Day	10
3.	Kisan Gosthi	12
4.	Radio Talk	As and when require
5.	TV Show	As and when require
6.	Film Show	12
7.	Exhibition	2
8.	Animal Treatment Camp	5
9.	Khedut shibir	12
10.	Kishan Mahila Meeting	3
11.	News Paper Coverage	As and when require
12.	Popular Articles	10
13.	Extension Literature	9
14.	Advisory Service	As and when require
15.	Ex- Trainee Sammelan	1
16.	Others – Seminar	3
17	Pashu Mela	1
18	SHG group	1

D. ON FARM TESTING (OFTs)

OFT-1

Title : Low yield of cotton

Objective : To increase the yield by balance fertilization

Treatments:

T_1. Farmer's practices

T_2. Recommended dose of fertilizer (160-0-0) in four split in which second split in form of Ammonium Sulphate

T_3. T_2 + 50 kg P_2O_5 ha^{-1} through DAP + 50 kg K_2O ha^{-1} through MOP as a basal dose.

T_4. T_3 + 25 kg $MgSO_4$ ha^{-1} + 10 kg $ZnSO_4$ as a basal dose.

OFT-2

Title : Reduction of Inter – Calving Period in Buffalo

Objective : To decrease the inter-calving period in buffalo

Treatments

1. One group of Animals be fed with Panacure tablets + Bio-Heat tablets.
2. Second group of Dairy Animals be fed with Mineral Mixture.
3. Third group of Dairy Animals be fed with Mineral Mixture + Panacure tablets + Bio-Heat tablets.
4. Fourth group of Dairy Animals under control (Farmers Practice)

OFT-3

Title : Soil moisture conservation through use of organic mulches in aonla.

Objective : To conserve soil moisture through mulching

Aonla is the most important fruit crop in arid and semi arid region. Generally farmers are growing this crop either on wasteland or on farm bund without using mulching. Mulching along with

saucer shape basin play very vital role for conservation of soil moisture in Aonla, so the On Farm Testing on this aspect has been decided.

Treatments

1. Preparation flat basin without mulches (Farmer's practice)
2. Black polythene sheet mulching (Recommended)
3. Preparation of saucer shape basin (5 % slope) with mulches through local farm waste (Intervention)

OFT-4

Title : Application methods of *Trichoderma* against stem rot disease in groundnut

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

Treatments

1. Mix *Trichoderma* @ 2.5 kg /ha with 50 kg fine sand or organic manure and soil application in side the groundnut row at 30 days after sowing in moist condition (General Recommendation- Farmers Methods)
2. Mixing *Trichoderma* @ 2.5 kg/ha with castor cake @ 500 kg/ha at the time of sowing with the help of multi purpose seed drill . (Recommended Practice by JAU).
3. Soil drenching of *Trichoderma* @ 50 gm/10 litter of water using spray pump without nozzle. (Intervention)
4. Trichoderma @ 2.5 kg/ha alongwith compost or castor cake 50 kg/ha at the time of after Sowing

OFT-5

Title : Management of sucking pests in cotton.

Objective: To minimize the sucking pest in cotton.

Treatments

Treatment-1 New insecticide use (Farmers practice)

Treatment-2 Use of new, old and bio control agent (Recommended practice)

Treatment-3 Alternate treatment one and two

OFT-6

Title: Management of leaf roller in sesamum.

Objective: To minimize the incidence of leaf roller in sesamum.

Treatments:

1. Farmer practices
2. Recommended practices
   Insecticidal spray at ETL of 5 larvae / 20 plants.
3. Alternate spray of Endosulfan 0.07 % and monocrotophos 0.04 % at 30 and 45 DAS

OFT- 7

Title : Low yield in Groundnut

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

Treatments

1. Shallow plowing with 7-8 inter culturing (Farmers method)
2. Deep plowing with 2-4 inter culturing (Recommended Practice)
3. Medium deep ploughing with 4-5 times inter culturing (Intervention)

OFT-8

Title: Soil Moisture Conservation by Farm Waste in Groundnut Crop

Objective: To conserve soil moisture by mulching

Treatments:

1. No. mulching (Farmers practice)
2. Flat bed with polythene mulch (Recommended practice)
3. Flat bed with farm waste as a mulch (Intervention)

OFT-9

Title : Feeding of calcium rich diet to children in rural for remove calcium deficiency (Age group - 6 to 12 Month).

Objective

To remove the calcum deficiency in rural child of age group of 6 – 12 months.

Treatment

1. Use of biscuits for first group of children (Age Group - 6 to 12 Month).
2. Use of mixture of til (30 gm)+ Groundnut seed (10 gm) + Ghee (5 gm) + Jaggery (10 gm) for second group of children (Age Group - 6 to 12 Month).
3. Use of Biscuits + mixture of til + Groundnut seed + Ghee + Jaggery for third group of children (Age Group - 6 to 12 Month)
4. Fourth group of children (Control)

IMPACT

Impact of KVK activities.

An interview schedule was prepared to measure the impact of KVK activities such as training, FLD, OFT on beneficiaries. An attempt was made to study the profit of the participant trainees, knowledge and adoption of different agricultural technology and increase in yield in major crops before KVK and after KVK. An interview schedule was prepared in local language and 100 participant trainees were selected for the study by random sampling method. This study was conducted with following objectives…

1. To know the profile of trainees
2. To identify the agricultural information sources before and after KVK
3. To assess the knowledge and adoption of trainees about agricultural technology before and after KVK
4. To assess the yield production of major growing crops before and after KVK

1. Profile of the trainees

A. Age of the participants

Sr. No.	Category	Percentage
1	Upto 35 years	36
2	36 to 50 years	50
3	More than 50 years	14

The data indicate that about 50 per cent of the participants belong to 36 to 50 years age group and 36 per cent of the participants were from the young age group. Hence, more emphasis may be given to attract young age farmers to participate in KVK activities.

B. Educational status of the participants

Sr. No.	Category	Percentage
1.	Illiterate	15
2.	Primary level	37
3.	S.S.C. / H.S.C. level	47
4.	Graduate and above	1

Majority of the respondent farmers were having either primary or high school education. The data also show that a very few (1%) of the respondents were graduate and above. It shows that they are not interested in agriculture and allied aspects. They may be interested in other vocations or service.

C. Area of farm land (Hectares)

Sr. No.	Category	Percentage
1.	Less than 1 ha.	5
2.	1 to 2 ha.	17
3.	2 to 4 ha.	27
4.	More than 4 ha.	51

The data indicate that majority (51%) of the participant farmers were having more then 4 ha.

D. Annual income (Rupees)

Sr. No.	Category	Percentage	
		Before KVK	At present
1.	10000 to 50000	14	7
2.	50001 to 100000	22	24
3.	100001 to 200000	39	40
3.	More than 200000	25	29

The farmers having annual income of Rs. 10000 to Rs. 50000 were 14 per cent, where as 22 per cent farmers had Rs. 50001 to Rs.100000 and 39 per cent of the farmers were having annual income in between Rs. 100001 to Rs. 200000 before KVK . At present 24 per cent farmers were having annual income between Rs. 50001 to Rs. 100000, 40 per cent were having Rs. 100001 to Rs. 200000 and 29per cent were having more than Rs. 200000. It shows that after KVK, the annual income of the farmers has increased.

2. Sources of agricultural information before KVK and at present

Sr. No.	Sources of agril. Information	Percentage	
		Before KVK	At present
1.	Radio	29	15
2.	Television	57	85
3.	Telephone	36	64
4.	News paper	50	57
5.	Agril. Literature	21	42
6.	KVK scientists	-	100
7.	NGOs	8	17
8.	Agro agencies	64	59

The data presented in the above table indicated that 29 per cent of the participants got agricultural information from radio, 64 per cent from agro agencies, 50 per cent from news paper, 57 per cent from T.V., 21 per cent from agril. Literature, 8 per cent from NGOs and 36 per cent by telephone before the KVK in this area. But at present, all the participated respondents are obtaining agril. Information from the KVK scientists, 85 per cent from the T.V., 15 per cent from radio, 57 per cent from newspapers, 42 per cent from agril. Literature, 64 per cent through telephone help line, 59 percent from agro agencies and 17per cent from NGOs. These show that KVK has helped the farmers to have access to farm information.

3. Knowledge and adoption of agril. Technology before KVK and at present By trainees

A. Knowledge and adoption of Groundnut production technology

Sr. No.	Particular	Before KVK		At present	
		Knowledge (%)	Adoption (%)	Knowledge (%)	Adoption (%)
1.	High yielding varieties				
	a. Spreading GG-11,12,13	52	27	94	43
	b. Semi spreading GG-20	85	74	100	89
	c. Erect GG- 2,4,6,7	74	58	96	67
2.	Sowing time	100	99	100	100
3.	Seed rate	70	51	80	73
4.	Seed treatment	52	25	95	90
5.	Row spacing	50	40	93	81
6.	Application of FYM	75	70	100	80
7.	Application of Fertilizer	50	43	85	78
8.	Irrigation	74	71	95	94
9.	Control measures for diseases	25	24	80	75
10.	Control measures for insect-pests	30	28	83	79

B. Knowledge and adoption of Cotton production technology

Sr. No.	Particular	Before KVK		At present	
		Knowledge (%)	Adoption (%)	Knowledge (%)	Adoption (%)
1.	High yielding varieties	27	24	100	100
2.	Sowing time	97	94	99	98
3.	Seed rate	36	27	96	76
4.	Seed treatment	80	67	100	100
5.	Row spacing	32	29	95	79
6.	Application of FYM	43	24	87	62
7.	Application of Fertilizer	39	22	73	68
8.	Irrigation	87	81	93	78
9.	Control measures for diseases	27	16	89	80
10.	Control measures for insect-pests	34	25	93	89

C. Knowledge and adoption of Cumin production technology

Sr. No.	Particular	Before KVK		At present	
		Knowledge (%)	Adoption (%)	Knowledge (%)	Adoption (%)
1.	High yielding varieties Guj.Cumin-2, 3, 4	24	15	97	84
2.	Sowing time	88	83	95	92
3.	Seed rate	53	40	87	83
4.	Seed treatment	43	38	96	84
5.	Row spacing	82	75	93	89
6.	Application of FYM	43	40	84	77
7.	Application of Fertilizer	45	41	92	87
8.	Irrigation	76	68	98	86
9.	Control measures for diseases	30	26	93	89
10.	Control measures for insect-pests	37	32	97	94

D. Knowledge and adoption of Wheat production technology

Sr. No.	Particular	Before KVK		At present	
		Knowledge (%)	Adoption (%)	Knowledge (%)	Adoption (%)
1.	High yielding varieties GW – 496, 322, 366	42	24	98	79
2.	Sowing time	82	76	87	76
3.	Seed rate	73	60	95	87
4.	Row spacing	48	25	92	73
5.	Application of FYM	68	59	86	69
6.	Application of Fertilizer	32	27	97	82
7.	Irrigation	80	73	98	92

E. Knowledge and adoption of Chickpea production technology

Sr. No.	Particular	Before KVK		At present	
		Knowledge (%)	Adoption (%)	Knowledge (%)	Adoption (%)
1.	High yielding varieties Guj.Gram-2	21	12	93	72
2.	Seed rate	53	46	96	82
3.	Row spacing	62	42	98	79
4.	Seed treatment	34	30	94	71
5.	Irrigation	82	79	95	88
6.	Plant protection	26	18	99	85

4. Yield production of major growing crops before KVK and at present

Sr. No.	Name of crop	Yield (qt. / ha.)		Yield increased in %
		Before KVK	At present	
1.	Groundnut	10.00	12.50	25.00
2.	Cotton	17.50	25.00	42.86
3.	Cumin	5.00	6.67	33.40
4.	Chickpea	13.75	17.50	27.27
5.	Wheat	32.50	37.50	15.38
6.	Sesamum	6.25	7.50	20.00
7.	Black gram	7.50	8.75	16.67

From above table the yield of the groundnut, cotton, cumin, gram and sesamum crops have been increased considerably while there is a meager increase in yield of wheat and black gram. This may be due to the adoption of recommended production technology and integrated pest management approaches suggested by the KVK scientists to the farmers during training programmes, field days, celebration of crop production week, etc.

Bench mark survey completed for adoption of villages from the period of 2008-2011

Sr. No	Name of Tahesil	Adopted villages
1	Padadhari	Metoda
2		Amreli
3		Kerala
4		Suvag
5		Sarapdad
6	Vankaner	Kothi
7		Samadhiyala
8		Jalida
9		Meshariya
10		Lunsar
11	Rajkot	Magharvada
12		Deroi
13		Bedala
14		Khorana
15		Ranpur