

PROGRESS REPORT

(April-2017 to March-2018)

1. GENERAL INFORMATION ABOUT THE KVK

1.1. Name and address of KVK with phone, fax and e-mail

Address	Telephone	E mail	Web Address
Krishi Vigyan Kendra, Junagadh Agricultural University, Morbi Dist Morbi (Gujarat) - 363641	02822-224853	kvkmorbi@gmail.com	www.jau.in

1.2 .Name and address of host organization with phone, fax and e-mail




Address	Telephone		E mail
	Office	FAX	
Junagadh Agricultural University, Junagadh (Gujarat)	0285- 2672080	0285-2672653	dee@jau.in

1.3. Name of the Senior Scientist and Head with phone & mobile No.

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr .D. S. Hirpara	Shubham Radhanagar Street No.5 Near, P.G.V.C.L.Office Nana mauve, Main Road Rajlot-360004	9426938235 O.02822- 224853	dshirpara@jau.in

1.4. Year of sanction: October – 2017 (Grant & Staff from March-2017)

1.5. Faculty Information : (Name, Designation, Specialization/Discipline, Contact & E-mail ID passport size photograph)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Specialization /Discipline	Contact No.	Email ID	Passport Size Photograph
1	In Charge Senior Scientist & Head	Dr.D.S.Hirpara	Senior Scientist & Head	Ph.D. (Agricultural Agronomy)	9426938235	dshirpara@jau.in	
2	Subject Matter Specialist	D.A.Saradava	Scientist (Plant Pro.)	M.Sc. (Agricultural Entomology)	9426784628	dasaradava@jau.in	
3	Subject Matter Specialist	Dr.Hemangi D.Mehta	Scientist (Home Science)	M.Sc.(Home Science), Ph.D. (Women Empowerment)	9712533511	hemangidmehta@gmail.com	
4	Subject Matter Specialist	4 Post Vacant					
5	Farm Manager/T-4	1 Post Vacant					
6	Program Assistant (computer)/T-4	1 Post Vacant					
7	Program Assistant (lab technician)/T-4	1 Post Vacant					
8	Assistant	1 Post Vacant					
9	Stenographer grade III	1 Post Vacant					
10	Driver/T-1	2 Post Vacant					
11	Skilled Support Staff	2 Post Vacant					

1.6 Total land with KVK (in ha): 26

1.7 Infrastructural Development:

A) Buildings

Sr. No	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	KVK	-	-	-	1-12-2017	575.32	under process
2.	Farmers Hostel	KVK	-	-	-	1-12-2017	443.96	under process

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Bollero jeep	2006	4,86500	270048	Working

C) Equipments & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
1	2	3	4
Tractor MasseyDI-241	2017	607137	Working
Computer System Acer 18.5	2017	34115	Working
Computer System Acer 18.5	2017	34115	Working
Printer MF 3010 canon	2017	10266	Working
Printer LBP 6510	2017	8761	Working

2. DETAILS OF DISTRICT

2.1. Major farming systems/enterprises

Sr. No	Farming system/enterprise
1	Cotton-Wheat/Cotton-Cumin/Groundnut-Wheat/Groundnut-Cumin/Cotton-Summer Sesame
2	Dairy product
3	Farm Waste Management specially for cotton stalk
4	Value addition in Groundnut, Sesame

2.2 Description of Agro-climatic Zone & major agro ecological situations

Sr. No	Agro-climatic Zone	Characteristics	
1.	North Saurashtra Agro Climatic Zone (VI)	The total geographical area of North Saurashtra Agro Climatic Zone is 35.2 Lacs ha. Out of total area, 73.40 per cent area falls under arid and semi-arid region. The soils of this zone are shallow to moderately deep. The soils of Rajkot district is low in their availability of nitrogen while medium in phosphorus and high in available potash except the available phosphorus and potash is in medium category in adopted villages. Monsoon commences usually by the end of June and withdraws by middle of September. Average annual rainfall of districts is 608 mm while 1329.2 mm during 2017-18.	
Sr. No	Agro ecological situation	Characteristics	Taluka Covered*
1.	Situation No. 7	Black & Loamy, Salty, Rocky , with 550-600 mm Rainfall	Morbi, Vankaner, Tankara, Halvad
	Agro-climatic Zone		
1.	North West Agro Climatic Zone	Black & Loamy, Salty with 550-600 mm Rainfall	Maliya

2.3 Basic information Of Morbi District:

Sr. No.	Details	Morbi
	Nickname(s):	Paris of Saurashtra
1	Total geographical area	481958 ha.
2	Forest land	26058 ha.
3	Net Sown Area	309369 ha
4	Gross Cropped Area	329654 ha
5	Net Irrigated Area	111661 ha
6	Average annual rainfall	608 mm.

7	Soil type	Black & Loamy, Salty, Rocky, Shallow Sandy loam
8	Major Crop	Groundnut
		Cotton
		Wheat
		Cumin
		Sesame
		Vegetables
9	Other Crop	Chick pea
		Garlic
		Onion
		Chilly
12	Number of Taluka (Five),	Morbi
		Maliya
		Tankara
		Halvad
		Wankaner
	Total number of villages Villeges	407
	Total population	10.08 lakh

2.4 Details of Operational area / Villages

Taluka	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
Morbi	Gorkhijadia, Jipur, Lutavadar, Bharatnagar, Laxminagar, Jetpar, Amreli, Jodhpar,	*Groundnut, Cotton, Sesame, Wheat, Cumin, Gram Chickpea, Garlic, Onion. *Enterprises are	Pink ball worm in Cotton, Heavy infestation of sucking pest in cotton , <i>phytophthora</i> disease in sesame and white grub infestation in	* IPM and INM in major crops of this area * Increase drainage of soil * Reducing the inter-
Tankara	Sajjanpar, Jabalpur Hadmatiya, Harbattiyali, Nasitpar,	dairy business, Vermi composting, preparation of roasted groundnut and chikki from groundnut seed	groundnut. Long inter-calving period in Buffalo, Nutritional deficiency in animal feed and fodder, Less area under Horticultural crops	calving period in Buffalo * Motivate the farmers for arid Horticultural crops. * Efficient use of irrigation water
Halwad	Devipur, Devalia,			

2.5 Priority thrust areas

Crop/Enterprise	Thrust area
Groundnut, Sesame etc	Increasing the productivity of the major crops by adopting the recommendation of dry farming technologies and to create awareness for value addition.
Water conservation	<i>In situ</i> soil moisture conservation and rainwater harvesting. Use of cotton stalk for organic manure.
Cotton	Motivating cotton growers to adopt IPM and INM practices for reducing the cost of production.
women empowerment	Providing self employment through skill oriented income generating activities
Agriculture	Developing interest among youth for agriculture as a profession.
Horticulture	Value addition in agriculture produces through proper grading, processing, marketing and information technology.
Income generating activities	Self employment among rural youth and skill oriented income generating activities.
Nutrition management	Care and importance of nutrition in children & pregnant women.

ACHIEVEMENT

3. A Details of target and achievements of mandatory activities by KVK during 2017-18

OFT				FLD			
1				2			
Number of OFTs		Number of Farmers		Number of FLDs		Number of Farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
2	2	4	4	70	70	70	70

Training (including sponsored, vocational and other trainings carried out under Rainwater Harvesting Unit)					Extension Activities			
3					4			
Number of Courses			Number of Participants		Number of activities		Number of Participants	
	Targets	Achievement	T	A	T	A	T	A
Farmers	15	17	375	615	-	110	-	14476
Rural youth	-	-	-	-	-	-	-	-
Extn. Functionaries	1	3	50	144	-	-	-	-
Total	16	20	425	759	-	110	-	14476

I.A. TECHNOLOGY ASSESSMENT AND REFINEMENT IN DETAIL PEST AND DISEASE MANAGEMENT

Problem definition: Heavy infestation of white grub in groundnut effecting in a yield loss 6 to 9% according to area specific.

Technology Assessed or Refined (as the case may be): Management of white grub in groundnut crop.

Table :Effect of chlorpyrifos in control of white grub in groundnut.

Technology Option	No.of trials	Incidence of infested plant(%)	Yield (kg/ha)	B:C
<i>Sowing of groundnut without Seed treatment. (Farmers practice)</i>	2	6.2	1910	2.35
<i>Seed treatment with chlorpyrifos 25 E.C.@ 25 ml/kg seed.(GAU Reco.)</i>		2.1	2038	2.65

I.B. TECHNOLOGY ASSESSMENT AND REFINEMENT IN DETAIL PEST AND DISEASE MANAGEMENT

Problem definition: Heavy incidence of wilt disease in cumin effecting yield loss of up to 9 to20 percent and monetary loss of Rs. 15000/- to 20000/- per ha.

Technology Assessed or Refined (as the case may be): Use of Trichoderma for wilt disease management in cumin

Cumin is an importance commercial spice crop of northern saurashtra. There is high incidence of wilt disease resulting in yield loss. KVKs Morbi) conducted on farm trial to refined the control measure. The refined technology of application of Trichoderma 5 Kg.ha with organic compost 1000 Kg/ha at time of sowing and second application 15 days after germination reduce the percentage of disease incidence from 9 to 13.5 and yield was increased by 18.2 percent.

Table Effect of Trichoderma for management of wilt in cumin.

Technology Option	No. of trials	Wilt (%)	Yield (kg/ha)	B:C
<i>No use of trichoderma or fungicide at the time of sowing. But they use fungicides viz., carbendazim, hexaconazole, difenconazole, tebuconazole, propiiconazole, , etc after of initiation of diseases. (Farmers practices.)</i>	2	11.2	930	3.18
<i>Application of Trichoderma @ 5 kg /ha with organic manure @1000 kg / ha at the time of sowing.. (Recommended practices.)</i>		5.2	1040	3.39
<i>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. (Intervention).</i>		3.4	1100	3.42

II. FRONTLINE DEMONSTRATION

a. Follow-up for results of FLDs implemented during previous years

List of technologies demonstrated during previous year and popularized during *Kharif 2018& Rabi 2018-19* and recommended for large scale adoption in the district.

Sr. No	Crop/ Enterprise	Thematic Area*	Technology demonstrated	Details of popularization methods suggested to the extension system	Horizontal spread of technology		
					No. of villa.	No. of farmer	Area in ha
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>
1	Groundnut	Diseasemanagement	IPM	stem rot management in Groundnut	3	10	4.0
2	Cotton	Crop Production	INM (Bt. Cotton)	Nutrient management in Bt. cotton	4	40	16.0
3	Cotton	Pest management	IPM (Bt. Cotton)	Pinkball warm managent in Bt. cotton	4	10	4.0
4	Cumin	Pest Management	IPM	Management of wilt through bio agent	5	10	4.0

b. Details of FLDs implemented

Oilseeds

Sr. No.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for short-fall
					Proposed	Actual	SC/ST	Others	Total	
1	Groundnut	Disease management	IPM	Kharif 2017-18	4.0	4.0	1	9	10	-

Others

Sr. No.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for short-fall
					Proposed	Actual	SC/ST	Others	Total	
1	Cotton	Crop Production	INM (Bt. Cotton)	Kharif 2017-18	16.0	16.0	3	37	40	-
2	cotton	Pest management	IPM(Bt. Cotton)	Kharif 2017-18	4	4	1	9	10	-

Commercial crops (Cumin & Wheat)

Sr. No.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for short-fall
					Proposed	Actual	SC/ST	Others	Total	
1	Cumin	Disease Management	IPM	Rabi 2018	4.0	4.0	1	9	10	-

Technical Feedback on the demonstrated technologies

S. No.	Feed Back
1	To enhance the farmers to use recently developed certified varieties of different crops.
2	Proper use of fertilizers, Irrigation, insecticides and fungicide as per recommendation to reduce the production cost.

Farmers' reactions on specific technologies

S. No.	Feed Back
1.	White grub problem in groundnut
2.	Pink boll worm in cotton
3.	Cumin variety GC-4 is high yielding but gradually losing wilt resistant character
4.	Heavy infestation of <i>Thrips</i> in crops like onion, cotton
5.	Research needed for control of insect-pests and diseases in organic farming

Performance of Frontline demonstrations
Frontline demonstrations on oilseed crops

Crop	Thematic Area	technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Groundnut	Disease Management	IPM	GG-20	10	4.0	24.2	18.8	22.1	20.09	9.30	36300	107082	70182	2.95	34900	96151	61251	2.75

FLD on Other crops

Category & Crop	Thematic Area	Name of the technology	No. of Farmer	Area (ha)	Yield (q/ha)				% Change in Yield	Other Parameters		Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demo			Check		Demo	Check	Gross Cost	Gross Return	Net Return	BC Ratio	Gross Cost	Gross Return	Net Return	BC Ratio
					High	Low	Average												
cotton	Nutrient management	INM	40	16.0	26.25	15.5	20.0	18.03	10.8	23.5*	21.5	36700	94000	57300	2.56	35100	84740	49640	2.40
Cotton	Plant protection	IPM	10	4.0	25.25	17.5	22.17	20.84	10.9	0.9*	0.3*	39550	104199	64649	2.63	38400	97948	59548	2.50
Cumin	Pest Management	GC-4	10	4.0	12.4	11.13	6.2	5.4	11.3	3.4*	11.2*5	41750	144690	102940	3.47	39400	130000	90600	3.3

Note :* (1)No of ball/plant

***** (2)No of damage ball/plant

***** (3) Percentage of infested plant

Farmers' Training including sponsored training programmes (On + Off campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I.)Crop Production										
Integrated Farming	1	30	0	30	2	0	2	32	0	32
Soil & water conservation	1	23	0	23	0	0	0	23	0	23
Production of organic inputs	1	35	0	35	16	0	16	51	0	51
Integrated nutrient management	0	0	0	0	0	0	0	0	0	0
Total	3	88	0	88	18	0	18	106	0	106
II.)Horticulture										
Organic Farming	1	0	24	24	0	9	9	0	33	33
Kitchen Gardening	1	0	19	19	0	12	12	0	31	31
Total	2	0	43	43	0	21	21	0	64	64
III.) Soil Health and Fertility Management										
	1	22	0	22	0	0	0	22	0	22
IV.)Livestock Production and Management	Nil									
V.)Home Science/Women empowerment										
Skill Development	1	0	20	20	0	0	0	0	20	20
Entrepreneurship Development	1	0	47	47	0	0	0	0	47	47
Value addition	2	0	36	36	0	38	38	0	74	74
Women and Child Nutrition	1	0	21	21	0	21	21	0	42	42
Total	5	0	124	124	0	59	59	0	183	183
VI.)Agri. Engineering										
Installation and maintenance of micro irrigation systems	0	0	0	0	0	0	0	0	0	0
Small scale processing and value addition	0	0	0	0	0	0	0	0	0	0
Post Harvest Technology	2	62	0	62	0	0	0	62	0	62
Total	2	62	0	62	0	0	0	62	0	62

VII.)Plant Protection										
Integrated Pest & Disease Management	3	146	0	146	2	0	2	148	0	148
Bio-control of pests and diseases	1	25	0	25	5	0	5	30	0	30
Total	4	171	0	171	7	0	7	178	0	178
VIII.)Fisheries	Nil									
IX.)Production of Inputs at site	Nil									
X.)Capacity Building and Group Dynamics	Nil									
XI.)Agro-forestry	Nil									
GRAND TOTAL	17	342	168	510	25	80	105	367	248	615
Extension Personnel										
Integrated Pest Management	1	52	0	52	0	0	0	52	0	52
Organic Farming	2	84	0	84	8	0	8	92	0	92
TOTAL	3	136	0	136	8	0	8	144	0	144
Grand Total	20	478	168	646	33	80	113	511	248	759

Training programmes for Extension Personnel including sponsored training programmes (on campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Organic Farming	1	51	0	51	5	0	5	56	0	56
TOTAL	1	51	0	51	5	0	5	56	0	56

Sponsored training programmes- Nil

IV. Extension Programmes

No.	Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
1	Kishan mela	3	2092	8	2100
2	Field Day	0	0	0	0
3	Field Advisory Services	14	252	2	254
4	Farmers visit to KVK	0	1959	0	1959
5	Farmer Shibir/Group Discussion/Night mitting	12	676	4	680
6	Kishan Mobail Advisories	4	3415	0	3415
7	Advise By Latter	0	0	0	0
8	Kishan Goshthi/Seminar	4	39	3	42
9	Farmer's mitting	9	251	2	253
10	Vedio Show/Film Show	2	331	2	333
11	Plant/animal health camps	0	0	0	0
12	Distribution Of Extension Literature	20	1888	0	1888
13	Lectures Delivered	21	1506	15	1521
14	Field Diagnosis	2	17	1	18
15	Scientists' visit to farmers field	9	100	2	102
16	Subscription of krushi Gau Vidhya	0	0	0	0
17	Diagnostic Team Visit	0	0	0	0
18	Celebration of Technology week	0	0	0	0
19	Celebration of Prime Minister Crop Insurance Plan	0	0	0	0
20	No. of Soil & Water Sample Tested	5	5	0	5
21	Exhibition	2	1484	4	1488
22	Other Ex. Activies	3	416	2	418
	Total	110	14431	45	14476

Details of other extension programmes

Particulars	Number
Electronic Media (CD./DVD)	0
Extension Literature Publish	1
News paper coverage	2
Popular articles	5
Radio Talks	0
TV Talks	2
Animal health camps (Number of animals treated)	0
Others (pl. specify)	-
Total	10

Message Advisory Service:

Name of KVK	Message Type	Type of Messages						Total
		Crop	Livestock	Weather	Marketing	Awareness	Other enterprise	
Morbi	Text only	3	-	-	-	-	-	3
	Voice only	1257	158	19	783	37	1155	3409
	Voice & Text both	-	-	-	-	-	-	-
	Total Messages	3	-	-	-	-	-	3
	Total farmers Benefitted	1263	158	19	783	37	1155	3415

VI. PRODUCTION OF SEED/PLANTING MATERIAL AND BIO-PRODUCTS

Sale of seeds/ Production of Bio-Products by the KVKs

Bio Products	Name of the bio-product	Quantity	Value (Rs.)	No. of Farmers
		Kg		
Bio-pesticide	Trichoderma (Savaj)	4,780	3,34,600	149
	Beauveria	12,200	18,30,000	232

NEWSLETTER/MAGAZINE

Name of News letter/Magazine	No. of Copies printed for distribution
2	-

PUBLICATIONS

Category	Number
Research Paper	5
Technical bulletins	-
Technical reports	2
Others (Abstract)	1

Success Story:1

Tital:Large Scale adoption of bio pesticide Beauveria bassiana in cotton crop

Krushvi Vigyan kendra Gorkhijadia-(Morbi)is Sanctioned in October - 2016 and routine work start from march-2017. In Morbi district more than 70% area sown under B.t.Cotton. Cotton growing farmer are facing the Sucking pest problem viz: Jassid, Thrips, Mealy bug , White fly and also pink ball warm.

Due to injudicious use of chemical pesticide for pest management in cotton create a many problem related to environmental issue, also the cost pesticide increase so high that there is no monetary saving in farmer hand.

Krushvi Vigyan Kendra Morbi took first priority to overcome these pest problem in B.t.cotton. KVK Morbi has played a vital role in convincing the farmer to use of eco- friendly bio pesticide like Beauvoir bassiana for management of sucking pest in Bt. Cotton, for which kvk Morbi has guided the farmer through different extension activities viz-Night meeting, field visit, group meeting, literature distribution and press note release. Due to continuous effort of KVK, the farmer of the region who had never heard the word Beauveria before kharif season has starting to use Beauveria in cotton crop for pest management as per guidance given by Morbi KVK.Savaj brand Beauveria bassiana produced by Junagadh agricultural university and available at each kvk with Rs.150/kg. Farmer of this region used Beauveria and good result obtain in kharif season for managing the sucking pest and pinkball warm in cotton crop.

Morbi KVK has sold 13000 k.g. Beauveria with good literatutre of proper pesticide combination for different crop and pest and proper spraying time . Jetpar, Jivapar and Tankara co-operative society also sold more than 10000 kg. Beauveria through Morbi KVK. The intervation of krushi vigyan Kendra Morbi has a huge impact so far management of pest problem in Bt.Cotton with a ecology point of view also.



Success Story:2

Success story:

Economic Empowerment – A contribution in earnings through the profession of dairy farming.

1. Name : **SONAL PRAKASHBHAI HAN**



2. Full postal address with pin code : **KHOKHANI STREET,
NR. GREEN CHOCK,
MORBI – 363641**

3. Date of Birth : **26/04/1985
(Age: 32 Years)**

4. Education : **Pass Standard 8th**

5. Source of income : **Dairy Farming
(Last 3 years)**

Brief information about an individual:

Sonal was unemployed. The only source of income to her family is the tea-stall business carried out by her husband. This business has no fixed income and based on the situation doesn't provide adequate money to their daily needs. These circumstances inspired Sonal to take some new initiatives which can help her family to stabilize their income and have better livelihood at economical standards. In year 2012, she decided to start dairy farming and purchased a dairy cattle for ₹.25,000/-. She started selling milk and eventually through the regular income of milk and bio product, she has purchased more cattle every year. At present state, she has 35 cattle in her possession out of which 20 are the dairy cattle and remaining are heifers. With these many cattle, she gets 180 liters of milk production daily. Considering the cost of ₹.50 per liter of a milk, today she is earning ₹.9,000/- as her daily income. Now with such stable income source, she has offered jobs to 4 people to take care of her cattle, provided solid support in her family income and cater the saving needs to have better future.

Land holding (ha.):

None

Utility of Innovation/Gaps:

Year	:	2017
Cattle	:	35
Dairy Cattle (Jersey Breed)	:	20
Monthly Income	:	₹.2,70,000
Monthly Expenditure	:	₹.1,43,200
Employee Salary	:	₹.15,000
Total Monthly Profit	:	₹.1,11,800

With the help of such monthly profit, she purchased a Maruti Swift car and currently looking for purchasing a better living space.

Spread of Innovation/Gaps:

By seeing her success story, other women in the surrounding areas are inspired and visited her dairy farm to understand how they can also boost up their economic growth.

Recognition

She has been recognized by Shree Ambika Sakhi Mandal, Morbi and appointed as President of a sub group which inspired other women to be self-sustaining in economical paradigm.

