# Chapter - V EXTENSION EDUCATION

#### 5.1 Directorate of Extension Education

The Directorate of Extension Education was established according to the Chapter-3 Part-IX vide Section 14.1(3) of the Gujarat Agricultural Universities Act-2004, for dissemination of the research findings and technical information through extension education programmes. The main function of the Directorate is to plan, coordinate, organize and guide the extension education programmes in the University and to ensure efficient working of the extension activities in close coordination with other development departments and state voluntary organizations, other officers and scientists of the University. Dr. A.M. Parakhia supervised and guided the extension education activities during the reporting year.

#### 5.2 Extension Education Council

The Extension Education Council was constituted according to the provision of the Gujarat Agricultural Universities Act-2004 in exercise of the power vested under Section 62(1) in pursuance of Section 17(5). During The year 2011-12, Extension Education Council meeting was organized on 11.01.2012. The members of Extension Education Council during 2011-12 were as under.

No.	Name	Designation
1	Dr. N.C. Patel	Vice Chancellor (Chairman)
2	Dr. C.J. Dangaria	Director of Research & Dean PG Studies
3	Dr. A.M. Parakhia	Director of Extension Education (Secretary)
4	Dr. A.V.Barad	Principal & Dean, Agriculture Faculty
5	Prof. J.B.Savani	Principal & Dean, Agril. Engg. & Tech. Faculty
6	Dr. A.Y. Desai	Principal & Dean, Fisheries Science Faculty
7	Dr. R.R.Shah	Principal & Dean, Vet. Faculty
8	Dr. K.A. Khunt	Principal & Dean, Agri. Business Institute
9	Dr. K.L. Dobaria	Research Scientist (Groundnut)
10	Dr. M.D. Khanpara	Research Scientist (Cotton)
11	Dr. P.U. Gajbhiye	Research Scientist (AGB), CBF
12	Dr. L.B. Ranaparia	Principal, Horticulture Polytechnic
13	Dr. P.R. Kanani	Professor & Head, Agril. Ext. Edu.
14	Dr. S.M. Upadhyay	Professor & Head, Agril. Statistics
15	Dr. M.N. Kapadia	Professor & Head, Agril. Entomology
16	Dr. P.N. Sarasavadia	Professor, RERE, CAET
17	Prof. D.M. Vyas	Principal, Agro. Processing Polytechnic
18	Dr. B.B. Kunjadia	Principal, Home Sci., Training Organizer, KVK, Amreli
19	Prof. G.G.Marakana	Asstt. Ext. Edu., SSK
20	Dr. R. S. Chovatia	Professor & Head, Horticulture
21	Shri Babubhai Jasoliya	Farmers Representative, At: Ambala, Ta. Shihor, Dist. Bhavnagar

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5.3	Extension	Education	and	Training	Centres
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No.	Туре	Location
Diploma/C	ertificate Courses	
1	Agriculture Diploma School	Halvad
2	Livestock Inspector Training Centre	Junagadh
3	School of Baking	Junagadh
4	Mali Training Centre	Junagadh
Training Pr	ogrammes for Extension Workers	
1	Training & Visit System Training Centre	Junagadh, Targhadia
2	Centre of Excellence for Training (Oilseeds)	Junagadh
Training Pr	ogrammes for Farmers/Farm Women	
1	Krishi Vigyan Kendra	Jamnagar, Targhadia, Amreli, Khapat, Nanakandhasar
2	Sardar Smruti Kendra	Junagadh
Extension	Education Programmes for Rural People	
1	Farm Advisory Service Centre	Junagadh
2	Extension Programme for Fisheries	Okha

#### **Extension Education and Training Programmes**

#### (I) Diploma/Certificate Courses for Farm Youths

The Junagadh Agricultural University continued various Diploma/ Certificate courses during the year under report as per the details given below.

No.	Name of Course	Duration	Location	No. of Students Completed the Course
1	Agriculture Diploma	2 years	Halvad	30
2	Livestock Inspector Training	1 year	Junagadh	33 First Sem, 33 Second Sem.
3	Bakery Training			
	<ul> <li>Basic Course in Baking Science</li> <li>Special Training to Women</li> </ul>	15/ 20 weeks 1 week	Junagadh Junagadh	07 (2 Batches) 92 (7 Batches)
4	Mali Training	6 months	Junagadh	06 (1 Batch)

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All these courses are aiming to impart skill oriented practical training to farmers' son/daughter in order to provide an opportunity for self-employment and employment in different organizations.

- (II) Training Programmes for Extension Workers
- (A) Training & Visit System Junagadh Agricultural University has taken-up

the task of training the extension personnel of the Department of Agriculture and Horticulture through T & V System. The bimonthly workshops, preseasonal training workshops and short-term training programmes organized for the extension personnel of the Department of Agriculture and the number of SMSs/AEOs who attended the programmes are given below.

No.	Type of programme	Programmes	No of Participants
1	Bimonthly Workshop	4	156
2	Pre-seasonal Training Programme	3	121
3	Agriculture - 6 (Oilseed)	1	53
	Total	8	330

#### (B) Other Training Programmes

The centre has continued to provide better training to the extension personnel and technical personnel of KVKs to improve their technical competency. The details about numbers of the attended the programmes are given below.

### Khedut shibir

No.	Subject	No. of Activities	No. of Scientists allotted (Approx.)	Beneficiaries
1	Khedut Shibir	42	3	7000
2	Demonstration (Diagnostic Team)	05	4-5	250

Training programme of Second year Master degree students of Lok Bharti, Lok Seva Mahavidyalaya, Sanosara, Dist. Bhavnagar.

No.	No. of Trainees	Date
1	30	12.09.2011 to 16.09.2011 (Five days)

#### Collaborative training

No.	Name of training	Duration	Organizer	No. of Trainees
1	Gujarat & Rajasthan Zone- VI (KVK) Annual Zonal Workshop	09-11 .06.2011	Zonal Project Director Zone-VI, CAZRI campus, ICAR, Jodhpur (Rajasthan)	87
2	National Level Model Training Course "Good Agricultural Practices"	28.09.11 to 05.10.11	Directorate of Extension, Ministry of Agriculture & Cooperation, Govt. of India, New Delhi.	16
3	National Level Training Programme " Writing for Print Media"	27-29 .02.2012	National Institute of Agriculture Extension Management (MANAGE), Hyderabad	25

### (III) Training/ Extension Education Programmes for Farmers/Farm Women

#### (A) Training Programmes

Training is essential to increase the efficiency of farmers, farm women, rural youths, *etc.* Oncampus as well as off-campus training programmes were organized based on the need and interest of the farming community.

Through the Transfer of Technology (TOT) Centres, 204 on-campus and 252 off-campus training programmes were organized, wherein 15452 participants received training. The details are given in Table 5.1.

# Table 5.1 Training programmes organized by the Transfer of Technology Centres for farmers/farmwomen during the year 2011-12

No.	тот		No. of Training	No. of participants				Total	
	Centre		Programme	Male	Female	Rural Youth	Other		
1	KVK,	А	26	521	124	79	113	837	
	Jamnagar		39	1017	300	0	0	1317	
2	KVK,	А	37	532	204	159	236	1132	
	Targhadia		54	952	242	200	48	1442	
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No.	TOT Centre		No. of Training		Total			
			Programme	Male	Female	Rural Youth	Other	
3	KVK,	Α	66	1165	726	78	77	2046
	Amreli	В	56	3389	1003	55	42	4489
4	KVK,	Α	37	888	105	0	0	993
	Khapat	В	57	1104	298	0	4	1406
5	KVK,	Α	38	672	215	0	0	887
	Nanakandhasar	В	46	889	0	14	0	903
	Total	Α	204	3778	1374	316	426	5894
		В	252	7351	1843	269	94	9557
Grand	d Total		456	11129	3217	585	520	15452

#### (B) Extension Activities

The Tranfer of Technology (TOT) centres also planned and organized extension activities like seminar/workshop/symposium, field/farmer's day, agriculture fair/exhibition, film/slide/video show, field visit, cattle camp, farmers' group/demonstration meeting, etc. by which total 72215 beneficiaries benefited. The details of the extension activities organized and number of participants are given in Table 5.2

#### A= On-campus B=Off-campus

KVKs play an important role to provide guidance for income generation to the farmers by imparting skill oriented trainings. Besides, the KVKs conducted variety of extension activities, on farm testing, etc. The KVKs are also collecting feedback on farmers' problems, which are sent to the concerned scientists as these feed backs provide guideline in reforming further research.

#### Table 5.2 Extension activities carried out by TOT centres during 2011-12

No.	Nome of activity			KVI	K		Total
NO.	Name of activity	Targhadia	Jamnagar	Khapat	Amreli	Nana Kandhasar	TOLAT
1	Krushi Mela	-	1	2	-	10	13
			(3550)	(466)		(1023)	(5039)
2	Field day	4	6	8	9	18	45
		(181)	(174)	(160)	(104)	(336)	(955)
3	Guidance on farm	23	22	280 (280)	58	24	407
		(238)	(105)		(195)	(343)	(1161)
4	Guidance to visitors	220	187	1121	107 (144)	87	1722
		(2648)	(187)	(1121)		(2823)	(6923)
5	Press note	10	4	2	8	-	24
6	Khedut shibir/ Night	26	3	4	6	-	39
	shibir/ Group discussion	(547)	(87)	(341)	(205)		(1180)
7	Guidance through Telephone	(2700)	(1050)	(1017)	(506)	(72)	(5345)
8	Guidance through Letter	2	126	-	-	-	128
9	Demonstrations	35	-	-	26	-	61
		(1467)			(280)		(1747)
				40			

		KVK					
No.	Name of activity	Targhadia	Jamnagar	Khapat	Amreli	Nana Kandhasar	Total
10	Krushi gosthi/	8	3	17	24	5	57 (2256
	Seminar	(141)	(1215)	(467)	(114)	(319)	
11	Khedut meeting	-	8	9	-	4	21
4.0			(234)	(147)		(210)	(591)
12	T.V. Programme	26	-	5	-	3	34
13	Radio talk	12	3	3	-	5	23
14	Popular articles	12	3	-	8	-	23
15	Video show/ Film show	19 (1248)	6 (300)	36 (960)	-	20 (775)	81 (3283)
16	Cattle camp	15	-	-	-	3	18
		(4068)				(255)	(4323)
17	Extension prog./	-	1	-	-	10	11
	Training		(3550)			(1023)	(4573)
18	Literature	-	17	10	10	2115	2152
	distribution	(6800)	(1860)	(3406)	(1400)	(2200)	(15666)
19	Literature published	13	-	2	16	2	33
		47			(1400)	(288)	(1688)
20	Lectures	47 (4609)	-	-	143 (4950)	41 (3096)	231 (12655)
21	Field diagnostic	(4000)	17		140	(3030)	157
21		-	(588)	-	(140)	-	(728)
22	Scientist's farm visit	33	-	-	-	-	33
		(356)		(64)	(33)		(453)
23	Vocational training	-	5	7	-	4	16
			(122)	(126)		(88)	(336)
24	Crop demonstration	12	120	-	-	-	132
		(159)	(120)				(279)
25	Sponsored training	-	-	-	-	1	1
						(25)	(25)
26	Collaboration	-	-	-	-	11	11
07	training		(5)	(170)	-	(380)	(380)
27	<i>Krushi-Go-Vidya</i> subscriber	-	(5)	(178)	-	-	(183)
	Registered						
28	Diagnostic team	23	22	142	14	4	205
20	Diagnootio tourn	(238)	(38)	(317)	(174)	(42)	(809)
29	Student	1	-	-	-	-	1
		(39)					(39)
30	Celebration of	1	-	-	1	1	3
	technology week	(767)			(430)	(401)	(1598)
31	Child day	-	-	-	-	-	-
32	Press released of	8	2	-	-	-	10
	Agril. related						



#### (C) Front Line Demonstrations

The front line demonstration aims to demonstrate the production potentialities of newly released and pre-released production technologies of pulses and oilseeds on farmer's field.

In all, 545 FLDs were conducted on various

oilseeds and pulses, *viz.,* castor, mustard, groundnut, sesamum, cotton, gram, wheat, pearl millet and cumin in 203.8 ha during *kharif* and *rabi* seasons through KVKs. The results are presented in Table 5.3.

			Variety/	No.	Area	Av. y	/ield (q/ha)	Increase ir
No.	Centre	Crop	Treatment	of FLDS	(ha)	Demo.	Local check	yield (%)
1	KVK,	Groundnut	GG-5	10	4	11.86	10.82	9.61
	Targhadia	Sesamum	GT-2	5	2	11.50	10.30	11.65
		Green gram	GM-4	5	2	5.2	4.8	8.33
		Black gram	GU-1	8	3.2	4.2	3.8	10.53
		Pearl Millet	GHB-538	20	8	25.67	24.35	5.42
		Groundnut	GG-20	10	4	15.8	15.0	5.33
		Cotton	Bt.	50	20	32.35	30.83	4.93
		Wheat	GW-366	12	4.8	45.31	42.10	7.62
		Cumin	GC-4	15	6	7.17	6.70	7.01
		Mineral Mittha Powder	V.M. All Powda	10	-	16.30	15.50	5.16
2	KVK, Jamnagar	Groundnut NPV	GG-20	5	2	16.56	14.06	17.78
	0	Groundnut	GG-20	5	2	17.19	14.37	19.62
		Chickpea	GG-3	15	6	31.25	.88	21.98
		Wheat	GW-366	20	8	58.13	48.12	20.80
		Cumin	GC-4	10	4	7.81	6.56	19.05
		Pearl millet	GHB-538	20	8	33.75	28.75	17.39
3	KVK,	Groundnut	GG-2	10	4	23.9	21.9	9.13
	Amreli	Groundnut	GG-20	10	4	20.19	18.38	9.85
		Sesame	GS-1	10	4	17.58	15.19	15.73
		Gram	GG-3	20	10	23.55	21.50	9.53
		Cumin	GC-4	10	4	4.92	4.45	10.56
		Wheat	GW-366	25	10	44.72	39.20	14.08
		Sesame	GT-3 (Til-3)	20	8	12.09	11.21	7.85
		Bajra	GHB-538	20	8	27.10	25.13	7.84
4	KVK,	Wheat	GW-366	20	10	48.13	43.34	11.05
	Khapat	Coriander	GC-2	10	4	17.9	16.15	10.84
		Gram NPV	GG-3	10	4	17.24	16.54	4.23
		Cotton	Bt.	25	10	30.10	25.61	17.53

#### Table 5.3 Performance of frontline demonstrations organized during 2011-12

		Variety/		No.	Area	Av. yield (q/ha)		Increase in
No.	Centre	Crop	Treatment	of FLDS	(ha)	Demo.	Local check	yield (%)
5	KVK,	Groundnut	GG-20	10	4	17.48	15.33	14.02
	Nanakandhasar	Sesame	Guj. Til-2	10	4	5.90	5.20	13.46
		Green Gram	GM-4	10	4	8.67	7.53	15.14
		Cotton	Bt.	10	4	27.70	23.65	17.12
		Bio -agent G.nut	Trichoderma harzianum	25	10	17.18	15.14	13.47
		Mustard	GM-2	10	4	16.35	14.33	14.10
		Gram	GG-3	10	4	15.16	13.38	13.30
		Cumin	GC-4	20	8	7.09	6.21	14.17
		Wheat	GW-496	20	10	40.22	35.51	13.26
			Total	545	220.0			

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## (D) Farm Advisory Service Scheme / SSK, Junagadh

The Farm Advisory Service Scheme has been continued at SSK, Junagadh with a view to provide guidance and the latest information to the farmers on scientific farming. The farmers were advised regarding their farm problems through correspondence and field visit. This centre acted as a link among research scientists, extension workers and farmers. During the year under report, various extension activities carried out by the centre are given below.

No.	Name of activity	No. of activities	No. of participants
1	Agril. Fair	6	1462400
2	Agril. Exhibitions (participation)	6	36895
3	<i>Khedut/Mahila</i> <i>Shibir</i> /Group Meeting/Crop Seminar	2	555
4	Spot Guidance / Guidance through Letters	145	1350
5	Agril. Literature Exhibition	7	44757
		166	1545957

(E) Extension Activities under Centre of Communication (COC) Scheme Objectives of COC Scheme

 To establish the Gram Kisan Samitis (GKS) in the rural areas.

- b. To train the members of *Gram Kisan Samitis* in leadership, communication and cooperation for transfer of technologies.
- c. To disseminate the latest agricultural and allied technologies through *Gram Kisan Samittees* in rural areas.
- d. To carry out different extension activities through GKS in different villages.
- e. To know the feedbacks from the farmers.

Formulation of *Gram Kisan Samitis* during the year 2011-12

No.	District	Taluka	No. of <i>Gram</i> Kisan Samitis
1	Rajkot	Dhoraji	1
2	Amreli	Lathi	2
3	Junagadh	Malia Hatina	2
4	Junagadh	Mendarada	4
5	Junagadh	Vanthali	2
6	Junagadh	Keshod	3
7	Junagadh	Una	1
8	Junagadh	Sutrapada	1
9	Junagadh	Junagadh	4
10	Jamnagar	Lalpur	1
		Total	21

Three-day on campus training programme under Centre of Communication (COC) Scheme

No.	Subject	No. of Training Programmes	No. of Beneficiaries
1	Seed Production technology for farmers/ farm women	04	109





# *Khedut Shibirs* organized during the year 2011-12 under COC scheme

No.	Name of the Taluka	No. of shibirs	No. of participants	Subjects covered
1	Lathi (Amreli)	2	88	
2	Malia Hatina (Junagadh)	1	66	
3	Junagadh(Junagadh)	2	143	Agriculture, Horticulture,
4	Amreli (Amreli)	1	78	Animal Husbandry and
5	Talala (Junagadh)	1	47	Efficient use of water through adoption of drip,
6	Mendarada (Junagadh)	1	10	sprinkler or micro irrigation
7	Keshod (Junagadh)	1	51	systems.
8	Visavadar (Junagadh)	1	31	
9	Upleta (Rajkot)	1	52	
	Total	11	566	

# Bakery Talim organized during the year 2011-12 under COC scheme

No.	Name of the Taluka	No. of shibirs	No. of participants	Subject covered
1	Junagadh (Junagadh)	1	25	Making Bakery items in
2	Mendarada (Junagadh)	2	94	home.
	Total	3	119	

# (F) Extension Activities carried out by Extension Education Centres

Extension activities carried out by various Extension Education Centres during the year are given below.

No.	Name of activity	Sardar Smruti Kendra, Junagadh	Fisheries Res. Station, Okha	LITC, Junagadh	School of Baking, Junagadh	Total
1	Krushi Mela	-	1 (437)	2	-	3 (437)
2	Guidance on farm	- (1205)	3 (14)	-	-	3 (1219)
3	Guidance to visitors	- (6067)	40 (1823)	70 (2900)	43 (1452)	153 (12242)
4	Press note	-	3 (14)	-	-	3 (14)
5	Khedut shibir/ Night shibir/ Group discussion	-	4 (357)	-	-	4 (357)
6	Guidance through Telephone	-	(52)	(629)	-	(681)
7	Guidance through Letter	-	(19)	-	-	(19)
8	Demonstrations	-	2 (10)	-	-	2 (10)

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No.	Name of activity	Sardar Smruti Kendra, Junagadh	Fisheries Res. Station, Okha	LITC, Junagadh	School of Baking, Junagadh	Total
9	Krushi gosthi/ Seminar	-	2 (243)	-	-	2 (243)
10	T.V. Programme	-	-	9	-	9
11	Radio talk	-	-	1	-	1
12	Video show/ Film show	-	2 (24)	-	-	2 (24)
13	Literature distribution	-	3 (86)	64 (11420)	-	67 (11506)
14	Literature published	5 (20500)	4 (5000)	5 (40007)	-	14 (65507)
15	Lectures	-	-	2 (61)	-	2 (61)
16	Krushi-Go-Vidya subscriber Registered	174	-	-	-	(174)
17	Cattle camp	-	-	1 (80)	-	1 (80)
18	Bakery Training	-	-	-	12 (800)	12 (800)
19	Graduate student	-	4 (22)	10 (100)	-	14 (122)
20	Visitors	(4055)	(105)	(1739)	-	(5899)
21	L.I. Training	-	-	7 (68)	-	7 (68)
					Total	299 (99476)

Figures in parentheses indicate no. of beneficieries/copies

#### 5.4 Radio Talks and TV Programmes

The scientists of the university delivered radio talks from time to time on various agricultural and allied subjects from All India Radio, Rajkot. Moreover, the agricultural messages were also broadcasted from All India Radio, Rajkot. During the year under report, nearly 41 such talks were delivered on different topics related to agriculture, horticulture, agricultural engineering, fisheries, animal husbandry, *etc.* 

In all, 42 television programmes covering various aspects of agriculture, animal husbandry, agricultural engineering, horticulture, fisheries, home

science, *etc.* were telecasted through Doordarshan Kendra, Rajkot in *"Gram Jagat"* programme regularly for the benefit of farming community.



#### 5.5 Publication of Extension Education Literature

During the year, total 23 publications (20 folders and 3 booklets) were published by different departments.

No.	Name of Office	Type of Publication		Total
		Folder	Booklets	
1	Director of Extension Education, JAU, Junagadh	16	1	17
2	Vegetable Research Station, JAU, Junagadh	-	1	1
3	Deptt. of Soil & Water Engg., College of Agril. Engg. & Tech., JAU, Junagadh	2	1	3
4	School of Baking	2	-	2
	Total	20	3	23

University news bulletin named as *"JAU News letter"* is being published regularly by Directorate of Extension Education.

5.6 Coordination of Extension Activities with Department of Agriculture, Horticulture, Animal Husbandry and Other Line Departments

Junagadh Agricultural University planned and organized various extension education programmes/ activities in coordination with different line departments of the state. The structural linkages exist under T & V system by constituting the technical committee at district, zonal and state level. The agricultural programmes of All India Radio as well as Doordarshan were finalized by such coordinated efforts. In AGRESCO, the officers of other departments are the members and they contribute in formulation of technical programmes as well as in finalizing the recommendations for the farmers. The functional linkages also exist under T & V system through bi-monthly workshops, preseasonal workshops, fortnightly training, diagnostic team, state level crop seminars/workshop, etc. The coordination exists in follow-up programmes as well as in planning of farm trials. For transfer of technologies to the farmers, the farmer's day, krushi mela, group discussion, film show, etc. were organized through collaborative efforts.

### 5.7 Orientation Training Programme

During the year under report, 16 scientists/ teachers of the University were deputed for participating in the orientation training programmes organized within and outsite the state to upgrade knowledge and skill for improving their faculty competence in respective disciplines.

### Krushi Mahotsav-2011

Government of Gujarat has started the celebration of *Krushi Mahotsav* from 2005-06. In the *Krushi Mahotsav*-2011, Junagadh Agricultural University has spared services of about 700 scientists/ officers to advise the farming community about the latest agricultural technologies. *Khedut shibirs* were organized in different districts. The details of *shibirs* organised by the university are given below.

No.	District	Taluka	Date	Beneficiaries Nos.
1	Junagadh	Talala	13.05.2011	70
		Visavadar	22.05.2011	225
		Una	23.05.2011	50
2	Rajkot	Wankaner (Satapar)	14.05.2011	150
		Wankaner	17.05.2011	250
3	Amreli	Amreli	08.05.2011	700
		Dhari	03.06.2011	175
4	Bhavnagar	Botad	29.05.2011	175
		Palitana	02.06.2011	325
		Bhavnagar	04.06.2011	220
		Mahuva	10.06.2011	650







