



### 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. D.B.

Kuchhadiya continued as an incharge Director of Extension Education and he supervised and guided the extension education activities.

### 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 sec. No. 62(1) in pursuance of section 17(5). The First meeting was held in the Conference Hall, College of Agriculture, Junagadh Agricultural University, Junagadh on 07.07.2005. The members of Extension Education Council during 2005-06 were as under.

No.	Name	Designation
1	Dr. B.K. Kikani	Vice Chancellor (Chairman)
2	Dr. R.L. Savaliya	I/c Director of Extension Education (Secretary)
3	Dr. D.B. Kuchhadiya	Director of Research & Dean, PG Studies
4	Dr. S.M. Jani	Associate Director of Extension Education
5	Dr. Ashok Mishra	Dean, Agriculture Faculty
6	Dr. N.C. Patel	Dean, Agril. Engg. & Tech. Faculty
7	Dr. A.Y. Desai	I/c Dean, Fisheries Science Faculty
8	Dr. R.L. Savaliya	Research Scientist (Groundnut)
9	Dr. V.K. Poshia	Research Scientist (Chickpea)
10	Dr. P.U. Gajbhiye	Research Scientist (Animal Genetics)
11	Prof. R.H. Ghaghada	Research Scientist (Agril. Engg.)
12	Dr. V.B. Gadhiya	Training Organizer, KVK
13	Dr. K.L. Jetani	Research Officer (Fisheries)
14	Dr. K.A. Khunt	Research Scientist (Agril. Economics)
15	Dr. M.N. Popat	Professor & Head, Agril. Ext. Edu.
16	Dr. A.H. Raval	Professor & Head, Agril. Engg. Ext. Edu.
17	Dr. N.N. Gajipara	Professor & Head, Horticulture
18	Dr. B.R. Karkar	Asstt. Ext. Edu., SSK
19	Dr. L.B. Ranaparia	Asstt. Ext. Edu., Horticulture Diploma School



**Extension Education and Training Centres**

Sr. No.	Type	Location
<b>I. Diploma/Certificate Courses</b>		
1.	Agriculture Diploma School	Halvad, Dhari
2.	Horticulture Diploma School	Junagadh
3.	Livestock Inspector Training Centre	Junagadh
4.	School of Baking	Junagadh
5.	Mali Training Centre	Junagadh
<b>II. Training Programmes for Extension Workers</b>		
1.	Training & Visit System Training Centre	Junagadh, Targhadia
2.	Centre of Excellence for Training (Oilseeds)	Junagadh
<b>III. Training Programmes for Farmers/Farm Women</b>		
1.	Krishi Vigyan Kendra	Jamnagar, Targhadia, Amreli, Khapat, Nana Kandhasar
2.	Sardar Smruti Kendra	Junagadh
<b>IV. Extension Education Programmes for Rural People</b>		
1.	Farm Advisory Service Centre	Junagadh
2.	Extension Programme for Fisheries	Okha

**5.3 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.

Sr. No.	Name of Course	Duration	Location	No. of Students Completed the Course
1)	Agriculture Diploma	2 years	Halvad, Junagadh, Dhari	78
2)	Livestock Inspector Training	1 year	Junagadh	30
3)	Bakery Training			
	➤ Basic Course in Baking Science	20 weeks	Junagadh	18 (2 Batches)
	➤ Special Training to Women	1 week	Junagadh	168 (7 Batches)
4)	Mali Training	6 months	Junagadh	8 (1 Batch)



All these courses are aiming to impart skill oriented practical training to farmer's son/daughter in order to provide an opportunity for self-employment, and employment in different organizations. There is a provision of monthly stipend in all the courses.

## (II) Training Programmes for Extension Workers

### (A) Training and Visit System

Junagadh Agricultural University has taken-up the task of training the extension personnel of the Department of Agriculture

Sr. No.	Type of programme	No.	No. of SMSs attended the programme
1)	Bimonthly Workshop	7	66
2)	Pre-seasonal Training Programme	2	62
3)	Short Duration Course	7	189
	Total	16	317

and Horticulture through the T & V System. The details about number of bimonthly workshops, pre-seasonal 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 is as under.

### (B) Centre of Excellence for Training (Oilseeds)

The centre has continued to provide better training to the extension personnel to improve their technical competency in the area of oilseeds production. This centre organizes the national workshop-cum-seminar on oilseeds production technology. The centre also plans the training programmes for the Master Trainers and SMSs. The details about numbers of workshops/ Training for the extension personnel of the Department of Horticulture and number of SMSs/AEOs who attended the programme are as under.

### Training Programmes conducted during the year 2005-06

Sr. No	Name of Workshop /Training	Duration	No. of Programmes	No. of Participants
1	Advanced Crop Production Technologies in Horticultural Crops	6 days	1	27
2	Advanced Crop Production Technologies in Horticultural Crops	6 days	1	24
3	National Level Model Training Course (MTC) on Technology for Achieving Higher Productivity of Oilseed Crops	8 days	1	19
		<b>Total</b>	<b>3</b>	<b>70</b>



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

#### (A) Training Programmes

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

Through the Transfer of Technology (TOT) Centres, 165 on-campus and 97 off-campus training programmes were organized, wherein 7532 participants received training. The details are depicted in Table 5.1.

#### Feed Back of Trainees about Training Programme

Trainees gained enough knowledge of IPM

and INM. They were eager to attend more training programmes in future. They were also interested in having vocational training programme on maintenance and repairing of agricultural implements and tractor mounted sprayers.

#### (B) Extension Activities

The 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 218345 beneficiaries benefited. The details of the extension activities organized and number of participants are given in Table 5.2

KVKs play an important role to provide an opportunity for income generation to the

**Table 5.1: Training programmes organized by the Transfer of Technology Centres for farmers/farm women during the year 2005-06**

Sr. No.	TOT Centre	No. of Trg. Prog.	No. of participants				Total
			Male	Female	Rural Youth	Other	
<b>1.</b>	<b>KVK:</b>						
(i)	Jamnagar	A 70	1082	719	-	-	1801
		B 48	602	345	-	-	947
(ii)	Targhadia	A 63	1375	704	-	158	2237
		B 37	919	128	-	30	1077
(iii)	Amreli	A 11	75	15	15	150	255
		B 5	244	11	21	24	300
(iv)	Nana Kandhasar	A -	-	-	-	-	-
		B 5	112	28	-	-	140
<b>2.</b>	<b>SSK:</b>						
(i)	Junagadh	A 21	466	139	-	-	605
		B 2	-	170	-	-	170
<b>Grand Total (A+B)</b>		<b>165+97</b>	<b>4875</b>	<b>2259</b>	<b>36</b>	<b>362</b>	<b>7532</b>
A= On-campus		B=Off campus					

farmers by imparting skill oriented trainings. Besides, the KVKs conduct variety of extension activities, on farm testing etc.

The KVKs are also collecting feed back on

farmers problems, which are sent to the concerned scientists and these feed back provides guideline in reforming further research.



**Table 5.2: Extension activities carried out by TOT centres during 2005-06**

Sr. No.	Name of activity	KVK					SSK, Junagadh	Total
		Jamnagar	Targhadia	Amreli	Khapat	Nana Kandhasar		
1)	Farmers/ Field Day	87 (2400)	28 (802)	6 (138)	- -	- -	- -	121 *(3340)
2)	Agril. Fair/ Exhibition	1 (3000)	1 (2697)	1 (499)	-	-	12 (18835)	15 (25031)
3)	<i>Khedut</i> /Women <i>Shibir</i> /Meeting/ Group Discussion	10 (3250)	29 (1947)	2 (13)	2 (2750)	15 (8844)	12 (16725)	70 (33529)
4)	Agril. Tour/ Field Visit	4 (350)	45 (10545)	2 (61)	-	-	-	51 (10956)
5)	Seminar/Workshop/ <i>Kisan Gosti</i>	5 (4850)	16 (15294)	-	2 (15)	-	19 (16795)	42 (36954)
6)	Film/Slide/ Video Show/ Radio Talk/TV Prog. etc.	-	19 (1520)	-	-	-	4 (254)	23 (1774)
7)	Guidance through Letters/Personal Contact	-	65 (65)	3 (20)	-	-	(206)	68 (291)
8)	Publication and Distribution of Farm Literature	15 (32000)	17 (37000)	-	-	-	+ 9 (33000)	41 (102000)
9)	Press Notes Released	8	78	1	-	-	-	87
10)	Demonstrations	200	58	7	-	-	-	265
11)	<i>Krush</i> i-Go-Vidya Subscriber Registered	-	-	-	-	-	324	324
12)	Escorting the Visitors	-	-	4 (92)	-	125 (125)	(4165)	129 (4382)
13)	Extension of Research Prog.	-	-	2 (88)	-	-	-	2 (88)
<b>Total</b>								<b>1238 (218345)</b>

\* Figures in Parenthesis indicates no. of beneficiaries / copies + Books & folder



**(C) Frontline Demonstrations**

The frontline demonstration aims to demonstrate the production potentialities of newly released and pre-released production technologies of pulses and oilseeds on farmers' fields.

In all, 430 FLDs were conducted on various oilseeds and pulses, viz., castor, mustard, groundnut, gram, wheat, pearl millet and cumin in 172.80 ha during *kharif* and *rabi* seasons through KVKs. The results are appended in Table 5.3.

**Table 5.3: Performance of frontline demonstrations organized during 2005-06**

Sr. No.	Centre	Crop	Variety	No. of FLDS	Area (ha)	Av. Yield Demo	(Q/ha) Local check	Increase in yield (%)	
1)	KVK, Targhadia	<b>Kharif</b>							
		Groundnut	GG-7	11	4.40	7.80	6.16	26.62	
		Groundnut	GG-5	12	4.80	7.40	5.80	27.59	
		Sesamum	GT-2	14	5.60	1.75	1.43	22.38	
		Bajra	GHB-577	19	7.60	13.00	12.31	5.61	
		<b>Rabi</b>							
		Gram	GG-1	10	0.40	5.30	4.80	10.42	
Wheat	GW-322	5	0.40	33.50	29.60	13.18			
		Cumin	GC-4	10	0.40	2.22	1.76	26.14	
2)	KVK, Jamnagar	<b>Kharif</b>							
		Groundnut	GG-5	20	10.00	11.87	9.92	19.66	
		Bajra	GHB-577	40	20.00	21.25	17.24	23.26	
		Castor	GCH-6	20	10.00	41.00	32.00	28.13	
		Sesamum	GT-2	10	5.00	4.78	3.54	35.03	
		<b>Rabi</b>							
		Mustard	GM-2	10	5.00	19.65	15.45	27.18	
Chickpea	GG-1	10	5.00	15.30	12.06	26.87			
		Wheat	GW-322	40	20.00	53.75	52.50	2.38	
3)	KVK, Amreli	<b>Kharif</b>							
		Groundnut	GG-7	13	5.00	7.00	6.00	16.67	
		Sesamum	GT-2	13	5.00	4.00	3.50	14.29	
		Pearl millet	GHB-558	12	5.00	25.00	22.00	13.64	
		<b>Rabi</b>							
		Wheat	GW-496	25	10.00	68.40	43.00	59.07	
		Cumin	GC-4	13	5.00	8.40	7.20	16.67	
Green Gram	GM-4	13	5.00	6.00	5.00	20.00			
		Gram	GG-4	12	-	11.20	10.50	6.67	
3)	Main Oilseeds Research Station, Junagadh	<b>Kharif</b>							
		Groundnut	Diff. Var.	50	20.00	22.15	17.49	26.64	
		Castor	GCH-4	15	6.00	39.65	28.41	39.56	
		<b>Rabi</b>							
		Mustard	GM-2/GM-3	3	1.20	17.50	16.04	9.10	
4)	Pulses Research Station, Junagadh	<b>Kharif</b>							
		Pigeon pea	BSR-336	5	2.00	14.90	13.75	8.36	
		( <i>Rhizobium</i> )	BSR-736	5	2.00	18.13	16.63	9.02	
		<b>Rabi</b>							
		Chickpea	GG-1	18	7.20	16.85	15.51	8.64	
			KAK-2	2	0.80	13.00	14.00	-7.14	
		<b>Total</b>		<b>430</b>	<b>172.80</b>				

## Feed Back

Feed backs received though implementation of the Front line demonstrations are as under:

- 1) Need for effective control measure for *Sclerotium* rot fungi in groundnut.
- 2) Effective measure for control of boll worm of cotton crop.
- 3) Control regarding blight and wilt of cumin.
- 4) Need to develop drought resistant varieties of various crops.
- 5) Control measures for varieties susceptible to insect-pest & disease.
- 6) Remedies for seed damages during seed preparation.
- 7) There is a need of aphids resistant variety in mustard.

### (D) Farm Advisory Service Scheme

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.

In co-ordination with District Rural Development Agency and Farm Advisory Service Scheme, SSK, Junagadh Agricultural University, Junagadh organized district level symposium on 'Celebration of "Rastriya Bhoomi Saunrakshan Saptah" on 02.03.2006 at College of Agriculture, JAU, Junagadh. Total 106 scientists of JAU, extension workers, forest department, DRDA, Junagadh and progressive farmers participated in this programme. Subject experts form JAU, Collectorate, Junagadh and forest department gave talks on:

1. Soil conservation and its importance in crop production.
2. Salt ingress and its solution/amendment.
3. Storage of rain water and its efficient use.
4. Pasture reformation and afforestation.
5. Water conservation and its availability.
6. Information on subsidy for soil conservation.

Sr. No.	Name of activity	No. of activity	No. of participants
1)	Agril. Fair	10	728100
2)	Agril. Exhibitions (participation)	32	21045
3)	<i>Khedut, Mahila Shibir/</i> Group Meeting/Crop Seminar	39	23610
4)	Spot Guidance/Guidance through letters	365	-
5)	Agril. Literature Exhibition	32	20835





**(E) Extension Activities carried out by various Extension Education Centres**

Extension activities carried out by various Extension Education Centres during the year are as under.

Sr. No.	Name of activity	LITC, Junagadh	School of Baking, Junagadh	Fisheries Res. Station, Okha	Total
1)	Refresher Training to Livestock Inspector	1	-	-	1
2)	Diagnostic and Treatment Services through Mobile Ambulatory Clinics	38	-	-	38
3)	Exhibitions on Animal Husbandry/Agril. Mela	1	1	1	3
4)	Farmers/Animal Owners Visit	46	59	5	110
5)	Lectures delivered in Training on Animal Health/Nutrition	24	-	-	24
6)	Farmers' Meeting/ Shibirs/Seminar, etc.	3	-	1	4
7)	Guidance through letters	15	-	6	21
8)	Literature Published	5	-	-	5
9)	On Campus Training Programme				
a)	Gopal Mitra Certi. Course (4 months)	1	-	-	1
b)	B.V.Sc. Internship	8	-	-	8
10)	Press Note Released	1	-	1	2
11)	One Day Camp	-	8	-	8
12)	Farmer's /Field Day	-	-	3	3
13)	Film/Slide/Video Show	-	-	5	5
14)	Demonstration	-	-	2	2
	<b>Total</b>	<b>143</b>	<b>68</b>	<b>24</b>	<b>235</b>





## 5.4 Radio Talk and TV programme

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 32 such talks were delivered on different topics related to agriculture, horticulture, agricultural engineering, fisheries, animal husbandry, etc. In all, 22 television programmes covering various aspects on 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.

## 5.6 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 Training and Visit 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

Sr. No.	Name of Office	Type of Publication		Total
		Folder	Books	
1.	Director of Ext. Edu., JAU, Junagadh	10	3	13
2.	Fisheries Research Station, JAU, Okha	2	-	2
3.	Millet Research Station, JAU, Jamnagar	2	-	2
4.	Oilseeds Research Station, JAU, Junagadh	1	-	1
5.	Dry Farming Research Station, JAU, Targhadia	4	-	4
6.	Cattle Breeding Farm, JAU, Junagadh	5	-	5
7.	Krishi Vigyan Kendra, JAU, Jamnagar	12	-	12
	<b>Total</b>	<b>36</b>	<b>3</b>	<b>39</b>

## 5.5 Publication of Extension Education Literature

During the year report, total 39 publications (36 folders and 3 books) were published by different departments. University News bulletin “Krushi Vishva” is being published regularly by Junagadh Agricultural University under the guidance of Directorate of Extension Education.

for the farmers. The functional linkages also exist under T & V system through bi-monthly workshops, pre-seasonal 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 for Junagadh Agricultural University Staff

During the year under report, 15 scientists/teachers of Junagadh Agricultural University were deputed for orientation training outside the Gujarat state to upgrade knowledge and skill for improving their faculty competence in respective disciplines.

### 5.8 Extension Activities done during the Krushi Mahotsav-2005

It is important that the innovations in agricultural field reach the farmers at the earliest. Revolutions could be brought in agriculture only if such recommendations are used by the farmers in their fields and hence stress was laid that these recommendations reach the farmers through '*Krushi Rath*' along with agricultural scientists with their new recommendations. Meetings with farmers in villages were held by these scientists to appraise them with the new techniques and even their problems were solved in the meetings. With the help of transfer of technology, 61977 farmers received information from Agril. Scientists through *shibir* in marketing yards in Saurashtra Region.

Literature on agriculture played a vital role in imparting guidance to farmers of the latest technologies. The Gram Panchayats were given *Krushi Margdarshika* which contained latest methods for sustainable agriculture.

In collaboration with other private organizations, 17 *Krushi Shibirs* were organized in which 8865 farmers

participated and were informed about the latest developments in agriculture, horticulture & animal husbandry during *Krushi Mahotsava-2005*.

Agricultural Exhibitions were organised at village level during *Krushi Mahotsava-2005* and 6680 farmers participated. Seed samples and cultivation methods of various crops grown in Saurashtra were shown to the farmers through exhibiting charts, drawings and information.

Agriculture Book fairs were held and 6590 farmers participated and collected information about agriculture literature. Books on Progressive Farming, Fruits and Flowers, Vegetables, Animal Husbandry, Our Herbal Medicines, Scientific Cultivation of Oilseeds, Energy in Agriculture, Garlic, Onion etc. were made available.

Agricultural fairs were organized at three places, viz., Amreli, Supedi (Tal. Dhoraji) and Bhuj during *Krushi Mahotsava* by Private Organizations, where in total 43100 farmers (34500 farmers, 8600 farm women) were participated and received knowledge about latest technologies.

### The Rabi Movement-2005

The Rabi Movement-2005 was organized in November-2005 for farmers. *Shibirs, Sabhas* etc. were held in all talukas of the 7 districts. Scientists from University and scholars of agriculture informed and guided farmers about the latest technologies and methods for profitable cultivation of *rabi* crops like wheat, pea, onion, garlic, sugarcane, horticultural crops, vegetable, animal husbandry, vermicompost etc. About 200 *Shibirs* were organized and 27159 farmers participated.

Sr. No.	Name of activities	Number of Activities	Number of beneficiaries
1	Agricultural Guidance about APMC	7 districts	61977
2	<i>Krushi Shibir</i>	17	8865
3	Agricultural Exhibition	11	6680
4	Agricultural Literature Exhibition	11	6590
5	Agricultural Fair	3	43100