

EXTENSION EDUCATION

● ANNUAL REPORT 2010-2011 ●

1. INTRODUCTION

Navsari Agricultural University is a pioneer institute in the South Gujarat region for transferring the agricultural technology to the farmers to increase their agricultural production. The Directorate of Extension Education is actively involved in transfer of latest technologies to the farmer's field and giving its feed back to the researcher. The Directorate of Extension Education has started functioning in 1972 during erstwhile Gujarat Agricultural University. Later on, as a consequence of the separation of Gujarat Agricultural University into four new universities in the State, Navsari Agricultural University (NAU) has come into existence on May 1, 2004. NAU encompasses seven districts, viz., Valsad, Navsari, Dangs, Surat, Tapi, Bharuch and Narmada of South Gujarat.

Geographically, the jurisdiction is stretched over 170 km. seashore on the western side and hilly terrain with dense forest on the eastern side enclosed with high fertile land and ample natural resources. Thus, presently the NAU serves to 4 districts of hills and 3 districts of plains in South Gujarat region. With varied geographical, biophysical and socio economic conditions of the region, the work of validation of newly developed technologies and transfer of technology has become very challenging. The Directorate undertakes extension activities through 6 KVKs (working at grass root level), Training Units (Sardar Smruti Kendra & Training and Visit System) at head quarter, ATIC, extension departments at different colleges along the State Agricultural Management and Extension Training Institute (SAMETI), Gujarat assisting in extension reform programme.

2. VISION

To make the extension system 'Farmer-Driven' and 'Market-led' for augmenting production, productivity and income of the farming community.

3. MISSION

- To bridge up the agricultural technology gap at grass root level.
- To educate rural people to attain/participate in development.
- To create awareness about health, hygiene, environment and bio-diversity conservation for sustainable development.
- To link farmer with newly emerging globalize world by providing them information and guidance.

- To develop a system of effective research and extension linkages.
- To generate employment in the field of agriculture and allied disciplines.
- To integrate IT in rural system for their development.

4. MANDATE

- Facilitating planning, implementation, execution and monitoring of extension programmes carried out in South Gujarat region.
- Emphasizing participatory technology generation, dissemination and utilization.
- Offering training and field services to public, private, NGOs and corporate sectors.
- Enhancing the agricultural vocations in the region.
- Promoting the 'Market-led Extension'.
- Organizing farm advisory services at the doorsteps of the farmers.
- Encouraging women to work in groups at the grass root level.
- Networking of extension and development systems through ICT-mode.

5. FUNCTIONS AND ACTIVITIES

- To plan, coordinate, organize, guide, implement and supervise the extension education programmes in the University.
- To assist and complement to state government department of agriculture, public sector and voluntary organizations in effective management of extension education systems.
- To transfer the innovative technology through Krishi Vigyan Kendras.
- To organize training programmes at headquarters.
- To serve as single window system for providing all information regarding agriculture, providing inputs like seeds & planting material through Agricultural Technology Information Center (ATIC).
- To act as mediator for researchers by updating them with field problems of farmers and to help them in developing "Demand Driven Technology."
- To publish extension literature and its distribution among farmers & extension functionaries.
- To handle various collaborative extension projects running through NAU.

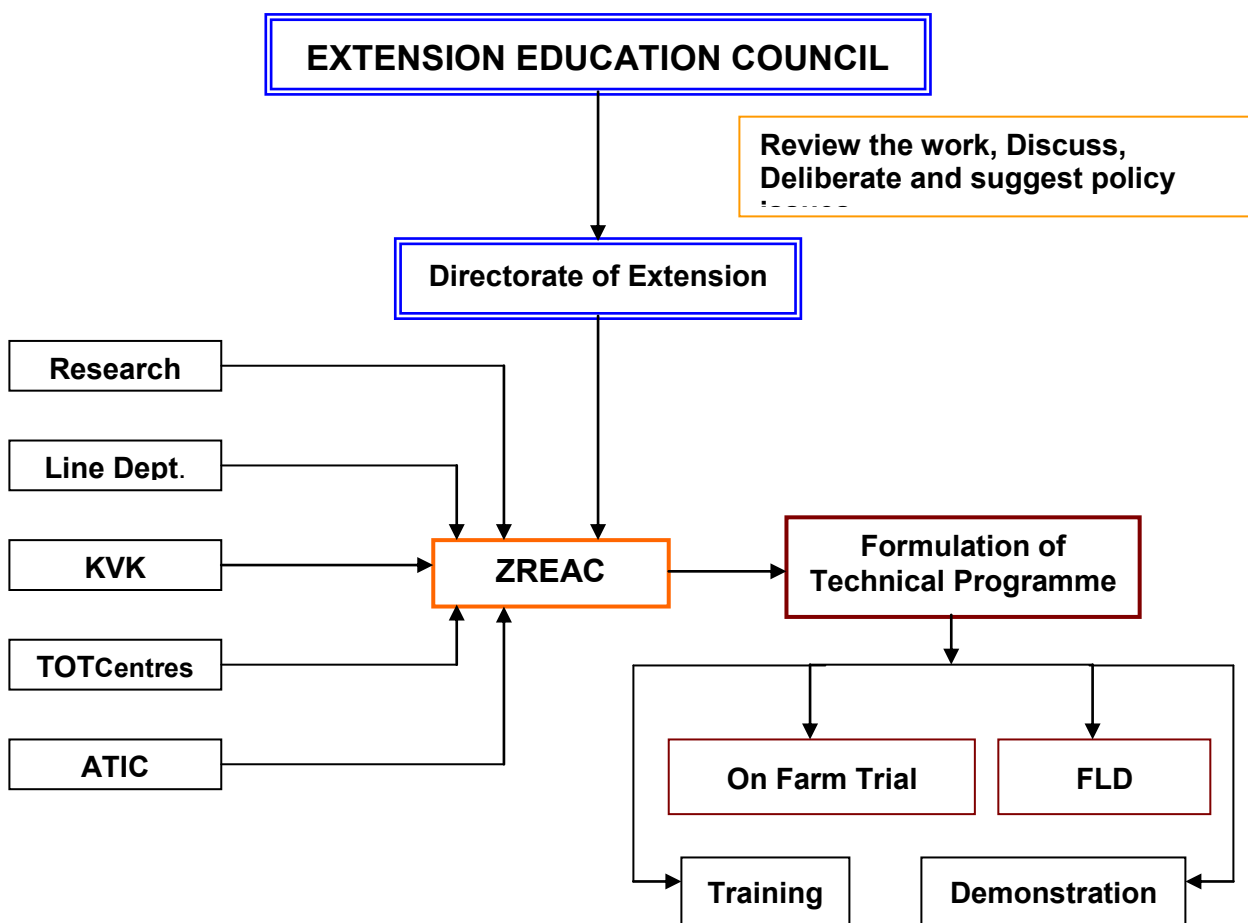
6. ORGANIZATIONAL STRUCTURE & STAFF STRENGTH

6.1 Organizational Structure of Directorate of Extension Education:

The Directorate of Extension Education is headed by Director Extension Education. It functions on the recommendations of Extension Education Council. The Vice Chancellor is the Chairman of Extension Education Council. The flow chart shown in figure 1 provides in detail organizational set up of the Directorate of Extension Education at the University level.

6.2 Extension Education Council:

Extension Education Council is a statutory body consisting of the Vice-Chancellor as its chairman and Director of Extension, Director of Research, Deans, Officers of the University, Heads of the Line Departments, Extension Educationist, Innovative Farmer and Experts in the field of extension as members. The council meets at least once in a year to review the work, discuss and deliberate the policy issues on extension system and formulate the technical programme for different units of the Directorate of Extension Education.



Flow chart showing the mechanism to formulate the technical programme for extension activities.

Organizational Structure of Directorate of Extension Education:

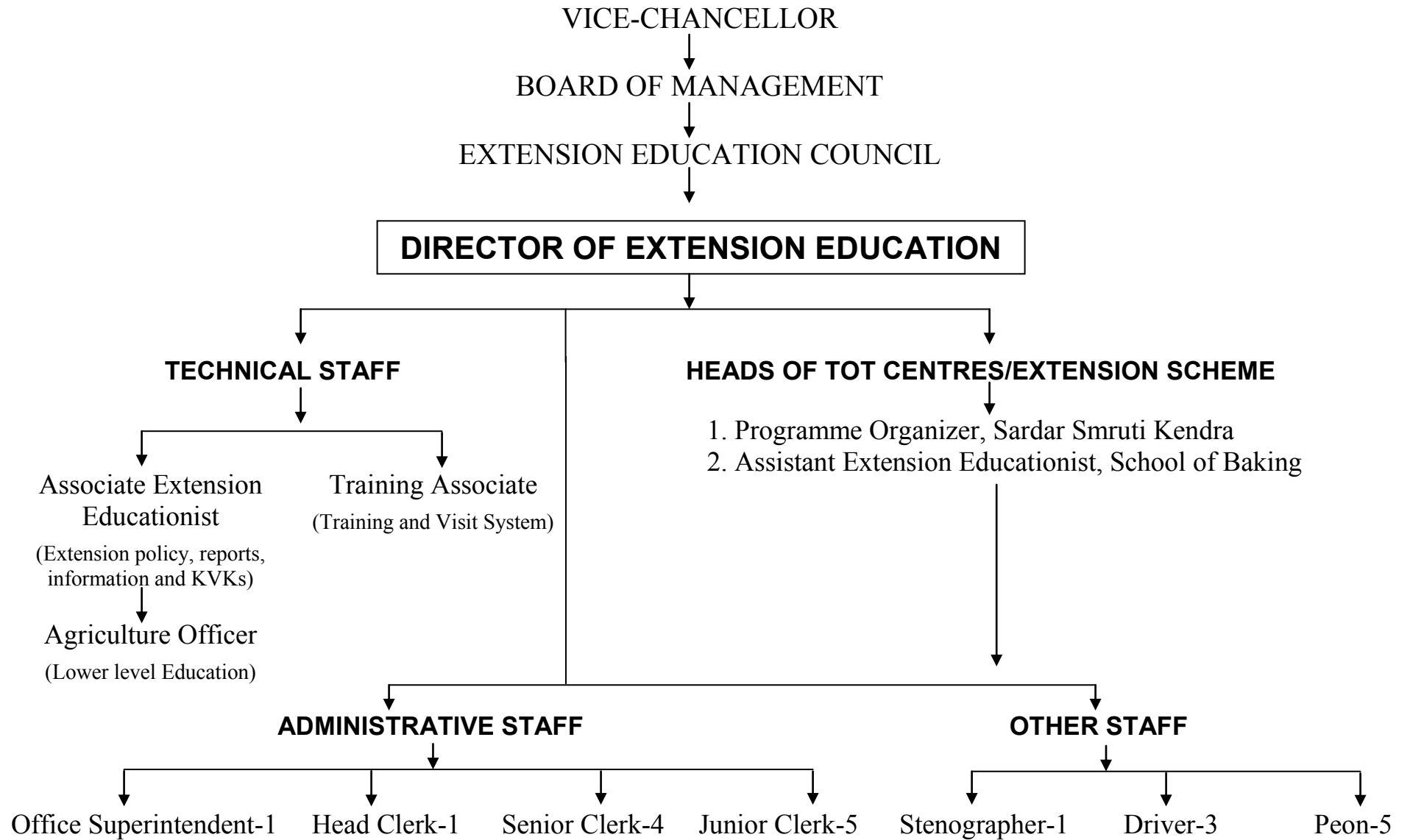


Figure 1: Organizational Structure of Directorate of Extension Education

6.3 Staff Strength:

S.N.	Designation	No. of Posts		
		Sanctioned	Filled	Vacant
1	Director of Extension Education	1	-	1
2	Training Associate	1	1	-
3	Assistant Extension Educationist	4	4	-
4	Agricultural Officer	3	-	3
	Total	9	5	4

7. Extension Education Centres

University has following Extension Education Centres from where different extension activities are being carried out.

1. Sardar Smruti Kendra: Navsari
2. Training and Visit System: Navsari
3. Farm Advisory Service: Navsari
4. Extension Wing: Navsari
5. Advance Training Centre for Soil and Water Management: Navsari
6. Vegetable and Fruit Demonstration Scheme for Tribal Upliftment: Pariya
7. Demonstration-cum-Training Centre for Inland Fisheries
8. Agricultural Technology Information Centre (ATIC): Navsari
9. Krushi Vigyan Kendra: Vyara
10. Krushi Vigyan Kendra: Waghai
11. Krushi Vigyan Kendra: Navsari
12. Krushi Vigyan Kendra: Dediypada
13. Bakery Training Unit: Navsari
14. Landscaping and Gardening Training Programme: Navsari



Sardar Smruti Kendra



ATIC

8. SALIENT ACHIEVEMENTS (2010-11)

8.1 Extension activities carried out:

S. N.	Extension Programme	No. of activities	No. of Beneficiaries			
			Farmers	Women	Youths	Total
1	On campus trainings	282	4631	2483	2587	9701
2	Farmers' day/Field day	61	3012	2411	3309	8732
3	Agril. Exhibition/Agril. Fair	27	12221	5943	8677	26841
4	Seminar/Workshop/Symposium	31	762	381	352	1495
5	Farmers/Farm Women Shibir	62	1730	1623	329	3682
6	Fieldtrip/Field Visit	118	1385	2847	1308	5540
7	Farmers' Meeting/Krishi Gosthi	161	1336	1248	1440	4024
8	Organization of FLDs	582	1593	561	2437	4591
9	On Farm Trials	15	70	18	64	152
10	Veterinary Clinic Camp/Exhib.	12	549	1022	485	2056
11	Video-Film-slide show	24	282	862	288	1432
12	Telephonic guidance	234	74	02	160	236
13	Press-notes	121	Mass	Mass	Mass	Mass
14	Radio & T.V. Programmes	11	Mass	Mass	Mass	Mass
15	Farm Litera. Publication	62	--	--	--	33561

8.2 Seminars/Workshops/Symposiums organized for farmers:

S. N.	Topic	Number of Programmes	Number of Beneficiaries
1	Sugarcane Production Technology	8	892
2	Paddy Production Technology	6	503
3	Floriculture	3	497
4	Pre-harvest technology in Mango	4	1304
5	Post-harvest technology in Mango	4	1032
6	Vegetable crops	5	523
7	Rabi crops of South Gujarat	6	752
8	Cotton Production Technology	2	431
9	Prawn rearing technology	3	194
10	Micro irrigation system	6	411
11	Fisheries-production & marketing	2	115
12	Kitchen Gardening	8	322
	Total	57	6976

8.3 Diploma/Certificate Courses:

S. N.	Polytechnic/School/ Centre	Courses	Duration	Intake capacity	No. of Students	
					Admit.	Passed
1	Horticulture Polytechnic : Navsari	Diploma	02 Years	30+5	33	32
2	Agriculture Polytechnic : Bharuch	Diploma	02 Years	30+5	24	24
3	Agriculture Polytechnic : Vyara	Diploma	02 Years	30+5	25	24
4	Agriculture Polytechnic : Waghai	Diploma	02 Years	30+5	28	28
5	Livestock Inspector Training Centre : NVS	Certifi.	01 Year	33	33	33
6	Landscaping and Gardening : Navsari	Certifi.	06 Months	20	10	09
7	School of Baking : Navsari	Certifi.	20 Weeks	16+16 (Two Batch)	28	28
Total		-	-	-	181	178

9. NEW INITIATIONS IN EXTENSION TRAININGS/PROGRAMMES

1. Short duration Agro ITI courses started for skill development:

1. Seed production
2. Organic farming
3. Kitchen gardening
4. Farm management
5. Gender friendly equipments for women farmers
6. Soil-Water-Plant analysis
7. Micro irrigation system
8. Flower dehydration
9. Farm power machinery: Selection, Operation and Maintenance
10. Tissue culture
11. Bio-fertilizers & Bio-pesticides
12. Poultry farming
13. Artificial insemination
14. Dairy farming
15. Productive & beneficial insects
16. Commercial Mushroom production technology

2. e-connectivity with village farmers:



Communication facilities are now easily available at each corner of world including interior villages. In each home of village, a mobile facility is there and some time it is available with the each family member. With this concept, KVK Navsari has started an e-connectivity centre at Navsari. From this centre, message related to agriculture are sending regularly to the large number of farmers through mobile SMS. Till now more than 109890 messages were sent through e-connectivity centre.

3. Market-led extension: MoU with Vadilal Industries:



NAU through its KVK Navsari bridged the gap between farmers and market traders by making MoU with highly reputed Vadilal industries. Usually said, that because of unsure marketing of farm produce, farmers do not get satisfied economic returns. In this direction, KVK Navsari has put its first step. With the help of Tribal Sub Plan, total 9 lakhs of fund was allotted to KVK, Navsari for the betterment of tribal farmers by cultivating new crop in the area of South Gujarat.

KVK, Navsari convinced farmers to cultivate sweet corn which is short period crop with high demand in urban areas. For this KVK, Navsari has formed farmers committee from each village and identified committee leaders to sign the MOU for contract farming. For implementation of this project, 126 farmers are given high quality seed and other necessary technical as well as critical inputs. Seventy four acres of area was covered with this crop. Many farmers did their best efforts to produce good quality sweet corn as per the terms and conditions of Wadilal industries and got good income. In the MOU, major weightage was put on quality of the final product. According to terms in MOU, the weight of each sweet corn corb should be minimum 250gms and should have proper moisture content and if these standards were maintained farmers will be paid 6 Rs. per Kg of sweet corn. Some farmers also failed to cope up with these terms on account of unsuitable weather conditions and planting pattern. Transportation facility was arranged by themselves. The noticeable impact which was seen by taking this step was that the farmers are sensitized to the quality of their produced. They became aware of the important of good quality produced and the demand of modern world. Till now they were cultivating traditional crops such as rice, Sorghum, Sugarcane,

Mangoes, and Sapota but with the help of this MOU, it become possible to deviate farmers to cultivate new crops to satisfy the demand of global market and got good return. In terms of economical benefits, many famer get Rs. 30,000 per acre or more. After harvesting the sweet corn crop residue was used as fodder to feed milky animals and fulfilled the need of green fodder which is pretty difficult to get in the summer day. This also has adds economical benefits for the farmers. Overall outcome of this MOU was very optimistic and farmers have shown their interest to sign other MOU in future with the help of KVK, Navsari. In this way KVK, Navsari has established good rapport in tribal area.

BRIEF OF CONTRACT FARMING:

- During this year MoU of sweet corn was done with Vadilal Industries
- Total 126 Farmers had signed MoU & 14 villages were covered.
- Total area covered 74 acre
- Total Production 1332 tone
- Total revenue generated 79.92 lakhs
- Fodder (Approx.) 2900 tone
- Income generated 43.50 lakhs

4. Inland Aquaculture: Participatory extension approach



A project on “Holistic development of 20 adopted villages of south Gujarat” under RKVY was sanctioned Navsari Agriculture University during the year 2007-08. The main objective of the project were to transfer the new technologies and researches of the University to the farmers field level through KVK’s Scientists by training, demonstration and other extension activities for holistic development of the selected villages through agriculture and allied sectors. This project involves ten different sub components and Inland aquaculture was one of them.

South Gujarat Zone falls under heavy rain fall area and the major rivers of Gujarat like Narmada and Tapi are flowing in this region. The sweet water recourses in Gujarat includes about 0.22 lakh hactor village ponds, 0.93 lakh hactor small lake & 2.55 lakh hactor medium and large lake with 3855 km. rivers and canals. So that in most of the villages of south Gujarat we found perennial ponds. These ponds are very useful for inland aquaculture.

Pathari village of Gandevi Taluka was selected for this Project of inland aquaculture. The village has very old non use ponds in about 4.3 hactor area, which was dig earlier by Government. The KVK Navsari visited the Pathri village and arranged a meeting with them for inland aquaculture farming. Village Sarpanch

shri and other leaders and interested persons of the village immediately understand the speech delivered by the programme coordinator and they took immediate action. They were form a group of 23 members for inland aquaculture and named it “ Samarpan Matsya Palan Group” and Mr Manubhai Kikubhai Patel selected as head of the Group. After this they hold these ponds through lease for five year and resolution was passed in Gram panchayat. The Village has Total 9 ponds viz.3 Nursery pond, 3 rearing ponds and 3 grow out ponds. KVK Navsari had renovated all these ponds in march 2010 which was inaugurated by DDO and total cost of the renovation was about 1.72 lakh.

Now, farmers were ready to start their new business along with KVK, Navsari. On 18th August 2010, KVK, Navsari purchase 50,000 mixed fry fish seed from Fadvel government fisheries farm. They also purchase 3500 fingerlings and 8850 yearlings from private farms. During November 2010 farmers added 18 kg prawns in this ponds. Total cost of such seed was around Rs. 15,000.

As a part of integrated farming, Mango, coconut tree, custard apple and teak wood were planted in the presence of honourable MLA shree Laxmanbhai Patel. A five days training programme was organized by KVK during September 2010 to provide the scientific techniques to the farmers in collaboration with dept. of fisheries and District Panchyat, Navsari an Exposure visit was organized by fisheries dept at Khambha and Fadvel Farm .Ten days exposure visit of 18 members of Samarpan Group were arranged at Central Institute of Freshwater Aquaculture (CIFA), Bhubaneshwar, Orissa and Central Institute of Fisheries Research Institute (CIFRI), Barrackpore, West Bangal to get practical experience and knowledge for inland aquaculture. Farmer got a lot experience and knowledge from the efforts made by KVK. They unite together for Fish Farming. Schedules were prepared to carry routine activities and accordingly members are working. Group members have kept pond clean, supplied feed regularly and it resulted into good survival and growth. Pond is established as integrated farming model through plantation and popularized in district. Total expenditure was made around 3.5 lakhs and farmers are in a position to earn 8-10 lakhs of return from the cultivation. Another achievement is social partision removed and group cohesiveness were found. They came together for welfare of the village.

BRIEF OF THE PROJECT

Total grant : Rs. 8.00 lakhs & Rs. 3.0 lakhs was utilized for Pathri village.

Initiation : On 12.01.2010

Total Members of the group : 18

For the purpose of fish rearing, a village pond was taken on lease for the period of 3 years. Fish seed Plantation: 18/ 08/2011

Achievement :

- Total income: 8 lacs.
- Expected from yearling: 15 to 20 lacs
- Training: 214 farmers

S.N.	Type of Training	No. of training	Beneficiary		Total
			Male	Female	
1.	ON CAMPUS	1	20	-	20
2.	OFF CAMPUS	5	89	-	89
3.	FIVE DAY	1	105	-	105
TOTAL					214

5. Krishi Mahotsav-2010:

- Gujarat Chief Minister Narendra Modi launched Golden Krishi Mahotsav-2010 on 16th of May from NAU, Navsari



Krushi Rath – A mobile exhibition van



Hon'ble Chief Minister Narendra Modi launching Krishi Mahotsava-2010 at NAU Navsari by giving flag to Swarnim Krushi Rath



Hon'ble Chief Minister Shri Narendra Modi addressing the Farmers' Meet Function

Gujarat launched Golden Krishi Mahotsava-2010 on the auspicious occasion of Akhatrij on May 16, 2010, as part of the state's bid for a second green revolution through a series of path-breaking measures. Gujarat Chief Minister Narendra Modi inaugurated state's Swarnim Krushi Mahotsav on 16th of May at Navsari Agricultural University, Navsari. Even as the state-wide Krishi Mahotsav being observed under the leadership of Chief Minister Shri Narendra Modi enters the sixth year, the focus in the year of the state's golden jubilee celebration is on *Innovative Convergence of Schemes for maximizing results*. The convergence includes precision farming, farm mechanization, sprinkler irrigation, tissue culture and organic fertilizers, introducing the concept of green houses, nursery and vadi farming. During the Krishi Mahotsav, the experts' teams held 525 demonstrations across the state, distribute farm kits to 1.69 lakhs beneficiaries and seeds for horticulture crops to 1.36 lakh beneficiaries.

The multi-pronged action plan includes increasing the yields of the state's cash crops like cotton, groundnut, castor and sugarcane. Under horticulture, plan is to increase the banana yield from the present 49 to 100 tones per hectare, besides tomato, lady's finger, chili that come under horticulture. It includes starting 60 farm fields schools to train farmers grow hybrid paddy, doubling ragi crop production in three years, Rs.19,500 assistance for demonstrating sprinkler convergence in groundnut in each block Plan is to issue 42 lakhs new soil health cards, setting up 85 new labs at APMC yards and sugar factories to test 14 lakhs soil samples every year, preparing farm maps for each district and train 1,500 students of Agricultural Universities in the state. It also aims to go for hybrid and improved seeds, doubling seeds output in three years with a view to reducing cost through mass production, distributing improved certified seeds through authorized dealers in various districts.

● **Farmers' Meet during inauguration programme:**



Hon'ble Agriculture Minister Shri Deelip Sanghani enlightening the lamp in inauguration function of Krishi Mahotsav



Farmers participating in Farmers' Meet



Farmers participating in Farmers' Meet

Gujarat Chief Minister Narendra Modi has launched the state's Swarnim Krushi Mahotsav-2010 from Navsari Agricultural University on 16-05-2010. On this occasion, a "Mega Farmers Meet" was inaugurated by the Agriculture Minister Shri Deelip Sanghani. In his address, CM appealed the farmers to adopt scientific approach in farming for alleviating the income of individual farmer in particular and production of State and Nation in general. About 30,000 farmers were remained present in launching programme of Krushi Mahotsav-2010.

● **Mega Krushi Mela:**

The Mega Krushi Mela was organized from 16-05-2010 to 18-05-2010 at Navsari. Hon'ble Agriculture Minister Shri Deelip Sanghani inaugurated the Krushi Mela on the first day of the event. In the exhibition, 112 stalls and demonstrations were exhibited under 6 big domes through which new agricultural inputs/items along with latest farm information were made available to the visitor farmers. NAU and State Departments also exhibited various technologies through 60 stalls during the Krushi Mela. Total 37,625 farmers visited the Krushi Mela.

Other important programmes organized during three days (16-18 May, 2010) of Mega Krushi Mela were as under;

S.N.	Programme	Date	Farmers Participated
1.	Mango, Fruits, Flowers and Vegetable show	16-17 May, 2010	24930
2.	Seminar on High-tech Horticulture	16 May, 2010	155
3.	Animal show and Animal competition	17 May, 2010	990
4.	Seminar on Animal Husbandry (Women)	17 May, 2010	650
5.	Seminar on Sugarcane crop	18 May, 2010	510

View of Krushi Mela



View of Mango, Fruits, Flowers, Vegetable and Animal shows



Fruit show arranged during Krushi Mela



Different Varieties of Mango exhibited in Krushi Mela



Farmers visiting the Fruit show



Cattle show arranged during Krushi Mela



Healthy Cattle exhibited in cattle show



Dr.A.R.Pathak, Hon.Vice-Chancellor NAU addressing in Cattle show arranged during Krushi Mela

● Technical Seminars during Krushi Mahotsav-2010:

Under the aegis of Krushi Mahotsav-2010, three technical seminars were organized during three days (16-18 May, 2010) of Mega Krushi Mela at Navsari in which experts from concerned disciplines had given latest know-how as well as made interaction with the innovative and progressive farmers. Total 1315 farmers had participated in the seminars. Some photographs of the seminars are given in the succeeding page.

Photographs of the Technical Seminars/Symposiums



Shri Bhupendrasinh Chudasma, Ex. Minister of Agriculture addressing the women in Mahila Pashupalan Symposium



Women participating in Mahila Pashupalan Seminar



Shri Mansinhbhai Patel, Chairman, GSSCF, Gandhinagar addressing the farmers during Seminar on Horticulture



Dr. A.R.Pathak, Hon.Vice-Chancellor NAU addressing the women in Mahila Pashupalan Symposium

10. IMPACT OF EXTENSION PROGRAMMES ON AGRICULTURAL DEVELOPMENT AND ADOPTION BEHAVIOUR OF FARMING COMMUNITY

10.1 Spread of new technology in farming community:

1. 65.11 % framers visited NAU Research/Extension/Teaching centres for attaining the information regarding new agricultural technology.
2. The area under floriculture has extended to 1755 ha.
3. 86 Green Houses have started to work and more than these double are under process.
4. Drip & sprinkler irrigation has spread in 24500 ha. of land.
5. 82 % farmers are using improved farm implements & equipments.
6. 76 % farmers have conceived the importance of value addition in Mango and Chiku, out of which 34 % have paved to their own small scale processing units.
7. Due to awareness given by the NAU in different extension programmes, 68 % farmers get more income by adopting grading, packaging and marketing.
8. Farmers have started to get soil analysis hence the cost of fertilizers per hectare is reduced to Rs. 664/-.
9. Tribal farm women have started to adopt value addition in Nagli crops and they are preparing Biscuit, Papad, Sukhadi etc. for more remuneration.
10. The area under tissue culture Banana plants has extended to 15000 ha.
11. The control over red rot, bacterial leaf blight, wilt and fruit fly could be made through bio-control methods promoted by NAU.
12. Farmers of South Gujarat are more tending to procure reliable seeds from NAU farms.

10.2 Increase in adoption rate of new agricultural technology:

S.N.	Technology	Adoption Rate (%)
1	New improved varieties	87.12
2	Mix and intercropping	47.02
3	Soil analysis	72.31
4	Efficient use of chemical fertilizers	55.83
5	Use of organic & bio-fertilizers	48.10
6	Precise irrigation	60.07
7	Judicious use of pesticides	34.46
8	Use of bio-control methods	12.11
9	Food processing	12.26
10	Grading, Packaging, Marketing for more returns	69.42

11. PUBLICATIONS

11.1 Farm publications:

Directorate of Extension is periodically publishing folders, leaflets and booklets on package of cultivation practices of main crops, diversified crops, newly released technology etc. of the area to make available to the farmers and extension workers as ready reference at very low cost. A list of farm literature published in vernacular language is presented below.

11.2 Other publications–news letter/reports:

- NAU Spectrum - six-monthly newsletter of the University
- Research Accomplishments and Recommendations
- NAU Annual Report
- Annual Budget
- Souvenirs
- Booklets on new emerging issues/technology

A list of farm literature published in vernacular language

(૧)	ઉનાળુ ડાંગરની ખેતી	(૨૧)	દરિયાકાંઠા વિસ્તારમાં ડાંગરની ખેતી
(૨)	ખરીફ ડાંગરની વૈજ્ઞાનિક ખેતી	(૨૨)	વેલાવાળા શાકભાજીની ખેતી
(૩)	કેળની ખેતી પદ્ધતિ	(૨૩)	મરચીની ખેતી
(૪)	જુવારની આધુનિક વૈજ્ઞાનિક ખેતી પદ્ધતિ	(૨૪)	વસ્ત્રની પસંદગી, પરિધાન અને માવજત
(૫)	આંબાની ખેતી	(૨૫)	વ્યવસાયલક્ષી પશુપાલન
(૬)	ગુજરાતમાં કપાસની વૈજ્ઞાનિક ખેતી	(૨૬)	પચૌલી
(૭)	શેરડીની વૈજ્ઞાનિક ખેતી પદ્ધતિ	(૨૭)	ફૂલપાકોની ખેતી
(૮)	ચીકુની ખેતી	(૨૮)	ગૃહ વ્યવસ્થા અને સજાવટ
(૯)	ટામેટાની ખેતી	(૨૯)	આહાર અને પોષણ
(૧૦)	રીંગણની ખેતી	(૩૦)	સાગની ખેતી
(૧૧)	પરવળની ખેતી	(૩૧)	ફળ-શાકભાજી પરિરક્ષણ
(૧૨)	ભીંડાની ખેતી	(૩૨)	પામારોઝાની ખેતી પદ્ધતિ
(૧૩)	ફૂલકોબીની ખેતી	(૩૩)	આંબાની સંકરજાતો
(૧૪)	કૃષિ તજજ્ઞતા માહિતી કેન્દ્ર (ATIC)	(૩૪)	અનાજ સંગ્રહ
(૧૫)	સરદાર સ્મૃતિ કેન્દ્ર ખેડૂતો માટેનું અનોખું યાત્રાધામ	(૩૫)	ખરીફ કઠોળ પાકોની સંક્ષિપ્ત ખેતી પદ્ધતિ
(૧૬)	મશરૂમની ખેતી	(૩૬)	ફળ-શાકભાજીની મૂલ્યવૃદ્ધિ
(૧૭)	રતનજયોત એક બહુહેતુક વૃક્ષ	(૩૭)	હળદરની ખેતી
(૧૮)	નવસારી કૃષિ યુનિવર્સિટી પર એક નજર	(૩૮)	ગુલાબની ખેતી
(૧૯)	સેન્દ્રીય ખેતી પદ્ધતિ	(૩૯)	તરબૂચની ખેતી પદ્ધતિ
(૨૦)	રાસાયણિક ખાતરોનો કાર્યક્ષમ ઉપયોગ	(૪૦)	સુરણની ખેતી

12. FUTURE PROJECTIONS

Following are some of the important projections needing attention:

1. NAU has made MoU with IARI, New Delhi for Collaborative Extension Programme to accelerate the transfer of technology through demonstrating production potentials of agricultural technologies in selected pockets as a model to facilitate farmer to farmer adoption of and diffusion of technology.
2. Develop more effective communication system through electronic media, audio-visual aids, computer network between NAU and various development departments.
3. Research and extension link with supporting role to line departments and more emphatically with NGOs.
4. Update information regarding price, demand and supply fluctuations, qualitative aspects of farm commodity within and outside the country to the farmers.
5. Need to popularize distant education for effective transfer of the technologies to the farming community.
6. Strong move to provide cost effective extension system to farmers, who practice commercial and high tech agriculture and commercial entrepreneurs and agro-based industries. The beneficiaries have to pay for the information.
7. Need to establish a centre for excellence of communication and publication as separate unit of extension.
8. Need to strengthen prevailing Directorate of Extension in terms of staff and set-up especially with IT professionals.

Planning for linkages of research programmes directly with the farmers for ten years through massive extension education programme

1. Emphasizing on ICT opportunities for technology transfer and linkages, this includes five interventions: policy, infrastructure, content, programme planning and development, and capacity building.
2. Ensuring more participation of women particularly in tribal area for empowering them professionally, socially and economically.
3. Enhancement of knowledge-based skills and attitude orientation programmes for professionalism of the farmers.
4. Capacity-building programmes for rural extension workers.
5. Decentralization of agricultural extension services and management through research and extension centres of concerned districts.
6. Documenting successful cases of farmers bringing about innovations and changes.
7. Documenting participatory methods in establishing better link amongst farmers, extension personnel and researchers.

