

FOURTH **ANNUAL REPORT**

2007-08

(1st April, 2007 to 31st March, 2008)



JUNAGADH AGRICULTURAL UNIVERSITY

JUNAGADH - 362001

JUNAGADH AGRICULTURAL UNIVERSITY
JUNAGADH - 362 001

FORTH ANNUAL REPORT FOR THE YEAR 2007-08

Name of the officer under whose direction the Annual Report is prepared	:	Dr. B.K. Kikani, Vice Chancellor, Junagadh Agricultural University, Junagadh
Authority under which the Annual Report is prepared	:	Section 49 of the Gujarat Agricultural Universities Act-2004
Signature of the officer preparing the Annual Report	:	Registrar, Junagadh Agricultural University, Junagadh

The Board of Management in its 16th meeting held on 09.04.2009 has approved the Fourth Annual Report vide item No. 16.7 of the said meeting and resolved as under:

Item No. 16.7 Approval of Fourth Annual Report of the Junagadh Agricultural University

“Resolved that the Fourth Annual Report of the Junagadh Agricultural University for the year 2006-07 (Dt. 01.04.2007 to 31.03.2008) under the provision of Section-49 of the Gujarat Agricultural Universities Act-2004 be considered and approved.”

REGISTRAR
JUNAGADH AGRICULTURAL UNIVERSITY
JUNAGADH



JUNAGADH AGRICULTURAL UNIVERSITY



From VC's Desk



Agriculture is the largest economic sector and plays a significant role in the overall socioeconomic development of the country. The agricultural scenario in Gujarat has changed fast but with new problems and challenges. To be more specific, the yield levels of major crops are already plateauing, water resources have become more scarce, the gross cropped and irrigated areas are marginally decelerating and the dryland agriculture has remained stagnant.

Junagadh Agricultural University is focusing to improve the livelihood of farmers and to commercialize farming as a profitable business, besides producing farm graduates. Our research activities are need based, very focused and time bound. New varieties are released every year to suit different regions of the state. New farm implements are designed to alleviate labour problem in farming practices. Appropriate technical know-how are continuously developed and disseminated. As one of the better performing State Agricultural Universities, we mould our students with self confidence and innovative thinking to meet the national and global needs. Education in JAU is continuously monitored and reoriented with collaborations wherever possible, to meet the challenges. Besides UG and PG programmes, JAU offers diploma/certificate programmes in agriculture and allied sciences.

Our extension efforts cater to training farmers, farm women, farm youth and extension personnel of Development Departments including unemployed agricultural graduates for self employment. Our Kisan Call centre responds to farmers' queries regularly with the help of subject matter specialists. JAU has a very effective extension system. Separate cells operate in JAU to forecast the weather status and to disseminate real time price information and market intelligence on agricultural commodities. Special emphasis is also given to seed multiplication for building adequate stocks of seeds. Periodically all our activities and achievements are published by way of Newsletter and Books in Gujarati and English.

It gives me immense pleasure to present Fourth Annual Report of Junagadh Agricultural University for the year 2007-08. It features the activities undertaken by the university in the field of teaching, research, extension education, students' welfare, estate management, finance and accounts, information technology, and governance.

I thank the State and Central Governments, Indian Council of Agricultural Research, and other funding agencies. I thank all my university officers without whose tireless contributions, the achievements of Junagadh Agricultural University would be impossible.

I congratulate the Registrar and his team in bringing out this document in a commendable manner. I am sure that all our stakeholders would be benefited by the information given in this report and will help them understand the sustained efforts taken by us.

Junagadh
Date: 06.02.2010

(N.C. PATEL)
VICE CHANCELLOR

JUNAGADH AGRICULTURAL UNIVERSITY

FORTH ANNUAL REPORT

2007-08

[1st April, 2007 to 31st March, 2008]

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CHAPTER - I

INTRODUCTION

The Junagadh Agricultural University was established on 1st May, 2004 under Gujarat Agricultural Universities Act-2004. On completion of its fourth year, Annual Report is published with detailed information about its various activities, targets & achievements and present & future plans.

1.1 Background

The Junagadh Agricultural University came into existence from 1st May, 2004 as a part of process of development of Agricultural Universities in Gujarat through an Act of Gujarat Legislative Assembly. The jurisdiction of this university includes all seven districts of Saurashtra region i.e. Junagadh, Rajkot, Jamnagar, Surendranagar, Bhavnagar, Amreli and Porbandar. The head quarter of this university is located at Junagadh.

1.2 Aim

The aim of Junagadh Agricultural University is to promote agricultural productivity in general and to improve the economic condition of rural community in particular through integration of teaching, research and extension education.

1.3 University Organization

As per the GAUs Act-2004, the Chancellor, Vice Chancellor, Director of Research & Dean PG Studies, Dean Faculty of Agriculture, Dean Faculty of Agricultural Engineering & Technology, Dean Faculty of Fisheries Science, Director of Extension Education, Registrar, Comptroller and Director of Students' Welfare, are officers of the university.

His Excellency the Governor of Gujarat acts as the Chancellor of the university. During the period under report, His Excellency the Governor Shri Nawal Kishore Sharma acted as the Chancellor. Dr. B.K. Kikani and Dr. D.B. Kuchhadiya acted as the Vice Chancellor and Registrar of the university, respectively.

The details of various activities of the university are as follows:

1.4 Education

The education programme in Junagadh Agricultural University is based on two tier system. The first one covers higher education in Agriculture, Agricultural Engineering & Technology and Fisheries Science, in which UG and PG resident instruction programmes are covered. While the second consists of lower education, i.e., diploma and certificate programmes like Horticulture Diploma, Agriculture Diploma, Bakery Training, Livestock Inspector Training, Mali Training as well as Extension Education Training.

During the period under report, 160 students at UG level and 101 students at PG level were given admission in the various colleges of the university i.e. College of Agriculture, College of Agricultural Engineering & Technology at Junagadh and College of Fisheries Science at Veraval. 84 students at UG level and 67 at PG level have successfully completed their degree courses.

During the year under report the Third Annual Convocation was held at Junagadh on 27th February, 2008. Dr. S.P. Tiwari, Deputy Director General (Education), ICAR, New Delhi was the chief guest. As many 212 students were awarded Under Graduate and Post Graduate degrees by His Excellency the Governor of Gujarat and Chancellor of this university Shri Nawal Kishore Sharma. Twenty nine Gold Medals were awarded to students for their outstanding performance at examination, achieving high percentage of marks and stood first on merit in various examinations.

1.5 Research

The various research projects, their monitoring and supervision, planning and implementation of research activities at different research stations as well as the PG teaching programmes and their evaluation in different disciplines were carried out under the guidance of Director of Research & Dean PG studies during the year under report.

Junagadh Agricultural University has seven multidisciplinary main research stations, five main research stations on various crops and eleven sub researches stations/testing centres working in the field of agriculture and animal science for the betterment of the living standards of rural farming community. The research activities have been carried out in Plant Breeding, Soil Science, Cropping System, Water Management, Weed Management, Horticulture, Plant Protection, Social Sciences, Agricultural Entomology, Plant Pathology, Agricultural Engineering and Fisheries etc.

The efforts made by scientists of the university emerged in 41 farmers' recommendations and 89 new technical programmes during the reporting year. It also resulted in emerging six new crop varieties for farmers. Besides this, seed production programmes were also taken up in different crops and varieties. During the year under report, total 31 new research projects were sanctioned by ICAR, Government of India, Government of Gujarat and other agencies.

1.6 Extension Education

Through the extension education activities, total 229 students have completed different certificate/diploma courses *viz.*, Horticulture Diploma, Agricultural Diploma, Livestock Inspector Training, Bakery Training, *Mali* Training etc. The T & V system programmes were also held and about 214 extension workers were given training. Two training programmes were also organised by Centre of Excellence for Training (Oilseeds) and 70 participants

were given training. Through the Transfer of Technology (TOT) Centres, 261 on-campus and 286 off-campus training programmes were organized, wherein 13537 participants received training. Besides this, the TOT centres had planned and organised 5651 extension education activities like symposia, workshops, farmers' days, agricultural exhibitions, fairs, visual programmes, field visits, cattle camps, meetings etc. through which total 104054 peoples were benefited. In all, 561 FLDs were conducted on various oilseeds and pulses in 265.4 ha through KVKs and Research Stations. The farmers' problems were solved through personal visit and proper guidance by KVKs. The feed back on farmers' problems is collected and sent to concerned scientist to reform further research.

Through 201 programmes arranged by Farm Advisory Scheme, total 467243 participants were benefited. Under COC scheme, one *GKS* was formulated and three *Khedut Shibirs* were organised in which 85 farmers participated. Extension Education Centres *viz.*, LITC, School of Baking and Fisheries Extension Centre benefited 19773 people by organising 492 extension programmes.

The efforts are made to inform farmers/rural people about technological advancement through different media *viz.*, TV, radio and publication of agricultural literature. During the report period, 26 TV programmes and 38 radio talks were given by agricultural scientists. Besides this, 50 folders and 2 books were published and 390 subscribers for '*Krush-Go-Vidya*' were registered. University news bulletin "*Krush Vishwa*" is being published regularly by the Directorate of Extension Education.

During the year under report, seven exhibitions of agricultural literature were organised, of which 2013 farmers and extension workers availed the benefit. During *Krush Mahotsav-2007*, the university deputed seven District Nodal Scientists and 148 Taluka Nodal Scientists, who have covered 4223 villages of the Saurashtra region in one month, in which 83632 rural people were participated.

1.7 Students' Welfare

The university authority is always looking forward to the welfare of the students through different activities like sports, cultural, spiritual programmes, NSS, health, adventure, educational tour with a view to developing personality, character and high human values in UG and PG students of the university.

Total 13 inter-collegiate sports and cultural activities were organised by the university. The university students participated in four inter-university tournaments. Under NSS, seven programmes were organised. Educational tour was arranged for the students of all the three colleges. Various scholarships were availed by the students. About 14 spiritual and national spirit programmes were organised. During the year, eight programmes of the student welfare were published in different news papers.

1.8 Estate Management

The construction & its related works, repairs & maintenance of buildings & roads, water supply, maintenance of drainage system, street light, electrification, repairing of electrical faults, all these works are looked after by the Executive Engineer of this university.

During the year under report, Construction Committee and Board of Management accorded approval for various works meant for creating new facilities at campus level as well as at other centres of the university.

1.9 Finance and Accounts

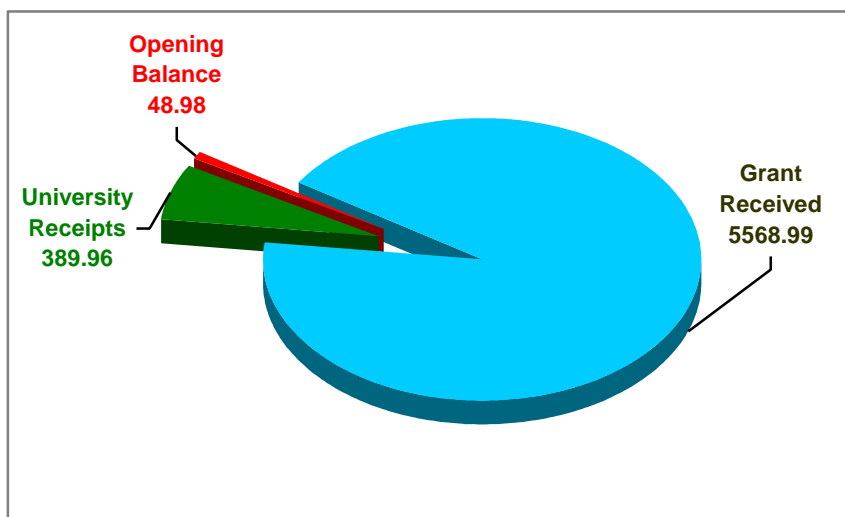
Major sources of finance were Government of Gujarat, Government of India, ICAR and other agencies which sanctioned grant through different schemes. During the period under report, State Government sanctioned Rs. 888.91 lakhs under plan budget and Rs. 2652.47 lakhs under non-plan budget. The revised non-plan budget was put up as per the need of the university, but State Government had not sanctioned the additional grant and hence, there was a deficit of Rs. 577.32 lakhs.

The finance sources, fund and budget

Income:

▪ Opening Balance as on 01.04.2007	Rs.	48.98 lakh
▪ Grant Received during 2007-08		
➤ State Government	Rs.	3541.38 lakh
➤ ICAR Coordinated Projects	Rs.	436.77 lakh
➤ ICAR RAWE	Rs.	5.52 lakh
➤ ICAR Adhoc	Rs.	400.10 lakh
➤ KVK	Rs.	282.78 lakh
➤ Other Agencies	Rs.	512.48 lakh
▪ University Receipts	Rs.	389.96 lakh

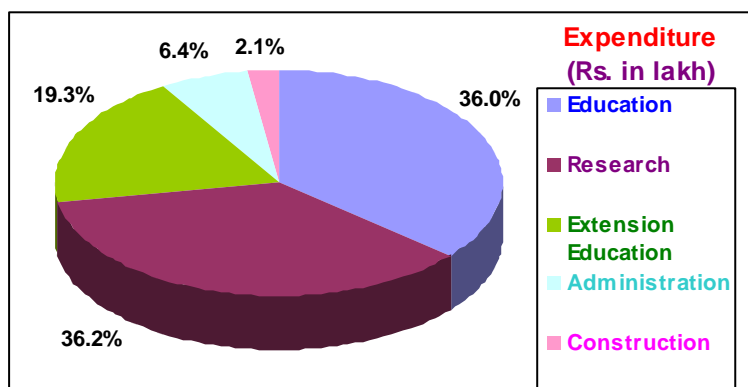
Total Rs. 5617.97 lakh



Expenditure:

➤ Education	Rs. 2051.20 lakh
➤ Research	Rs. 2060.91 lakh
➤ Extension Education	Rs. 1098.97 lakh
➤ Administration	Rs. 365.26 lakh
➤ Construction	Rs. 120.31 lakh

Total Rs. 5696.65 lakh



The university is entrusted with the work of Internal Audit, Local Fund Audit and AG Audit. During the period under report, the Local Fund, Junagadh had done the audit work for the period 2004-05 and settled the primary audit objections.

The audit work has been done by the Accountant General, Audit Office, Rajkot for the financial year 2004-05 of the University.

The internal audit reports of Research Stations, College of Agriculture and College of Agril. Engineering & Technology were submitted to the university.

Stores verification was also carried out by creating internal arrangement. During the period of the report, physical verification reports for eight centres were submitted to the university.

The pension cases on account of superannuation, retirement and voluntary retirement of the officers/employees from the University have been settled granting the pension/commuted pension and gratuity. Total 40 cases (PPO No. 123 to 163) were sanctioned during the year and the payment was made to the staff/officers for their benefits of retirement.

The new PF accounts were opened for newly appointed employees and 317 cases for Part-final Advance were sanctioned and payments made during the year under the report. Forty eight cases for the PF final payment were sanctioned and payments made during the year.

Total three claims of Provident Fund Linked Insurance were settled during the year.

1.10 Information Technology

The network at Junagadh Agricultural University connecting all the offices of the campus was established in two phases; one in 1996 and another in 1999. Presently, Internet, E-mail, References Database and File/Printer sharing services have been provided and maintained through Local Area Network (LAN) having VSAT, Leased Line and Dial-up connectivity. These services have greatly boosted the educational, research and extension activities of the university. The centre has also given training to university employees, which covered fundamental aspects of computer operating. Computer training as per Government of Gujarat Module-I and II was given to university employees.

Junagadh Agricultural University has its website having the URL of www.jau.in. The information related to university activities, important announcements, news, UG/PG admission etc. are available online at the website.

The University Library possesses 41000 books, 200 journals and 20000 back volumes. Cyberary with 100 mbps LAN connectivity enables users with online database like AGRICOLA, Indian Harvest etc. Full time internet, scanning and CD writing facilities are available for the students in the Cyberary. The book bank facility also exists for students. The library is marching towards automation through libsys software for the circulation of library materials to users.

CHAPTER - II

UNIVERSITY ADMINISTRATION

2.1 University Set-Up

The University consists of Chancellor, Vice Chancellor, Board of Management, Academic Council and the faculties of Agriculture, Agricultural Engineering & Technology, Fisheries Science and Post Graduate Studies with their Boards of Studies. His Excellency the Governor of the Gujarat State is the Chancellor of the University. His Excellency the Governor Shri Nawal Kishore Sharma continued as a Chancellor of the University for the year under review. The Vice Chancellor is the principal executive and academic officer of the university and ex-officio chairman of the Board of Management and the Academic Council. During the period under review Dr. B.K. Kikani held the charge as a Vice Chancellor.

The Gujarat Agricultural University is partitioned into four universities on the basis of agro-climatic conditions representing Saurashtra, Middle Gujarat, South Gujarat and North Gujarat regions. Junagadh Agricultural University comprises Rajkot, Jamnagar, Junagadh, Amreli, Bhavnagar, Surendranagar and Porbandar districts of Saurashtra region. This university is looked after by the Vice Chancellor who coordinates all the education, research and extension education activities of the university.

The university has implemented the principle of decentralization of powers in order to run the administration smoothly and efficiently. Administrative as well as financial powers are delegated to various heads of units and sub-units located at different places in the university. The administrative structure is evolved in such a way that co-ordination and integration of education, research and extension education at all levels are maintained.

The Vice Chancellor is assisted by Registrar, Director of Research and Dean PG Studies, Director of Extension Education, Accounts Officer-cum-Comptroller, Director of Students' Welfare in administrative, financial and other matters. For co-ordination of various faculties, the Vice Chancellor is assisted by Deans of Faculties.

During the year under review followings were officers of the university.

No.	Designation	Name	Period
1.	Chancellor	Shri Nawal Kishore Sharma	01.04.2007 onward
2.	Vice Chancellor	Dr. B.K. Kikani	01.04.2007 onward
3.	Director Research & Dean of PG Studies	Dr. D.B. Kuchhadiya	01.04.2007 onward
4.	Dean, Agriculture Faculty	Dr. P.G. Butani	01.04.2007 onward
5.	Dean, Agril. Engineering & Technology Faculty	Dr. N.C. Patel	01.04.2007 onward
6.	Dean, Fisheries Science Faculty	Dr. A.Y. Desai	01.04.2007 onward
7.	Director of Extension Education	Dr. A.M. Parakhia	01.04.2007 onward
8.	Registrar	Dr. D.B. Kuchhadiya	01.04.2007 onward
9.	Account Officer-cum-Comptroller	Shri P.R. Jadeja	01.04.2007 onward
10.	Director of Students' Welfare	Dr. K.B. Jadeja	01.04.2007 onward

2.2 University Authorities

Following authorities were functioning under the provisions of section-17 of the Gujarat Agricultural Universities Act-2004 during the year under report.

1. The Board of Management
2. The Academic Council
3. The Faculties and Board of Studies
 - 1) Agriculture
 - 2) Agricultural Engineering & Technology
 - 3) Fisheries Science
 - 4) Post Graduate Studies

1. The Board of Management

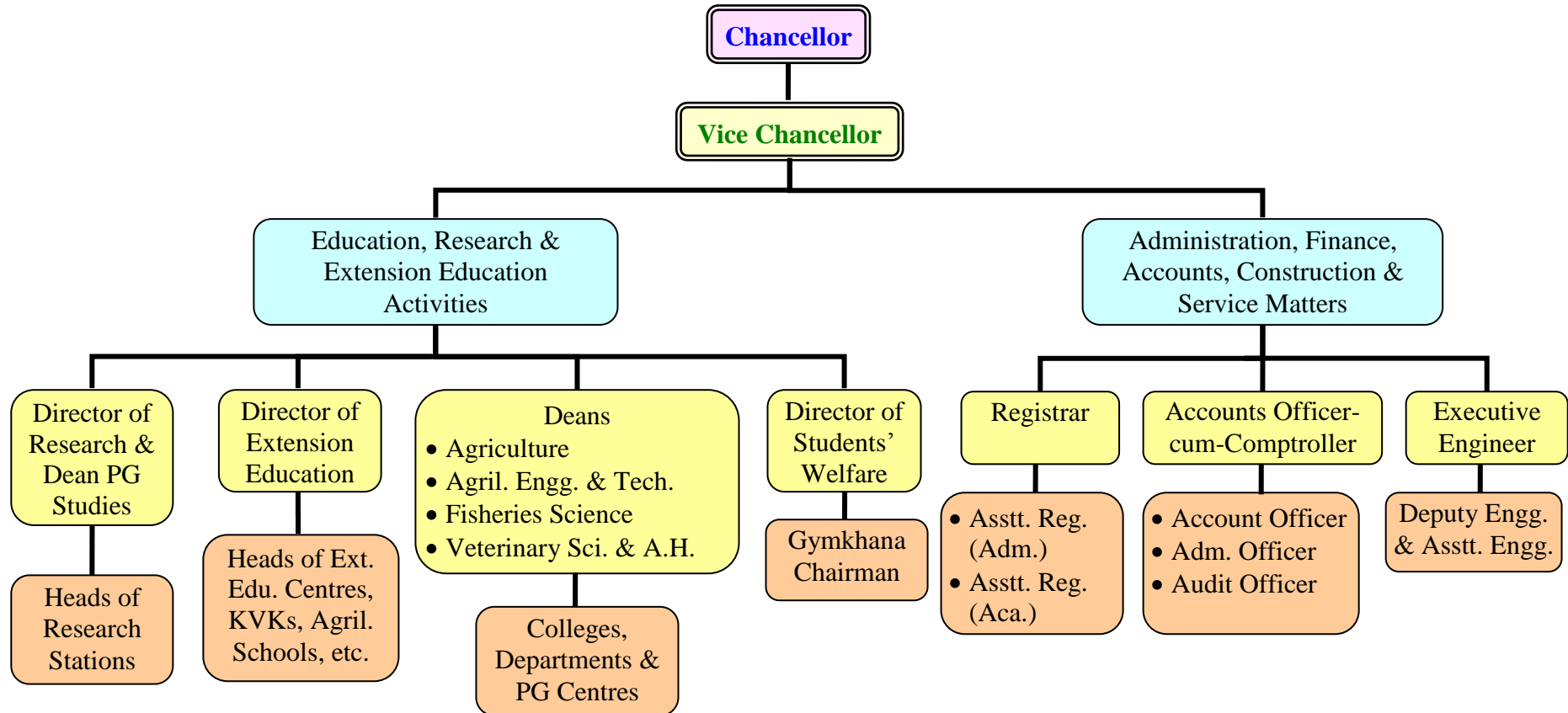
i) Constitution

The Board of Management is the highest decision making and executive authority of the university consisting of the following members, namely

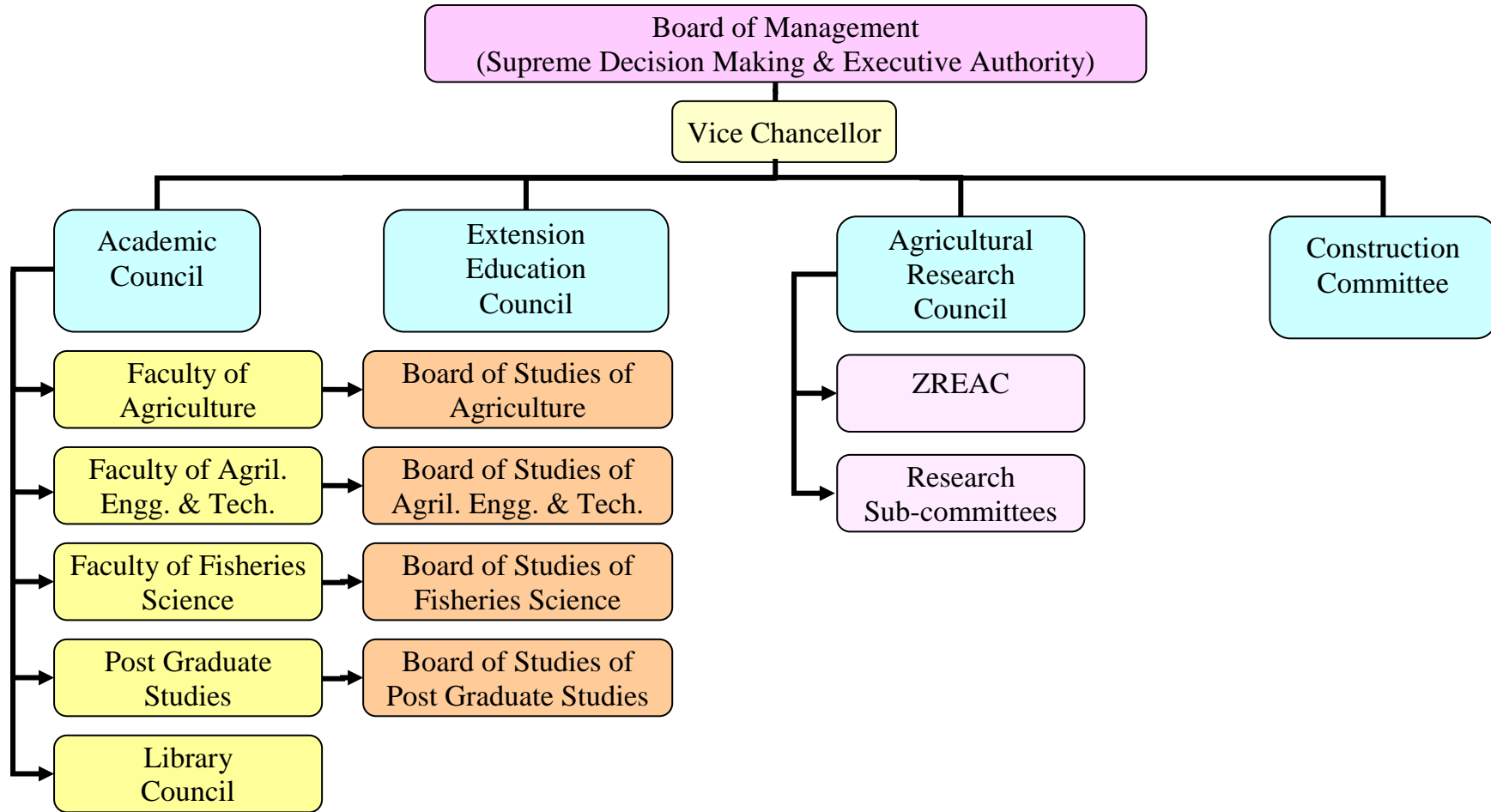
Class-I Ex-officio Members

- (1) The Vice Chancellor,
- (2) The Secretary to the Government of Gujarat, Agriculture & Co-operation Department or an officer not below the rank of Deputy Secretary of that Department designated by the Secretary,
- (3) The Secretary to the Government of Gujarat, Education Department or an officer not below the rank of Deputy Secretary of that Department designated by the Secretary,

ORGANIZATIONAL SET-UP



Organizational Chart & Decision Channel



- (4) The Secretary to the Government of Gujarat, Finance Department,
- (5) The Director of Agriculture, Gujarat State,
- (6) The Director of Animal Husbandry, Gujarat State,
- (7) The Director of Horticulture, Gujarat State, and
- (8) One member nominated by the Vice Chancellor by rotation in the prescribed manner from amongst the Deans of Faculties.

Class-II Ordinary Members

Five persons, not being officers, to be nominated as follows, namely

- (a) To be nominated by the State Government
 - (1) One member of the Gujarat Legislative Assembly,
 - (2) Two Agricultural Scientists having background of Agricultural Research or Education,
 - (3) One farmer,
- (b) One representative nominated by the Director General of Indian Council of Agricultural Research

The Vice Chancellor and Registrar are the Chairman and Secretary, respectively in the Board of Management. The term of office of the nominated members is of three years.

The Board of Management is the principal executive autonomous authority of the university, which considers and reviews all the financial, administrative and academic matters of the university. The Board is assisted by the Vice Chancellor, Academic Council, Board of Studies and Officers of the university in taking decisions and deciding policy matters.

ii) Members of the Board of Management

List of Members of the Board of Management during the year 2007-08

No.	Name	Designation
1.	Dr. B.K. Kikani	Vice Chancellor (Chairman)
2.	Dr. Avinash Kumar	Additional Chief Secretary, Agriculture & Co-operation Department
3.	Shri P. Paneervel	Secretary, Education Department
4.	Shri A.K. Joti	Secretary, Finance Department (Expenditure)
5.	Dr. R.A. Sherashiya	Director, Agriculture
6.	Dr. R.B. Shukla	Director, Animal Husbandry
7.	Dr. S.R. Chaudhary	Director, Horticulture
8.	Dr. M.S. Basu / Dr. V. Murlidharan	Director, NRCG, Junagadh
9.	Dr. D.B. Kuchhadiya	Dean, PG Studies
10.	Dr. D.B. Kuchhadiya	I/c Registrar (Secretary)

iii) Meeting of the Board of Management

During the period under report, four regular meetings of the Board of management were held.

Sr. No.	Meeting No.	Date	Place	Chairman
1.	Eighth	14.07.2007	Junagadh	Dr. B.K. Kikani
2.	Ninth	29.10.2007	Gandhinagar	Dr. B.K. Kikani
3.	Tenth	17.01.2008	Gandhinagar	Dr. B.K. Kikani
4.	Eleventh	26.02.2008	Junagadh	Dr. B.K. Kikani

2. The Academic Council

The academic council has the control and general regulation of, and be responsible for, maintenance of the standards of teaching and examinations of the university.

i) Constitution

The Academic Council consists of the following members, namely

- (1) The Vice Chancellor (Ex-officio)
- (2) The Director of Research and Dean Faculty of Post Graduate Studies (Ex-officio)
- (3) The Deans of Faculties (Ex-officio)
- (4) The Director of Extension Education (Ex-officio)
- (5) Six members nominated by the Vice Chancellor by rotation in the prescribed manner from amongst the Heads of Departments of the Faculties and the Research Scientists of the university.
- (6) It may co-opt for such period as may be prescribed as its additional members not more than ten persons representing different disciplines of agriculture & allied sciences irrespective of whether they are connected with the university as its members, teachers or otherwise.

The Vice Chancellor and Registrar are the Chairman and Secretary, respectively in the Academic Council. The term of office of the members of the Academic Council other than ex-officio members shall be of three years.

ii) Members of the Academic Council

List of Members of the Academic Council during the year 2007-08

No.	Name	Designation	
1.	Dr. B.K. Kikani	Vice Chancellor (Chairman)	
Director	2.	Dr. D.B. Kuchhadiya	Director of Research & Dean PG Studies
	3.	Dr. A.M. Parakhia	Director of Extension Education
Dean	4.	Dr. P.G. Butani	Dean, Agriculture Faculty
	5.	Dr. N.C. Patel	Dean, Agril. Engg. & Tech. Faculty
	6.	Dr. A.Y. Desai	I/c Dean, Fisheries Science Faculty

HOD/Research Scientist	7.	Dr. V.P. Chovatia	Professor & Head, Agril. Botany
	8.	Dr. P.M. Chauhan	Professor & Head, Renewable Energy & Rural Engg.
	9.	Dr. A.V. Barad	Professor & Head, Horticulture
	10.	Prof. B.A. Kunadia	Research Scientist, Oilseeds
	11.	Dr. D.R. Padmani	Research Scientist, Dry Farming
	12.	Dr. K.L. Jetani	Research Officer, Fisheries
Co-opted members	13.	Dr. K.B. Jadeja	I/c Director of Students Welfare
	14.	Dr. J.N. Sutaria	Former President, Bhavnagar District Cooperative Bank
	15.	Dr. B.L. Joshi	Retd. Research Scientist, Chick pea
	16.	Shri M.L. Savalia	Retd. Principal, Shri Mahila Arts & Commerce College, Joshipara
	17.	Shri K.P. Thomas	Retd. Director, HMG Industries Ltd.
	18.	Shri S.B. Patel	Sr. Vice President, Jain Irrigation Systems Ltd.
	19.	Dr. K. Jankiraman	Retd. Director of Research, GAU
	20.	Dr. R.A. Khimani	Registrar, Gujarat Vidyapeeth
	21.	Dr. V.P. Vadodaria	Principal, College of Veterinary Sci. & Animal Husbandry, Sardarkrushinagar
	22.	Prof. S.N. Usadadia	Retd. Scientist, Horticulture
	23.	Dr. D.B. Kuchhadiya	I/c Registrar (Secretary)

ii) Meeting of the Academic Council

The Academic Council held three meetings during the period of 01.04.2007 to 31.03.2008 as under.

Sr. No.	Meeting No.	Place	Date
1.	Seventh	Manhar Kutir (Guest House), Junagadh	24.08.2007
2.	Eighth	Meeting Hall, Office of the Vice Chancellor, Junagadh	07.01.2008
3.	Ninth	Meeting Hall, Office of the Vice Chancellor, Junagadh	26.02.2008

3. Faculties

Section 23 of the GAUs Act-2004 provides that there shall be faculties of Agriculture and allied sciences and such other faculties as may be prescribed. Accordingly, Faculty of Agriculture, Agricultural Engineering & Technology and Fisheries Science were constituted.

4. Board of Studies

Section 24 of the GAUs Act-2004 provides that there shall be a Board of Studies for every subject or group of subjects or as may be prescribed. Accordingly, the following Board of Studies were constituted.

- 1) Board of Studies of Post Graduate Studies
- 2) Board of Studies of Agriculture
- 3) Board of Studies of Agricultural Engineering & Technology
- 4) Board of Studies of Fisheries Science

During the year under report, one meeting of the Board of Studies of Post Graduate Studies was held. The venue of the meeting and date etc. were as under.

Sr. No.	Name of Board of Studies	Meeting No.	Venue	Date
1.	Post Graduate Studies	Third	Junagadh	17.12.2007

3.1 General

The concept of education is based on two-tier system. The first one consists of the higher Agricultural education covering Agriculture, Agricultural Engineering & Technology and Fisheries Science, which include the graduate and post graduate resident instruction programmes. The second consists of lower education programme provided at the Horticulture School, Agricultural School, School of Baking, Livestock Training Centre, Mali Training Centre and Extension Education Training Centres. The higher education programmes are looked after by the Registrar and lower education programme by the Director of Extension Education at the University level.

3.2 Under Graduate Programmes

(1) Procedure of Admission

The admission criteria in the Under Graduate programmes in Junagadh Agricultural University are purely on merit basis i.e. percentage of marks obtained in science subjects like Physics, Chemistry and Biology/Mathematics at HSCE with English as a compulsory subject in science or vocational stream. For admission to B.Sc. (Agri.) and B.F.Sc., Physics, Chemistry and Biology, while for B.Tech. (Agril. Engg.), Physics, Chemistry and Mathematics subjects are compulsory. Among the seats allotted for admission, 49% seats are reserved for various Backward Classes, i.e. 15% for Schedule Tribes, 7% for Schedule Caste and 27% for Socially and Educationally Backward Communities as declared under Baxi Commission (Mandal Panch). The students of CBSE, who have passed their examination in Gujarat state, are considered eligible as per prorata. Moreover, 3% seats are reserved for disabled (physically handicapped) candidates as per the directives from the Hon. Supreme Court of India. There is provision of reserved seats for Kashmiri Migrants also. Additional 15% seats are reserved for ICAR candidates, who have cleared All India Entrance Examination conducted by ICAR. The admission procedure is centrally administered by the Registrar at University level.

Weightage of marks for participation in sport is given in admission. Weightage of 5% marks is given to farmer's son/daughter and students of vocational stream who have passed HSCE with Agriculture subject in addition to Physics, Chemistry and Biology for admission to B.Sc. (Agri.) degree course. In B.F.Sc. degree course, 12% seats are reserved for Fisherman's son/daughter and weightage of 15% marks is also given for admission. Weightage of 5% marks is given to farmer's son/daughter for admission to B.F.Sc.

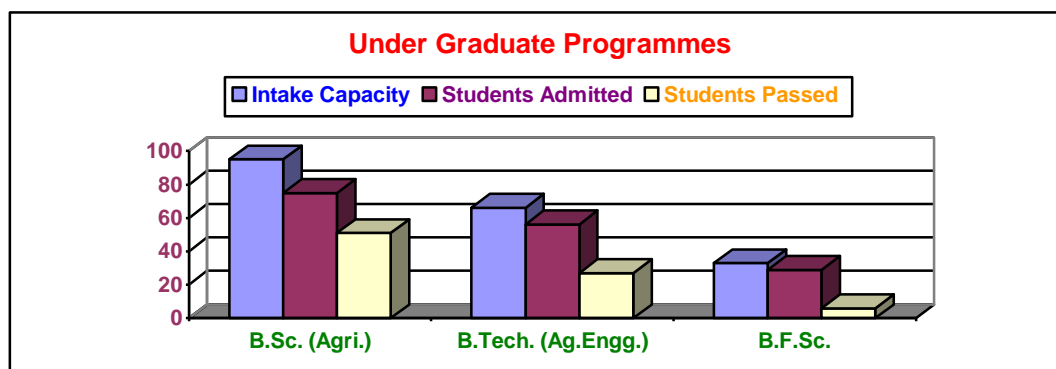
From the academic year 2003-04, the Board of Management resolved to fill up 10 seats each in all the colleges of this University in Under Graduate courses as NRI/NRI Sponsored/Payments Seats with a fees of 3500 US Dollar per semester for NRI/NRI Sponsored candidates and Rs. 25000/- fees per semester for payment seat.

(2) Academic Programmes offered at UG level

Intake capacity, admission and students graduated from various faculties at under graduate level in the University for the academic year 2007-08 are given in Table 3.1.

Table 3.1: Under Graduate Programmes

Sr. No.	Degree course and duration	College where course offered	Intake Capacity	Students Admitted	Students Passed
1	B.Sc.(Agri.) 4 years (8 semesters)	College of Agriculture, Junagadh	65+20+10	75	51
2	B.Tech. (Agril. Engg.) 4 years (8 semesters)	College of Agricultural Engg. & Tech., Junagadh	40+20+6	56	27
3	B.F.Sc. 4 years (8 semesters)	College of Fisheries Science, Veraval	20+10+3	29	6



3.3 Post Graduate Programmes

The Junagadh Agricultural University imparts Post Graduate instructions with the help of the PG recognized teachers of the University.

(1) Procedure of Admission

- (A) A candidate for admission to the Master's degree should possess Bachelor's degree with an OGPA not less than 6.00 (10.00 basis) or its equivalent in aggregate as well as in the subject in which admission is sought.

- (B) A candidate for admission to the Ph.D. degree programme should possess Master's degree with an OGPA of not less than 6.50 (10.00 basis) or its equivalent.
- (C) A candidate for admission shall have to pass entrance test and admission is given on merit based on marks obtained in the entrance test.
- (D) Relaxation of 5% marks is given in eligibility and entrance test to ST, SC and SEBC candidates for admission to Master/Ph.D. degree.
- (E) Seats for ICAR and Govt. of India nominees, ST, SC, SEBC, Gujarat State nominees and in-service candidates are reserved as per university / ICAR rules. Candidates having degrees from basic science and out state candidates are also admitted on vacant seats.

(2) Academic Programmes offered at Post Graduates level

Number of admissions and passed out candidates from various faculties at Post Graduate level in the University for the academic year 2007-08 are given in Table-3.2

Table 3.2 Post Graduate Programmes

Sr. No.	Name of the course	Duration	College	Students admitted	Students Passed
1	M.Sc. (Agri.)	2 years divided into 4 semesters	College of Agriculture, Junagadh	75	48
2	M.Tech. (Agril. Engg.)	2 years divided into 4 semesters	College of Agricultural Engineering & Technology, Junagadh	5	9
3	M.F.Sc.	2 years divided into 4 semesters	College of Fisheries Science, Veraval	4	-
4	Ph.D.	3 years divided into 6 semesters	College of Agriculture, Junagadh and College of Agricultural Engineering & Technology, Junagadh	17	10

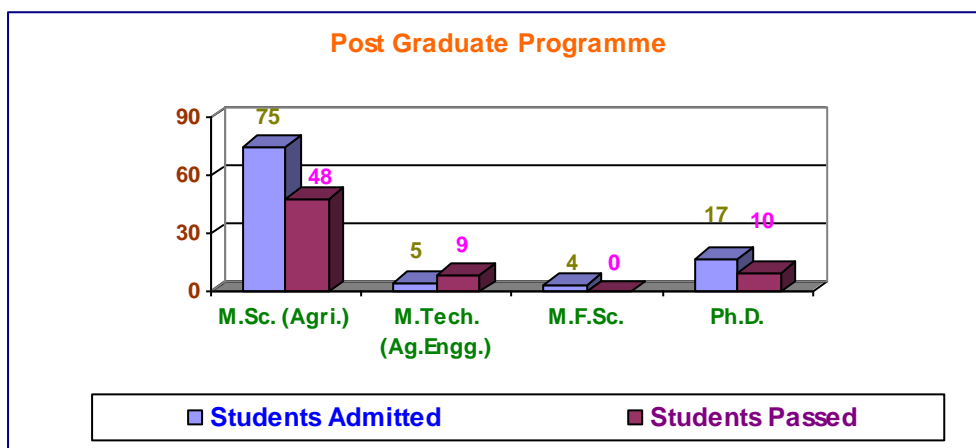
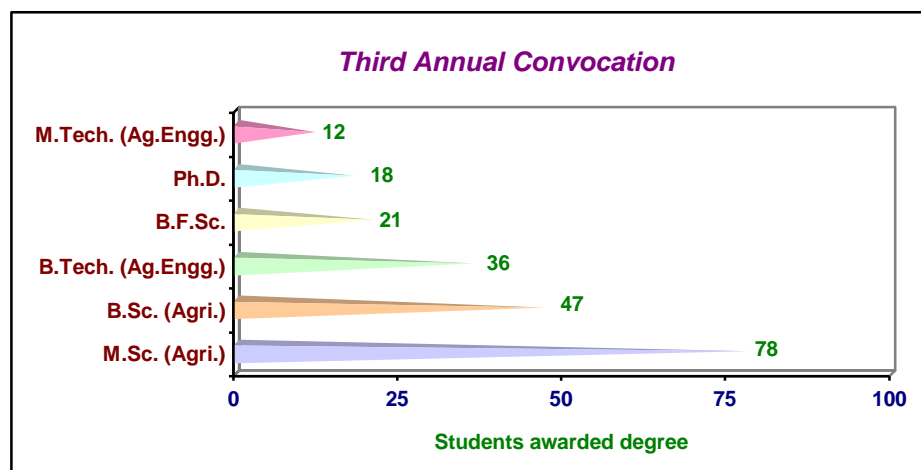


Table 3.3 Number of Students Graduated from Different Degree Programmes (2007-08)

Academic Year	First Class with Distinction	First Class	Second Class	Pass Class	Total
B.Sc. (Agri.)	14	10	20	7	51
B.Tech. (Ag. Engg.)	5	16	6	0	27
B.F.Sc.	0	3	3	0	6
M.Sc. (Agri.)	3	30	15	0	48
M.Tech. (Ag. Engg.)	0	4	5	0	9
Ph.D.	10				10

3.4 Annual Convocation

During the year under report the Third Annual Convocation was held at Junagadh on 27th February, 2008. Dr. S.P. Tiwari, Deputy Director General (Education), ICAR, New Delhi was the chief guest. As many 212 students were awarded Under Graduate and Post Graduate degrees by His Excellency the Governor of Gujarat and Chancellor of this university Shri Nawal Kishore Sharma. Twenty nine Gold Medals were awarded to students for their outstanding performance at examination, achieving high percentage of marks and stood first on merit in various examinations.



CHAPTER - IV

RESEARCH

4.1 Agricultural Research Council

The Agricultural Research 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). The members of Agricultural Research Council during 2007-08 were as under.

No.	Name	Designation
1	Dr. B.K. Kikani	Vice Chancellor (Chairman)
2	Dr. D. B. Kuchhadiya	Director of Research & Dean PG Studies (Secretary)
3	Dr. A.M. Parakhia	Director of Extension Education
4	Dr. H.J. Vyas	Associate Director of Research
5	Dr. I.U. Dhruj	Associate Director of Research
6	Dr. D.R. Padmani	Associate Director of Research
7	Dr. P.G. Butani	Dean, Agriculture Faculty
8	Dr. N.C. Patel	Dean, Agril. Engineering & Technology Faculty
9	Dr. A.Y. Desai	I/c Dean, Fisheries Science Faculty
10	Dr. V.K. Poshiya	Research Scientist (Chickpea)
11	Prof. B.A. Kunadia	Research Scientist (Groundnut)
12	Dr. C.J. Dangaria	Research Scientist (Millet)
13	Dr. K.L. Dobaria	Research Scientist (Sugarcane)
14	Dr. K.L. Jetani	Research Officer (Fisheries)
15	Dr. P.U. Gajbhiye	Research Scientist (Animal Genetics)
16	Dr. G.R. Sharma	Research Scientist (Agril. Engg.)
17	Dr. V.D. Khanpara	Professor & Head, Agronomy
18	Prof. J.B. Savani	Professor & Head, Farm Machinery & Power
19	Dr. R.L. Shiyani	Professor & Head, Agricultural Economics
20	Dr. P.M. Chauhan	Professor & Head, Renewable Energy
21	Dr. B.A. Golakiya	Professor & Head, Biochemistry

4.2 Brief Report of Research Activities

Agriculture has been passing through a critical phase. Quality of soil and water is on decline. Water level in the wells is going deeper and some unwanted salts are harming productivity of crops. This is disappointing to our farming community. Quality of food, fertilizers and insecticides/pesticides is a major concern for the farmers. There was also stagnation in the yield of major crops in the last decade which has affected per capita food availability adversely. In the light of climate change, we have to pay our attention towards management and conservation of natural resources.

The sustainability of food production has been threatened by depletion of water resources, soil health degradation, adverse environment, lack of adequate extension activities, spurious input supply and decline in investment in agriculture. The price of the food grains should be lower to make food within easy reach of the poor. Simultaneously, the interest of the producers has to be kept in mind. This is only possible when production and yield of food grains, pulses, oilseeds, vegetables and fruits and other cash crops are enhanced to the desirable limits. The scientists and academicians of the University are contributing to the best of their efforts to enhance productivity and production to meet the needs of our increasing population.

Junagadh Agricultural University has three colleges, seven multidisciplinary main research stations, five main research stations on various crops and 11 sub research stations / testing centres spread over in North Saurashtra Agro-climatic Zone and South Saurashtra Agro-climatic Zone. These research stations are working in the field of Agriculture, Agricultural Engineering, Animal Science and Fisheries for catering the needs of farmers, artisans, livestock holders, fishermen and rural masses for their upliftment. At these research stations, scientists are working hard with sincere eco-friendly efforts for development of high yielding varieties, new improved agronomical practices and pest & diseases management strategies. The research work is also undertaken on natural resource management (Bio-diversity, Land & Water), improved farm equipments, post harvest processes and renewable energy. The region is endowed with 788 km. long sea coast. Research efforts are continuing for improvement of cattle breeds, nutritive cattle feeds, fisheries and allied industries. Apart from this, agricultural information is disseminated through five Krishi Vigyan Kendras of the University. The research activities, research accomplishments and recommendations, achievements made by the Junagadh Agricultural University during 2007-08 are given herein.

I. PLANT BREEDING & GENETICS

Six new varieties were recommended for cultivation to the farmers during 2007-08.

Crop	Name of Variety	Average yield	Area for recommended	Distinguish characteristics
Groundnut	GJG-HPS-1	21.25 q/ha	Rainfed areas of Saurashtra and South Gujarat	The variety GJG-HPS-1 recorded an overall yield increase of 38.06, 28.33 and 36.75 per cent over the check varieties BAU-13, M-335 and ICGV-86564, respectively.
Pearl millet	GHB-719	23.50 q/ha	Entire Gujarat State	An early duration hybrid GHB-719 recorded 38 and 6 per cent yield increment over early checks Pusa-23 and hybrid GHB-538, respectively. The hybrid showed synchronous tillering, medium grain size and attractive seed colour besides earliness. The hybrid showed highly resistant reaction to

				downy mildew and tolerance to other diseases.
Pearl millet	GHB-744	29.00 q/ha	Entire Gujarat State	A medium duration pearl millet hybrid GHB-744 for <i>kharif</i> season gave 17, 51 and 10 per cent higher yield over GHB-577, MH-169 and PB-106, respectively. The hybrid GHB-744 possesses appealing earhead with attractive seed colour.
Pearl millet	GHB-732	30.00 q/ha	Entire Gujarat State	The pearl millet hybrid GHB-732, late maturing variety for <i>kharif</i> season gave higher yield to the tune of 12, 51 and 34 per cent over GHB-558, MH-169 and PB-106, respectively. This hybrid showed high level of resistance to downy mildew, lodging and good quality of stover with preferred seed colour.
Chickpea	Gujarat Gram-3	14.83 q/ha	Bhal area of Saurashtra	The variety is identified and released for Vallabhipur and adjoining region for rainfed condition only. It has given 12, 10 and 9 per cent higher yield than Chaffa, Gujarat Gram-1 and Gujarat Gram-2, respectively. The variety is moderately resistant to wilt and stunt. It has got attractive seed colour (yellow), large seed size, early maturity and consumer and farmers' preference.
Tomato	Junagadh Tomato-3	384.60 q/ha	Saurashtra region	The variety gave 23 per cent higher yield over check variety Gujarat Tomato-2. Fruits are medium in size, flat round in shape with attractive red colour, thick skin and 4 to 5 locules with high T.S.S.

II. NATURAL RESOURCE MANAGEMENT

Natural Resource Management group worked out the weed management in groundnut & summer pearl millet and evaluated the potentiality of organic farming in groundnut-wheat, groundnut-onion and pearl millet-wheat cropping sequences. Strategies for fertilizer management, dry seeding, yield optimization, groundnut-castor intercropping and paired row planting of castor + green gram or cow pea in castor were also recommended. Nutrient & micronutrient management in pearl millet-groundnut crop sequence, pigeon pea and sesame were recommended. For groundnut, optimization of plant density, crop weather relationship and irrigation schedules for groundnut-pigeon pea cropping sequence were worked out. Response of wheat variety to irrigation, paired row planting in *bajra* and reclamation of sodic soil in rainfed conditions were advocated. This group has released 21 farmers' recommendations and two scientific recommendations which are briefed below.

1. Nutrient Management

Groundnut (*kharif*)-Wheat (*rabi*)

The farmers of South Saurashtra Agro-climatic Zone adopting groundnut-wheat crop sequence are advised to apply soil test based recommended dose of fertilizer to both the crops for realizing higher net return. Application of nutrients only through organic sources was not found economical.

Groundnut (*kharif*)-Onion (*rabi*)

The farmers of South Saurashtra Agro-climatic Zone adopting groundnut-onion crop sequence are advised to apply recommended dose of N through FYM on equivalent N basis to both the crops.

Under the situation of inadequate availability of FYM; farmers should follow soil test based fertilizer application to both the crops.

Pearl millet (*kharif*)-Wheat (*rabi*)

The farmers of South Saurashtra Agro-climatic Zone adopting pearl millet-wheat crop sequence are advised to apply chemical fertilizers as per soil test to both the crops for realizing higher net return. Application of nutrients only through organic sources was not found economical.

Pigeon pea + Groundnut

The farmers of South Saurashtra Agro-climatic Zone adopting pigeon pea + groundnut relay cropping in medium black calcareous soils are advised to apply 40 kg sulphur (one month prior to sowing) and 50 kg K₂O per hectare as a basal in addition to recommended doses of N and P to pigeon pea for higher yield and net return.

Pearl millet-Groundnut

The farmers of North Saurashtra Agro-climatic Zone following pearl millet-groundnut cropping system under rainfed condition are advised not to follow monocropping and apply N @ 80 kg/ha to pearl millet only for obtaining higher yield and net return.

Sesame

The farmers of North Saurashtra Agro-climatic Zone are advised to apply FYM @ 5 t/ha + NP fertilizer (25-25 kg NP/ha) to sesame crop for getting higher yield and net realization.

Alternatively, the farmers are advised to apply FYM @ 5 t/ha + NP (12.5-12.5 kg/ha) through chemical fertilizers along with seed inoculation of PSM + *Azotobacter* each @ 625 g/ha to sesame crop.

Pearl millet

The farmers of North Saurashtra Agro-climatic Zone growing hybrid pearl millet (GHB-558) during *kharif* on Zn deficient soils are advised to apply 20 kg/ha zinc sulphate at the time of sowing followed by 0.2 per cent spray of ZnSO₄ at pre-flowering stage to obtain higher grain yield and net return.

Sesame (Black)

The farmers of North Saurashtra Agro-climatic Zone growing black seeded sesame (G.Til-10) in *kharif* are advised to apply 25 kg N + 25 kg P₂O₅/ha as basal and 25 kg N/ha as top dressing at 30 DAS or apply FYM 10 t/ha + *Azotobacter* and PSB each @ 5 kg/ha as soil application for getting higher yield and net return.

Sesame

The farmers of North Saurashtra Agro-climatic Zone growing sesame during *kharif* in soils with marginal to deficient in available Fe and Zn are advised to apply mixture grade of multi-micronutrients @ 20 kg/ha (Fe-2.0%, Mn-0.5%, Zn-5.0%, Cu-0.2% and B-0.5%) equivalent to Government notified general grade-V as soil application for obtaining higher yield and net return.

Sesame

The farmers of North Saurashtra Agro-climatic Zone growing sesame on soils marginal to deficient in Zn and Fe are advised to apply 2.5 t FYM/ha with ZnSO₄ @ 20 kg/ha and FeSO₄ @ 25 kg/ha in addition to the recommended fertilizer dose (50-25-0 NPK kg/ha) for getting higher yield and net return.

2. Package of Practices

Castor

The farmers of South Saurashtra Agro-climatic Zone growing irrigated castor are advised to apply 75-40-0 NPK kg/ha along with two interculturings, two hand weedings and two sprays of insecticide to control sucking pests and semilooper for getting higher yield and net return.

Among the various package of practices, fertilizer application is the most critical practice followed by weeding and plant protection which could reduce seed yield by 45.30, 32.43 and 23 per cent, respectively.

Groundnut-Pigeon pea

Farmers of South Saurashtra Agro-climatic Zone interested in adopting semi-spreading groundnut + pigeon pea intercropping system are advised to open the furrow at 40 cm distance and sow two rows of groundnut (GG-20) and one row of pigeon pea (*Vaishali*). They are also advised to apply four irrigations at an interval of 10 days (1.0 IW/CPE) to pigeon pea after harvest of groundnut for realizing higher net return.

Groundnut (rainfed)

Farmers of South Saurashtra Agro-climatic Zone growing rainfed groundnut (cv. GG-20) are advised to sow the crop at 60 cm x 7.5 cm with bullock drawn automatic seed drill using 120 kg seed/ha treated with mancozeb @ 3.0 g/kg seed and soil application of FYM based *Trichoderma viridii* (2.5 kg/ha) at the time of sowing for getting higher pod yield and net return.

3. Water Management

Groundnut + Castor

The farmers of South Saurashtra Agro-climatic Zone adopting bunch groundnut + castor (3:1) intercropping system are advised to irrigate castor crop at 1.0 IW/CPE ratio (four irrigations). First irrigation should be given at 20 days after harvesting of groundnut and remaining at an interval of 10 days for getting higher net return.

Wheat

The farmers of South Saurashtra Agro-climatic Zone growing irrigated wheat are advised to prefer wheat variety GW-322 and give seven irrigations *i.e.* at sowing, CRI, tillering, boot, flowering, milky and dough stages for getting higher yield and net return. Under limited water availability, farmers can apply six irrigations by skipping irrigation at boot stage without affecting yield.

4. Weed Management

Pearl millet

The farmers of South Saurashtra Agro-climatic Zone growing summer pearl millet are advised to keep their field weed free through hand weeding and interculturing at 20, 40 and 60 days after sowing. However, under shortage of labourers, they are advised to apply atrazine 0.5 kg/ha (Atracil 50% WP 1.0 kg/ha) as pre-emergence by dissolving it in 500 litres of water followed by one hand weeding and interculturing at 40 days after sowing for effective weed management.

Groundnut (*kharif*)

Under the circumstances of labourer shortage or not able to spray pre-emergence herbicide, the farmers of South Saurashtra Agro-climatic Zone growing *kharif* groundnut are advised to spray quizalofop-ethyl 40 g/ha (Targa Super 5% EC, 800 ml/ha) by dissolving it in 500 litres of water as post emergence at 25 days after sowing to control monocot weeds. It should be followed by a hand weeding and interculturing at 45 days after sowing for effective weed management.

5. Management of Problematic Soil

Cotton

The farmers of coastal area of South Saurashtra Agro-climatic Zone growing *kharif Dhummad* cotton are advised to apply gypsum @ 75% of GR in addition to recommended dose of N (40 kg/ha) under sodic soil condition for getting higher yield and net return.

6. Cultural Practices

Pearl millet

The farmers of North Saurashtra Agro-climatic Zone growing hybrid pearl millet (GHB-558) during *kharif* are advised to sow the crop in paired row at **30 cm x 60 cm** to get higher yield and net return.

7. Low Cost Techniques

Castor

The farmers of South Saurashtra Agro-climatic Zone growing rainfed castor are advised to soak the seed in 1% sodium chloride solution for three hours and sow at onset of monsoon to get higher seed yield and net return.

Sesame

The farmers of North Saurashtra Agro-climatic Zone growing sesame are advised to adopt seed soaking technique (8 hours soaking of seed in water (1:1) and drying in shade for 12 hours) before sowing followed by one hand weeding at 15 DAS and mulching with dust (soil mulch) for getting higher seed yield and net return.

Recommendation for Scientific Community

Soil test based fertilizer application for targeted yields of castor crop

The Soil Testing Laboratories of the state are recommended to adopt following equations for achieving targeted yield (25 q/ha) of castor.

$$N : FN = 6.13 \times T - 0.23 SN,$$

$$P : FP_2O_5 = 3.35 \times T - 0.77 SP,$$

$$K : FK_2O = 3.38 \times T - 0.11 SK$$

Where; T = Targeted yield in quintal, S = Soil test value of respective elements, F = Fertilizer

Crop-weather relationship of *kharif* groundnut

Based on the results of crop-weather relationship study, the farmers of South Saurashtra Agro-climatic Zone are advised to sow the spreading and semi-spreading varieties of groundnut during 21st May to 10th June with one or two pre-monsoon irrigations to harness benefits of favourable weather conditions during the monsoon period and to obtain higher yields.

III. HORTICULTURE AND AGRO FORESTRY

The Horticulture and Agro forestry group worked out the extension of shelf life of *kesar* mango, standardization of root stock in mango against salt stress, post harvest treatments for enhancement of ripening of *kesar* mango fruits, effect of different sources of nitrogen with graded levels of inorganic fertilizers on papaya, fertigation system with drip irrigation in guava, development of plant canopy and fruit yield of *kagzi* lime by planting density, effect of organic manures and chemical fertilizers on growth and yield of *kagzi* lime, varietal trials in custard apple, integrated nutrient management in custard apple, evaluation of custard apple selections, response of different genotypes of custard apple to weather parameters, pruning trials in *gunda*, response of drumstick variety to different nutrient levels, introduction and evaluation of cashew nut cultivars under south Saurashtra agro-climatic conditions, evaluation of chrysanthemum varieties, production of off season vegetables under net house, effect of growing environments and plant growth regulators on gladiolus, efficiency of split application of chemical fertilizer and requirement of water on coconut and sapota grown in shallow skeletal soil through drip irrigation, application of nutrients through root feeding in coconut, use of saline water in tomato crop using drip irrigation seasonal activity of *Opisina arenosella* W. and its parasitism, management of eriophyed mite in coconut through root feeding of insecticides and nutrients & bio-fertilizers are also continued. This group advocated the nutrient management in guava & *chiku* and biofertilizer in custard apple. The recommendations under this group are given below.

Guava cv. Sardar

The farmers of South Saurashtra Agro-climatic Zone growing guava cv. Sardar are advised to apply 10 kg FYM along with 120 g N, 60 g P₂O₅ and 60 g K₂O per tree at the age of one year which should be increased in equal quantity every year upto fifth year (50 kg FYM, 600 g N, 300 g P₂O₅ and 300 g K₂O per tree) for obtaining economical production. One half dose of nitrogen and full dose of FYM, P₂O₅ and K₂O should be applied in June and remaining half dose of nitrogen in September.

Chiku cv. Kalipatti

Farmers of South Saurashtra Agro-climatic Zone growing sapota cv. Kalipatti are advised to apply 900 g N or 450 g N plus 8.00 kg castor cake per adult tree along with recommended dose of 50 kg FYM, 450 g each of P₂O₅ and K₂O to obtain higher yield and better quality of fruit. One half dose of nitrogen and full dose of castor cake, FYM, P₂O₅ and K₂O should be applied in June and remaining half dose of nitrogen in September.

Custard apple cv. Sindhan

Farmers of South Saurashtra Agro-climatic Zone are advised to apply 200 g N + 100 g P₂O₅ + 50 g K₂O and *Azotobacter* and *Phosphobacter* bio-fertilizers each @ 30 g by mixing with 15 kg FYM per plant at onset of monsoon to get maximum fruit yield and net profit in six year old custard apple cv. Sindhan orchard.

IV. PLANT PROTECTION

Plant protection group recommended control of sucking pests in dillseed & cumin and leaf miner & whitefly in tomato through chemical seed treatment, management strategies of thrips, semilooper and wireworm in castor; white grub in groundnut and mealy bug in custard apple. The management of powdery mildew of fenugreek, green gram & black gram and nursery management for soil borne diseases in onion through soil solarization were recommended.

1. Agricultural Entomology

Dillseed

For effective and economical management of aphids in dillseed, seed treatment with thiamethoxam 70% WS @ 4.2 g/kg seed (CBR 1:5.29) or imidacloprid 70% WS @ 10 g/kg seed (CBR 1:1.69) is recommended under south Saurashtra region.

Cumin

For effective and economical management of thrips in cumin, seed treatment with thiamethoxam 70% WS @ 4.2 g/kg seed (CBR 1:9.22) or imidacloprid 70% WS @ 10 g/kg seed (CBR 1:2.58) is recommended under south Saurashtra region.

Tomato

Seed treatment with thiamethoxam 70% WS @ 4.2 g/kg seed or imidacloprid 70% WS @ 7.5 g/kg seed is recommended under south Saurashtra region for effective management of whitefly and leaf miner attacking tomato nursery and thereby to obtain higher numbers of transplantable seedlings.

Groundnut (*kharif*)

For effective and economical management of white grubs in *kharif* groundnut, seed treatment with chlorpyrifos 20 EC @ 25 ml/kg seed (CBR1:11.00) or furrow application of phorate 10 G @ 25 kg/ha (CBR 1:7.69) at the time of sowing or drenching of chlorpyrifos 20 EC (0.1%) (50 ml/10 lit. water) in plant row after 15 days of germination (CBR 1:4.67) is recommended under south Saurashtra region.

Note: General treatments of spraying of carbaryl 0.2% on host trees *viz.*, babul, neem and ber trees surrounding the field within three to four days of pre-monsoon rain, spraying of crop with monocrotophos 0.05% and installation of light trap are to be followed.

Custard Apple

For effective management of mealy bugs in custard apple, the module comprising dusting methyl parathion 2% dust @ 25 kg/ha on the ground; spraying with methyl parathion 50 EC (10 ml/10 lit. water) on the stem and spraying of quinalphos 25 EC (20 ml/10 lit. water) at pest appearance on shoots followed by triazophos 40 EC (10 ml/10 lit. water) after 15 days of first spray is recommended under south Saurashtra region.

Castor

For effective and economical management of wireworm in castor, seed treatment of carbaryl 50 WP @ 5 g/kg seed (CBR 1:507.06) or carbosulfan 25 DS @ 5 g/kg seed (CBR 1:118.04) or imidacloprid 70 WS @ 5 g/kg seed (CBR 1:37.26) is recommended under south Saurashtra region.

Castor

For effective and economical management of thrips in castor, spraying of acephate 0.05%, (CBR 1:17.86) or dimethoate 0.03%, (CBR 1:14.01) or profenophos 40% + cypermethrin 4%, 0.044%, (CBR 1:12.24) at appearance of pest is recommended.

Castor

Farmers of North Saurashtra Agro-climatic Zone cultivating castor under rainfed condition are advised to apply granulosis virus @ 300 LE/ha at ETL (4 larvae/plant) for control of semilooper. The spray should be done in late evening hours and wetting agent (Sandovit) @ 10 ml and UV protectant (Ranipal) 1 g should be mixed in 10 lit. of spray solution.

Recommendation for Scientific Community

Pearl millet

In pearl millet, incidence of shoot fly *Atherigona approximate* (Malloch) started at seedling stage and remained up to earhead stage. It was non-significantly and positively correlated with maximum and minimum temperatures and the difference of temperature, while negatively with remaining parameters. Incidence of stem borer *Chilo partellus* (Swinhoe) started from early crop stage. Comparatively higher dead heart per cent was noticed at pre-flowering and earhead stages. Maximum temperature and the difference of temperature exhibited significantly negative correlation with stem borer incidence, while remaining weather parameters showed significant positive correlation. Incidence of earhead worm *Helicoverpa armigera* (Hub.) started at earhead emergence was higher at 63 days after germination and decreased towards maturity. Its correlation was found significantly positive with minimum temperature and negative with rainy days.

Groundnut

The coccinellid *Menochilus sexmaculatus* (F.) was the major predator of aphid *Aphis craccivora* Koch on groundnut crop. The predator commenced one week later than the aphid (prey) which multiplied very fast and reached at peak in 31st standard week. Significant and positive correlation between population of the predator and the aphid on groundnut crop was observed. The pest to predator ratio was 33:1 (aphid/twig : coccinellid/plant).

2. Plant Pathology

Fenugreek

Farmers of South Saurashtra Agro-climatic Zone are advised to sow fenugreek in third or fourth week of October for maximum yield and minimum powdery mildew disease incidence.

Green Gram

Farmers of North Saurashtra Agro-climatic Zone are advised to apply three sprays of carbendazim 0.025% (CBR 1:7.37) or hexaconazole 0.005% (CBR 1:9.16) or wettable sulphur 0.2% (CBR 1:15.99) or for organic farming, neem seed kernel extract 5% (CBR 1:2.89) starting from the initiation of the disease and subsequent at 15 days interval for effective and economical management of powdery mildew of *kharif* green gram.

Black Gram

Farmers of North Saurashtra Agro-climatic Zone are advised to apply two sprays of hexaconazole 0.005% (CBR 1:24.42) or carbendazim 0.05% (CBR 1:22.84); first spray at initiation of disease and second spray at 20 days after first spray for effective and economical management of powdery mildew of black gram.

Onion (*kharif*)

Farmers of South Saurashtra Agro-climatic Zone growing *kharif* onion nursery are advised to adopt any one of the following treatments in the raised bed nursery after 15 days of soil solarization to get maximum transplantable seedlings at economical cost.

Seed treatment with thiram 75% SD (3 g/kg seed) and drenching with thiram 75% WP (0.2%) @ 3 litres/m² after 10 days of seed sowing (CBR 1:3.94).

OR

Seed treatment with thiram 75% SD (3 g/kg seed) and drenching with copper oxychloride (0.2%) @ 3 litres/m² after 10 days of seed sowing (CBR 1:3.10).

OR

Seed treatment with *Trichoderma harzianum* (2×10^6 cfu) @ 5 g/kg seed and drenching of *T. harzianum* (0.5%) @ 3 litres/m² after 10 days of seed sowing (CBR 1:3.70).

OR

Seed treatment with carbendazim 50% WP (3 g/kg seed) and drenching of carbendazim 0.1% @ 3 litres/m² after 10 days of seed sowing (CBR 1:3.12).

Recommendation for Scientific Community

Groundnut

Pseudomonas fluorescens Pf-1 (ICBR 1:23.34) and *Trichoderma viride* - local (ICBR 1:26.28) as seed treatment @ 10 g/kg seed are highly effective and economical in reducing collar rot, stem rot and tikka diseases of groundnut.

V. SOCIAL SCIENCE

Agricultural economists worked on the farm cost studies of important crops in Gujarat state. Post harvest losses in fresh vegetables on economic assessment. An economic analysis of production and marketing of semi-*rabi bajra* in Saurashtra region and comparative economics of organic and conventional farming in Saurashtra. The web "Gujarat-krushi.net" has been updated with huge information related to package of practices, export, government programmes, plant protection measures, district wise time series data on area, production and yield of different crops etc. The web is updated on regular basis. Extension educationists conducted study on aptitude of researchers towards the writing for farm families and motivation factors for agriculture degree course.

VI. AGRICULTURAL ENGINEERING

The Agricultural Engineering group accomplished the studies on design, development and fabrication of agricultural machinery, equipments, tools and processes. Research work was undertaken on irrigation, water management, groundwater utilization and use of plastics in agriculture.

1. Soil & Water Engineering

The main research focus was emphasized on estimation of ground water recharge using ANN and GIS, time series modelling of agro-meteorological data, determination of aquifer properties, sea water intrusion impact on the qualitative parameters of ground water, performance evaluation of pumps for irrigation, impact of watershed treatment on ground water quality, ground water contamination in the industrial track of Jetpur, effect of different levels of irrigation on yield of castor crop under drip and surface irrigations, effect of land configurations on groundnut yield and survey on existing cropping pattern and quantity and quality of natural resources.

2. Agricultural Process Engineering

Major research work include development of agro-processing centre, design & development of cleaner-cum-grader for peanut pods and kernels and sapota grader, forced air ventilated storage of onion, processing, preservation and dehydration of vegetables, effect of different drying methods on seed quality of groundnut, pest management in coriander, preparation of value added products from groundnut and evaluation of specific gravity separator for sesame seed, harvest and post harvest losses assessment of different crops, storage of wheat harvested by combined harvester and operation of agro-processing centres.

3. Farm Machinery & Power

Farm machinery & power, focused on standardization of subsoiling technology using two bottom subsoiler, design and development of bullock drawn subsoiler, development and adoption of vertical conveying harvesting unit for mini tractor, development of tractor drawn groundnut digger-cum-shaker and groundnut pod exposure and development of bullock drawn pod exposure.

4. Renewable Energy & Rural Engineering

Renewable energy and rural engineering is focusing research on utilising cotton stalks for gasification, tomato drying in solar driers, evaluation of solar photo voltaic system for green house cooling, atmospheric storage of fruits, medicinal plants and vegetables, design standardization of environment control system for surface covered cultivation, drying and dehydration of fruits, vegetables and fish using green house performance of bio-degradable mulch for onion and human resource development and transfer of technology.

The Agricultural Engineering Extension Department is working on use of major cooking devices by the rural families in Junagadh district.

Agricultural Engineering group has released following two implements for farmers.

Grader for Sapota

Hand-operated grader developed by Junagadh Agricultural University for grading sapota on the basis of size is released for the use of farmers, manufacturers and processors. The same machine can also be used for grading of similar types of fruits and vegetables.

Hay Rake-cum-Loader

Tractor operated hay rake-cum-loader, developed by Junagadh Agricultural University, is released for the use of farmers and manufacturers. The machine is easy to operate and reduces time & cost of collecting hay.

Time table for green house cooling

Farmers of the Saurashtra region growing flower crops in medium cost green houses are advised to adopt the following time table for operating different cooling systems by using 50% shade net along with natural ventilation (20 to 30% of the ground floor area) during summer months (March-June) for maintaining productive temperature (20-30°C) inside the green house and for saving energy.

Month	Treatment	Time of Operation
March	Natural Ventilation	8.00-10.00 /19.00-21.00
	Fogging & Natural Ventilation	10.00-11.00/17.00-19.00
	Fogging & Fan Ventilation/Fan & Pad Ventilation	11.00-17.00
	Without Ventilation	21.00-8.00
	Shading	Required
April	Natural Ventilation	7.00-8.00 /22.00-23.00
	Fogging & Fan Ventilation	8.00-10.00/19.00-22.00
	Fan & Pad Ventilation	10.00-19.00
	Without Ventilation	23.00-7.00
	Shading	Required
May	Natural Ventilation	22.00-24.00
	Fogging & Fan Ventilation	8.00-11.00/19.00-22.00
	Fan & Pad Ventilation	11.00-19.00
	Without Ventilation	0.00-8.00
	Shading	Required
June	Natural Ventilation	22.00-24.00
	Fogging & Fan Ventilation/Fan & Pad Ventilation	8.00-22.00
	Without Ventilation	0.00-8.00
	Shading	Required

Least-cost design for drip irrigation system

The farmers, entrepreneurs and design engineers are advised to install the drip irrigation system as per layout given below for different crops grown in Saurashtra region to minimize installation cost.

Drip irrigation in horticultural crops**

Sr. No.	Name of Crop	Spacing (m x m)	Expenditure (Rs/ha)	Size of Different components				
				Screen Filter	Main Line	Sub main line	Lateral	Dripper Discharge
				M ³ /h	mm	mm	mm	Lph
1	Mango	10 x 10	25376	10	-	50	16	8
2	Sapota	10 x 10	25493	10	-	50	16	8
3	Coconut	6 x 6	33855	10	-	50	16	8
4	Custard apple	6 x 6	34123	10	-	50	16	4
5	Guava	6 x 6	33372	10	50	40	12	8
6	Lemon	6 x 6	33855	10	-	50	16	8
7	Pomegranate	6 x 6	35131	10	-	50	16	4
8	Date palm	8 x 8	30255	10	-	50	16	8
9	Ber	6 x 6	32209	10	50	40	12	8

10	Amla	8 x 8	29476	10	40	32	12	8
11	Papaya	2 x 2	58789	10	-	75	16	4
12	Cashew nut	5.4 x 5.4	36124	10	-	50	16	8
13	Banana	1.5 x 1.5	62290	10	63	50	12	4
14	Banana	3.2 x 1.2	45101	10	-	50	16	2

*As per the GGRC rates of 2007

** Design layout No. 5 for all horticultural crops except ber, amla and banana.

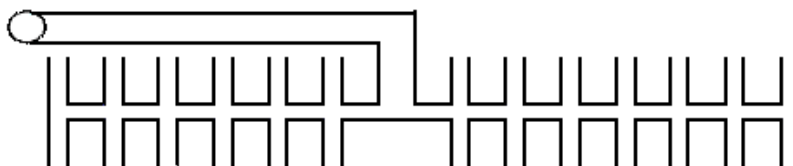
Drip irrigation in field crops*

Sr. No.	Name of Crop	Crop geometry (m x m) (R x P)	Lateral x Dripper Spacing (m x m)	Expenditure (Rs/ha)	Size of Different components				
					Screen Filter	Main Line	Sub main line	Lateral	Dripper Discharge
					M ³ /h	mm	mm	mm	Lph
1	Groundnut	0.45 x 0.1	0.9 x 0.6	123986	20	90	75	12	2
2	Groundnut	0.9 x 0.1	0.9 x 0.6	119971	20	75	63	12	2
3	Groundnut	0.6 x 0.1	1.2 x 0.6	94586	20	75	63	12	2
4	Groundnut	0.75 x 0.1	0.75 x 0.6	142174	25	90	75	12	2
5	Cotton	1.5 x 0.6	1.5 x 1.2	86723	25	90	75	16	8
6	Cotton	1.2 x 0.6	1.2 x 1.2	78612	20	75	63	12	4
7	Cotton	0.9 x 0.6	0.9 x 1.2	98673	20	75	63	12	4
8	Castor	0.6 x 0.6 x 1.2	1.8 x 0.6	68619	10	63	50	12	2
9	Castor	0.9 x 0.6	0.9 x 1.2	98673	20	75	63	12	4
10	Castor	0.9 x 0.6	0.9 x 0.6	148711	40	75	63	16	4
11	Tomato/ Brinjal	0.6 x 0.6 x 0.9	1.5 x 1.2	68301	20	75	63	12	4
12	Tomato/ Brinjal	0.75 x 0.6	0.75 x 1.2	116618	25	90	75	12	4
13	Chillies	0.6 x 0.6	1.2 x 1.2	78612	20	75	63	12	4
14	Lady's finger	0.6 x 0.3	1.2 x 0.6	94586	20	75	63	12	2
15	Lady's finger	0.3 x 0.3 x 0.9	1.2 x 0.6	94586	20	75	63	12	2
16	Cabbage/ Cauliflower	0.45 x 0.45	0.9 x 0.9	102902	20	75	63	12	2
17	Cabbage/ Cauliflower	0.3 x 0.3 x 0.9	1.2 x 0.6	94586	20	75	63	12	2
18	Bitter gourd	1 x 1	1 x 1	99647	20	90	75	12	4
19	Sugarcane	0.1 x 0.6 x 1.2	1.8 x 0.6	68619	10	63	50	12	2

* Design layout No. 3 for field crops except castor.



Design Layout No. 5 for Horticultural Crops



Design Layout No. 3 for Field Crops

VII. BASIC SCIENCE

Biotechnology group worked on the research on biochemical and molecular aspects of host-pathogen interaction of *fusarium* wilt of chickpea, metabolic changes of groundnut in response to drought, biochemical changes during ripening of mango and tomato and crop quality aspects of pigeon pea, onion and garlic and molecular characterization of endangered medicinal plants and some promising onion garlic varieties. Plant Physiology group worked on the screening of groundnut genotypes from varietal breeding trials for fresh seed dormancy, yield assessment of groundnut genotype with fresh seed dormancy, screening of drought tolerance groundnut genotypes and assessment of the effect of simulated water stress on growth, partitioning of dry matter and metabolic in relation to productivity of groundnut genotypes. Testing of pearl millet male sterile and inbred lines against drought, evaluation for seedling establishment under adverse conditions, evaluation of entries from initial trial for their response to terminal stress, screening for stay-green character in pearl millet, drought tolerance in pearl millet genotypes using PEG and foliar spray of growth substance under rainfed condition on yield potential of pearl millet. This group has released one recommendation for nurserymen and two for scientific community.

Rukhdo (*Adansonia digitata*)

The nurserymen are advised to sow fresh seeds of Rukhdo (*Adansonia digitata*) treated with 40% sulphuric acid (H₂SO₄) for 48 hrs or the seed cracked with hexoblade to get maximum seed germination.

Recommendation for Scientific Community

Plant Physiology

Testing of male sterile (B) and inbred lines of pearl millet against drought

The *bajra* male sterile maintainer line 92777B and inbred J.2405 were found to be drought resistant/tolerant, which may be used for the development of terminal drought resistant hybrids. The terminal drought resistant/tolerant entries had higher harvest index and dry matter, and lowest drought susceptibility index.

Studies on drought tolerance in pearl millet genotypes using PEG

Models for the prediction of relative agronomic performance of *bajra* genotypes i.e. grain yield are developed for drought stress and potential irrigated conditions.

Exponential Model No. 1 : For Drought Stress Condition

$$Y = 1.448*(1.002^{X_1})*(0.999^{X_2})*(2.748^{X_3})*(0.582^{X_4})*(1.875^{X_5})* \\ (0.218^{X_6})*(0.851^{X_7})*(1.110^{X_8})*(0.984^{X_9})*(1.007^{X_{10}})*(0.665^{X_{11}}) \\ *(2.315^{X_{12}})*(3.232^{X_{13}})*(7.306^{X_{14}})*(0.744^{X_{15}})*(0.575^{X_{16}})$$

Where, Y = Predicted yield under drought stress

Parameters		Regression coefficient		Std. Error	T values	F value	R ² value	df
X ₁	Root Length (3 bar)	M ₁	1.0020	0.0029	348.4135***	9.6311**	0.7980	39
X ₂	Shoot Length (3 bar)	M ₂	0.9992	0.0020	511.1348***			
X ₃	Root DW (3 bar)	M ₃	2.7478	0.7026	3.9110***			
X ₄	Shoot DW (3 bar)	M ₄	0.5822	0.3134	1.8579			
X ₅	R/S Length Ratio (3 bar)	M ₅	1.8755	0.5639	3.3260**			
X ₆	R/S DW Ratio (3 bar)	M ₆	0.2183	0.5282	0.4133			
X ₇	V I-1 (3 bar)	M ₇	0.8513	0.3253	2.6994*			
X ₈	V I-2 (3 bar)	M ₈	1.1102	0.2088	5.3159***			
X ₉	Root Length (6 bar)	M ₉	0.9843	0.0049	201.5419***			
X ₁₀	Shoot Length (6 bar)	M ₁₀	1.0067	0.0022	452.1029***			
X ₁₁	Root DW (6 bar)	M ₁₁	0.6656	0.7750	0.8588			
X ₁₂	Shoot DW (6 bar)	M ₁₂	2.3145	0.6971	3.3203**			
X ₁₃	R/S Length Ratio (6 bar)	M ₁₃	3.2318	0.5161	6.2617***			
X ₁₄	R/S DW Ratio (6 bar)	M ₁₄	7.3066	0.5652	12.9279***			
X ₁₅	V I-1 (6 bar)	M ₁₅	0.7443	0.2747	2.7090**			
X ₁₆	V I-2 (6 bar)	M ₁₆	0.5746	0.2748	2.0907*			
Constant b		1.4476						
Exponential Model: $Y = B*(M_1^{X_1})* (M_2^{X_2})* (M_3^{X_3})...*(M_{16}^{X_{16}})$								
Where, Y = Predicted yield under drought stress								

Exponential Model No. 2 : For Potential Condition (Irrigated)

$$Y = 0.472*(1.004^{X_1})*(0.997^{X_2})*(2.701^{X_3})*(0.568^{X_4})*(1.816^{X_5})* (0.238^{X_6})*(0.975^{X_7})*(1.497^{X_8})*(0.985^{X_9}) *(1.007^{X_{10}})*(1.324^{X_{11}}) *(4.413^{X_{12}})*(4.689^{X_{13}})*(4.088^{X_{14}})*(1.044^{X_{15}}) *(0.441^{X_{16}})$$

Where, Y = Predicted yield under irrigated condition

Parameters		Regression coefficient		Std. Error	T values	F value	R ² value	df
X ₁	Root Length (3 bar)	M ₁	1.0036	0.0023	429.6307***	7.9550**	0.7655	39
X ₂	Shoot Length (3 bar)	M ₂	0.9967	0.0016	637.6927***			
X ₃	Root DW (3 bar)	M ₃	2.7007	0.5707	4.7325***			
X ₄	Shoot DW (3 bar)	M ₄	0.5684	0.2545	2.2330*			
X ₅	R/S Length Ratio (3 bar)	M ₅	1.8159	0.4580	3.9645***			
X ₆	R/S DW Ratio (3 bar)	M ₆	0.2381	0.4291	0.5548			
X ₇	V I-1 (3 bar)	M ₇	0.9747	0.2561	3.8052***			
X ₈	V I-2 (3 bar)	M ₈	1.4971	0.1696	8.8253***			
X ₉	Root Length (6 bar)	M ₉	0.9846	0.0040	248.2146***			
X ₁₀	Shoot Length (6 bar)	M ₁₀	1.0069	0.0018	556.7164***			
X ₁₁	Root DW (6 bar)	M ₁₁	1.3242	0.6295	2.1037*			
X ₁₂	Shoot DW (6 bar)	M ₁₂	4.4131	0.5662	7.7942***			
X ₁₃	R/S Length Ratio (6 bar)	M ₁₃	4.6885	0.4192	11.18404***			
X ₁₄	R/S DW Ratio (6 bar)	M ₁₄	4.0876	0.4591	8.9042***			
X ₁₅	V I-1 (6 bar)	M ₁₅	1.0444	0.2232	4.6802***			
X ₁₆	V I-2 (6 bar)	M ₁₆	0.4414	0.2232	1.9772			
Constant b		0.4717						
Exponential Model: $Y = B*(M_1^{X_1})* (M_2^{X_2})* (M_3^{X_3})...*(M_{16}^{X_{16}})$								
Where, Y = Predicted yield under irrigated condition								

VIII. FISHERIES SCIENCE

During the year 2007-08, six technical programmes were continued by the College of Fisheries Science, Veraval, viz., application of magnetized diet on growth characteristics of fish, socio-economic profile of fisher-folk in coastal Saurashtra, study on different selling methods of fish with reference to bacterial count, effect of stocking density on survival rate of Indian major carp seed in nursery ponds, survey of bivalve molues in the inter-tidal region of Veraval and Chorwad coasts, qualitative analysis of phytoplankton in freshwater culture pond.

Technical programmes of 2007-08 of Okha comprised study of bio-assay test on industrial effluent in marine coastal area, artemina (*Artemia fransiscana*) cyst production in varying salinity study of location specific growth rate in marine algae *Kappaphycus alverzii*, preliminary investigation on the cultivation possibilities of marine algae *Gracilaria* spp., population growth of *Rotiber brachious* spp., in varying salinity, preliminary study of culture potentials of *brachionus* for live feed (Filler trial), study on induced breeding of grey mullet (*Mugil cephalus*) through hypophysation (filler trial), study of heavy metal deposition in cephalopod & fish landed at Dalda & Rupen landing centres.

Microbial population in water at fish landing centre of Veraval

Fishermen of Veraval coast are advised not to use seawater of the coast for washing/cleaning of fish catch as the seawater of Market hall, Jetty and Diwadandi areas contains pathogenic bacteria beyond permissible limit (>20 *E. coli* /ml).

Recommendation for Scientific Community

Seasonal variations in population densities of important Diatoms on Zaleswar coast of Veraval

Study on seasonal abundance of prominent seven diatom species indicates that the species were higher in winter at Chorwad and Zaleswar coasts. The density was higher at Chorwad coasts in all the seasons as compared to Zaleswar.

IX. ANIMAL PRODUCTION & HEALTH

In animal production & health discipline, 19 schemes are in operation at Cattle Breeding Farm, JAU, Junagadh. These schemes are aimed at genetic improvement in the bovines maintained at the farm and also in the field through supply of genetically superior bulls with breeding and improvement of Gir and Jaffrabadi bovines. Semen freezing laboratories became fully functional and 1065 frozen semen doses were prepared. The centre has supplied 12 Gir bulls and five Jaffrabadi bulls to various *gram panchayats* and *gaushalas*. During the year, 621 dairy farmers, 96 farm women and eight extension workers visited this research station.

X. BREEDER SEED PRODUCTION

The production of different breeder seeds to cater the need of private and public sectors are given in the table. Moreover as per the demand of the Agricultural Department of the State, 100 per cent nucleus seed was produced in different crops by the joint collaboration of the scientists of state and the country. The nucleus and breeder seeds were inspected by different committees which were approved as per regulations.

Production of Nucleus / Breeder seed during year 2007-08

Sr. No.	Crop.	Variety	Production (q)		Total (q)
			National	State	
1.	Groundnut	GG-2	-	78.50	78.50
		GG-3	-	00.50	00.50
		GG-5	42.60	59.20	101.80
		GG-6	15.00	00.30	15.30
		GG-7	32.10	05.20	37.30
		SB-XI	-	06.12	06.12
		GG-20	-	293.50	293.50
		GAUG-10	-	48.00	48.00
		GG-11	-	75.00	75.00
		GG-13	-	20.00	20.00
		GG-14	60.60	-	60.60
		GG-21	30.00	-	30.00
		GG-8	00.63	-	00.63
GG-16	02.00	-	02.00		
					769.25
2.	Pearl millet	Parent Seed	00.07	15.16	15.23
3.	Chickpea	GG-1	79.91	63.70	143.61
		GG-2	10.75	51.77	62.52
		GG-4	21.90	-	21.90
					228.03
4.	Sesame	G.Til-1	00.25	04.15	04.40
		G.Til-2	01.50	17.00	18.50
		G.Til-10	01.15	00.65	01.80
					24.70
5.	Wheat	Lok-1	-	98.80	98.80
		GW-496	25.20	98.80	124.00
		GW-366	13.20	511.14	524.34
					747.14
6.	Cotton	G.Cot-19	-	00.55	00.55
		G.Cot-15	-	00.57	00.57
		Deviraj	-	01.51	01.51
		G.Cot-18	-	00.20	00.20
Total			336.86	1450.32	1787.18

New research programmes sanctioned during the year 2007-08

Sr. No.	Agency	Research Programmes	Amount (Rs. in Lakh)
1	ICAR	3	62.15
2	Government of India	3	69.71
3	Other Agencies	25	133.82
	Total	31	265.68

HAPTER - 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). The members of Extension Education Council during 2007-08 were as under.

No.	Name	Designation
1	Dr. B.K. Kikani	Vice Chancellor (Chairman)
2	Dr. A.M. Parakhia	Director of Extension Education (Secretary)
3	Dr. D.B. Kuchhadiya	Director of Research & Dean PG Studies
4	Dr. S.M. Dadhania	Associate Director of Extension Education
5	Dr. P.G. Butani	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	Prof. B.A. Kunadia	Research Scientist (Groundnut)
9	Dr. V.K. Poshiya	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. A.V. Barad	Professor & Head, Horticulture
18	Dr. B.R. Karkar	Asstt. Ext. Edu., SSK
19	Dr. L.B. Ranaparia	Asstt. Ext. Edu., Horticulture Diploma School

5.3 Extension Education and Training Centres

Sr. No.	Type	Location
I. Diploma/Certificate Courses		
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
II. Training Programmes for Extension Workers		
1.	Training & Visit System Training Centre	Junagadh
2.	Centre of Excellence for Training (Oilseeds)	Junagadh
III. Training Programmes for Farmers/Farm Women		
1.	Krishi Vigyan Kendra	Jamnagar, Targhadia, Amreli, Khapat, Nana Kandhasar
2.	Sardar Smruti Kendra	Junagadh
IV. Extension Education Programmes for Rural People		
1.	Farm Advisory Service Centre	Junagadh
2.	Extension Programme for Fisheries	Okha

5.4 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)	Horticulture Diploma	2 years	Junagadh	26
2)	Agriculture Diploma	2 years	Halvad, Dhari	63
3)	Livestock Inspector Training	1 year	Junagadh	30
4)	Bakery Training			
	➤ Basic Course in Baking Science	20 weeks	Junagadh	23 (2 Batches)
	➤ Special Training to Women	1 week	Junagadh	83 (6 Batches)
5)	Mali Training	6 months	Junagadh	4 (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 & 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 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.

Sr. No.	Type of programme	Programmes	No of Participants
1.	Bimonthly Workshop	2	20
2.	Pre-seasonal Training Programme	2	46
3.	Short Duration Course	7	148
Total		11	214

(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 State Department and number of SMSs/AEOs who attended the programme are as under.

Sr. No.	Name of Workshop/Training	Duration	Programmes	No. of Participants
1.	<i>Gram Mitra</i> Training	7days	1	43
2.	Training Identified Area for Technical Personnel of KVKs	3 days	1	27
Total			2	70

(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. On-campus 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, 261 on-campus and 286 off-campus training programmes were organized, wherein 13537 participants received training. The details are depicted in Table 5.1.

Table 5.1: Training programmes organized by the Transfer of Technology Centres for farmers/farm women during the year 2007-08

Sr. No.	TOT Centre	No. of Trg. Prog.	No. of participants				Total	
			Male	Female	Rural Youth	Other		
(i)	KVK, Jamnagar	A	97	-	-	-	-	1825
		B	99	-	-	-	-	2100
(ii)	KVK, Targhadia	A	51	597	382	75	19	1073
		B	46	1009	75	84	-	1163
(iii)	KVK, Amreli	A	30	697	158	-	-	855
		B	46	1317	312	-	75	1704
(iv)	KVK, Khapat	A	18	-	-	-	-	437
		B	49	-	-	-	-	1557
(v)	KVK, Nana Kandhasar	A	34	587	109	-	98	794
		B	46	694	222	-	139	1055
(vi)	SSK, Junagadh	A	31	785	189	-	-	974
		B	-	-	-	-	-	-
Total		A	261	2666	838	75	117	5958
		B	286	3020	609	84	214	7579
Grand Total			547	5686	1447	159	331	13537

A= On-campus B=Off-campus

(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 1,04,054 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 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 as these feed backs provide guideline in reforming further research.

Table 5.2: Extension activities carried out by TOT centres during 2007-08

Sr. No.	Name of activity	KVK					SSK, Junagadh	Total
		Jamnagar	Targhadia	Amreli	Khapat	Nana Kandhasar		
1)	Farmers'/ Field Day	50 (1112)	11 (507)	1 (25)	10 (223)	10 (209)	-	82 (2136)
2)	Agril. Fair/ Exhibition	3 (17000)	1 (13)	-	-	-	7 (2029)	11 (19042)
3)	<i>Khedut Shibir</i> / Group Discussion	83 (1913)	38 (1084)	-	7 (357)	-	22 (35235)	150 (38589)
4)	Agril. Tour/ Field Visit	-	- (234)	-	- (189)	-	-	- (423)
5)	Seminar/Workshop/ <i>Kisan Gosti</i>	15 (4130)	-	7 (81)	-	2 (211)	-	24 (4446)
6)	Cattle camp	11 (653)	2 (103)	-	-	4 (38)	-	17 (794)
7)	Film/Slide/Video Show/ Radio Talk/TV Prog. etc.	23	41	4	5	3	-	76
8)	Guidance through Letters/Personal Contact	286	-	27	194	-	157	664
9)	Publication and Distribution of Farm Literature	37 (1000)	53 (19000)	- (500)	10 (7297)	- (1465)	-	100 (38262)
10)	Press Notes Released	57	64	-	6	2	-	126
11)	Demonstrations	78	18	7	-	65	-	168
12)	<i>Krush-Go-Vidya</i> Subscriber Registered	-	-	-	50	-	340	390
13)	Escorting the Visitors	114	24	63	325	813	2489	3828
14)	Extension of Research Prog.	9 (253)	-	3 (109)	-	-	-	12 (362)
Total								5651 (104054)

Figures in parenthesis indicates no. of beneficiaries/copies

(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 farmer's fields.

In all, 561 FLDs were conducted on various oilseeds and pulses viz., castor, mustard, groundnut, sesamum, cotton, gram, wheat, pearl millet and cumin in 265.4 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 2007-08

Sr. No	Centre	Crop	Variety/ Treatment	No. of FLDS	Area (ha)	Av. yield (q/ha)		Increase in yield (%)		
						Demo.	Local check			
1)	KVK, Targhadia	Kharif								
		Groundnut	GG-5	20	8	13.63	12.27	11.05		
		Green gram	GM-4	5	2	6.00	5.38	11.63		
		Sesamum	GT-2	14	5.6	3.08	2.68	15.00		
		Groundnut	<i>Trichoderma</i>	10	4	14.88	13.50	10.19		
		Rabi								
		Gram	GG-1	12	4.8	22.00	20.38	7.95		
		Cumin	GC-4	15	6	6.63	6.04	9.77		
		Wheat	GW-366	10	4	59.38	54.31	9.34		
2)	KVK, Jamnagar	Kharif								
		Groundnut	GG-5	20	10	12.60	9.95	21.03		
		Sesamum	G.Til-2	10	5	5.60	3.60	35.71		
		Castor	GCH-6	20	10	28.60	25.20	11.89		
		Pearl millet	GHB-577	40	20	21.40	17.80	16.82		
		Rabi								
		Mustard	GM-2	20	10	17.90	14.90	16.76		
		Gram	GG-2	10	5	16.40	12.80	21.95		
		Wheat	GW-322	40	20	53.60	43.60	18.66		
		KVK, Amreli	Kharif							
			Groundnut	GG-20	10	4	21.25	17.50	21.42	
			Groundnut	Fertilizer	2	1	21.87	19.87	10.06	
			Groundnut	<i>Trichoderma</i>	15	7.5	18.43	14.98	23.06	
			Sesamum	G.Til-2	12	5	5.31	4.78	11.19	
Green gram	GM-4		10	5	12.10	11.10	8.26			
Pearl millet	GHB-558		12	5	28.26	21.38	32.18			
Cotton	Insecticide		12	5	13.80	11.00	13.69			
		Rabi								
		Wheat	GW-496	25	10	37.04	31.70	16.84		
		Cumin	GC-4	10	5	4.81	3.93	22.00		
		Gram	GG-2	20	10	9.29	7.20	23.64		
4)	KVK, Khapat	Kharif								
		Castor	GCH-6	10	5	26.60	22.00	20.70		
		Groundnut	GG-20	10	5	25.60	21.30	20.30		
		Soybean	GS-1	3	1.5	15.80	14.00	12.60		
		Pigeon pea	BDN-2	10	5	25.60	22.10	17.40		
		Pearl millet	GHB-558	10	5	27.70	23.20	19.60		
		Sorghum	GSF-5	10	5	93.60	73.30	28.10		
		Groundnut	<i>Trichoderma</i>	4	2	25.60	21.40	19.30		
		Rabi								
				Wheat	GW-366	20	10	52.70	44.40	18.70
				Gram	GG-4	10	5	14.40	12.00	19.50
				Cumin	GC-4	10	5	14.40	12.00	19.50
				Gram	NPV	10	5	17.20	15.30	12.50
		5)	KVK, Nana Kandhasar	Kharif						
Groundnut	GG-20			10	5	13.78	11.62	18.58		
Sesamum	Gujarat-2			10	5	5.20	4.50	15.56		
Green gram	Gujarat-4			10	5	8.29	7.02	18.09		
Mustard	GM-3			10	5	14.81	12.43	19.15		
Gram	Gujarat-3			10	5	12.44	10.48	18.70		
Rabi										
				Cotton	Bt	10	5	19.94	17.46	14.20
				Cumin	Gujarat-4	10	5	6.84	5.67	20.63
				Wheat	GW-366	6	3	35.73	31.22	14.44
			GW-496	4	2	34.02	29.93	13.66		
Total				561	265.4					

(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.

Sr. No.	Name of activity	No. of activities	No. of participants
1.	Agril. Fair	8	427950
2.	Agril. Exhibitions (participation)	7	2029
3.	<i>Khedut/Mahila Shibir</i> /Group Meeting/Crop Seminar	22	35235
4.	Spot Guidance/Guidance through Letters	157	-
5.	Agril. Literature Exhibition	7	2029
		201	467243

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

Objectives of COC Scheme

- To establish the *Gram Kisan Samities* (GKS) in the rural areas.
- To train the members of *Gram Kisan Samities* in leadership communication and cooperation for transfer of technologies.
- To disseminate the latest agricultural and allied technologies through *Gram Kisan Samities* in rural areas.
- To carry out different extension activities through GKS in different villages.
- To know the feedbacks from the farmers.

Formulation of *Gram Kisan Samities* during the year 2007-08

Sr. No.	District	No. of GKS
1	Bhavnagar	1

Khedut Shibirs organized during the year 2007-08 under COC scheme

Sr. No.	Name of the village	No. of <i>shibirs</i>	No. of participants	Subject covered
1	Bhatia and Vaspada (Junagadh)	1	30	Agriculture,
2	Shrinathgadh (Rajkot)	1	25	Horticulture &
3	Mandva and Bheshan (Junagadh)	1	30	Animal Husbandry
	Total	3	85	

(F) Extension Activities carried out by 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)	Diagnostic and Treatment Services through Mobile Ambulatory Clinic	39	-	-	39
2)	Farmers/Animal Owners Visit	46	-	-	46
3)	Farmers' Meeting/ <i>Shibirs</i> /Seminar, etc.	28 (1017)	-	2 (150)	30 (1167)
4)	Guidance on Farm		-	-	-
5)	Guidance through letters	117	-	59 (1942)	176 (1942)
6)	Literature Published	2	-	-	2
7)	Literature Distribution	(9733)	-	-	(9733)
8)	Off Campus Training		-	-	1
9)	On Campus Training:				
a)	<i>Gopal Mitra</i> Certi. Course (4 months)		-	-	
b)	B.V.Sc. Internship	9 (56)	-	-	9 (56)
c)	BRS Internship (1 month)	2 (4)	-	4 (36)	6 (40)
d)	LITC-II Representatives	4 (49)	-	-	4 (49)
10)	One Day Camp		11 (512)	-	11 (512)
11)	Film/Slide/Video Show		-	9 (119)	9 (119)
12)	TV Programmes	3	-	-	3
13)	Radio Talk	-	-	8	8
14)	Guidance to Visitors	28 (1017)	62 (3196)	59 (1942)	149 (6155)
Total		278 (11876)	73 (3708)	141 (4189)	492 (19773)

5.5 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 38 such talks were delivered on different topics related to agriculture, horticulture, agricultural engineering, fisheries, animal husbandry, etc.

In all, 26 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.

5.6 Publication of Extension Education Literature

During the year report, total 52 publications (50 folders and 2 books) were published by different departments.

Sr. No.	Name of Office	Type of Publication		Total
		Folder	Books	
1.	Directorate of Ext. Edu., JAU, Junagadh	-	1	1
2.	Sardar Smruti Kendra, JAU, Junagadh	7	1	8
3.	Wheat Research Station, JAU, Junagadh	1	-	1
4.	Dry Farming Research Station, JAU, Targhadia	4	-	4
5.	Fruit Research station, Mahuva	2	-	2
6.	Krishi Vigyan Kendra, JAU, Targhadia	8	-	8
7.	Krishi Vigyan Kendra, JAU, Amreli	18	-	18
8.	Krishi Vigyan Kendra, JAU, Khapat	5	-	5
9.	Research Testing & raining center, Junagadh	5	-	5
	Total	50	2	52

University news bulletin “*Krusha Vishwa*” is being published regularly by Directorate of Extension Education.

5.7 Agriculture Literature Exhibition

During the year under report, seven agricultural literatures exhibitions were availed for farmers and extension workers. Total 2013 farmers and farm women participated in agricultural literature exhibition.

5.8 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, 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.

5.9 Orientation Training Programme

During the year under report, 10 scientists/teachers of the university were deputed for orientation training outside the Gujarat state to upgrade knowledge and skill for improving their faculty competence in respective disciplines.

5.10 *Krushi Mahotsav-2007*

It is important that the innovations in agricultural field should reach the farmers at the earliest. Revolution 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, 83632 farmers were benefited.

No.	District	No. of talukas	No. of beneficiaries
1	Junagadh	14	6331
2	Rajkot	14	6937
3	Bhavnagar	11	38831
4	Amreli	11	5740
5	Surendranagar	10	12862
6	Jamnagar	10	4024
7	Porbandar	3	8907
	Total	73	83632

CHAPTER - VI

STUDENTS WELFARE

6.1 Directorate of Students' Welfare

The Directorate of Students' Welfare was established with effect from 09.08.2004 after existence of Junagadh Agricultural University. This office is looking after various students' activities/facilities including sports, culture, fellowships, residential, recreation, health, adventure, counselling, placement etc. Moreover, dignitaries of different fields are invited to share their thoughts, experiences and views among staff and students. Dr. K.B. Jadeja continued as in-charge Director of Students' Welfare since 21.05.2006.

6.2 Students Union

In the colleges of Junagadh Agricultural University, the Student Representative Council (SRC) is being formed by Principal of respective colleges by selecting the sincere and leading students in sports, culture, debate and adventure activities. The Principal also nominate the Chairman and staff advisors. Principal acts as a president of SRC. During 2007-08, 14 advisors and 14 students' representatives were nominated in SRC of College of Agricultural Engineering & Technology, while 11 staff advisors and 13 students' representatives were nominated in SRC of College of Fisheries Science, Veraval.

6.3 Students facilities

All the under graduate and post graduate students are provided hostel facilities with an attached mess. A central library near to the hostel area is utilised by students for reference, reading and net surfing. A sports complex is also exists near the hostels and interested students utilize the facilities according to their choice games.

A student counselling and placement cell is working in the university. On campus and off campus interviews were arranged for different faculties. Almost 100 per cent pass out students during the year were selected for the jobs in the faculty of Agricultural Engineering & Technology and Fisheries Science. Agricultural engineers were selected in Jain Irrigation System Ltd. Jalgoan (11), NETAFIM Irrigation India Pvt. Ltd. (5) and TAFE (7). Fisheries Science graduate were absorbed in private fish processing plants, bank and government jobs. In Agriculture faculty, 49 students were offered jobs in pesticides and fertilizer companies, NABARD and State Bank.

6.4 Physical Education Programmes

1. Inter Collegiate Sports and Cultural activities

During the year 2007-08, inter collegiate sports and cultural activities were organised as here after.

Sr. No.	Name of Game / Event	No. of Players	Date of Tournament	Host College	Winner College
1.	Badminton (M)	5	24.08.07	Agril. Engg. & Tech.	Agriculture
	Badminton (W)	3	24.08.07	Agril. Engg. & Tech.	Agril. Engg. & Tech.
2.	Table Tennis	4	24.08.07	Agril. Engg. & Tech.	Fisheries Science
3.	Basketball	12	24.08.07	Agril. Engg. & Tech.	Agriculture
4.	Volleyball	12	14.09.07	Agriculture	Agriculture
5.	Kabaddi	12	14.09.07	Agriculture	Agriculture
6.	Kho-Kho	12	14.09.07	Agriculture	Agriculture
7.	Chess	5	05,06.10.07	Agril. Engg. & Tech.	Agril. Engg. & Tech.
8.	Cricket	15	05,06.10.07	Agril. Engg. & Tech.	Agriculture
9.	Debate	6	20.10.07	Fisheries Science	Agril. Engg. & Tech. (Favour)
					Agril. Engg. & Tech. (Against)
					Agriculture (Elocu.)
10.	Essay	4	20.10.07	Fisheries Science	Fisheries Science
11.	Weight lifting	10	20.10.07	Fisheries Science	Agriculture
12.	Culture Activities				
	(a) Drama	8	06.02.08	Agriculture	Agril. Engg. & Tech.
	(b) Folk dance	10	06.02.08	Agriculture	Fisheries Science
	(c) Group song	5	06.02.08	Agriculture	Agril. Engg. & Tech.
	(d) Fancy dress	2	06.02.08	Agriculture	Agriculture (1 st)
					Agril. Engg. & Tech. (2 nd)
(e) Mono acting	2	06.02.08	Agriculture	Agriculture (1 st)	
				Agril. Engg. & Tech. (2 nd)	
13.	Athletics (M)	15	12,13.02.08	Agriculture	Agriculture
	Athletics (W)	5	12,13.02.08	Agriculture	Agriculture

2. Inter University Participation

Sports

- University cricket team participated in 20-20 Cricket Tournament organised between SAUs of Gujarat during 12-13.02.2008 at SDAU, S.K.Nagar.
- Forty five students including four girls participated in 9th All India Inter Agricultural Universities Sports & Games Meet-2008 held at MPKV, Rahuri during 22-25.02.2008.

Cultural-Literary

- Twenty four students participated in 9th All India Inter Agricultural University Youth Festival 'AGRIUNIFEST 2007' organised during 22-26.09.2007 at MPUAT, Udaipur (Rajasthan).

- (d) A memorable function of second 'Gujarat State Inter Agricultural Universities Cultural-Literary Competition-2008' was successfully organised on 16.02.2008 at Junagadh Agricultural University, Junagadh. The JAU won the first prize in Drama, Group song, Extempore and second in fancy dress. Under Graduate student Mr. Dheeraj Singh Rathore won the second prize (Rs. 2500) in national essay competition organised by BHU, Varanasi.

3. Adventure activity

Students of the university participated in Girnar Tracking, Narmada Tracking and 'Know Your Border' programme.

6.5 NSS

The brief information about NSS activities carried out during 2007-08 in each college is as follows.

(1) College of Agriculture, Junagadh

The enrolled number of students was as under.

Regular activity			Special Activity		
Boys	Girls	Total	Boys	Girls	Total
199	17	216	138	15	153

- Red Ribbon Club established on 02.04.2007 in which Hon'ble Vice Chancellor sent a message to achieve target in regularly planned health awareness programmes. In these activities 78 volunteers participated.
- Fifty one volunteers participated in one day camp for enrolment & orientation programme on 21.07.2007.
- In connection to celebrate of 58th Vanmahotsav, 43 volunteers participated in *vruksharopan* programme on 04.08.2007 held at Hiravadi farm.
- A one day camp organised on 29.09.2007 to test thelasmia and blood group for the 74 volunteers of first semester in co-operation with Sardar Patel Employee Federation at Domadiyavadi, Junagadh.

(2) College of Agricultural Engineering & Technology, Junagadh

The enrolled number of students was as under.

Regular activity			Special Activity		
Boys	Girls	Total	Boys	Girls	Total
95	08	103	52	04	56

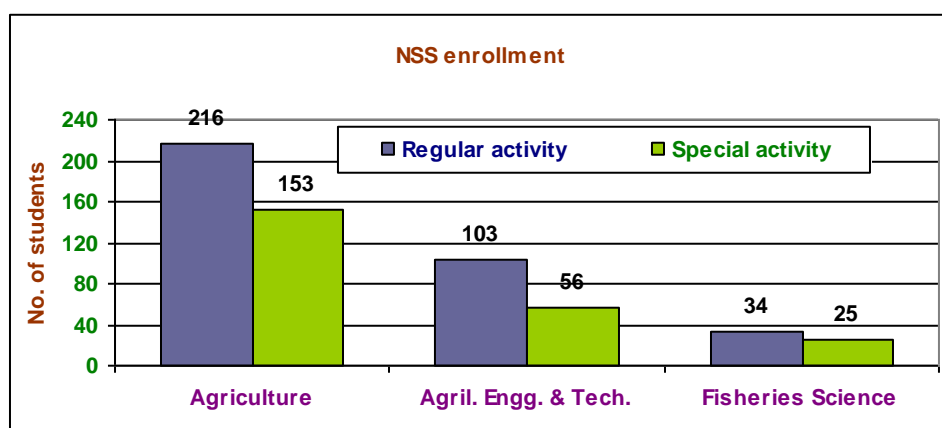
- Fifty volunteers participated in state level 58th Vanmohotsav programme at Somnath on 19.07.2007.

(3) College of Fisheries Science, Veraval

The enrolled number of students was as under.

Regular activity			Special Activity		
Boys	Girls	Total	Boys	Girls	Total
25	09	34	25	00	25

- Twenty five volunteers participated in a special camp organised during 03-12.03.2008 at Adri village. The activities like sanitation of public places, wall painting, health awareness, video show for fisheries enterprises, street drama, sports and adventurous activities were carried out.
- Eleven regular activities pertaining to Environment Day (05.06.2007), *Shramyagna* (01.07.2007), *Vruksharopan* (15.08.2007), NSS Day (24.09.2007), Aids Day (01.12.2007) and Pulse Polio Immunisation (06.01.2008) were carried out.



(4) Orientation programme

- Programme officer (NSS), Fisheries Science College, Veraval participated in a orientation programme for TOC/TORCs and other NSS functionaries held at Rajiv Gandhi National Institute of Youth Development, Sriperumbudur (Chennai) during 29-31.03.2008.

6.6 NCC

At present the NCC activities are not being conducted in the university.

6.7 Students' Magazine

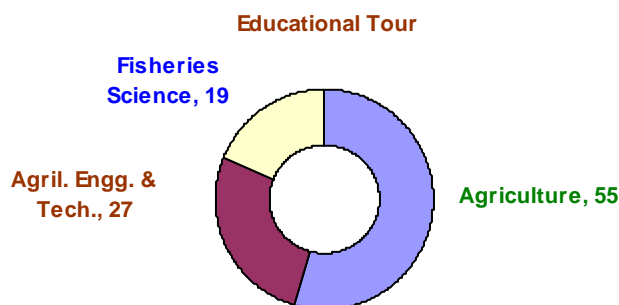
Colleges publish the Magazine at certain interval.

6.8 Educational Tour

The Junagadh Agricultural University conducting the educational tour under RAWE programme for every year. The aim of this tour is to show directly the location specific activities of research and education of different Centres.

The education tour schedules of different colleges were as under:

Sr. No.	College	No. of students	Period
1.	College of Fisheries Science	19	18.04.07 to 01.05.07
2.	College of Agriculture	55	15.10.07 to 04.11.07
3.	College of Agril. Engineering & Technology	27	15.11.07 to 05.12.07



6.9 Financial Assistance to Students

In Junagadh Agricultural University following scholarships are awarded to the students.

1. National Talent Scholarship (NTS)

Awarded to students of other states nominated by ICAR on the basis of merit and written test @ Rs. 12000 per student per annum. During the period, 12 students received this scholarship.

2. Merit Cum Means Scholarship (MCM)

Awarded by ICAR to five meritorious students in each faculty. The amount of this scholarship is Rs. 2040 per annum. During the period, not a single student received this scholarship.

3. JAU UG Scholarship

Awarded by Junagadh Agricultural University to five girls students in each faculty @ Rs. 6000 per student per annum. If girls' candidates are not available, it is awarded to economically backward students on the basis of merit.

4. JAU PG Scholarship

Awarded by Junagadh Agricultural University to the basis of merit to four students for Master degree @ Rs. 12000 and two students for Ph.D @ Rs. 18000 per student per year.

5. Merit & Poor Merit Scholarship

This scholarship is awarded to economically backward students by the Department of Social Welfare of the state @ Rs. 720 per student. During the report period, 24 students received this scholarship.

6.10 Students discipline

The high discipline, character build up, sportsman spirit, harmony and unity are developed among students through sports, cultural, spiritual, NSS and adventurous activities. No serious incidence of indiscipline was recorded during the year.

6.11 Other Activities

(A) Medals award in third convocation

The third convocation of Junagadh Agricultural University was held on 27.02.2008 in which twenty nine medals were awarded to meritorious students as mentioned here after.

❖ Chancellor Gold Medal

1. Awarded to Shri Saini Kunal Mahendrapalsinh for overall best performance at Post Graduate level in Agriculture faculty for the year 2006-07.
2. Awarded to Shri Karkar Jigneshkumar Bhikhalal for overall best performance at Post Graduate level in Agricultural Engineering & Technology faculty for the year 2006-07.

❖ Vice Chancellor Gold Medal :

1. Awarded to Shri Dholariya Ashokkumar Vrujlal for overall best performance in Agricultural faculty for the year 2005-06.
2. Awarded to Shri Khunt Sanjaykumar Madhubhai for overall best performance in Agricultural Engineering & Technology faculty for the year 2005-06.
3. Awarded to Shri Chudasama Bharatkumar Govindji for overall best performance in Fisheries Science faculty for the year 2005-06.

❖ Donar's Gold Plated Silver Medal

Faculty of Agriculture

1. Late Devang B. Bhatt and Rajesh D. Kuchhadiya gold plated silver medal was awarded to Kum. Madhu Bala for the highest GPA in Agril. Economics in B.Sc. (Agri.) degree course for the year 2005-06.
2. Shrimati Ushaben B. Bhatt and Shri B. U. Bhatt gold plated silver medal was awarded to Kum. Madhu Bala for the highest OGPA in B.Sc. (Agri.) degree course for the year 2005-06.
3. Shri Jerambhai Veljibhai Timbadiya, Kheti Vikas Kendra, Junagadh gold plated silver medal was awarded to Kum. Madhu Bala for the highest GPA in the subject of Agril. Entomology and Plant Pathology in B.Sc. (Agri.) degree course for the year 2005-06.

4. Akshay Seed Tech Co., Junagadh gold plated silver medal was awarded to Kum. Madhu Bala for the highest OGPA in B.Sc. (Agri.) degree course for the year 2005-06.
5. Dr. T.L. Dholariya gold plated silver medal was awarded to Kum. Madhu Bala for the highest GPA in the subject of Agril. Botany, Plant Breeding & Genetics in B.Sc. (Agri.) degree course for the year 2005-06.
6. Western Agri. Seeds (P) Ltd. gold plated silver medal was awarded to Kum. Madhu Bala for the highest GPA in the subject of Plant Breeding & Genetics in B.Sc. (Agri.) degree course for the year 2005-06.
7. Late Shri Ahir Rambhai Jivabhai Der gold plated silver medal was awarded to Shri Vinja Ranavaya for the highest GPA in the subject of Agril. Chemistry & Soil Science in B.Sc. (Agri.) degree course for the year 2005-06.
8. Late Shri Shersiya Alibhai Jalalabhai gold plated silver medal was awarded to Kum. Madhu Bala for the highest GPA in the subject of Agril. Entomology and Plant Pathology in B.Sc.(Agri.) degree course for the year 2005-06.
9. Shri B.J. Jadeja gold plated silver medal was awarded to Kum. Madhu Bala for the highest GPA in the subject of Agronomy in B.Sc. (Agri.) degree course for the year 2005-06.
10. Agril. Scientist Late Prof. Vallabhbhai J. Patel gold plated silver medal was awarded to Kum. Madhu Bala for the highest GPA in the subject of Plant Breeding & Genetics (including Botany) and Plant Physiology in B.Sc. (Agri.) degree course for the year 2005-06.
11. Dr. P.A. Bhalani gold plated silver medal was awarded to Shri Patel Nikunj Kumar Pravinchandra for the highest GPA in the subject of Agril. Entomology in B.Sc. (Agri.) degree course for the year 2005-06.
12. Late Shri Gordhanbhai G. Patel gold plated silver medal was awarded to Shri Kumbhani Jitendrakumar Zaverbhai for the highest GPA in the subject of Horticulture in B.Sc. (Agri.) degree course for the year 2005-06.
13. Shri Laljibhai H. Ghelani gold plated silver medal was awarded to Shri Vinja Ranavaya for the highest GPA in the subject of Agronomy & Soil Science in B.Sc. (Agri.) degree course for the year 2005-06.
14. Late Indrajitsinh Jaysinh Chauhan gold plated silver medal was awarded to Kum. Madhu Bala for the highest OGPA in B.Sc. (Agri.) degree course for the year 2005-06.

15. Late R.J. Patel Memorial gold plated silver medal was awarded to Kum. Madhu Bala for the highest GPA in Agril. Economics in B.Sc. (Agri.) degree course for the year 2005-06.
16. Late Dr. V.J. Vora gold plated silver medal was awarded to Shri Parmar Pradipsinh Bahadursinh for the highest GPA in Agril. Entomology in M.Sc. (Agri.) degree course for the year 2006-07.

Faculty of Agricultural Engineering and Technology

17. Dr. J.S. Patel memorial ISAE gold plated silver medal was awarded to Shri Kathiriya Nareshkumar Jerambhai for the highest OGPA in B.Tech. (Agri. Engg.) degree course for the year 2005-06.
18. Shri M. M. Patel (Morbi) Ex. Agricultural Engineer gold plated silver medal was awarded to Shri Kathiriya Nareshkumar Jerambhai for the highest OGPA in B.Tech. (Agril. Engg.) degree course for the year 2005-06.
19. Late Smt. Kamladevi Ugamraj Mehta gold plated silver medal was awarded to Shri Kathiriya Nareshkumar Jerambhai for the highest GPA in the subject of Farm Machinery & Power in B.Tech.(Agri.Engg.) degree course for the year 2005-06.
20. Param Poojya Pragdasbapa's Ramvadi No. 1 Annakshetra Trust (Junagadh) & Atmiya Anantharsh Bhagvandas Memorial Trust (Juna Manka) Dist. Patan (NG) gold plated silver medal was awarded to Shri Kathiriya Nareshkumar Jerambhai for the highest GPA in the subject of Agril. Process Engineering in B.Tech. (Agril. Engg.) degree course for the year 2005-06.
21. Late Shrimati Kamlaben Jagjivanbhai Gondhiya, Shilpin Electronics, Junagadh gold plated silver medal was awarded to Shri Kathiriya Nareshkumar Jerambhai for the highest GPA in the subject of Renewable Energy in B.Tech. (Agril. Engg.) degree course for the year 2005-06.
22. CAET Alumni Association, Junagadh gold plated silver medal was awarded to Shri Kathiriya Nareshkumar Jerambhai for the highest GPA in the subject of Soil & Water Engineering in B.Tech. (Agril. Engg.) degree course for the year 2005-06.

Faculty of Fisheries Science

23. Late Shri Dharmdas Choithram Gagvani gold plated silver medal was awarded to Shri Ashish Mishra for the highest OGPA. in B.F.Sc. degree course for the year 2005-06.
24. The Sea Food Exporters Asso. of India, Veraval gold plated silver medal was awarded to Shri Ashish Mishra for the highest OGPA in B.F.Sc. degree course for the year 2005-06.

(B) Spiritual, National Spirit and Health Awareness Programme

- A special talk on "Role of parents/gardians in educational development of students" was delivered Shri Gijubhai Bharad a well-known educationist of Rajkot on 23.05.2007.
- Dr. Arunaben Sheth representative of Art of Living, Rajkot Centre delivered a talk on "Self management through stress management" on 21.07.2007.
- One week "*Shwashta Shibir*" was arranged during 05-11.08.2007 for staff members and students by Shri Maheshbhai Mehta (Veraval), a Saurashtra Zone representative of Patanjali Yogpith, Haridwar lead by Swami Ramdevji Maharaj.
- Swami Parmatmanandji of Munjka Ashram (Rajkot Dist.) expressed his thoughts on "Relativity of *Vedant* for happy life under present circumstances" on 12.09.2007.
- Dr. M.H. Mehata, Ex. Vice Chancellor, Gujarat Agricultural University delivered his scientific talk on "The coming rainbow revolution" on 27.09.2007.
- Shri M.L. Patel, President Patel Kelvani Mandal and Ex. State Minister of Irrigation delivered his talk on "Prospects of Kalpasar project in the development of Gujarat" on 03.10.2007.
- Warm welcome was given to *Bhakti Yatra* organised by BAPS Swaminarayan Sampraday on 20.10.2007.
- Pujya Doctor Swami of BAPS delivered his holy thoughts on "*Jivan Jivavani Kala*" on 30.10.2007.
- Dr. H.C. Pathak, Director of Finance, ICAR, New Delhi delivered a lecture and discussed among the teachers / Agril. officers on 29.11.2007 regarding the financial assistance by ICAR.
- Dr. Harishankar Singh, Faculty of Sardar Patel Mahila B.Ed. College, Junagadh put his thoughts on environment awareness during inauguration of his book entitled "Environment Education" on 17.12.2007.
- A special lecture on "Relevance of the Cs and Ps of the GMG for 21st century India" was delivered by Prof. Mukul Asher, a senior Prof. of Lee Kaum Yew School of Public Policy, Singapore on 24.01.2008
- Achraya Aryanareshji from Himachal Pradesh expressed his views on "Youth and Nation" with the students and staff members on 28.01.2008.
- Some of undocumented facts of Junagadh State during India independent movement were highlighted by Dr. Anilbhai Kikani, Ex. Head, Itihas Bhavan, Saurashtra University, Rajkot on 31.01.2008.

- A spiritual talk was delivered on "Positive life style" by Brahmakumari Nehaben on 19.03.2008.

(C) Activities published in news papers

- i) "Role of parents/guardians in educational development of students" was delivered Shri Gijubhai Bharad, Sandesh, Date 25.05.07; RaviSandhya, Date 27.05.07.
- ii) *Vruksharopan* programme at JAU, Junagadh on the celebration of 58th *Vanmahotsav* a special programme for *Ambavatika*, Sandesh, Date 06.08.07.
- iii) Shri M.L. Patel, President, Patel Kelvani Mandal and Ex. State Minister for Irrigation delivered his talk on "Prospects of Kalpasar project" Sanjsamachar, Date 08.10.07.
- iv) Pujya Doctor Swami of BAPS delivered his holy thoughts on "*Jivan Jivavani Kala*", Sandesh, Date 06.11.07.
- v) Dr. Harishankar Singh, Faculty of Sardar Patel Mahila B.Ed. College, Junagadh put his thoughts on environment awareness during inauguration of his book entitled "Environment Education", Sandesh, Date 19.12.07.
- vi) Leadership Training Programmes for students, Sandesh, Date 30.01.08.
- vii) Second Gujarat State Inter Agril. Universities Cultural-Literary Competition Programme at JAU, Junagadh, Sandesh, Date 12.02.08; Akila, Date 14.02.08.
- viii) Leadership Training Programmes for Teachers / Agril. Officers, Sandesh, Date 12.03.08.

(D) Students / Staff training Programmes

International School for Public Leadership, Gandhinagar organised three Leadership Training Programmes for students and staff members of Junagadh Agricultural University as under.

Sr. No.	Period	Participants	No. of Trainees
1.	22.05.07 to 27.05.07	Students	47
2.	21.01.08 to 25.01.08	Students	42
3.	18.02.08 to 26.02.08	A.O., Asst. Prof., Asso. Prof.	38

CHAPTER - VII

ESTATE MANAGEMENT

7.1 Estate Department

Under the guideline and direction of Vice Chancellor, the Executive Engineer, Deputy Engineer and Junior Engineers are working for construction & its related works as well as repairs & maintenance of buildings & roads at campus level and at sub-centres of the university. Shri J.D. Hadiyal is working as the Executive Engineer of Junagadh Agricultural University.

The main function of this department is water supply, maintenance of drainage system, street light, electrification, repairing of electrical faults, maintenance & repairs of the university office buildings, residential quarters, internal roads, etc. The office of the Executive Engineer is also working as a custodian of the university properties. Besides this, maintenance of university guest house and allotment of quarters to university employees/officers is also done by this office.

7.2 Construction Committee

A committee constituted for the purpose of construction work during 2007-08 was as given hereunder.

Sr. No.	Name	Designation	Status
1.	Dr. B.K. Kikani	Vice Chancellor	Chairman
2.	Dr. D.B. Kuchhadiya	Director of Research & Dean PG Studies	Member
3.	Dr. N.C. Patel	Dean, Faculty of Agril. Engineering & Technology	Member
4.	Shri P.R. Jadeja	Account Officer-cum-Comptroller	Member
5.	Shri J.D. Hadiyal	Executive Engineer	Secretary

Four meetings were held by the committee on the following dates.

Sr. No.	Meeting No.	Date	Place	Chairman
1.	Thirteenth	05.07.2007	Junagadh	Dr. B.K. Kikani
2.	Fourteenth	11.09.2007	Junagadh	Dr. B.K. Kikani
3.	Fifteenth	23.10.2007	Junagadh	Dr. B.K. Kikani
4.	Sixteenth	05.03.2008	Junagadh	Dr. B.K. Kikani

7.3 Quarters Allotment Committee

A committee constituted for the allotment of quarters during 2007-08 was as given below.

Sr. No.	Name	Designation	Status
1.	Dr. D.B. Kuchhadiya	Director of Research & Dean PG Studies	Chairman
2.	Dr. D.B. Kuchhadiya	Registrar	Member
3.	Dr. A.M. Parakhia	Director of Extension Education	Member
4.	Dr. P.G. Butani	Dean, Faculty of Agriculture	Member
5.	Dr. N.C. Patel	Dean, Faculty of Agril. Engineering & Technology	Member
6.	Shri J.D. Hadiyal	Executive Engineer	Secretary

Two meeting was held by the committee during the year under report.

Sr. No.	Meeting No.	Date	Place	Chairman
1.	First	12.06.2007	Junagadh	Dr. D.B. Kuchhadiya
2.	Second	26.12.2007	Junagadh	Dr. D.B. Kuchhadiya

7.4 Construction Works

Junagadh Agricultural University is aided by the Government of Gujarat. The Indian Council of Agricultural Research, New Delhi as well as many other agencies are also allotting grant and funds for the purpose of Education, Research and Extension Education.

Details of expenditure for construction work during the year 2007-08 under different budget heads are given hereunder.

Sr. No.	B.H.	Name of Work.	Expenditure (Rs.)
1.	1534-00	Minor Original Works	1011073
2.	2704-02	Construction of Farmers' Hostel at Junagadh	8600000
3.	2704-12	Additional Facility in Farmers' Hostel at Junagadh	714500
4.	2704-13	Construction for KVK at Khapat	4865000
5.	2704-13	Electrical Installation 'C' type quarters (3-Units) for KVK at Khapat	73650
6.	2704-13	Electrical Installation 'D' type quarters (2-Units) for KVK at Khapat	58550
7.	2704-13	Electrical Installation 'E' type quarters for KVK at Khapat	38300
8.	2704-13	Electrical Installation Trainees' Hostel for KVK at Khapat	94900
9.	2704-13	Electrical Installation for Administrative-cum-Laboratory Building for KVK at Khapat	163700

10.	2704-14	Construction of KVK Building at Amreli	4832000
11.	2704-14	Electrical Installation 'C' type quarters (3-Units) for KVK at Amreli	73650
12.	2704-14	Electrical Installation 'D' type quarters (2-Units) for KVK at Amreli	58550
13.	2704-14	Electrical Installation 'E' type quarters (2-Units) for KVK at Amreli	38300
14.	2704-14	Electrical Installation Trainees' Hostel for KVK at Amreli	94900
15.	2704-14	Electrical Installation for Administrative-cum-Laboratory Building for KVK at Amreli	163700
16.	2704-18	Construction of KVK Building at Nana Kandhasar	3494000
17.	2704-18	Electrical Installation 'C' type quarters (3-Units) for KVK at Nana Kandhasar	73650
18.	2704-18	Electrical Installation 'D' type quarters (2-Units) for KVK at Nana Kandhasar	58550
19.	2704-18	Electrical Installation 'E' type quarters for KVK at Nana Kandhasar	38300
20.	2704-18	Electrical Installation Trainees' Hostel for KVK at Nana Kandhasar	94900
21.	2704-18	Electrical Installation for Administrative-cum-Laboratory Building for KVK at Nana Kandhasar	163700
22.	4510-00	M & R	1192935
23.	10115-00	P/F MS Grill around Fountain of CAET at Junagadh	39500
24.	10115-00	Renovation of Fountain for CAET at Junagadh	36300
25.	10138-00	P/F Granite Laboratory Platform in Sea-food Training Hall at Veraval	34300
26.	10501-00	Construction of Administrative Building for VC Office at Junagadh	4951408
27.	10501-00	Electrical Installation of Administrative Building of VC Office at Junagadh	1387000
28.	10504-02	Renovation of Auditorium Building at Junagadh	292363
29.	10504-01	Expansion of Health Centre at Junagadh	481414
30.	10504-01	Providing Additional Facility in Health Centre at Junagadh	129900
31.	10505-01	Providing Street Light Facility at Junagadh	1092210
32.	10506-00	Expansion of Community Hall at Junagadh	728688
33.	10508-01	Construction of Agricultural Technology Information Centre Building at Junagadh	778256
34.	10508-01	Modernization of Conference Hall in ATIC Building at Junagadh	342050
35.	10508-01	Addition Work for Modernization of SSK Building with Alex Aluminium Composite Panel at Junagadh	70100
36.	10512-00	Construction of Compound Wall at Amreli	35018
37.	10520-00	Renovation of Cattle Shed at CBF, Junagadh	445092
38.	10520-00	Re-carpeting of Existing Road from Main Gate to Old Milking Parlour for CBF at Junagadh	163400

39.	10569-00	P/F Alex Panelling in Main College Building at Fisheries College, Veraval	26000
40.	10600-00	Classified Works at Campus/Farm	1023022
41.	10712-05B	P/F Decorative Structural Gate near Motibaug Gate No. 1 at Junagadh	49700
42.	10712-05B	P/F Decorative Welcome Board near Motibaug Gate No. 1 at Junagadh	37200
43.	10712-05B	P/F Alex Aluminium Composite Panel Work to Motibaug Garden Decorative Gate (Inside) at Junagadh	101200
44.	10712-05B	Supplying, Stacking & Spreading of Hard Murrum on Roadside from Sugarcane Dargah to Cotton Farm at Junagadh	34700
45.	10712-05B	Supplying, Stacking & Spreading of Hard Murrum on Roadside from Paritalav to Jamrukhi to Sugarcane Farm at Junagadh	49300
46.	10712-05B	Supplying, Stacking & Spreading of Hard Murrum on Roadside from Sugarcane Farm to Dargah at Junagadh	49800
47.	10712-05B	Supplying, Stacking & Spreading of Hard Murrum on Roadside near DR Office at Junagadh	8600
48.	10712-05B	Supplying, Stacking & Spreading of Hard Murrum and Binder/Murrum on existing Roadside at Junagadh	50000
49.	10712-05B	Supplying, Stacking & Spreading of Hard Murrum on Roadside from Paritalav to CAET and Gymnasium at Junagadh	22200
50.	10712-05B	P/F Remaining Chain Link Wire Fencing (Right side) up to Opposite to Hose in Motibaug at Junagadh	49900
51.	10712-05B	Supplying, Stacking & Stacking of Hard Murrum on Roadside from RTTC to CAET at Junagadh	26500
52.	10712-05B	P/F RCC Decorative Type Curbing on Roadside from Bakery School Cross to Workshop Cross at Junagadh	46200
53.	10712-05B	P/F RCC Decorative Type Curbing on Roadside from Pathology Cross to CAET Cross at Junagadh	49900
54.	10712-05B	P/F RCC Decorative Type Curbing on Roadside from Workshop Cross to CAET at Junagadh	49900
55.	10712-05B	P/F RCC Decorative Type Curbing on Roadside from Farm Engineering to Bakery School Cross & Pathology Cross at Junagadh	49900
56.	10712-05B	Construction of Compound Wall (Remaining Part) for Girls' Hostel at Junagadh	246500
57.	10712-05B	Modernization of Mangal Nivas Guest House at Junagadh	291300
58.	10926-00	Providing Decorative Garden Light from Agril. College Main Building to Motibaug Fountain Circle at Junagadh	96350
59.	10926-00	Providing Decorative Garden Light from SSK Gate to Auditorium Road at Junagadh	112400
60.	10967-00	P/F PVC Sliding Window & Outside Colour Work to Gymnasium Building at Junagadh	49975
61.	10967-00	Renovation of Toilet Block of Gymnasium Building at Junagadh	49300

62.	10967-00	Renovation & Repairing of Gymnasium & Badminton Hall at Junagadh	50000
63.	18021-00	Construction of Food Testing Laboratory at Junagadh	3652697
64.	18021-00	Construction of Conference Hall for Soil Testing Laboratory & Connected Corridor to Bio-chemistry building at Junagadh	1601808
65.	18021-00	Additional Facilities for Food Testing Laboratory Building at Junagadh	2499800
66.	18126-02	Construction of Implement Shed under Centrally Sponsored Scheme on Spices Crops under National Horticulture Mission	149941
67.	18126-02	Construction and Extension of Seed Processing Storage Unit for Vegetable Research Station at Junagadh	489689
68.	18126-02	Construction of Implement Shed for Vegetable Research Station at Junagadh	149800
69.	18127-02	Construction of Mega Seed Project	2743532
70.	18127-02	Renovation of Godown of Pulse Research Station at Junagadh	98302
71.	18127-02	Renovation of Godown of Wheat Research Station at Junagadh	98502
72.	18127-02	Construction of Compound Wall & Approach Road for Mega Seed Complex at Junagadh	871200
73.	18127-02	Construction of Approach Road for Threshing Floor at Junagadh	49200
74.	18127-02	P/A Paint to Mega Seed Complex at Junagadh	20300
75.	18127-02	Construction of Conditional Seed Godown for Mega Seed Project at Junagadh	416550
76.	18127-02	Supplying, Stacking & Spreading of Hard Murrum and Binder Materials on Roadside of Mega Seed Project at Junagadh	11450
77.	18128-02	Seed Production in Agril. Horticulture :- (1) Construction of Pump Houses at Junagadh (2) Providing and Fixing Chain Link Wire Mesh Neat at Junagadh	479180 468605
78.	18128-02	Construction of Conditional Modern Godown for Horticulture Department in Mega Seed Project at Junagadh	416550
79.	18128-02	Renovation/Repairing of Existing Godown in Lalbaug Horticulture Department at Junagadh	399800
80.	18128-00	Construction under Seed Production in Agril Crops & Fisheries Junagadh	1658937
81.	18246-89	Work for the Scheme of Agro Processing Centre for Value Addition & Technical Support Services under the Experiential Learning Setting Up the Facilities for Hands on Training at CAET at Junagadh	994000
82.	18246-05	Modernization of Front Portion of SSK Building with Composite Panel at Junagadh	315600

83.	18246-05	Modernization of Entrance Portion of SSK Gate with Decorative Light at Junagadh	42200
84.	18246-05	Modernization of Motibaug Gate No. 1 Photography High-Light with Metal Halide Lamp at Junagadh	19300
85.	18246-05	Modernization of Sardar Smruti Kendra Wall, Photography with Metal Halide Lamp at Junagadh	36450
86.	18246-05	Modernization of Auditorium Building Entrance High-Light with Metal Halide Lamp at Junagadh	19250
87.	21500-00	Providing Pre-cast VC Paving Approach to Girls' Hostel at Junagadh	50000
88.	23500-00	Renovation of Manhar Kutir VIP Guest House at Junagadh	150000
89.	23500-00	Providing Wall Panelling, False Ceiling in FF Common Room Dinning & PVC Tiles for Manhar Kutir VIP Guest House at Junagadh	419200
90.	23500-00	Modernization/Remodelling of Right side Front Portion of Administrative Building of VC Office at Junagadh	745600
91.	23500-00	Modernization/Remodelling of Main Entrance Front Portion of Administrative Building of VC Office at Junagadh	994100
92.	23500-00	Modernization/Remodelling of Left side Front Portion of Administrative Building of VC Office at Junagadh	745600
93.	23500-00	Construction of Compound Wall in Front side of Girls' Hostel at Junagadh	128100
94.	23500-00	P/F MS Protection Grill in Washing Place for Girls' Hostel at Junagadh	19900
95.	23501-00	Remodelling/Modernization of CAET Front Portion with Alex Aluminium Composite Panel Work at Junagadh	999400
96.	23501-00	Remodelling/Modernization of CAET Front Portion Window and Ventilation Alex Glazing Work at Junagadh	181000
97.	23501-00	P/F Perforated Galvanized Rolling Shutter at Front of CAET at Junagadh	48100
98.	23501-00	P/L Polish Kota Stone & Elevation Tiles at Front of CAET at Junagadh	33800
99.	23501-00	Providing Chemical Waterproofing Treatment on Terrace of RE & RE Department (Wing-G) of CAET at Junagadh	425600
100.	23501-00	Providing Chemical Water Proofing Treatment on Terrace of SWE Department (Wing-D) of CAET at Junagadh	602900
101.	23501-00	Providing PVC Tiles in Language Laboratory Floor for Library at Junagadh	49450
102.	23501-00	P/L Chemical Water Proofing Treatment on Terrace of Connected Passage of various Departments of CAET at Junagadh	212300
103.	23501-00	Providing Chemical Water Proofing Treatment on Terrace of RE & RE Department (Wing-C) of CAET at Junagadh	514300

104.	23501-00	Providing Chemical Water Proofing Treatment on Terrace of FMP (Wing-E) CAET at Junagadh	609700
105.	23501-00	P/A Plastering for Connected Passage of various Departments of CAET at Junagadh	35500
106.	23501-00	P/A paint to Connected Passage of various Departments of CAET at Junagadh	49970
107.	23502-00	Construction of Compound Wall for Ladies' Hostel at Veraval	49100
108.	23502-00	P/F MS Grill in Room Balconies and MS Gate for Compound Wall for Ladies' Hostel at Veraval	47500
109.	23502-00	Modernization of Main Building Front & Side Portion with Alex Panelling of Fisheries College at Veraval	935800
110.	23502-00	Providing RCC Approach Road Connected to Hands on Training Centre at Fisheries College, Veraval	49300
111.	23502-00	Renovation of Compound Wall Left side of Main Building at Fisheries College at Veraval	49800
112.	23502-00	Renovation of Kitchen with Washing Platform in Boys' Hostel at Fisheries College, Veraval	44000
113.	23502-00	Renovation of Dinning Hall in Boys' Hostel at Fisheries College, Veraval	49500
114.	23502-00	Modernization of Main Building Front Right side Classroom & Laboratory Portion with Alex Panelling of Fisheries College at Veraval	376900
115.	23504-00	Modernization of Language Laboratory & Conference Hall with Replacement of Doors in Library Building at Junagadh	654200
116.	23510-00	Providing RCC Approach Road Connected to Main Building at Fisheries College, Veraval	49300
117.	23514-00	Spectrum Wall Finishing with Texture Wall and Spectrum Spray to Gate No. 2 at Junagadh	69300
118.	23514-00	P/A Spectrum Wall Finishing with Granulised to Gate No. 1 at Junagadh	57700
119.	23514-00	P/A Spectrum Wall Finishing with Granulised to Gate No. 1 at Junagadh	95800
120.	23517-00	P/F RCC Decorative Type Curbing on Roadside from VC Bungalow to Health Centre at Junagadh	49980
121.	23517-00	P/F RCC Decorative Type Curbing on RHS of Road from Statistics Department to Pathology Department & up to Auditorium at Junagadh	35950
122.	23520-00	Supplying, Stacking & Spreading of Hard & Soft Murrum on various Roads/Curbing side at Junagadh	27300
123.	23521-00	P/F RCC Decorative Type Curbing from LHS of DSW/Seed Godown/Cross Road up to Chemistry/Bio-Chemistry Department Passage at Junagadh	49975
124.	23521-00	P/F RCC Decorative Type Curbing on Roadside from LHS of Chemistry/Bio-chemistry Department Passage up to DR office Corner & VC Office to DSW/RTTC at Junagadh	49975

125.	23521-00	P/F RCC Decorative Type Curbing on Roadside from VC Bungalow and Health Centre to Canteen at Junagadh	49995
126.	23521-00	P/F RCC Decorative Type Curbing on LHS Road from Extension/Statistics Department up to Auditorium at Junagadh	36450
127.	23522-00	P/F RCC Decorative Type Curbing on Roadside from Canteen to DSW Office at Junagadh	44200
128.	23522-00	Providing Entrance Gate in Compound Wall for Girls' Hostel, CAET at Junagadh	33000
129.	23523-00	Providing Pre-cast CC Block/Paving in Left side of Main Building (Class Laboratory side) at Fisheries College, Veraval	49200
130.	23523-00	Providing Pre-cast CC Block/Paving in Right side of Main Building (Girls' Hostel side) at Fisheries College, Veraval	49200

CHAPTER - VIII

FINANCE AND ACCOUNTS

8.1 General

Junagadh Agricultural University has become functional from 01.05.2004 after the bifurcation of Gujarat Agricultural University into four separate Universities. The arrangement has been made for university finance administration as per the Resolution Chapter-11. The office work of the Accounts Officer-cum-Comptroller has been started under the control of Vice Chancellor.

During the period under the report, Shri P.R. Jadeja as in-charge Accounts Officer-cum-Comptroller looked after the responsibility of budget, accounts, internal audit and physical verification of stores etc.

The management of funds started separately after establishment of Junagadh Agricultural University. The funds were obtained from the State Government, Central Government and Other Agencies. During the period of report, the State Government provided the budget for the plan and non-plan separately for the university.

8.2 Budget

The State Government has sanctioned Rs. 888.91 lakhs under Plan Budget and Rs. 2652.47 lakhs under Non Plan Budget. The revised non-plan budget was put up as per the need of the university, but State Government has not sanctioned additional grant and hence, there was a deficit of Rs. 577.32 lakhs.

8.3 Audit

The University is entrusted with the work of Internal Audit, Local Funds Audit and Accountant General Audit.

During the period under report Local Fund, Junagadh has done the audit work for the year 2004-05 and settled the primary audit objections.

The audit work has been done by the Accountant General, Audit Office, Rajkot for the financial year 2004-05 of the University.

The internal audit reports of Research Stations, College of Agriculture and College of Agril. Engineering & Technology were submitted to the university.

8.4 Sources of Income and Expenditure

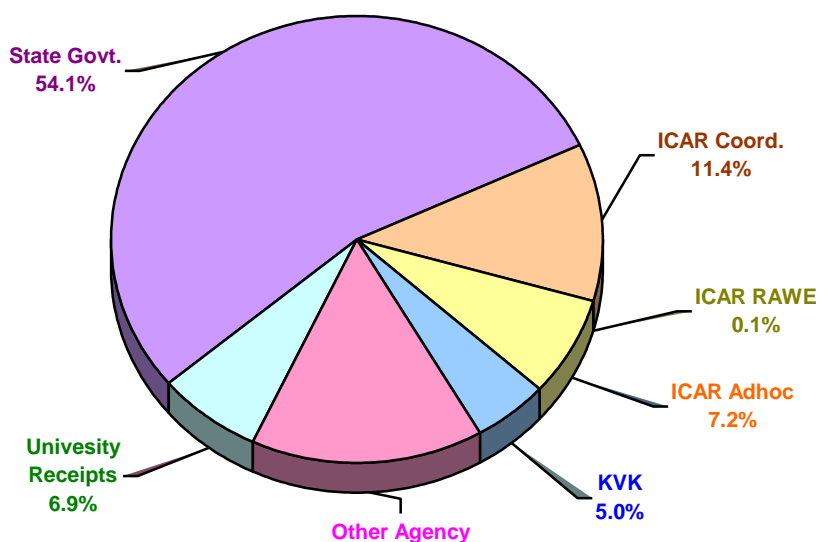
The statement showing the details of source of income and expenditure of the university for the year 2007-08 is given below.

Source-wise income (Rs. in lakh)

(From 01.04.07 to 31.03.08)

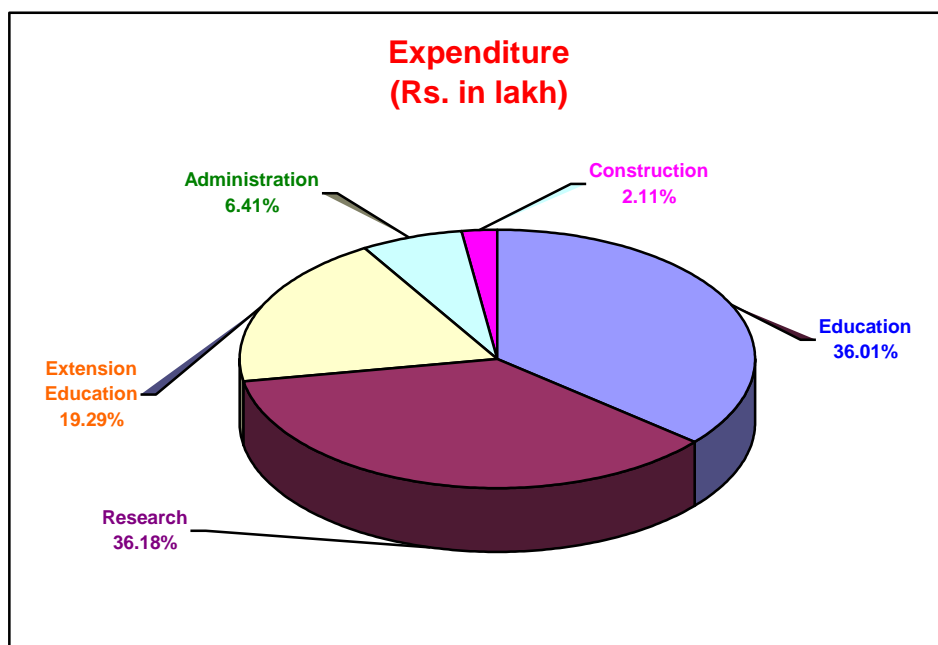
Sr. No.	Details	Opening balance	Grant received	Total grant	Percentage of total grant
1.	State Govt.	-501.57	3541.38	3039.81	54.11
2.	ICAR Coord.	202.38	436.77	639.15	11.38
3.	ICAR RAWE	0.48	5.52	6.00	0.11
4.	ICAR Adhoc	6.68	400.10	406.78	7.24
5.	KVK	-4.00	282.78	278.78	4.96
6.	Other Agency	345.01	512.48	857.49	15.26
7.	University Receipts	0.00	389.96	389.96	6.94
	Total	48.98	5568.99	5617.97	100.00

Sources of income



The Details of Expenditure (Rs. in lakh)

Sr. No.	Details	Expenditure	Percentage of total expenditure
1	Education	2051.20	36.01
2	Research	2060.91	36.18
3	Extension Education	1098.97	19.29
4	Administrative Expenditure	365.26	6.41
5	Construction	120.31	2.11
	Total	5696.65	100.00



8.5 Physical Store Verification

When the University was newly established the arrangements of permanent staff for Physical Store Verification was not done but the planning for the work of Physical Store/Stocks Verification was necessary, hence, the work was started with the help of internal arrangements. During the period of the report, physical verification reports for eight centres were submitted to the university.

8.6 Pension

The pension cases on account of superannuation, retirement and voluntary retirement of the officers/employees from the University have been settled granting the pension/commuted pension and gratuity. Total 40 cases (PPO No. 123 to 163) were sanctioned during the year and the payment was made to the staff/officers for their benefits of retirement.

8.7 Provident Fund

The financial arrangement for provident fund of staff was done as per the sanction received from the State Government with the help of District Treasury with PL Accounts. The new PF accounts were opened for newly appointed employees and 317 cases for Part-final Advance were sanctioned and payments made during the year under the report. Forty eight cases for the PF final payment were sanctioned and payments made during the year.

Total three claims of Provident Fund Linked Insurance were settled during the year.

Non-Plan, Plan, ICAR and Other Agency Schemes during 2005-06

No.	B.H.	Name of scheme	Centre
Govt. Non-Plan Schemes			
1.	3126-01	Establishment of Agril. College	Junagadh
2.	3226-00	Scheme of Design of Experiment	Junagadh
3.	4500-00	Vice Chancellor Office & Registrar Section	Junagadh
4.	4501-00	Director of Research Section	Junagadh
5.	4502-00	Comptroller Section	Junagadh
6.	4503-00	Executive Engineer Office	Junagadh
7.	4504-00	Director of Students' Welfare Section	Junagadh
8.	4505-00	Director of Extension Education Section	Junagadh
9.	4506-00	Medical Office	Junagadh
10.	4510-00	Maintenance & Repairs to University Buildings	Junagadh
11.	4511-00	House Rent Receipt	Junagadh
12.	4801-A	Award of Fellowship College of Agril. Engg. & Tech. and College of Fisheries Science	Junagadh, Veraval
13.	4807-00	Inter College Cultural Activities, College of Agril. Engg. & Tech.	Junagadh
14.	4812-00	Debate & Essay, College of Fisheries Science	Veraval
15.	4862-00	Inter College/University Sport Tournament, College of Agriculture/Agril. Engg. & Tech./Fisheries Science	Junagadh, Veraval
16.	4862-A	Inter Agril. School's Sports	Junagadh, Halvad
17.	4862-02	Inter Sport Tournament, LITC	Junagadh
18.	5002-00	Research in Bajra	Jamnagar, Mahuva
19.	5004-00	Research in Wheat	Junagadh, Mangrol
20.	5006-00	Research in Jowar	Targhadia
21.	5007-00	Scientific Works for Improvement of Cereals	Junagadh
22.	5008-00	Oilseed Research	Junagadh, Amreli, Jamnagar, Kodinar, Manavadar
23.	5009-00	Strengthening of Research in Cotton, Investigation of Fibre Crops other than Cotton, Development of Ramie Fibre	Amreli, Khapat, Junagadh
24.	5011-00	Research in Sugarcane	Kodinar
25.	5012-00	Research in Grasses	Dhari
26.	5013-00	Strengthening of Research in Vegetables (Tomato)	Junagadh
27.	5014-00	Research and Improvement in Fruit Crops	Mangrol, Mahuva, Junagadh
28.	5018-00	Research Studies in Agril. Economics	Junagadh
29.	5020-00	Research in Agril. Chemistry & Soil Science	Junagadh
30.	5025-00	Mechanized Commercial Farm	Junagadh
31.	5026-00	Research in Plant Diseases	Junagadh
32.	5042-00	Strengthening of Dry Farming Research Station	Targhadia, Ratia, Jam Khambhalia, Vallabhipur, Nana Kandhasar, Dhari, Sagdividi, Khapat, Junagadh

No.	B.H.	Name of scheme	Centre
33.	5044-00	Expansion of Plant Pathology Research	Junagadh
34.	5046-00	Weed Control	Junagadh
35.	5046-A	Botanical Garden and Plant Ecology	Junagadh
36.	5046-B	Cytogenetics	Junagadh
37.	5046-C	Herbarium	Junagadh
38.	5073-00	Research in Agricultural Engineering	Junagadh
39.	5075-00	Establishment of Seed Technology Cell	Junagadh
40.	5106-00	Strengthening of Departments by Providing Additional Equipments in View of Semester System	Junagadh
41.	5116-00	Establishment of Sardar Smruti Kendra	Junagadh
42.	5228-00	Project for Agricultural School	Junagadh, Halvad, Dhari
43.	5252-00	Farm Mechanic-cum-Artisan Centre	Junagadh
44.	5302-00	Research in Cattle Breeding Farm	Junagadh
45.	5353-00	Livestock Research Station	Junagadh
46.	5711-00	Establishment of Library	Junagadh
47.	5810-00	Project for Heath Centre	Junagadh
48.	5816-00	Students' Welfare	Junagadh
49.	6110-01	Strengthening of PG Teaching	Junagadh
50.	6119-00	Instructional Farm at Agril. College	Junagadh
51.	6221-00	Farm Advisory Service	Junagadh
52.	6228-01	Establishment of School of Bakery	Junagadh
53.	6316-00	Research of Bull Calves at Depot Attached to Cattle Breeding Farm	Junagadh
54.	6502-01	Department of Farm Engineering	Junagadh
55.	6502-02	Department of Plant Physiology	Junagadh
56.	6503-03	Department of Horticulture	Junagadh
57.	6503-04	Department of Bio-chemistry	Junagadh
58.	7082-A	NARP	Junagadh
59.	7082-B	NARP	Jam Khambhalia, Jamnagar
60.	7082-C	NARP	Dhari
61.	7115-00	Establishment of College of Agriculture	Junagadh
62.	7228-01	Strengthening of Extension, School of Baking	Junagadh
63.	7253-00	Establishment of Livestock Inspector Training Centre	Junagadh
64.	7401-00	Fisheries Research Scheme	Okha
65.	7402-00	Fisheries Research Scheme	Sikka
66.	8126-07	Fisheries Research Scheme	Veraval
67.	9091-00	NARP Phase-II	Junagadh
68.	9091-09	NARP Phase-II	Jonpur
69.	19002-00	Pension & Gratuity to Retired University Employees	Junagadh
Govt. Plan Schemes			
1.	10001-00	Ear Marked Information Technology	Junagadh
2.	10002-00	Strengthening of Research in Millet	Jamnagar
3.	10006-00	Strengthening of Research in Sorghum	Targhadia
4.	10007-00	Strengthening of Research in Pulses	Junagadh

No.	B.H.	Name of scheme	Centre
5.	10008-00	Strengthening of Research in Oilseeds (Groundnut)	Junagadh, Manavadar
6.	10009-00	To Establish Centres of Excellence for Cotton Research	Junagadh, Amreli, Ratia
7.	10013-00	Research in Vegetable Crops	Junagadh
8.	10027-00	Management of Salt Affected Soils & Poor Quality of Under Ground Water	Junagadh
9.	10044-01	Research in Bio-technology	Junagadh
10.	10078-00	Strengthening of Research in Dry Farming	Targhadia, Ratia
11.	10092-00	Strengthening of Tissue Culture Research & Development	Junagadh
12.	10093-00	Project on Fertigation in Horticultural Crops	Junagadh
13.	10094-00	Research for Integrated Pest management in Fruit Crops	Junagadh
14.	10095-00	Strengthening of Horticulture Research & Development Activities	Junagadh
15.	10096-00	Research on Micro-irrigation System in Saurashtra Region	Junagadh
16.	10101-01	Centre of Excellence on Soil and Water Management	Junagadh
17.	10101-02	Centre of Excellence on Soil and Water Management	Targhadia
18.	10101-03	Centre of Excellence on Soil and Water Management	Mangrol
19.	10101-04	Centre of Excellence on Soil and Water Management	Mahuva
20.	10115-00	Strengthening of College of Agril. Engg. & Technology	Junagadh
21.	10126-02	Modernization of the Departments of Agril. College	Junagadh
22.	10127-00	Establishment of Instructional Farm for College of Agril. Engineering & Technology	Junagadh
23.	10128-00	Lift Irrigation Project for Sugarcane Research Station	Kodinar
24.	10131-00	Research on Eco-friendly Biological Fertilizer	Junagadh
25.	10133-00	Establishment of New Sub-centre for Research in Garlic	Junagadh, Jamnagar
26.	10134-00	Expansion of Planning & Evaluation Cell	Junagadh
27.	10135-00	Establishment of Department of Plant Physiology, Tissue Culture	Junagadh
28.	10136-00	Library Facilities	Junagadh
29.	10137-00	Strengthening of Department of Aquaculture	Veraval
30.	10138-00	Strengthening of Fish Processing Technology Department	Veraval
31.	10139-00	Strengthening of College Library	Veraval
32.	10228-04	Upgrading of the Existing Agriculture School	Junagadh, Dhari, Halvad
33.	10253-00	Establishment of Livestock Inspector Training Centre	Junagadh

No.	B.H.	Name of scheme	Centre
34.	10303-05	Establishment of Gir Cattle & Jaffrabadi Buffaloes	Junagadh
35.	10303-13	Research for Improvement of Jaffrabadi Buffaloes in Saurashtra Area	Junagadh
36.	10318-00	Strengthening of Mobile Ambulatory Clinic	Junagadh
37.	10389-00	Optimization of Various Economics Traits in Relation to Maximizing Profit Function in Gir Cattle	Junagadh
38.	10505-00	Strengthening of Directorate of Extension Education	Junagadh
39.	10507-00	Upgrading of Existing Sardar Smruti Kendra	Junagadh
40.	10508-00	Establishment of Mali Training Centre	Junagadh
41.	10561-00	Award of JAU Fellowship to UG Students of Various Faculties	Junagadh
42.	10562-00	Establishment of WTO Cell	Junagadh
43.	10563-00	Addition of the Existing Facilities for Organizing Rural Agricultural Work Experience Programme	Junagadh
44.	10564-00	Strengthening of Facilities for Sericulture, Apiculture and Mushroom Cultivation	Junagadh
45.	10565-00	Establishment of Modern Green House	Junagadh
46.	10566-00	PG Programme in College of Agricultural Engineering & Technology	Junagadh
47.	10567-00	Establishment of Central Instrument Centre	Junagadh
48.	10568-00	Strengthening and Modernization of the Existing Health Centre	Junagadh
49.	10569-00	Establishment of Department of Fisheries Engineering & Computer Laboratory	Veraval
50.	10570-00	Centre of Communication Network	Junagadh
51.	10571-01	Establishment of Transfer of Technology Centre	Junagadh
52.	10571-02	Establishment of Transfer of Technology Centre	Targhadia
53.	10571-03	Establishment of Transfer of Technology Centre	Jamnagar
54.	10571-04	Establishment of Transfer of Technology Centre	Amreli
55.	10572-01	Agricultural Technology Information Centre	Junagadh
56.	10572-02	Agricultural Technology Information Centre	Targhadia
57.	10572-03	Agricultural Technology Information Centre	Jamnagar
58.	10572-04	Agricultural Technology Information Centre	Amreli
59.	10573-00	Research on Tillage Technology	Junagadh
60.	10574-00	Research on Rejuvenation of Degraded Costal Agro-eco-systems of Saurashtra	Junagadh
61.	10575-00	Strengthening Research in Sesamum	Amreli
62.	10576-00	Research on Post Harvest Technology of Important Crops of Saurashtra	Junagadh
63.	10577-00	Value Added Products from Fish/Shellfish	Veraval
64.	10578-00	Establishment of Inland Fisheries Research Centre	Junagadh, Veraval
65.	10703-00	Award of JAU Fellowship for PG Students in Various Faculties	Junagadh, Veraval
66.	10710-D	Establishment of Balmandir	Junagadh
67.	10711-00	Project for Library	Junagadh
68.	10712-02	Landscaping at Different Campuses	Junagadh

No.	B.H.	Name of scheme	Centre
69.	10712-03	Creating of the Computer Communication Facilities at Different Campuses	Junagadh
70.	10712-05B	Campus Development (On Campus)	Junagadh
71.	10712-06	Creation of Additional Posts as per SC Orders	Junagadh, Veraval
72.	10865-00	Upgrading of the Students Facilities	Junagadh, Veraval
73.	10901-00	Strengthening of Extension Programme in Fisheries	Okha
74.	10902-00	Creation of Infrastructure Facility & Manpower for Research in Agril. Statistics	Junagadh
75.	10903-00	Establishing Organic Farming Cell	Junagadh
76.	10905-00	Research on Watershed Management	Targhadia, Junagadh, Dhari
77.	10906-00	Centre of Excellence for Soil & Water Management Technology	Mahuva
78.	10907-00	Strengthening of Agro-meteorology	Jamnagar, Mahuva
79.	10926-00	Modernization of Departments of Agril. College	Junagadh
80.	10927-00	Establishment of Agro-meteorological Cell at Agril. College	Junagadh
81.	10929-00	Establishment of Department of Agril. Engg. Extension Education at CAET	Junagadh
82.	10929-01	Establishment of Microbiology Cell at Department of Plant Pathology	Junagadh
83.	10930-00	Establishment of New Sub-centre for Research on Cumin	Amreli
84.	10931-00	Establishment of New Research Centre on Onion Crop	Junagadh, Mahuva
85.	10940-00	Establishment of Centre of Agril. Extension Information System	Junagadh
86.	10950-00	Establishment & Development of Research in Fisheries	Okha
87.	10953-00	Strengthening of Livestock & Veterinary Component	Junagadh
88.	10967-00	Modernizing the Student Facilities, College of Agriculture/Fisheries Science/DSW	Junagadh, Veraval
ICAR Schemes			
1.	2002-00	AICRP on Millet	Jamnagar
2.	2002-04	Impact of Common Peafowl in Agricultural Landscape	Veraval
3.	2002-05	Protection of Plant Varieties & Farmer's Rights Legislation	Jamnagar
4.	2004-00	AICRP on Wheat	Junagadh
5.	2004-01	FLD on Wheat	Junagadh
6.	2008-01	AICRP on Oilseeds (Sunflower)	Amreli
7.	2008-01	AICRP on Oilseeds (Sesame & Mustard)	Amreli
8.	2008-01	AICRP on Oilseeds (Castor)	Junagadh
9.	2008-01	AICRP on Oilseeds (Groundnut)	Junagadh
10.	2008-01	AICRP on Oilseeds (Groundnut)	Amreli
11.	2008-02	AICRP on Soybean	Junagadh
12.	2008-03	FLD on Sesamum	Amreli

No.	B.H.	Name of scheme	Centre
13.	2008-08	Production of Breeder Seeds of Annual Oilseed Crops	Junagadh
14.	2008-12	Breeder Seed Production of Oilseed Crops (ICAR Revolving Fund)	Junagadh, Amreli
15.	2008-13	Irrigation Facilities for Breeder Seed Production of Groundnut	Junagadh
16.	2008-19	FLD on Oilseeds	Junagadh
17.	2008-20	Conducting Groundnut Trials under Indous Project	Junagadh
18.	2009-00	AICRP on Cotton	Junagadh
19.	2009-01	Remittance of TMC-MM-1 (Cotton)	Junagadh
20.	2009-06	FLD on Cotton	Junagadh
21.	2010-00	AICRP on Vegetables	Dhari
22.	2011-09	Role of Polyamines in Biochemical Response to Drought	Junagadh
23.	2011-12	Conduct Efficient Trial on Sugarcane	Kodinar
24.	2013-01	Project Directorate Vegetable Scheme	Junagadh
25.	2014-07	Studies of Utility of Vermicompost in Fruit Crops	Junagadh
26.	2014-08	Development of Efficient Water Use Technology in Fruit Crops	Junagadh
27.	2017-01	Establishment of Hatchery Project	Sikka
28.	2025-00	Agronomy Experiments on Cultivator's Field	Junagadh
29.	2026-02	AICRP on Nematode Pest	Junagadh
30.	2027-05	Impact Assessment of Salinity of Agri. in the Coastal Area of Western Gujarat	Junagadh
31.	2030-01	AICRP on Long Term Fertilizer Experiments	Junagadh
32.	2042-01	AICRP on Dryland Agriculture	Targhadia
33.	2042-05	World Bank Project Module (3) Funds for Surveys by the Dryland Research Centre	Targhadia
34.	2044-03	Biological Control of Stem/Pod and Collar/Crown Rots of Groundnut	Junagadh
35.	2044-04	Utilization of Groundnut Gotar as a Potential Roughage Source in Lactating	Junagadh
36.	2044-05	An Economic Analysis of Fish Production in Saurashtra region	Junagadh
37.	2044-08	Development of Modes for Water Management of Groundnut Based Cropping System	Junagadh
38.	2044-09	Determination of Relationship Between Root Zone of Plant Soil Properties and Discharge for Optimum Design and Operation of Drip Irrigation System	Junagadh
39.	2044-10	Soil Solarization for Nursery Raising	Junagadh
40.	2044-11	Anthropometrics Survey and Ergonomic Studies on Agri. Works of Gujarat	Junagadh
41.	2044-13	Strategies and Options for Increasing and Sustaining Fisheries	Junagadh
42.	2076-01	Breeder Seed Production <i>Rabi/Kharif</i> Subsidy	Jamnagar
43.	2076-02	Breeder Seed Production for National Seed Project	Jamnagar

No.	B.H.	Name of scheme	Centre
44.	2076-03	Central Sector Special Food Grain, Production of Breeder Seed	Junagadh
45.	2076-04	Research & Development Efforts on Hybrids in Selected Crops, Castor, Millet, Seed	Junagadh, Jamnagar
46.	2076-05	Research & Development Efforts on Hybrids in Selected Crops, Millet	Jamnagar
47.	2076-11	New Seed Policy R & M	Amreli
48.	2084-01	Phenol Metabolism During Host Pathogenic Interaction in <i>Fusarium</i> Wilt of Cumin	Junagadh
49.	2084-02	Utilization of Power Tiller and its Matching Equipment for Groundnut Cultivation in Saurashtra Region	Junagadh
50.	2084-03	Studies on Techno Economic Feasibilities of Drip Irrigation in Summer Groundnut	Junagadh
51.	2258-00	Studies on Harvest & Post Harvest Technology	Junagadh
52.	2258-A	AICRP on Ground Water Utilization	Junagadh
53.	2258-B	AICRP on Application of Plastics in Agriculture	Junagadh
54.	2259-00	Grant for recurring and Non-recurring under Bajra	Jamnagar, Mahuva
55.	2259-A	AICRP-FC Trials (Indian Grassland & Fodder Research)	Jamnagar
56.	2273-02	FLD of Improved Agril. Machinery for Major Pulse Crops	Junagadh
57.	2303-08	Germplasm Unit (Gir)	Junagadh
58.	2303-09	Data Recording Unit (Gir)	Junagadh
59.	2303-10	Network Project for the Survey Unit of Gir Breeder	Junagadh
60.	2305-03	Network Project on Buffaloes	Junagadh
61.	2305-04	Identification & Dev. of Perennial Forage for Developing the Under-utilized Cultivable Wastelands & Coastal Saline Area of Gujarat	Junagadh
62.	2346	AICRP on Rodent Control	Junagadh
63.	2374-00	AICRP on Pulses	Junagadh
64.	2374-01	FLD on Pulses	Junagadh
65.	2374-03	Testing Fee of Bolides & RH 245 in Chickpea	Junagadh
66.	2374-04	Testing Fee of Match & Match in Chickpea	Junagadh
67.	2374-05	AICRP on Pigeon Pea	Junagadh
68.	2704-01	Creation of Database Systems and Organising Training Workshop and TA/DA	Junagadh
69.	2704-02	Construction of Farmers' Hostel	Junagadh
70.	2704-15	Mustard Crop Demonstration Training Organizer	Jamnagar, Amreli, Targhadia, Nana Kandhasar, Khapat
71.	2704-19	FLD on Intercropping System in Castor	Targhadia
72.	2704-20	FLD on Cropping System Research	Targhadia
73.	2704-23	FLD on Oilseeds & Revolving Fund	Junagadh, Amreli
74.	2704-24	FLD on Pulse Crops	Junagadh, Amreli, Targhadia, Nana Kandhasar, Khapat

No.	B.H.	Name of scheme	Centre
75.	2704-33	KVK Oilseeds/Pulses	Targhadia, Khapat, Jamnagar, Nana Kandhasar, Amreli, Junagadh
76.	2704-34	FLD on Cotton	Junagadh
77.	2704-35	FLD on Improved Agril. Machinery for Major Pulse Crops	Junagadh
78.	2704-38	FLD on Rapeseed & Mustard	Junagadh
79.	2704-40	FLD on Groundnut	Junagadh, Amreli
80.	2704-43	FLD on Pearl Millet	Jamnagar
81.	2704-46	AICRP on Mullarp	Junagadh
82.	2704-48	Directorate of Wheat Research Trials During Crop Season	Junagadh
83.	22499-00	RAWE	Junagadh
Other Agency Schemes			
1.	18005-01	National Centre for Medium Range Weather Forecasting (NCMRWF)	Junagadh, Targhadia
2.	18005-02	Energy and Mass Exchange in Vegetative System (ISRO)	Junagadh
3.	18005-07	IFAD-TAG 532 ICRISAT	Junagadh
4.	18005-08	Agricultural Technology Management Agency Project (ATMA)	Junagadh, Amreli
5.	18008-13	Evaluation of Score 10% WP Against Tikka and Rust Diseases of Groundnut	Junagadh
6.	18005-16	Antracol 70% WP and Folicare 250 EC against Tikka and Rust in Groundnut	Junagadh
7.	18008-20	To Evaluate the Efficacy of Confidor 200 SL Against Aphid, Jassid and Leaf Miner on Peanut	Junagadh
8.	18008-27	Atonik 0.3% PNP Bio-efficacy in Groundnut	Junagadh
9.	18008-28	Testing of Organic Fertilizer Nutragold Super Granule and Nutragold Liquid BDW Basal on Mustard & Castor	Junagadh
10.	18005-31	Chlorothalonil Testing	Junagadh
11.	18008-32	Biovita in Groundnut	Junagadh
12.	18008-33	Testing of Cippy's BDW Based Organic Fertilizer Nutragold Super Granules, Nutragold Liquid and Cipp's Phos Powder on Kharif Groundnut	Junagadh
13.	18008-34	Testing of Product SAAF & Biovita in groundnut	Junagadh
14.	18008-35	Testing of Folicare 250 EC in Groundnut	Junagadh
15.	18009-06	Testing for New Molecules	Junagadh
16.	18009-08	Evaluation of Cotton Hybrid Entries under AICCIP	Amreli
17.	18009-09	BT Cotton Trial and Protocol	Junagadh
18.	18009-11	Bio-efficacy of Verticel (liquid & powder formulation) against Pests of Cotton	Junagadh
19.	18009-12	Remittance of AICCP PC Cell	Amreli, Khapat, Ratia
20.	18009-13	Testing Fee for Bt Cotton Hybrid	Sagdividi
21.	18009-14	Monitoring of MLT & LSTs of Bt Cotton	Junagadh

No.	B.H.	Name of scheme	Centre
22.	18009-15	Bio-efficacy and Phytotoxicity of Solomon 300 OD against Gram Pod Borer and Sucking Pests on Chickpea	Junagadh
23.	18009-16	Demonstration of Recommendable IPML IHM	Junagadh
24.	18011-14	Monitoring Protocol for the Use of Distillery Effluent for Irrigation	Junagadh
25.	18011-15	Establishment of Tissue Culture Laboratory	Junagadh
26.	18011-16	Groundnut Response to Borate	Junagadh
27.	18011-17	Rapid Tissue Testing Laboratory for Horticulture crops	Junagadh
28.	18014-16	Testing Efficacy of Melody 50% WP against Late Blight of Tomato	Junagadh
29.	18014-18	Evaluation of Amistar Against Powdery Mildew & Anthracnose of Mango	Junagadh
30.	18014-21	Development of Tree Borne Oilseeds	Junagadh
31.	18020-00	Establishment of Food Testing laboratory	Junagadh
32.	18021-00	Construction and Equipments for Food Testing Laboratory	Junagadh
33.	18022-00	Nutrition of Groundnut in Saurashtra Region	Junagadh
34.	18024-04	Quantification of the Environmental Economic Benefits of Conserving Gir Eco-system	Junagadh
35.	18024-05	Important Infrastructure Facilities in the Botanical Garden	Junagadh
36.	18024-08	Standard Charted Grindlys for the Research	Junagadh
37.	18025-01	Case Studies of Marine National Park, Gulf of Kutch	Okha
38.	18025-02	Studies on Pollution Potential from Fishing Harbours to the Coastal Water with Respect to Veraval/Okha	Veraval, Okha
39.	18026-01	Root Rot Disease of Castor	Junagadh
40.	18038	Green House/Poly House for Commercial High Value	Junagadh
41.	18053-00	Creation of Permanent Machinery for Studying the Cost of Cultivation, Production of Principal Crops Growing in Gujarat State	Junagadh
42.	18055	Hybrid Coconut Diseases	Mahuva
43.	18072-03	Collaborative Research Project on the Yield Forecasting of Standing Groundnut through Satellite Based Information with Space Application Centre	Junagadh
44.	18126-00	Establishment for Green House Scheme	Junagadh
45.	18126-02	Centrally Sponsored Scheme National Horticulture Mission	Junagadh
46.	18126-07	Dhanuka Agri. Tech., New Delhi	Junagadh
47.	18126-14	Establishment of Small Nursery	Dhari
48.	18126-15	Raising of Nursery for Fruit and Vegetable at KVK	Amreli
49.	18126-18	Establishment of Canning Plant	Junagadh
50.	18127-00	Seed Production Agril. Crops & Fisheries (Oilseeds)	Junagadh

No.	B.H.	Name of scheme	Centre
51.	18127-01	Item of Works (Field Crops) for Different Research Stations (RTTC, Junagadh) Mega Seed	Junagadh
52.	18127-02	Item of Works (Field Crops) for Different Research Stations (Executive Engineer, Junagadh) Mega Seed	Junagadh
53.	18127-03	Item of Works (Field Crops) for Different Research Stations (Agril. Botany, Junagadh) Mega Seed	Junagadh
54.	18127-03A	Item of Works (Field Crops) for Different Research Stations (CAET, Junagadh) Mega Seed	Junagadh
55.	18127-04	Watershed and Water Recharging Live Demonstration (CAET, Junagadh)	Junagadh
56.	18128-00	Seed Production Agril. Crops & Fisheries (Horticulture)	Junagadh
57.	18128-01	Item of Works (Horticulture Crops) for Different Research Stations (RTTC, Junagadh)	Junagadh
58.	18128-02	Item of Works (Horticulture Crops) for Different Research Stations (Executive Engineer, Junagadh)	Junagadh
59.	18128-03	Item of Works (Horticulture Crops) for Different Research Stations, (Agril. Botany, Junagadh)	Junagadh
60.	18129-00	Seed Production Agril. Crops & Fisheries (Fishery)	Okha
61.	18246-00	T & V Scheme under Benor System	Junagadh
62.	18246-02	Administrative Infrastructure Facilities for Agril. Development	Junagadh
63.	18246-03	T & V Scheme under Benor System	Junagadh
64.	18246-04	Krushi Polyclinic Kendra	Junagadh
65.	18246-05	Krushi Mahotsav	Junagadh
66.	18246-07	Gram Sevak Training Project	Junagadh
67.	18246-08	Establishment of Centres of Training under NARP-II	Junagadh
68.	18246-09	Establishment of Centres of Training under CET	Junagadh
69.	18246-15	FLDs on Vegetable Crops	Junagadh
70.	18246-16	Testing Programme for Entrepreneurship in Tissue Culture under HRD	Junagadh
71.	18246-87	Artificial Insemination Training Programme	Junagadh
72.	18246-89	Experiential Learning: Setting up of Facilities for Hands on Training on Mushroom, Bioagents and Vermicompost Production and Processing	Junagadh
73.	18246-90	Experiential Learning: Setting up of Facilities for Hands on Training on Seafood Processing Centre for Value Added Products and By-products	Veraval
74.	18246-91	Experiential Learning: Setting up of Facilities for Hands on Training on Production and Management of Alternative/Renewable Sources of Energy	Junagadh
75.	18246-92	Experiential Learning: Setting up of Facilities for Hands on Training on Design, Planning and Evaluation of Watershed	Junagadh

No.	B.H.	Name of scheme	Centre
76.	18246-93	Experiential Learning: Setting up of Facilities for Hands on Training on Machinery Management, Custom Hiring and Mobile Workshop	Junagadh
77.	18246-96	Sardar Sarovar Narmada Nigam Ltd., Gandhinagar	Junagadh
78.	18246-97	Intensive Aquaculture in Ponds and Tanks	Jamnagar
79.	18246-98	Intensive Aquaculture in Ponds and Tanks	Amreli
80.	18303-00	Cattle & Buffalo Development	Junagadh
81.	18303-05	Veterinary Clinic/Biotechnology/ Modernization of Lab.	Junagadh
82.	18311-04	Merit-cum-Means National Scholarship	Junagadh
83.	18316-00	Progeny Testing	Junagadh
84.	18375-00	Training & Camp for Livestock Inspector of the Department of Animal Husbandry	Junagadh
85.	18401-08	Freshness Preservation Bags for Kesar Mango	Junagadh
86.	18408-00	To Determine the Effective Rate of Pursuit Application for Weed Control in Groundnut	Junagadh
87.	18800-00	Fellowship to the Students	Junagadh
88.	18801-00	Relief in Food Bill to the Parents Sons to the Scarcity Area	Junagadh
89.	18802-00	Facilitation Centre of Medicinal Plants	Junagadh
90.	18802-01	Infrastructural Facilitation in Botany	Junagadh
91.	18803-01	Item for Field Crops for Different Research Stations, Agronomy Farm	Junagadh
92.	18803-02	Item for Field Crops for Different Research Stations, Sagdividi Farm	Junagadh
93.	18803-03	Item for Field Crops for Different Research Stations, Grass Research Station	Dhari
94.	18803-04	Item for Field Crops for Different Research Stations, Oilseeds Research Station	Junagadh
95.	18803-05	Item for Field Crops for Different Research Stations, Wheat Research Station	Junagadh
96.	18803-06	Item for Field Crops for Different Research Stations, KVK	Amreli
97.	18803-07	Item for Field Crops for Different Research Stations, Agril. Research Station	Manavadar
98.	18803-08	Item for Field Crops for Different Research Stations, Agril. Research Station	Amreli
99.	18803-09	Item for Field Crops for Different Research Stations, Cotton Research Station	Junagadh
100.	18803-10	Item for Field Crops for Different Research Stations, Sugarcane Research Station	Kodinar
101.	18803-11	Item for Field Crops for Different Research Stations, Pulses Research Station	Junagadh
102.	18803-12	Item for Field Crops for Different Research Stations, CAET	Junagadh
103.	18804-01	Item of Horticulture Crops for Different Research Stations, Department of Horticulture	Junagadh
104.	18804-02	Item of Horticulture Crops for Different Research Stations, Department of Agril. Botany	Junagadh

No.	B.H.	Name of scheme	Centre
105.	18804-03	Item of Horticulture Crops for Different Research Stations, Fruit Research Station	Mahuva
106.	18804-04	Item of Horticulture Crops for Different Research Stations, Agril. Research Station	Mangrol
107.	18805-00	Item for Field Crops for Different Research Stations, Fisheries Research Station	Okha
108.	19200-00	Printing of Agril. Literature	Junagadh

CHAPTER - IX

INFORMATION TECHNOLOGY

9.1 Network Services

Junagadh Agricultural University has 256 kbps ERNET Connectivity and it is also connected to Gujarat State wide Area Network (GSWAN) through radio connectivity. Internet, e-mail, References and Indian Harvest Database have been provided and maintained through Local Area Network (LAN). These services have greatly boosted the education, research and extension education activities of the university.

9.2 Beneficiaries

Most of the staff and UG/PG students have taken benefit of ITC facilities like network services, internet, e-mail, scanning of photographs, reference abstract service, printing, CD writing etc. These services have been useful for those engaged in education, research and extension activities.

9.3 Training

The basic training covering fundamental aspects of operating computer system is given to the university staff. Computer training for the examination of CCC & CCC+ was organised for university employees as per Government of Gujarat guidelines.

9.4 Network Implementation and Management

For smooth and error free implementation of network, all the departments of the campus are connected by switches, UTP cable and optic fibre cable. All the switches and network connectivity is centrally managed from ITC Server Room. The ITC is responsible for installation and maintenance of the network of the university. A sizable amount of money has been saved by using a free Network Operating System i.e. Linux/Fedora/CentOS. The network is continuously monitored and the problem, if any, is attended and rectified. The Network Operating System is up-graded regularly by adding the useful features. Because of the network, sharing of the information has become fast and reduced the paper work to some extent.

9.5 Presentations/Lectures

The infrastructure facilities LCD projector, screen, laptop computer etc. for online presentation/lecture are managed by ITC during various conferences, meetings, seminars, workshops etc. The help is also provided to the UG/PG students and university personnel for preparing effective presentation.

ITC prepared many multimedia presentations covering various activities of JAU, which were updated during the year. These presentations have been

shown or displayed during the visits of the guests, meetings of Board of Management/Academic Council/Board of Studies, Agricultural Exhibitions/Fairs and Government level meetings.

9.6 Reference Services

All the available agricultural data base reference services viz., CAB, AGRIS, AGRICOLA and Indian Harvest are provided online by ITC in collaboration with the Campus Library to UG/PG students for their research projects and to university personnel engaged in research and teaching work. This enables the end user to get quick information through computer on any reference related to agricultural research through network. This is unique kind of a service provided free of cost to the scientists and the students of the university. This has made the reference services very fast and has saved a lot of time of the scientists and the students.

9.7 University Web Site

The web site (www.jau.in) prepared by ITC is presently kept at server of ITC and university domain name www.jau.in is registered for five years. This web site includes various aspects and activities of Junagadh Agricultural University like Administration, Education, Research Extension Education, Library facility, important announcements/events, tenders, advertisements, RTI, telephone directory, etc. Further, a Web Mail Service has been incorporated in the web site enabling the user to read and reply e-mail from any computer of LAN. There are about 300 e-mail users at campus taking advantage of this service. The web site was maintained and updated regularly during the year.

9.8 Leased Line Connectivity

For providing network services two connectivity are available at ITC. The wireless radio connectivity through Gujarat State Wide Area Network (GSWAN), Gandhinagar and 256 kbps VSAT Connectivity through Education and Research Network (ERNET), New Delhi.

9.9 Qualified Personnel

All the services at ITC are managed by IT trained personnel of the university.

9.10 Visitors

The ITC has been visited by a number of eminent persons who have appreciated the activities in fullest terms. The students of IT courses of various colleges of Junagadh city are taking frequent visit as a part of their project work. They have remarked JAU a front-runner in IT activities amongst all universities of Gujarat state.

9.11 University Library

The university library provides services to students and staff of constituent colleges as well as research stations and extension education centres.

Collection: It is a rich library with double storeyed stack room with capacity of 1.5 lakh books. It possesses around 41000 books. These books are very valuable and helpful in studies, research and preparation for competitive examinations. It provides 200 Indian & Foreign journals and around 20000 back volumes.

Services: Cyberary with 100 mbps LAN connectivity facilitates users with online journal database like AGRICOLA, Indian Harvest etc. are accessed. Full time internet, scanning and CD writing facilities are available for the students in the Cyberary. The internet access through GSWAN and existing database facilities and other IT enabled students to update their General Knowledge along with latest information in their respective disciplines. This facility is being extensively utilized by both faculty and students on an average of daily 80 to 100 users for about 12 hours per day. Students are provided with books of their concerned subject of their respective semesters through book bank facility. The library is marching towards automation process through libsys software for the circulation of library materials to users.

The library renders its services to the users from 8:00 to 18:10 h and cyberary renders its services from 8:00 to 20:00 h. The circulation counter, the cyberary and other services are open to the readers during working days.

CHAPTER - X

OTHER ACTIVITIES

10.1 Activities of Vice Chancellor

The Hon'ble Vice Chancellor of Junagadh Agricultural University is responsible for overall administration, development, maintaining discipline and appropriate functioning of the University as per the Gujarat Agricultural Universities Act-2004. The Vice Chancellor has to run the administration as per University rules and regulations. He is also responsible for financial activities of the University. He maintains coordination between Teaching, Research and Extension Education activities conducted by the University. A brief summary of the activities done by the Vice Chancellor during 2007-08 are as under.

Dr. B.K. Kikani appointed as the first Vice Chancellor of Junagadh Agricultural University on 20.05.2004 for two years and keeping into cognizance of overall development activities of the University and his able administrative capabilities, Government of Gujarat extended his tenure for five more years since 2006. Dr. B.K. Kikani is specialized in Plant Pathology. He made good contribution in research. He had transformed the University into a robust and well recognized institution by restructuring the departments and modernization of the farms.

Dr. Kikani accomplished the mammoth task of improving the education standards and strengthened the departments and laboratories of Agriculture, Agricultural Engineering and Fisheries College under this University to provide more facilities to the students. Moreover, the state and national level games and sports facilities were acquired for the students. Due to this, Junagadh Agricultural University has got the facilities like J-GATE, J.CCC, Online Annual Reviews Archives. Further, campus interviews were arranged for outgoing students to avail the employment opportunities in the Nationalized Banks, Corporate and other related organizations.

After the establishment of the University, to satisfy the on field requirements of the farmers of the Saurashtra, the research activities were accelerated by encouraging the scientists involved in research, satisfying the needs of the research centres, developing new infrastructure and by establishing new schemes and research centres. Thus, the concept of Vice Chancellor is to make university activities more and more farmers oriented. Under the guidance of Dr. Kikani, the new research projects have achieved their targets. Mega Seed Project, Tree Borne Oilseed Project, Inland Fisheries and Centre of Excellence in Soil & Water Management are the few new emerging projects shown good progress. During this period, 87 scientists/teachers were sent to attend Training / Winter / Summer School, 82 have attended different Seminar / Symposium /

Conferences at State and National level, 115 attended the workshops and group meets of their projects and 55 were sent for different academic works. Under the leadership of Dr. B.K. Kikani, the efforts made by scientists of the University emerged in 41 farmers' recommendations and 89 new technical programmes during the reporting year. It also resulted in emerging six new crop varieties for farmers. Junagadh Agricultural University has organized one national level and one state level workshop during 2007-08.

Krusha Mahotsav-2007

Under the able guidance of Hon'ble Chief Minister of Gujarat, Shri Narendrabhai Modi, *Krusha Mahotsav-2007* (20th April to 19th May, 2007) was organized. The Junagadh Agricultural University has contributed a lot in successful organization of this programme under the leadership of Dr. Kikani, Hon'ble Vice Chancellor.

The Research Scientists, Professors and other technical staff participated in the *Krusha Mahotsav-2007*. The team of scientists, officers from the state line departments, bankers and other related agencies have approached to each and every village of Saurashtra region for providing first hand information to the farmers, village artisans and rural industries based on agriculture. The University has deputed seven District Nodal Scientists, 148 Taluka Nodal Scientists, who have covered 4223 villages of the Saurashtra region in one month. The sincere efforts made by the university brought fruitful results which ultimately benefited the farmers of this region.

Soil Health Cards

The planning of crops has been done on the basis of soil health cards in Saurashtra region. Seven and seventy three agricultural scientists of this university act as district and taluka nodal officers, respectively, for preparation of soil health card and planning of crops in Saurashtra region.

10.2 Planning Branch

1. State Government Plan Programme

A. Fund Allocation

State Government allocates the funds for education, research and extension education programmes of agricultural university as per the requirements of funds for the schemes of various fields suggested in draft annual plan of the university.

In the annual development programme (2007-08), Rs. 900.00 lakhs were allotted by Govt. of Gujarat for education, research and extension education of Junagadh Agricultural University.

(Rs. in lakhs)

Sr. No.	Programme	Annual Development Programme (2007-08)
		Provision
1	Research	437.46
2	Education	398.45
3	Extension Education	53.00
4	Earmarked for IT	11.09
Total		900.00

Thus, for agricultural education, research and extension education programmes State Government has released Rs. 888.91 lakhs against the sanctioned grant of Rs. 900.00 lakhs. However, the total expenditure was Rs. 846.50 lakh and unspent amount of Rs. 75.98 was carried forward as spill over grant for construction up to December-2008 as per grant in aid rules.

B. Monitoring

The monthly and quarterly progress reports were collected from the concerned heads of the schemes, compiled and submitted to the Government quarterly. The problems of the scheme were solved satisfactorily by discussions between scientists and the Hon'ble Vice Chancellor in three meetings held during the month of September-2007, December-2007 and March-2008 for monitoring the progress and expenditure of plan schemes and reallocation of the funds.

2. Development programme by ICAR for Education

Under the scheme "Development and Strengthening of State Agricultural Universities" ICAR released a grant of Rs. 406.78 lakhs for the year 2007-08. The university has utilized Rs. 397.82 lakhs from this fund.

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