ANAND AGRICULTURAL UNIVERSITY

ANAND - 388 110

5th Annual Report

2008 - 2009

Anand Agricultural University
Anand-388 110
(Gujarat)

Chapter-1

Vision & Mission

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Way back, in the forties, Krishi-go-Vidya Bhavan was established by the Iron Man of India, Sardar Vallabhbhai Patel not as merely an educational institution, but as a mission, a cause, primarily conceived to revitalize agriculture, following Gandhiji's call for village regeneration.

To establish and incorporate teaching and imparting education in Agriculture and Allied Sciences in the State of Gujarat, the Anand Agricultural University (AAU), carved out of the erstwhile Gujarat Agricultural University, was established at Anand by the Government of Gujarat, by enactment of Gujarat Act No. 5 of 2004. The Act was passed by the Gujarat Legislative and was assented by HE the Governor of Gujarat on 4th March, 2004. Through AAU, the farming community is being provided support in all the three facets, namely education, research and extension activities in agriculture and all its allied fields.

The Vision and Mission of the Anand Agricultural University (AAU) are as under:

Vision

Agriculturally Prosperous Gujarat and India

Mission

The mission of the Anand Agricultural University is to provide teaching, research and extension education services related to Agriculture, Dairy, Veterinary and Allied Sciences thereby to develop excellent human resources and innovative technologies for serving to the farming community with the main motto of making Gujarat and India agriculturally prosperous.

Goals and Objectives

- Making provision for imparting education in agriculture and allied sciences leading to masters and doctorate degrees and develop quality human resources in different branches of agricultural sciences.
- Furthering the advancement of learning and conducting of research;

Undertaking extension education

Promoting partnership and linkages with national and international educational institutions

- Developing cutting edge technologies for national and international arena/markets.

Teaching: Goals and Objectives

- To impart education in agriculture and allied sciences at undergraduate and post graduate level leading to Bachelor's, Master's and Doctorate degree in various colleges of Agriculture, Dairy, Veterinary, Agril. Engineering, Agril. Information Technology, Food Processing Technology & Bio-Energy, International Agri Business Management and leading to diplomas in various Polytechniques in Agril. Engineering.;
- To provide integrated agricultural education at different levels to increase efficiency and effectiveness of skill of students;
- To upgrade the technical competence of the teachers by redesigning course curriculum as suggested by ICAR/ Dean's Committee and coordinating the teaching with research in the field of agriculture.;
- To organize vocational courses to educate rural youth in various disciplines of agriculture and allied sciences with intension to develop self-employment;
- To provide consultancy and advisory services to the industry, government and non-government sectors;
- To architect agribusiness professionals for agriculture, Agri. food firms, rural and allied sectors;
- To encourage entrepreneurial spirit and develop qualified entrepreneurs for rural development;
- To cater to the needs of enterprises and cooperatives in agribusiness at national and international level.;

Research: Goals and Objectives

1. The research is aimed at evolving new varieties and breeds and developing technologies for increasing agricultural and animal productivity with a view to improve socio-economic status of farmers of Gujarat and India.
2. To develop package of practices for cultivation of various crops and cropping sysems of middle Gujarat.
3. To develop integrated farming system, Integrated Pests and Disease Management Systems, Organic farming and bio control.
4. To develop cutting edge technologies in the filed of nano-bio technologies pertaining to agriculture, animal husbandry and food sciences.

5. To develop technologies in the field of milk and food processing and bio-energy.
6. To develop specific indigenous and cross breeds suitable to ago-climate of Middle Gujarat;

Extension : Goals and Objectives

- To impart training to the officers and extension workers of line department of Government of Gujarat and India, field functionaries, staff of the University, NGOs, farmers, entrepreneurs etc;
- To conduct short and long duration vocational training for farmers, farm women, farm youth, entrepreneurs and tribal;
- To assess, refine and demonstrate the latest agricultural technologies of University through front line demonstration for their wider adoption;
- To transmit agricultural technologies to the farmers and rural masses of Gujarat through mass media, information technologies and video conferencing.

History

The Anand Agricultural University (AAU) has entered into fifth year of its existence. Established by the Gujarat Act No. 5 of 2004, which was passed by the Gujarat Legislature and assented by His Excellency the Governor of Gujarat on 4th, March 2004, the AAU has been incorporated as a teaching and affiliating University for imparting education in agriculture and allied sciences. The AAU has a long cherished history. Sardar Vallabhbhai Patel, a Statesman and Iron man of India and Dr. K. M. Munshi, one of the authors of Indian Constitution had established *Krushi-Go-Vidhya Bhavan* or Institute of Agriculture and animal genetics, Anand in 1938 to revitalize agriculture and train farmers and their sons and daughters in modern practices of agriculture and animal husbandry so that they can raise their head and live in prosperity.

The Institute of Agriculture was popularly known as *Khetiwadi*, which later on in June, 1972 became the part of the Gujarat Agricultural University. The Institute of Agriculture, Anand had two Colleges viz., B. A. College of Agriculture established in 1947and Sheth M. C. College of Dairy Science established in 1960, which were affiliated to Sardar Patel University, Vallabh Vidhyanagar. Later on in 1972 they became integral part of Gujarat Agricultural University along with the Government

College of Veterinary Science and Animal Husbandry which was established in 1964 at Anand.

The activities of Anand zone of erstwhile Gujarat Agricultural University have now been transferred to newly established Anand Agricultural University with effect from May 1, 2004 with three Colleges viz., B. A. College of Agriculture, Sheth M. C. College of Dairy Science and College of Veterinary Science & Animal Husbandry and 17 Research Stations, one Extension Education Institute and 22 Extension Education Centres like Krushi Vigyan Kendra, Sardar Smruti Kendra, Tribal Training Centre, Tribal Research-cum-Training Centre, Poultry Training Centre, Bakery Training Centre, Livestock Training Centre, Home Science School, Mali Training Centre.

Now, all existing diploma schools are converted into polytechniques with new syllabus and rules and passed out students will get employment as middle level technician on farm, industry and agriculture related enterprised and admission to college. More colleges are established i.e. I.A.B.M.I., Agril. Information Technology, Agril. Engineering, Food Processing Technology & Bio-Energy.

Power and Functions of the University

Under Section 6 of the GAU Act, 2004, the University is empowered to exercise the following powers.

(1) To provide education and instruction in agriculture and allied sciences and in such other branches of learning as the University may deem fit;

(2) To make provision for research in agriculture and allied branches of learning;

(3) To make provision for dissemination of the findings of research and technical information through extension education programmes;

(4) To make such provision, which would enable affiliated colleges and recognised institutions to undertake specialisation in different fields of studies;

(5) To institute degrees, polytechnique and other academic distinctions;

(6) To lay down courses of study and instruction for various examinations;

(7) To hold examinations and confer degrees, polytechnique and other academic distinctions and grant certificates to persons who -

(a) have pursued approved courses of study in the University or in a college unless exempted there from, in the manner prescribed and have passed the examinations prescribed by the University or

(b) have carried on research under conditions prescribed;

(8) To withdraw or cancel any degree, diploma or certificate conferred or granted by the University in such manner as may be prescribed;

(9) To confer honorary degrees and other distinctions in the manner prescribed;

(10) To provide lectures, instructions and training to persons who are not enrolled students of the University and to grant such certificates to them as may be prescribed;

(11) To co-operate with any other University or authority in such manner and for such purpose as the University may determine;

(12) To establish and maintain colleges for imparting education in agriculture and allied sciences,

(13) To establish and maintain classrooms laboratories, libraries, English language laboratory, research stations, institutions and museums With latest Information technology for teaching, research and extension education;

(14) To create such teaching, administrative and other posts as the University may deem necessary from time to time and make appointments thereto;

(15) To institute and award fellowships, scholarships and prizes in accordance with the Statutes;

(16) To associate or admit educational institutions imparting education in agriculture and allied sciences with, or to the privileges of the University by way of affiliation or recognition;

(17) To withdraw or modify, either in whole or part, affiliation or recognition of educational institutions;

(18) To inspect colleges and recognised institutions and to take measures to ensure that proper standards of instruction, teaching and training are maintained in them and that adequate library and laboratory provisions are made therein;

(19) To lay down and regulate the salary scales, allowances and other conditions of service of the members of the teaching, other academic and non-teaching staff of the University;

(20) To lay down and regulate the salary scales, allowances and other conditions of service of the members of the teaching, other academic and non-teaching staff in the affiliated colleges and recognised institutions;

(21) (a) To control and co-ordinate the activities of, and to give financial aid to, affiliated colleges and recognised institutions; and

(b) To regulate fees to be paid by the students in affiliated colleges and recognised institutions;

(22) To institute and maintain residential accommodation for students and staff of the University;

(23) To fix demand and receive or recover such fees and other charges as may be prescribed;

(24) To supervise, regulate and control the residence, conduct and discipline of the students of the University, and to make arrangements for promoting their health and general welfare;

(25) To conduct, co-ordinate, supervise, regulate and control post-graduate teaching and research work in the University departments and affiliated colleges and recognised institutions;

(26) To co-ordinate, supervise, regulate and control conduct of undergraduate teaching and instruction in the affiliated colleges and to undertake the same in University colleges;

(27) To make special provision for agricultural education, research and extension in relation to arid areas and areas prone to scarcity in the University area;

(28) To do all such other acts and things whether incidental to the powers aforesaid or not, as may be requisite in order to further the objectives of the University.

Chapter-2

Functioning of Authorities

Decision making is a Science, Implementation is an Art

Authorization

The authority to govern the affairs of Anand Agricultural University flows from the GAU Act, 2004.

The AAU is a body corporate established under the GAU Act, 2004 (Gujarat Act No. 5 of 2004) and consists of the Chancellor, Vice-Chancellor, Board of Management, Academic Council and Officers of the University. It has territorial jurisdiction of six districts of Gujarat namely Ahmedabad, Anand, Dahod, Kheda, Panchmahal and Vadodara.

Functioning of the Authority

During the year under report following authorities, as provided in Section 17 of the Act, were functional.

- Board of Management
- Academic Council
- Faculties
- Board of Studies of different groups of subjects of different faculties.

The Organizational Chart and decision making channel are given in the chart- 1 and chart- 2.

Board of Management

The Board of Management considers and decides matter of general policies relating to progress and development of University. The list of the Hon'ble members of the Board is given in Appendix -1.

During the year under report, three regular meetings and two special meeting were held under the Chairmanship of Prof. M. C. Varshneya, Vice Chancellor. Shri V. P. Macwan acted as the Secretary of the Board.

The Board of Management held total five meetings during the year and took important decisions as follows:

(1) K9'F 5UFZ5\R VgJI[VF6\N S'lQF I]lGJl;"8LGF lAGX{1Fl6S ;\JU"GF SD"RFZLVMGF 5UFZ WMZ6M ;]WFZJF TYF TFP !P!PZ__& GL V;ZYL VD, SZJFG]\ 9ZFJJFDF\ VFJ[,P

(2) Approval of Partnership of AAU in EM-ECW15 Fellowship Program.

(3) VF6\N S'lQF I]lGJl;"8LGF ;G[Z__*v_(GF JFlQF"S lC;FAM D\H]Z SZJFDF\ VFjIFP

(4) HFC[ZFT S|DF\So &qZ__(GF VG];\WFGDF\ ;\XMWG lGIFDS VG[0LG4 5LPHLP :80Lh4 VFRFI"zL sS'lQFf TYF VFRFI"zL4 V[OP5LP8LP V[g0 ALP.PfGL lGD6}\S V\U[5;\NUL ;lDlT E,FD6 D\H]Z SZJFDF\ VFJLP

(5) A\P VP S'lQF DCFlJnF,I4 VF6\N S'lQF I]lGJl;"8L4 VF6\NGF V[U|MGMDL OFD"GL JrR[VFJ[,F BFGUL DFl,SLGL HDLG BZLNJF ;ZSFZzLG[NZBF:T SZJFDF\ VFJLP

(6) N[JU-AFZLIF BFT[8=FIA, OFD" JLD[G 8=[GL\U ;[g8Z X~ SZJFDF\ VFjIFP

(7) NFCMN BFT[5M,L8[SGLS .G V[U|LS<RZ, V[gHLGLIZL\U X~ SZJFDF\ VFJLP

(8) NFCMN BFT[5M,LS,LGLS OMZ 8=FIA, OFD;" X~ SZJFDF\ VFJLP

(9) lX1FSMGL lGJ'ltT JIDIF"NF &_ JQF"YL JWFZLG[&Z JQF" SZJFDF\ VFJLP

(10) VF6\N S'lQF I]lGJl;"8LGL GMSZLDF\ JU"v# VG[JU"v$GL HuIFVM 5Z !_ @ VG[Z_@ 5}J";{lGSM (Ex-Serviceman) DF8[G]\ VGFDT WMZ6 HF/JJF 9ZFJJFDF\ VFjI]\P

(11) The MoU between Anand Agricultural University and Lund University, Sweden for Collaboration in Education and Research was approved.

(12) The MoU between Anand Agricultural University and Indian knowledge Corporation (IKC) was recommended to the Govt. of Gujarat for the establishment of Distance Education Division to develop and launch programmes and courses in agriculture and allied sciences through distance education mode.

(13) The MoU signed with Charutar Aryogya Mandal, Karamsad for getting good medical treatment within the campus at primary health Center was approved.

(14) The Implementation of Research Schemes/Projects financed by GOG/GOI/ICAR and other Agencies was approved.

(15) New Research Schemes / Projects approved by Government of Gujarat for ADP 2008-09.

(16) Implementation of projects funded by ICAR under NAIP.

(17) Implementation of project funded by DBT.

(18) Establishment of Department of Agricultural Microbiology at B. A. College of Agriculture, Anand Agricultural University, Anand.

(19) VF6\N S'lQF I]lGJl;"8L DF8[cc,FIA|[ZL SFpg;L,ccGL ZRGF SZJFDF\ VFJLP

(20) Approval of the list of eligible candidates for award of degrees at the Fifth Annual Convocation.

(21) Approval of the Chancellor's Gold Medal to Post-graduate students of Anand Agricultural University for the year 2007-08.

(22) Approval of the Vice-Chancellor's Gold Medal to Under Graduate students of Anand Agricultural University for the year 2007-08.

(23) Approval of the Gold Medals, Medals & Cash Prizes to Under-graduates and Post-graduates students for the year 2007-08.

(24) Approval of the MoU signed between Anand Agricultural University and International School for Public Leadership (ISPL), Puri Foundation for Education, India for organizing a certificate course on "Agriculture & Rural Management and Leadership Programme."

(25) 5NJLNFG ;DFZ\EDF\ 0FI; %,FG D\H}Z SZJFDF\ VFjIMP

(26) S'lQF lJ:TZ6 lX1F6GL sVFIMHGf IMHGFDF\ GJL IMHGF ccV[:8Fa,LXD[g8 VMO V[GLD, C;Ag0ZL 5M,L8[SGLS V[8 KFZM0LccP

(27) ccV[:8Fa,LXD[g8 VMO 5M,L8[SGLS .G CM8L"S<RZ V[8 J0MNZFccP

(28) ccV[:8Fa,LXD[g8 VMO 5M,L8[SGLS .G V[U|LS<RZ V[8 VF6\NccP

(29) ccV[:8Fa,LXD[g8 VMO 5M,L8[SGLS .G O]0 ;FIg; V[g0 CMD .SMGMDLS; V[8 VF6\Ncc G[;G[Z__(v_)GF GF6F\SLI JQF"DF\ VD, SZJFGL D\H]ZL VF5JFDF\ VFJLP

Academic Council

The Academic Council has been established in the University under Section 21 of GAU Act. The Academic Council is responsible for maintenance of standard of teaching and examination in the University. It controls and regulates the quality of teaching, education and examination in the university.

During the year under report, Prof. M. C. Varshneya, Vice Chancellor was the Chairman and Shri V.P. Macwan, Registrar acted as the Secretary of the Academic Council. The list of the members of the Academic Council is given in Appendix -2.

During the year under report, the Academic Council held three meetings to consider various issues pertaining to improvement of education, course curricula, course credits, recruitment rules for teachers and such other items. Besides making recommendations to the Board of Management as mentioned above, the Academic Council also took following important decisions.

The Academic Council took important decisions as follows:

(1) The list of eligible candidates for award of degrees at the Fifth Annual Convocation and for the Chancellor's, Vice Chancellor's and other medals to the Board of Management.

(2) The Amendment in academic rule 6.7 for B.Tech. (D.T.) course.

(3) The UG curriculum and Syllabus as per the recommendations of 4th Dean's Committee for B.Tech. (D.T.) to be implemented at Faculty of Dairy Science, AAU, Anand.

Faculties:

Faculties provided in the Section 23 of the Act are the authorities within the University. The following faculties in the University are constituted:

- Faculty of Post Graduate Studies
- Faculty of Agriculture
- Faculty of Dairy Science
- Faculty of Veterinary Science & Animal Husbandry
- Faculty of Food Processing Technology & Bio-energy
- Faculty of Agricultural Engineering
- Faculty of Agricultural Information Technology

The constitution of faculty is given in appendix-4

Faculties consider all administrative and academic matters pertaining to respective faculties and make recommendations to the Academic Council. The faculty either initiates the matters on its own or receives recommendations of the board of studies of group of subjects of the respective faculty.

During the year under report meetings of the different faculties were orgamised as under:

Sr. No.	Name of faculty	No of Meeting	Date
1	Agriculture	4th	19-01-2009
2	Dairy Science	6th	10-06-2008
		7th	08-08-2008
		8th	20-01-2009
3	Veterinary Science & Animal Husbandry	3rd	20-01-2009
		4th	21-03-2009

Board of Studies

As provided in Section 24 of the GAU Act 2004, Anand Agricultural University has constituted the Board of Studies for different group of subjects. The Constitution of Board of studies is given in Appendix-5.

During the year under report, following Board of Studies were functional and held meetings to consider various issues pertaining to their group of subjects.

Sr. No.	Name of Board of Studies	Date of Meeting
Agriculture Faculty		
1	Board of Studies of the subject of Crop Production	17-03-08
2	Board of Studies of the subject of Plant Science	22-05-08
3	Board of Studies of the subject of Plant Protection	--
4	Board of Studies of the Basic and Social Science subjects	10-06-08
Dairy Science Faculty		
5	Board of Studies of the subject of Dairy Technology	20-01-09
6	Board of Studies of Basic subjects of Dairy Science Faculty	20-01-09
7	Board of Studies of Dairy Business Management	20-01-09
Veterinary Faculty		

8	Board of Studies of the Basic Subjects of Veterinary Faculty	07-01-09
9	Board of Studies of the Pre-clinical subjects of Veterinary Faculty	06-01-09
10	Board of Studies of the Clinical subjects of Veterinary Faculty.	06-01-09
11	Board of Studies of the subjects of Animal Production	05-01-09
Food Processing Technology and Bio-Energy		
12	Board of Studies of subjects of Post Harvest Engineering and Technology.	--
13	Board of Studies of subjects of Food Science, Nutrition, Food Processing and Business Management.	--
14	Board of Studies of subjects of Agricultural, Horticultural, Livestock and Aqua-cultural Produce Processing and Food Engineering.	--
15	Board of Studies of subjects of Bio-Energy.	--
Post-graduate Faculty		
16	Board of Studies of Faculty of Post Graduate Studies.	24-03-09 03-03-09

- The Board of Studies of all faculties specially considered the following five items:
  1. Scrutiny of application for recognition of teachers as Ph.D. guide.
  2. List of experts in the subjects dealt with by that Board of Studies.
  3. List of examiners from the field of subjects of that Board of Studies.
  4. Research Problems to be given to the students for M.Sc. /Ph.D. thesis
  5. The evaluation of examination results of all semesters and their analysis.

Appendix-1

Members of the Board of Management

Vice Chancellor
Prof. M. C. Varshneya
Chairman

Secretary
Agriculture & Cooperation Department
Dr. Avinashkumar (Upto 05-04-08)
Dr. P. N. Roychaudhary (From 06-04-08)

Secretary
Finance Department
Shri A. K. Jyoti (Upto 05-04-08)
Shri G. P. Joshi (From 06-04-08)

Secretary
Education Department
Shri P. Paneervel (Upto 04-04-08)
Dr. Hasmukhbhai Adhiya (From 06-04-08)

I/c. Director of Agriculture
Dr. S. R. Chaudhary

Director of Animal Husbandry
Dr. R. B. Shukla

Director of Horticulture
Dr. S.R. Choudhary

Dean, Agriculture College
Dr. A. M. Shekh (Upto 31-10-08)
Dr. A. R. Pathak (From 01-11-08)
Nominated by Vice-Chancellor

Director
NRC, M & AP (Boriavi)
Dr. S. Maiti
Nominated by I.C.A.R.

Registrar
Shri V. P. Macwan
Member Secretary

Appendix-2

Members of Academic Council

Vice Chancellor
Prof. M. C. Varshneya
Chairman

Director of Research &
Dean, PG Studies
Dr. A. R. Pathak

Director of Extension Education
Dr. P. P. Patel

Dean, Agriculture
Dr. A. M. Shekh

Dean, Veterinary Science
Dr. J. V. Solanki

Dean, Dairy Science
Dr. B. P. Shah

Dean, Food Processing Technology &
Bio-energy
Dr. D. C. Joshi

Dean, Agriculture Information
Technology
Dr. S. K. Dixit

Principal
Extension Education Institute
Dr. Arun A. Patel (Nominated)

Professor & Head
Veterinary Pathology
Dr. K. S. Prajapati (Nominated)

Prof. & Head
Agriculture Botany
Dr. G. C. Jadeja (Nominated)

Prof & Head
Veterinary surgery
Dr. D.B. Patil (Nominated)

Professor & Head
Dairy Microbiology
Dr. J. B. Prajapati (Nominated)

Professor & Head
Post Harvest Engineering & Technology
Dr. R. F. Sutar (Nominated)

Retd. Prof. / Dean, Horticulture
Dr. V. M. Mehta (Co-opt)

Librarian
Dr. Girish B. Valand (Co-opt)

Director of Student Welfare
Dr. A. M. Thaker (Co-opt)

Retd. Research Scientist
Dr. B. S. Jadon (Co-opt)

Managing Director, Vidya Dairy
Dr H.K. Desai (Co-Opt)

Rt. Principal Dairy Science
Dr. S.S. Sannabhadti (Co-Opt)

Rt. Principal Veterinary Science
Dr. M. C. Desai (Co-Opt)

Vice-Chancellor
M. S. University, Baroda
Dr. Manoj Soni (Co-Opt)

Asstt. Director General (Edn)
I.C.A.R., New Delhi,
Dr. G. C. Tiwari (Co-Opt)

Director, IRMA (Co-Opt)
Dr. Vivek Bhandari

Registrar
Shri V. P. Macwan
Member Secretary

Appendix-3

Officers of the University

Chancellor
Shri Nawal Kishore Sharma

Vice Chancellor
Prof. M. C. Varshneya

Registrar
Shri V. P. Macwan

Director of Research & Dean PG Studies
Dr. A. R. Pathak

Director of Extension Education
Dr. P. P. Patel

Dean, Agriculture
Dr. A. M. Shekh

Dean, Dairy Science
Dr. B. P. Shah

Dean, Veterinary Science
Dr. J. V. Solanki

Dean Food Processing Technology & Bio-energy
Dr. D. C. Joshi

Dean Agril. Information Technology
Dr. S. K. Dixit

Comptroller-cum-Accounts Officer
Shri P. S. Vyas

Librarían
Dr. Girish B. Valand

Director of Students' Welfare
Dr. A. M. Thaker

Director, Information Technology
Shri R. S. Parmar

Executive Engineer
Shri B. N. Bhalia

Appendix-4

Heads of the Department

AGRICULTURE Faculty :

Dean : Dr. A. M. Shekh

Sr. No.	Name & Address of the Teacher	HOD Declared for the Department
1	2	3
1.	Dr. M. V. Patel Professor of Agronomy, BACA, AAU, Anand	Agronomy
2.	Dr. G. C. Jadeja Professor of Botany, BACA, AAU, Anand	Plant Breeding & Genetics
3.	Dr. H. C. Patel Professor of Horticulture, BACA, AAU, Anand	Horticulture
4.	Dr. S. K. Dixit Professor of Statistics, BACA, AAU, Anand	Agricultural Statistics
5.	Dr. N. B. Chauhan Professor of Extension Deduction, BACA, AAU, Anand	Extension Education
6.	Dr. D. R. Patel (Upto 29-12-08) Professor, Agril. Biotechnology, BACA, AAU, Anand	Agricultural Biotechnology
	Dr. R. S. Fogut, Professor (P), (From 30-12-08) Agril. Biotechnology, BACA, Anand	
7.	Dr. R. Bhatnagar Professor (P), Biochemistry, BACA, AAU, Anand	Agricultural Biochemistry
8.	Dr. R. C. Jhala Professor, BACA, AAU, Anand	Agricultural Entomology
9.	Dr. Vyas Pandey Professor, BACA, AAU, Anand	Agricultural Meteorology
10.	Dr. M. S. Vora, (Upto 30-06-08) Research Scientist (P), Deptt. of Microbiology, BACA, Anand	Agricultural Microbiology
	Shri R. V. Vyas (From 01-07-08) Research Scientist (Microbiology), B.A.C.A., Anand	
11.	Dr. G. B. Valand (Upto 29-12-08) Professor (P), BACA, AAU, Anand	Plant Pathology
	Dr. R. N. Pandey (From 30-12-08) Professor & Head (Plant Pathology), BACA, Anand.	
12.	Dr. B. A. Patel Associate Professor, Department of Nematology, BACA, AAU, Anand.	Nematology
13.	Dr. G. N. Patel (Upto 29-12-08) Professor (P), BACA, AAU, Anand	Agricultural Economics
	Dr. R. H. Patel Professor (P), (Agril. Economics), BACA, Anand	
14.	Dr. V. R. Bhatt Professor (P), BACA, AAU, Anand	Agri. Chemistry & Soil Science

VETERINARY SCIENCE & ANIMAL HUSBANDRY FACULTY :

Dean: Dr. J. V. Solanki

Sr. No.	Name & Address of the Teacher	HOD Declared for the Department
1.	Dr. Subhash Parnerkar, Research Scientist (P), Western Regional Animal Nutrition Station, AAU, Aanand	Animal Nutrition
2.	Dr. A. I. Patel Professor, Veterinary Parasitology, College of Veterinary Science & Animal Husbandry, Anand	Veterinary Parasitology
3.	Dr. F. S. Kavani Professor, Animal Re-Production Gynaecology & Obstetrics, College of Veterinary Science & Animal Husbandry, Anand	Animal Re-production, Gynaecology & Obstetrics.
4.	Dr. P. R. Patel Professor, Epidemiology & Preventive Veterinary Medicine, College of Veterinary Science & Animal Husbandry, Anand	Clinical Veterinary Medicine
5.	Dr. P. R. Patel Professor, Epidemology & Preventive Veterinary Medicine, College of Veterinary Science & Animal Husbandry, Anand	Epidemiology & Preventive Veterinary Medicine
6.	Dr. K. S. Prajapati Professor, Veterinary Pathology, College of Veterinary Science & Animal Husbandry, Anand	Veterinary Pathology
7.	Dr. A. M. Patel Professor, Livestock Production & Management, College of Veterinary Science & Animal Husbandry, Anand	Livestock Production & Management & Livestock Product Technology
8.	Dr. D. B. Patil Professor, Veterinary Surgery, College of Veterinary Science & Animal Husbandry, Anand	Veterinary Surgery (In-charge)
9.	Dr. C.G.Joshi Professor, Animal Biotechnology, College of Veterinary Science & Animal Husbandry, Anand	Animal Biotechnology (Animal Science)
10.	Dr. M. K. Rank Professor, College of Veterinary Science & Animal Husbandry, AAU, Anand.	Animal Genetics & Breeding
11.	Dr. M. N. Brahmbhatt Associate Professor, College of Veterinary Science & Animal Husbandry, AAU, Anand.	Livestock Production Technology

Sr. No.	Name & Address of the Teacher	HOD Declared for the Department
1	2	3
12.	Dr. A. M. Thaker Professor (P), Veterinary Pharmacology & Toxcology, College of Veterinary Science & Animal Husbandry, Anand	Veterinary Pharmacology & Toxicology
13.	Dr. Y. L. Vyas Professor (P), Veterinary Anatomy, College of Veterinary Science & Animal Husbandry, Anand	Veterinary Anatomy
14.	Dr. J. S. Arya Professor (P), College of Veterinary Science & Animal Husbandry, AAU, Anand.	Veterinary Physiology
15.	Dr. A. M. Pandey Professor (P), College of Veterinary Science & Animal Husbandry, AAU, Anand.	Veterinary Biochemistry
16.	Dr. B. P. Patel Professor (P), College of Veterinary Science & Animal Husbandry, AAU, Anand.	Veterinary Extension Edacation
17.	Dr. Ashish Roy (Upto 04-01-09) Professor (P), College of Veterinary Science & Animal Husbandry, AAU, Anand.	Veterinary Microbiology
	Dr. M. K. Jhala (From 05-01-09) Professor (P), College of Veterinary Science & A.H., AAU, Anand.	
18.	Dr. D. M. Patel Professor (P), College of Veterinary Science & Animal Husbandry, AAU, Anand.	Teaching Veterinary Clinical Service Complex

DAIRY SCIENCE FACULTY :

Dean : Dr. B. P. Shah

Sr. No.	Name & Address of the Teacher	HOD Declared for the Department
1.	Dr. P. S. Prajapati, (Upto 30-11-07) Professor, Dairy Technology, Dairy Science College, Anand	Dairy Technology
2.	Dr. V. R. Boghra (Upto 16-07-08) Professor (P), Dairy Chemistry, Dairy Science College, Anand	Dairy Chemistry
	Dr. K. D. Aparnathi (From 17-07-08) Professor, (Dairy Chemistry) Dairy Science College, AAU, Anand	Dairy Chemistry
3.	Dr. A. G. Bhadania Professor, Dairy Engineering, Dairy Science College, Anand	Dairy Engineering
4.	Dr. J. B. Prajapati Professor, Dairy Microbiology, Dairy Science College, Anand	Dairy Microbiology
5.	Dr. A. J. Pandya Professor, Dairy Plant Machines and Operations Dairy Science College, Anand	Dairy Plant Machines and Operations
6.	Dr. R. H. Patel (Upto 29-12-08) Asso. Professor, Dairy Business Management, Dairy Science College, Anand	Dairy Business Management (In-charge)
	Dr. A. K. Makwana, (From: 30-12-08) Assistant Professor, Dairy Business Management, Dairy Science College, AAU, Anand	

FOOD PROCESSING TECHNOLOGY & BIO-ENERGY:

Sr. No.	Name & Address of the Teacher	HOD Declared for the Department	Telephone Number	Mobile Number
1	2	3	4	5
1.	*Dr. D. C. Joshi* *Professor,* *Food Engineering, F.P.T. & B.E., APPE, Anand*	Food Engineering	(02692)261302	9998009965
2.	Dr. R. F. Sutar Professor, Post-Harvest Engineering & Technology,F.P.T. & B.E., APPE, Anand	Post-Harvest Engineering & Technology	(02692)261302	9824386568
3	Dr.S.S.Kapadi Associate Professor, Bio-Energy	Bio-Energy	(02692)261302	9428489145

Appendix-5

Constitution of Board of studies

(a) The Head of the Department Ex-Officio Chairman.

(b) Professor in each subject comprised in the Board from each constituent college/department.

(c) One academic staff members for each subject comprised in the Board other than Professors to be nominated by the concerned Associate Dean/Principal from the constituent / affiliated college.

(d) One member from amongst the development departments and allied fields related to concerned Board of Studies to be nominated by the Vice-Chancellor.

(e) One progressive having specialized knowledge about related subjects to be nominated by the Vice-Chancellor.

(f) Chairman of the concerned Boards of Studies under the remaining Agricultural Universities in the State. Provided further that the Chairman may invite one or two academic staff members from a constituent college for a particular meeting.

Chart-1

ORGANIZATIONAL SET-UP

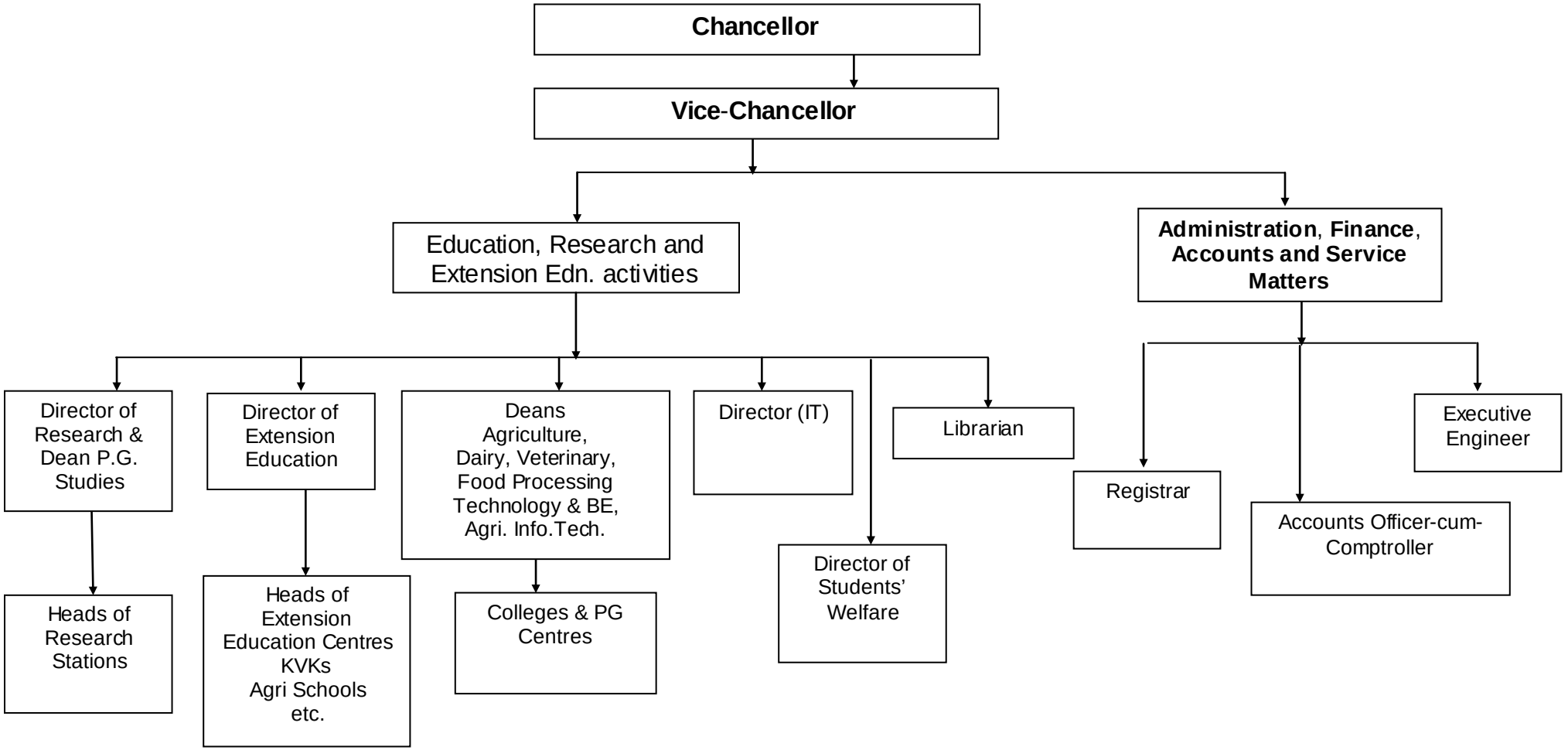
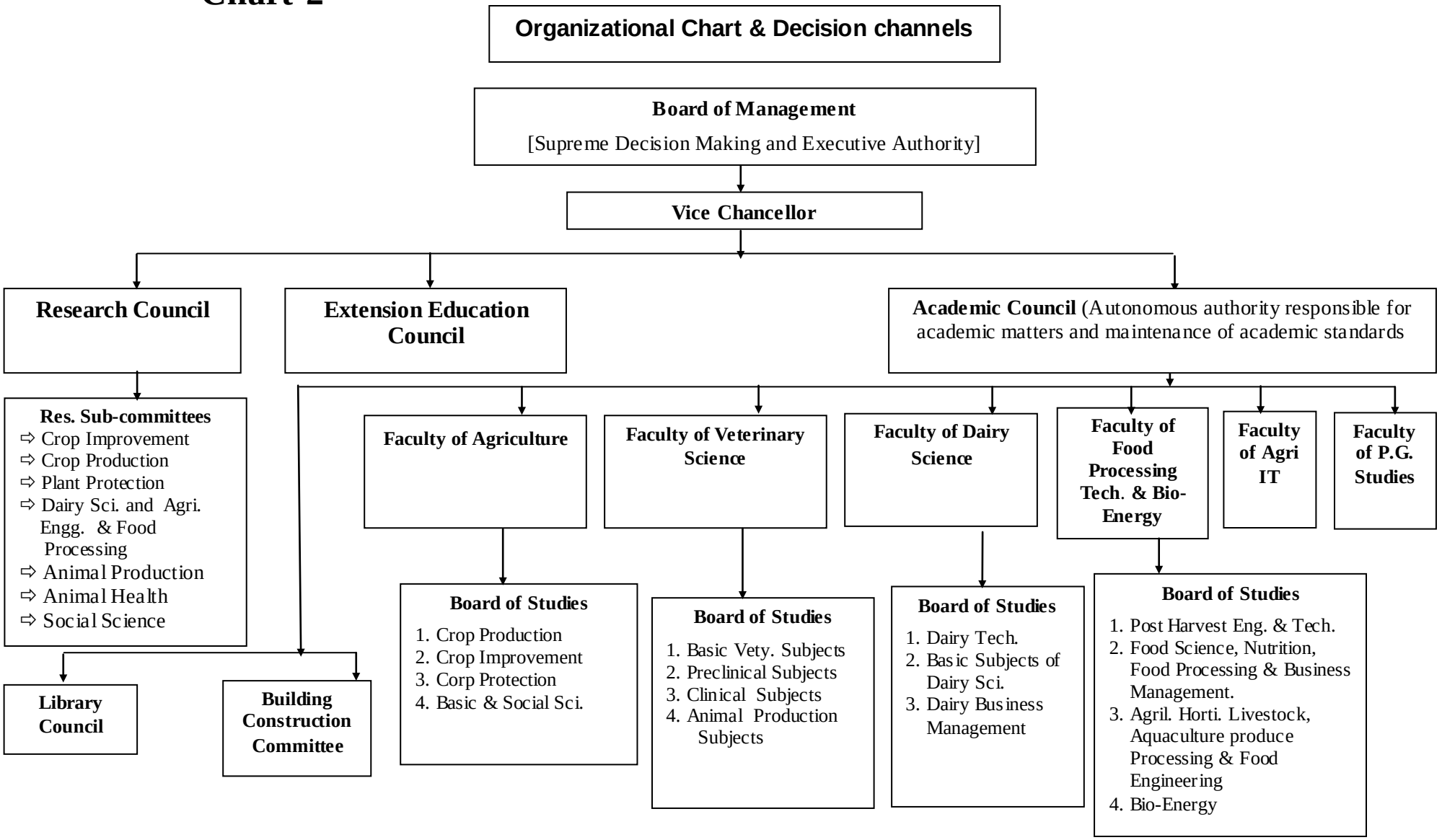


Chart-2


Organizational Chart & Decision channels
Board of Management
[Supreme Decision Making and Executive Authority]
Vice Chancellor
Research Council
Extension Education Council
Academic Council (Autonomous authority responsible for academic matters and maintenance of academic standards
Res. Sub-committees
⇨ Crop Improvement
⇨ Crop Production
⇨ Plant Protection
⇨ Dairy Sci. and Agri. Engg. & Food Processing
⇨ Animal Production
⇨ Animal Health
⇨ Social Science
Faculty of Agriculture
Faculty of Veterinary Science
Faculty of Dairy Science
Faculty of Food Processing Tech. & Bio-Energy
Faculty of Agri IT
Faculty of P.G. Studies
Library Council
Building Construction Committee
Board of Studies
1. Crop Production
2. Crop Improvement
3. Corp Protection
4. Basic & Social Sci.
Board of Studies
1. Basic Vety. Subjects
2. Preclinical Subjects
3. Clinical Subjects
4. Animal Production Subjects
Board of Studies
1. Dairy Tech.
2. Basic Subjects of Dairy Sci.
3. Dairy Business Management
Board of Studies
1. Post Harvest Eng. & Tech.
2. Food Science, Nutrition, Food Processing & Business Management.
3. Agril. Horti. Livestock, Aquaculture produce Processing & Food Engineering
4. Bio-Energy

Chapter 3

The Vice Chancellor – Ripples in the Ocean

The Vice-Chancellor is the principal executive and academic officer of the University. He is ex-officio Chairman of the Board of Management and Academic Council. The Vice-Chancellor visualizes the direction of growth and development, exercises general control over the affairs of the University and is responsible for the maintenance of the discipline in the university. Vice-Chancellor gives effects to the orders of the Board of Management regarding appointment, dismissal, suspension of the officers, teachers and employees of the University.

Prof. M. C. Varshneya, a reknowned Agro- Meteorologist took over as the first Vice-Chancellor on 21-5-2004 and continued to be Vice-Chancellor of the University during the year under report. Prof. Varshneya has taken the University to a new height.

As the first Vice-Chancellor of the Anand Agricultural University, Prof. M. C. Varshneya constituted the authorities like Academic Council, Faculties, Board of Studies of different groups of subjects, Research Council, Extension Education Council and made them effectively functional. He also completed the task of drafting Statutes of the University and with the approval of the Board of Management sent it to the Government for the approval.

The Government of Gujarat has assigned him special responsibilities as Nodal Officer of all the four agricultural Universities of Gujarat of administrative and academic matters concerning the state agricultural universities.

The Major contributions of Prof. M.C. Varshneya as Vice Chancellor are as follows:

- Decision Support System Software on Soil Health Card Project covering 10 lakh farmers of 18,000 villages of Gujarat through internet.
- Establishment of four new colleges and five polytechnics.

- Centre of Excellence in Bio-technology, Animal Nutrition, Medicinal & Aromatic Plant, Weather Forecasting & Climate Change and Niche Area Project on Synbiotic
- Organized fourth *Krushi Mahotsav* of one month duration in six districts involving more than one lakh farmers every year.
- Established four new faculties and six new departments.
- Provided dynamic leadership to AAU Scientific Community spreaded in seven colleges under different departments, five polytechnics, 24 research stations, 16 extension centres including three KVKs under University and three KVKs with NGO's.
- Within four years 227 teachers and 72 supporting/technical staff were appointed through systematic recruitment proceedings.
- Signed five MoUs for collaborative research with foreign Universities
- Visited Israel. Prepared CM's presentations of Israel entitled "More Crop per Drop".

The leadership role played by Prof. Varshneya has made excellent impact. The efforts have resulted in –

- Gujarat Farmers are now aware about health of their soil resultant effect is balanced use of inputs.
- Teaching and Agricultural Education has been given impetus in the State as evident from large numbers of applications received for admission in all faculties and higher percentage of cut off marks compared to GAU regime.
- The Research and Extension activities of university are streamlined.
- Streamlined admission and examination, reducing delay.

National and State level Representation of the Vice Chancellor:

Prof. M.C. Varshneya has been nominated /appointed on the various State Level and National Level Committees by the competent authorities, which are given below:

- Member-Advisory Board, Sri Sri Institute of Agril. Science and Technology
- Member- Task Force – Food Processing Industries in Gujarat
- Member – Work Plan Inter Departmental Co-ordination Committee.
- Member - State Food Security Mission

Trustee

- Trustee – Narmada Integrated Rural & Environmental Development Society

ACTIVITIES OF NODAL OFFICER

Administrative Matters:

Prof. M. C. Varshneya as the Nodal Officer of the four agricultural Universities of Gujarat has vigorously pursued various pending problems of the staff and solved problems related to pay commission, transfer, promotion etc. He also took-up the issue of displacement of staff of erstwhile Gujarat Agricultural University.

As the Nodal Officer, he has been providing constant guidance in the matter of academic and personnel/management and has solved many problems with innovative approaches. During the year under report 19 appointments have been made on compassionate grounds to the nearest relatives of deceased employees.

Academic and Examination Matters:

As the Nodal Officer for Academic and Examination matters Prof. M.C. Varshneya successfully organized tedious and tiresome exercise of central admission at UG and PG level for four SAUs of Gujarat. As Nodel Officer, he convened meetings of Registrars and Deans of four SAUs and conducted examinations and paper evaluation exercise for centralized admissions. The details of the students admitted are given below:

UNDERGRADUATE LEVEL (2008-09)

Degree	Number of application received for admission	Actual admission given in SAUs			
		Anand	Junagadh	Navsari	Sardar Krushinagar
B.Sc.Agri	1583	90+20*	80+20*	75+15*	69+20*
B.V.sc.and A.H.	1430	59+15*	-	-	59+15*
B.Tech (D.T)	639	38+0*	-	-	-
B.Tech (Agril.Engg.)	863	45+15*	57+20*		
POSTGRAUDATE LEVEL (2008-09)					
M.V.Sc.	87	47	-	01	19
Ph.D (Vetrenary)	18	12	-	00	03
M.Sc.(Agri)	297	64	35	36	24
Ph.D (Agri)		17	05	10	03
M.Sc.(D.T.)/M.Tech(Dairy)	04	04	-	-	-
Ph.D. (Dairy)	01	01	-	-	-
M.Tech(FPT)	06	05	-	-	-
IABM	24	20	-	-	-

*** Payment seat**

University Administration:

Prof. Varshneya has provided direction and pace to the university through participative management and committee approaches. During the year under report, 15 meetings of different authorities, important committees and councils have been organized under his Chairmanship, wherein he actively participated/guided and motivated the personnel of the university and setup new standards in all spheres of activities and programmes. Due to his efforts the academic sessions are regularized. Vth annual convocation was organized.

Under the dynamic leadership of Prof. M. C. Varshneya as Vice-Chancellor 68 new research projects to the tune of Rs.3,133 lakh have been sanctioned during the year under report by Government of India, Government of Gujarat, Overseas and other agencies.

Seminars and Meetings:

During the year under report Prof. Varshneya attended various seminars and meetings and presented papers. The details are as under:

- One day seminar of Progressive Farmers on *Krushi Mahotsav* 2008 held at Gandhinagar on 3rd April 2008.
- Joint AGRESCO at Navsari Agricultural University, Navsari on 4th April, 2008.
- Seminar on Monsoon 2008, organized by College of Agriculture, Pune on 24th April, 2008.
- National Conference of Ministers of Agriculture and Horticulture organized by National Academy of Agriculture Research Management, Hyderabad on 25th May,2008
- National Research Advisory Committee meeting held at IIM, Ahmedabad on 15th November 2008.
- National Seminar on "Agro-meteorological Services for farmers during 10-13 November, 2008, BACA, AAU, Anand.
- Presented Paper in Indian Society of Agronomy organized by NAU, Navsari on 19th November, 2008.
- 33rd IAUA Vice Chancellors' Conference on "Climate Change and its Effect on Agriculture" on 3-5 December, 2008 held at AAU, Anand.
- RKVY conference held at New Delhi on 6th December 2008.
- One day International Symposium on "Afforestation of Medicinal Trees organized by 3rd Word Ayurveda Congress and Arogya-2008, Jaipur on 20th December, 2008.
- National Seminar on "Innovations in Food Processing Technology & Bio-Energy AAU, Anand on 9-10th February, 2009.
- Received Bronze Medal in 2009 for *e-krishi kiran* program by Ministry of Administrative Reforms and Ministry of Information Technology, Govt. of India, New Delhi on 12th February 2009.

- VC Conference at New Delhi on 15-16th February, 2009.
- Seminar on Challenges and Opportunities in Agro-meteorology at New Delhi on 24 & 25th February, 2009.
- Workshop on "Organic farming in Horticultural Crops" organized at Department of Horticulture, BACA, AAU, Anand on 17.18 March, 2009.

Chapter-4

Human Resource (HR) Activities
Nature make man we make gentleman

Human Resource Development in Anand Agricultural University (AAU) is given top priority. The changing global scenario demands that traditional research must be sharpened and it should be based on market driven economy. Therefore AAU scientists are encouraged to update their knowledge and to improve their skills. The need of the day is to search for newer technology with cutting edge research so that new generation, young farmers and daughters are imparted instructions in cutting edge technologies.

In view of this the AAU organises various Programmes and activities to expand wings of knowledge of its scientists and the staff.

During the year under report following programmes / trainings / workshops / seminars are organised or were attended by the University scientists.

Seminar

- National Seminar on 'Agro meteorological services for farmers during 10 - 13 November, 2008. BACA, AAU, Anand.
- Workshop on "Organic farming in Horticultural Crops" organized at Department of Horticulture, BACA, AAU, Anand on 17 - 18 March, 2009.
- National seminar on "Innovations in Food Processing & Entrepreneurship Development" was organized by Faculty of Food Processing Technology & Bio-Energy, Anand Agricultural University, Anand on February 9 - 10, 2009 at Anand.

Conference

- 33rd IAUA Vice Chancellors' Conference on "Climate Change its Effect on Agriculture" during 3 - 5 December, 2008.

Training

- Short-Term Training programme on "Soil and Water Testing" organized at the Department of Agricultural Chemistry & Soil Science, BACA, AAU, Anand during August 25 – 29, 2008 for the College / School teachers of Panchmahals district.
- Training Programme on Postmortem examination and Veterolegal cases under Continuous Veterinary Education organized for field veterinarians, A. H., Department of Gujarat state during 04-02-09 to07-02-09 and 18-02-09 to 21-02-09 (Two Batches).
- Training course on "Advanced Laboratory Chemical Quality Assurance in Dairy Industry" for 10 days from June 18 to June 27, 2008, DSC, Anand.

Managerial Training

Sr. No.	Name of Training	Place	Duration period	Total participants
1.	"Staff Development Improving Efficiently & Effectiveness of Personal Secretaries / Assistants & Office Staff "	New Delhi	24/4/2008 to 26/4/2008	05
2.	"International School for Public Leadership Training Programme"	Dairy Science College, AAU, Anand	23/4/2008 to 30/4/2008	34
3.	Induction Training	Dairy Science College, AAU, Anand	8/4/2008 to 11/4/2008	25
4.	Training Programme on "Participatory Management of Natural Resources for Sustainable livelihoods"	SPIPA Ahmedabad	8/4/2008 to 11/4/2008	05
5.	Advanced Training Programme on Cyber Laws, Information Security and Computers especially for women Personnel of S & T Departments of India for Senior Administrative Staff and Junior Scientist / Technologists.	New Delhi	4/8/2008 to 10/8/2008	02
6.	Winter School on "Farmer Market Linkage in Agriculture Opportunities and Challenges"	Dharwad Karnataka	18/11/2008 to 8/12/2008	03

7.	Opportunities and Challenges for Future Generation in Leadership	Ahmedabad	26/12/2008 to 27/12/2008	22
8.	2nd Cep Short Course on "Delivering High Quality Services in Guest House"	Mumbai	20/2/2009 to 21/2/2009	01
9.	Scope English Training	Dairy Science College, AAU, Anand	17/11/2008 to 7/3/2009	30
10.	"Court Procedure and handing Litigation (GOI)"	SPIPA Ahmedabad	16/3/2009 to 18/3/2009	03

Human Resource:

The staff position as on 31-03-2009 in the Anand Agricultural University is given **Appendix-1**

Reservation policy implemented:

The Anand Agricultural University implements the reservation policy of the Govt. in University service in letter and spirit. During the year under report the SC / ST / SEBC backlog was as given in Table-1.

Table: 1 Backlog in Reservation in SC/ST/SEBC categories in recruitment Teaching / Non-teaching (01-04-2008 To 31-03-2009)

Sr. No.	Cadre	Backlog as on 31-03-200			
		SC	ST	SEBC	Total
1.	Professor (Agri.)	01	01	01	03
2.	Professor (Vety.)	--	01	--	01
3.	Senior Research Assistant	--	01 Shortfall	--	01 Shortfall
Total		**01**	**03**	**01**	**05**

New Appointments

During the year under report, the Board of Management approved the selection of teachers and equivalent posts in different faculties. Details of which are given in Table-2.

Table: 2 Teachers Appointed during the year (01-04-2008 To 31-03-2009)

Sr. No.	Post	No. of Teachers appointed				Other faculty AET	IABMI	Total
		Agriculture	Veterinary	Dairy	F.P.T			
1.	Professor	01	--	01	--	01	--	03
2.	Associate Professor	03	--	01	--	02	--	06
3.	Assistant Professor	21	05	01	04	13	03	47
Total		**25**	**05**	**03**	**04**	**16**	**03**	**56**

Non-teaching cadre

Non-teaching staff was not appointed during this year

Career Advancement Scheme (CAS)

During the year under report, Professors, Associate Professors (P) and Assistant Professor (Selection Grade) and Assistant Professors (Senior Scale) have not been promoted under Career Advancement Scheme.

Promotion

During the year under report, AAU has given the promotion in different administrative cadres is mentioned in Table-4

Table: 4 Promotions to Non-teaching cadres (01-04-2008 To 31-03-2009)

Sr. No.	Category	No. of promotion	Remarks
1.	Office Supdt.	03	--
2.	Head Clerk	05	--
3.	Agri. Supervisor	02	--
Total		**08**	

Retirement:

During the year under report, number of persons Teaching and Non-teaching retired from the university services is given in Table-5.

Table: 5 No. of persons retired on Superannuation/resignation and voluntarily during the year (01-04-2008 To 31-03-2009)

Sr. No.	Name of posts	No. of persons retired on			Death
		Superannuation	Voluntarily	Resignation	
1.	Professor	--	01	--	--
2.	Associate Professor	--	--	--	--
3.	Assistant Professor	--	02	03	--
4.	Agril. Officer	02	--	--	--
5.	Agril. Supervisor	--	--	--	--
6.	Agril. Assistant	03	01	--	--
7.	Office Superintendent	03	--	--	--
8.	Head Clerk	01	--	--	--
9.	Senior Clerk	08	--	--	--
10.	Junior Clerk	04	01	--	01
11.	Lab technician	02	--	--	--
12.	Driver	01	02	--	01
13.	Tractor Driver	--	--	--	--
14.	Steno Grade-2	--	01	--	--
15.	Wireman	--	--	--	01
16.	Programme Assistant (Farm Manager)	--	--	01	--
17.	Home Science Teacher/ Balwadi Teacher	02	--	--	--
18.	Class-II (Administratative)	02	--	--	--
19.	Class – IV	15	01	--	02
	Total:	**43**	**09**	**04**	**05**

Appendix-1
Staff Position as on 31-03-2009

Sr. No.	Cadres Name	Sanctioned post	Filled up Posts	Vacant posts
(1)	(2)	(3)	(4)	(5)
1	**University Officers**			
	A Vice-Chancellor	1	1	0
	B Director of Research	1	1	0
	C Registrar	1	1	0
	D Director of Extension Education	1	1	0
	E Account Officer-cum-Comptroller	1	1	0
	F Director (I.T.)	1	0	1
	G Director, Students' Welfare	1	0	1
	H University Librarian	0	0	0
	Total	**7**	**5**	**2**
2	**Teaching / Research / Extension:**			
	A Principal	3	3	0
	B Associate Director of Research	2	2	0
	C Professor & equivalent	51	38	13
	D Associate Professor & equivalent	152	95	57
	E Asstt. Professor & equivalent	243	186	57
	F Asstt. Librarian	1	0	1
	G Physical Instructor	2	2	0
	H Farm Manager	4	3	1
	I Asstt. Farm Manager	4	3	1
	Total	**462**	**332**	**130**
3	**Administration - Class-I**			
	A Assistant Registrar	2	2	0
	B Adm-cum-Accounts Officer	1	0	1
	C Legal Officer	1	0	1
	Total	**4**	**2**	**2**
4	**Non Technical Class-I**			
	A Executive Engineer	1	0	1
	B Deputy Engineer	2	2	0
	C Medical Officer	1	0	1
	Total	**4**	**2**	**2**
5	**Administration - Class-II**			
	A Accounts Officer (Cash)	1	1	0
	B Accounts Officer (P.F/ Cash)	1	1	0
	C Assistant Adm. Officer	3	3	0
	D Audit Officer	1	0	1
	Total	**6**	**5**	**1**
6	**Adm- Class -III**			
	A Office Supdt	**27**	**18**	**9**
	B Head Clerk	**21**	**16**	**5**
	C Senior Clerk	**95**	**89**	**6**
	D Junior Clerk	**142**	**142**	**0**
	Total	**285**	**265**	**20**

7	**Technical Class –III**			
	A Agril Officer / S.R.A (Agri) & equivalent	115	65	50
	B Programme Assistant	9	3	6
	C Veterinary Officer & equivalent	15	10	5
	D Senior Research Assistant (Agri. Engg)	4	4	0
	E Senior Research Assistant (Dairy)/ Dairy Supervisor	13	0	13
	F Agril Supervisor & equivalent	49	22	27
	G Agril Asstt. & equivalent	173	172	1
	Total	**378**	**276**	**102**
8	**Non Technical – Class- III**			
	A Steno Grade – I	3	3	0
	B Steno Grade – II	13	13	0
	C Steno Grade –III	10	5	5
	D Lab Technician	65	53	12
	E Driver	58	47	11
	F Tractor Driver	20	13	7
	G Stockman / Live Stock Assistant	11	8	3
	Total	**180**	**142**	**38**
9	**Isolated Cadres – Enclosed proforma**	65	45	20
	Total	**65**	**45**	**20**
10	Class – IV Cadres (Regular)	315	257	58
	Total	**315**	**257**	**58**
11	**As per Supreme Court order Created posts**			
	A Class – III (Jr. Clerk /Agril Asstt./Driver/ Tractor Driver)	15	14	1
	B Class - IV	247	212	35
	Total	**262**	**226**	**36**
	Grant Total	**1968**	**1557**	**411**
Details of Isolated Cadres:				
1	Blacksmith	2	2	0
2	Carpenter	2	2	0
3	Compounder	2	2	0
4	Junior Mechanic-cum-wiremen	1	1	0
5	Mechanic	1	0	1
6	Boiler Attendant	3	2	1
7	Compressor Attendant	2	2	0
8	Sanetary Inspector	1	0	1
9	Fitter	2	1	1
10	Bakery Operator	1	1	0
11	Plumber	1	1	0
12	Hatchery Supervisor /Chick Sexier	1	1	0
13	X- ray Technician	1	0	1

14	Qualified midwife	1	0	1
15	Project Operator	2	1	1
16	Electrician	1	0	1
17	Junior Instructor (Bakery)	1	0	1
18	Craft Teacher	1	1	0
19	Balwadi Teacher	1	1	0
20	Shaving Teacher	1	1	0
21	Teaching Assistant	3	2	1
22	Hostel Warden	1	1	0
23	Tracer	1	1	0
24	Junior Instructor	1	1	0
25	Junior Instructress	1	1	0
26	Assistant Instructor	1	1	0
27	Mechanic cum Draftsman	1	1	0
28	Draftsman	1	0	1
29	Senior Wireman	1	1	0
30	Wireman	3	3	0
31	Wireman (Electrical)	1	0	1
32	Librarian	1	0	1
33	Artist/ Photographer	1	1	0
34	Artist	1	0	1
35	Statistical Assistant	1	1	0
36	Computer Operator	2	1	1
37	Data Entry cum Disk Librarian	1	1	0
38	Library Assistant	1	1	0
39	Programmer	1	1	0
40	Data Processor	1	0	1
41	Senior Technician	2	1	1
42	Instructor (Baking /Science)	3	3	0
43	Senior Lab Technician (Electronics)	1	0	1
44	Junior Engineer (Civil/Electric)	4	3	1
45	Prof reader	1	0	1
46	Electrician (Arnej)	1	1	0
	Total	**65**	**45**	**20**

Chapter-5

Education:----------

(1) Admission Procedure (Under-graduate)

The University is mainly a residential one and follows semester system of education. Duration of **Bachelor of Science (Agriculture**), **Bachelor of Technology** (**Dairy Technology),Agri. Engg.** study course is of four years divided into eight semesters, while **Bachelor of Veterinary Science & Animal Husbandry**, is of five years divided into ten semesters. The candidates should have passed Higher Secondary School Certificate examination in science stream with English, Physics, Chemistry, Biology and Mathematics (optional for **Agri**.) for admission in all the degree courses run by the University. Candidates are selected for admission strictly on merit basis. The medium of instruction is English. The admission procedure in Post Graduate fellow as above.

The number of seats and the actual admitted students' details for the academic year 2008-09 are given.

Exemption of Tuition Fees for Girls

The girl students (except girls of NRI/payments seats) are exempted from tuition and hostel fees admitted in AAU for academic year 2008-09

Sr. No.	Degree its duration	Name of the College	Admission capacity				
			Gen/SC/ ST/ OBC	NRI/ Payment	ICAR/ VCI	Students Admitted	Students Passed
1.	B.Sc.(Agri) 4 years (8 semesters)	B.A. College of Agriculture, Anand	78	20	12	101	49
2.	B.V.Sc.& A.H. 5 years (10 semesters)	College of Vety. Sci. & A.H., Anand.	50	15	08	64	48
3.	B.Tech.(Dairy Tech.) 4 Years (8 Semesters)	Sheth M.C.College of Dairy Science, Anand.	40	15	06	61	59
4.	B.Tech (Agril.Engg)	B.Tech Agril. Engg College, Godhra	30	-	-	28	-

Admission procedure (Post-graduate)

A candidate aspiring to take admission in PG studies should have a graduate degree of the related faculty with an OGPA of not less than 6.00/10.00. A basic science graduate should have 55% in aggregate as well as in the field in which he/she seeks admission.

Entrance test and personal interview are conducted. On the basis of performance in the entrance test and interview, students are admitted as per the intake capacity. For admissions in International Agri. business management Institute graduates of any faculty of Agricultural University are eligible. Selections are made on the basis of merit in entrance test,, group discussion and interview.

Two academic years (four semesters) are required for the course work, research project work, thesis preparation and examination leading to the Master's Degree. A minimum period of three academic years (six semesters) is required for the Ph.D. degree.

Intake Capacity

The Anand Agricultural University has taken up and innovative approach for fixing intake capacity for master's and Ph.D. programmes.

Till the Academic Council fixed the intake capacity in a particular discipline the question of how many students should be admitted was dependent on the willingness of a teacher in that discipline. Therefore, the Hon'ble Vice-Chancellor proposed that intake capacity for post graduate programmes in a particular discipline should be fixed on the basis of department's infrastructure in that department and the experts / recognized teachers available.

The Academic Council had unanimously decided and fixed the intake capacity as follows.

Faculty	Masters	Ph.D.
Agriculture	176 (32)	66 (33)
Veterinary	89 (12)	20 (10)
Dairy	24 (4)	08 (4)
F.P.T. & B.E.	7 (1)	03 (2)
I.A.B.M.I.	19 (7)	--
Total	315	97

Note:

- Figures in parentheses show NRI / payment seats
- 15% seats are reserved for ICAR/GOI candidates
- The intake capacity in P.G. Diploma in Agril. I.T. is 15. Dairy and Food Quality Assurance is 20
  Subject wise intake capacity is given in Appendix-A.

Post-Graduate study center

There is no separate building or department for the PG programme. The faculties meant for the UG studies teaches in PG programme also in their respective subjects.

(2) Nodal Officer

As the Nodal Officer of Academic and Examination, Prof. M. C. Varshneya successfully organized tedious and tiresome exercise of central admission at UG and PG level for four SAUs of Gujarat. As Nodal Officer, he convened meeting of Registrars and Deans of four SAUs and conducted examinations and paper evaluation exercise for centralized admissions.

(3) Centralized Admission Process

Under Section 25 (7) (g) of the GAU Act, 2004 the Council of State Agricultural Universities is assigned the function to supervise and coordinate the central admissions to various degree courses in the University. However, since the council does not have adequate staff, function of the central admission for all SAUs of Gujarat are performed by the Nodal Officer and Vice Chancellor, Anand Agricultural University.

The advertisement is published in popular Gujarati daily news papers for the admission. The applications were processed through computer OMR system and merit list was prepared and declared on internet to call candidates for personnel interview / counselling. During the year under report, details of applications received and students admitted in four SAUs are as under.

Students admitted in four SAUs (2008-09)

Sr. No.	Name of Course	No. of applications received	Candidates called for interview	No. of Students admitted
1.	B.Sc.(Agri.)	1583	1433	340
2.	B.V.Sc. and A.H.	1430	276	190
3.	B.Tech.(D.T.)	863	195	55
4.	B.Tech (Agril Engg.)	639	348	100

UNDER GRAUDATE / POST GRAUDATE LEVEL (2008-09)

Degree	Number of application received for admission	Actual admission given in SAUs			
		Anand	Junagadh	Navsari	Sardar krishi nagar
Under Graduate					
B.Sc.Agri	1583	99	89	72	80
B.V.Sc. & A.H.	1430	50	14	15	46
B.Tech (D.T)	863	55	-	-	-
B.Tech (Agril Engg)	639	30	70	-	-
Post Graduate					
M.V.Sc.	87	47	-	01	19
Ph.D (Veterinary)	18	12	-	-	03
M.Sc.(Agri)	231	60	30	33	23
M.Sc.	21	04	05	03	01
Ph.D (Agri)	45	17	05	10	03
M.Tech(Dairying)	04	04	-	-	-
M.Tech(FPT)	-	04	-	-	-
MBA	-	19	-	-	-
Ph.D	01	01	-	-	-
PG. Diploma in Dairy & Food Quality Assurance	06	02	-	-	-

Post-graduate Admission and Output:

Admission given in different faculties at Masters and Ph.D. level under Anand Agricultural University, Anand are as under.

The details of admission in PG studies are as under.

Sr. No.	Name of Degree	Duration	Name of the College	Students Admitted	Students Passed
1.	M.Sc. (Agri.)	2 Years (4 semesters)	B.A. College of Agriculture, Anand	76	53
2.	M.Sc	2 Years (4 semesters)	B.A. College of Agriculture Anand.	0	05
3.	M.V. Sc.	2 Years (4 semesters)	College of Vety. Sci. & A. H., Anand	60	27
4.	M.Sc. (Dairying)	2 Years (4 semesters)	S.M.C. College of Dairy Science, Anand	02	04
5.	M. Tech. (D.T.)	2 Years (4 semesters)	S.M.C. College of Dairy Science, Anand	04	01
6.	M.Tech (FPT)	2 Years (4 semesters)	Faculty of Food Processing Technology and Bio-Energy	05	03
7.	Ph. D.	3 Years (6 semesters)	All the above colleges	30	13
8.	PG Diploma in Dairy & Food quality Assurance	14 Months (2 Semesters + 2 months in plant training	S.M.C. College of Dairy Science, Anand	07	-

As mentioned earlier in Undergraduate admission, the admission for PG programmes in all four Agricultural Universities were processed centrally by the AAU. Following admissions were given at PG level in all four Agricultural Universities of Gujarat State.

Sr. No.	Name of Degree	No. of application	No. of Students admitted
Agriculture			
1.	M.Sc.(Agri)	231	146
2.	M.Sc.	21	14
3.	Ph.D.	45	35
Veterinary			
4.	M.V.Sc.	87	67
5.	Ph.D	18	15

➢ Examination :

The University conducted its examinations regularly as per schedule for the various degree courses. The results were declared as under. Annual examinations for B.V.Sc. and A.H. were conducted as prescribed by the Veterinary Council of India.

Result Analysis:

The number of students passed with different level of success are as follows.

Degree	First class with Distinction	First class	Second Class	Pass Class	Total (passed out)
Graduate					
B.Sc.(Agri.)	12	15	18	04	49
B.V.Sc. and A.H.	07	28	13	-	48
B. Tech.(D.T.)	07	28	24	-	59
Post Graduate					
M.Sc.(Agri.)	03	20	30	-	53
M.Sc.	-	03	02	-	05
M.V.Sc.	10	17	-	-	27
M.Sc. (Dairying)	-	04	-	-	04
M. Tech. (D.T.)	-	01	-	-	01
M. Tech.(FPT)	-	03	-	-	03
Ph.D.	-	-	-	-	13
PG Diploma in Agril. (I.T.)	-	-	-	-	-
P. G. Diploma in Dairy & Food Quality Assurance	-	-	-	-	-

➢ Convocation :

Fifth Annual Convocation *:*

31st January 2009 was historic day for Anand Agricultural University as Fifth Annual Convocation was held in presence of His Excellency, the Governor of Gujarat and the Chancellor of the University Shri Naval Kishorj Sharma, the Guest of Honour Shri Dilipbhai Sanghani Hon'ble Minister of Agriculture Gujarat state, the Chief Guest Dr. P.L. Gautam Chairman, National Biodiversity Authority, Govt. of India, Chennai.

His Excellency, the Governor of Gujarat and the Chancellor of AAU, Anand Shri Naval Kishorji Sharma conferred the Degrees to the graduates and Post-graduates in person and in absentia. Total 318 graduate and Post-graduate candidates received the degrees in this Convocation.

H.E. the Governor of Gujarat and the Chancellor Shri Nawal Kishore Sharma delivering the Convocation Address

Vice Chancellor Prof. M. C. Varshneya addressing the students

H.E. the Governor of Gujarat and the Chancellor Shri Nawal Kishore Sharma awarding Gold Medal to students at the Fifth Convocation

List of Gold Medal/Gold Plated Silver Medals Award/Cash Prize for the year 2007-08.

Sr. No.	Name of Gold Medal	Degree	Particulars	Name of Student and Registration Number	Name of college
Post-graduate Medal					
1.	Chancellor's Gold medal	Post Graduate	For best Ph.D. thesis amongst all faculties is awarded	Puspkant Swarnkar 04-165-2005	B.A. College of Agriculture, Anand.
2.	Chancellor's Gold medal	Post Graduate	For being adjudged the best Post-graduate student of Master degree	Roon Marium Mathai 04-465-2006	Veterinary Science & Animal Husbandry, Anand
3.	Dr. C. B. Shah Medal	Post Graduate	For getting the highest O.G.P.A. including excellence in thesis in the subject of Agronomy at the M.Sc.(Agri.) Examination	Dhanraj Bhawsar 04-301-2006	B. A. College of Agriculture, Anand
4.	Dr. D. J. Patel Medal	Post Graduate	For securing maximum O.G.P.A. in the subject of Plant Pathology for M. Sc. (Agri.) degree course	Sanjeev Choubey 04-171-2005	B. A. College of Agriculture, Anand
5.	Late Shri S. V. Desai Medal	Post Graduate	For securing highest O.G.P.A. in the subject of Plant Pathology in M. Sc. (Agri.) degree course	Sanjeev Choubey 04-171-2005	B. A. College of Agriculture, Anand
6.	Late Shri K. K. Shukla Medal	Post Graduate	For best P. G. Research work from faculty of Veterinary Science & Animal Husbandry.	Sanjay Ghodasara	Veterinary Science & Animal Husbandry, Anand
7.	Smt. V. S. Siripurapu Memorial Gold Medal	Post Graduate	For securing First Class with Maximum O.G.P.A. in M.Tech.(FPT) examination	Tagalpallewar Govind Pradip 04-248-2005	Institute of Food Processing Technology & Bio-Energy, Anand

Under-graduate Medal				
Faculty of Agriculture				
8.	Vice-Chancellor's Gold Medal	Under Graduate	For being adjudged the best student of faculty of Agriculture.	Dineshkumar Bhakar 01-0009-2004
9.	Dr. Purachand D. Mistry Medal	Under Graduate	For securing highest C.G.P.A. in the subject of Agricultural Meteorology and related courses at the end of the 8th Semester of B.Sc.(Agri.) degree.	Dineshkumar Bhakar 01-0009-2004
10.	Dr. Mrinal Kanti Chakraborty Medal	Under Graduate	For securing highest O.G.P.A. in the subject of Ag. Chem. -3.4 (Introductory Plant Biochemistry) and Ag. Chem.-5.6 (Chemistry of Plant Products) at the end of the 8th semester of B.Sc.(Agri.) degree.	Dineshkumar Bhakar 01-0009-2004
11.	Dr. Harikaka Medal	Under Graduate	For securing highest G. P. A. in the course of Fundamentals of Entomology (Ag. Ento.-3.1) of B. Sc. (Agri.) degree.	Dineshkumar Bhakar 01-0009-2004
12.	Dr. Ramjibhai M. Patel Medal	Under Graduate	For securing highest C.G.P.A. in the subject of Agricultural Statistics and related course at the end of 8th semester of B.Sc.(Agri.) degree.	Ramdev Choudhary 1-0045-2004
13.	Dr. B. V. Mehta Medal	Under Graduate	For securing highest C.G.P.A. in the subject of Agricultural Chemistry and Soil Science up to the end of the 8th Semester of B. Sc. (Agri.) degree.	Ramdev Choudhary 1-0045-2004
14.	Dr. M. V. Desai Medal	Under Graduate	For securing highest C.G.P.A. in the subject of Plant Pathology and related courses at the end of the 8th semester of B.Sc.(Agri.) degree.	Ramdev Choudhary 1-0045-2004
15.	Late Shri Jashbhai J. Patel Medal	Under Graduate	For securing highest G.P.A. in the subject of Agronomy(Agron-8.11) at the end of the 8th semester of B.Sc.(Agri.) degree.	Ramdev Choudhary 1-0045-2004

16.	Ravjibhai Chhotabhai Patel Medal	Under Graduate	For securing highest O.G.P.A. in the subject of Agricultural Entomology at the end of 8th Semester B.Sc(Agri.) degree.	Ramdev Choudhary 1-0045-2004
17.	American Spring & Pressing Works Pvt. Ltd., Cash Prize	Under Graduate	For Securing highest C.G.P.A. in the subjects of Entomology and Plant Pathology up to the end of 8th semester of B.Sc.(Agri.) degree course.	Ramdev Choudhary 1-0045-2004
18.	Dr. Ranchhodbhai M. Patel Gold Medal	Under Graduate	For securing highest C.G.P.A. in the related courses of Plant Breeding & Genetics at the end of the 8th Semester of B.Sc.(Agri.) degree.	Suresh Kumar A1-00052-04
19.	Dr. Z. B. Patel Medal	Under Graduate	For securing highest C.G.P.A. in the subject of Horticulture at the end of 8th Semester of B.Sc.(Agri.) degree.	Suresh Kumar A1-00052-04
20.	Dr. Sureshbhai N. Patel Memorial Medal	Under Graduate	For securing highest O.G.P.A. in the subject of applied Entomology in 5th and 6th Semester of B.Sc.(Agri.) degree.	Suresh Kumar A1-00052-04
21.	Late Shri Dahyabhai Ambalal Patel Gold Medal	Under Graduate	For securing highest C.G.P.A. in the Subject of Horticulture up to the end of the 8th semester of B.Sc.(Agri.) degree.	Suresh Kumar A1-00052-04
22.	Prof. H.N. Patel Memorial Medal	Under Graduate	For securing highest C.G.P.A. in the Subject of Extension Education up to the end of 8th Semester of B.Sc.(Agri.) degree.	Shukla Morli Jiten A1-00049-04
Faculty of Veterinary Science and Animal Husbandry				
23.	Vice-Chancellor's Gold Medal	Under Graduate	For being adjudged the best student of Faculty of Veterinary Science and Animal Husbandry.	Arunkumar Patel 02-2354-2002
24.	Dr. R. K. Shukla Medal	Under Graduate	For securing highest O.G.P.A. in B.V.Sc. & A.H. degree.	Arun Singhatiya 02-2353-2002
25.	S. J. C. Veterinary College, Anand Medal (Basic Subjects)	Under Graduate	For securing highest O.G.P.A. in the Basic subjects viz., Anatomy, Biochemistry, Physiology and Pharmacology at the end of B.V.Sc. & A.H. degree.	Arun Singhatiya 02-2353-2002

26.	S. J. C. Veterinary College, Anand Medal (Clinical Subjects)	Under Graduate	For securing highest O.G.P.A. in the Clinical Subjects viz.,Surgery, Medicine, Gynaecology and Veterinary Public Health at the end of B. V. Sc. & A. H. degree.	Arun Singhatiya 02-2353-2002
27.	V. C. Desai Charities Medal	Under Graduate	For securing highest O.G.P.A. at the end of the 10th semester of B.V.Sc. & A.H. degree.	Arun Singhatiya 02-2353-2002
28.	Smt. Ramaben B. Avasthi Medal	Under Graduate	For securing highest C.G.P.A. up to the end of 6th semester in the subject of Veterinary Parasitology of B.V.Sc. & A.H. degree.	Arun Singhatiya 02-2353-2002
29.	Dr. M. N. Mannari Gold Medal	Under Graduate	For securing highest C.G.P.A. up to the end of the 9th semester in the subject of Veterinary Surgery & Radiology of B.V.Sc. & A.H. degree.	Arun Singhatiya 02-2353-2002
30.	Prof. M. R. Varia Medal	Under Graduate	For securing highest C.G.P.A. in the subjects of Veterinary Pathology, Microbiology, Phraseology at the end of 6th semester of B.V.Sc. & A.H. degree.	Dharaben Patel 02-2365-2002
Faculty of Dairy Science, Anand				
31.	Vice-Chancellor's Gold Medal	Under Graduate	For being adjudged the best student of Faculty of Dairy Science.	Nikhil Surendrakumar Vaidya 03-0043-2002
32.	Sheth Mansukhlal C. Desai Medal	Under Graduate	For securing highest C.G.P.A. in all the subjects offered by the Dairy Technology Department up to the end of 8th semester of B. Tech. (D.T.) examination.	Nikhil Surendrakumar Vaidya 02-2353-2002
33.	Sheth Mansukhlal C. Desai Medal	Under Graduate	For securing highest C.G.P.A. in all the subjects offered by the Dairy Chemistry Department up to the end of 8th semester of B. Tech. (D.T.) examination.	Nikhil Surendrakumar Vaidya 02-2353-2002
34.	Sheth Mansukhlal C. Desai Medal	Under Graduate	For securing highest C.G.P.A. in all the subjects offered by the Dairy Engineering Department up to the end of 8th semester of B. Tech. (D.T.) degree course examination.	Nikhil Surendrakumar Vaidya 02-2353-2002

35.	Late Smt. Taraben Maganlal Khatri Medal	Under Graduate	For securing highest C.G.P.A. in Dairy Technology subjects in the 7th & 8th semester of B.Tech.(D.T.) degree.	Nikhil Surendrakumar Vaidya 02-2353-2002
36.	Late Dr. Jashbhai Ranchhodbhai Patel Medal	Under Graduate	For securing highest O.G.P.A. at the end of 8th semester of B. Tech. (D.T.) degree course examination.	Nikhil Surendrakumar Vaidya 02-2353-2002
37.	Late Smt. Kapilaben Babubhai Patel Medal	Under Graduate	For securing highest C.G.P.A. in the Dairy Engineering subjects of B.Tech. (D.T.) degree.	Nikhil Surendrakumar Vaidya 02-2353-2002
38.	Late Shri Shankarlal Ratilal Shah Medal	Under Graduate	for securing highest C.G.P.A. in Dairy Engineering subjects at the end of the 4th semester examination.	Nikhil Surendrakumar Vaidya 02-2353-2002
39.	Shreshth Milk Gamdivala Dairy Medal	Under Graduate	For securing highest C.G.P.A. in all the subjects offered by the Dairy Technology Department up to the end of 8th semester of B. Tech. (D.T.) examination.	Nikhil Surendrakumar Vaidya 02-2353-2002
40.	Late Shri Bhogibhai V. Patel Medal	Under Graduate	For securing highest G.P.A. in all the courses of 7th & 8th semester of B. Tech. (D.T.) examination.	Jani Devangkumar Pinakinbhai 03-0017-2004
41.	Sheth Mansukhlal C. Desai Medal	Under Graduate	For securing highest C.G.P.A. in all the subjects offered by the Dairy Microbiology Department up to the end of 8th semester of B. Tech. (D.T.) examination.	Jani Devangkumar Pinakinbhai 03-0017-2004
42.	Shri Indubhai R. Patel Meda	Under Graduate	For securing highest C.G.P.A. in the subjects offered by the Dairy Microbiology Department up to the end of 8th semester of B. Tech. (D.T.) examination.	Jani Devangkumar Pinakinbhai 03-0017-2004
43.	Late Shri R. J. Patel Medal	Under Graduate	For securing highest C.G.P.A. in the subject of Dairy Business Management of B. Tech. (D.T.) examination.	Vasavada Keval Jagdishchandra 03-0045-2004
44.	Late Shri Kanubhai Chhotabhai Patel Medal	Under Graduate	For securing highest O.G.P.A. in all subjects of entire B. Tech. (D.T.) examination.	Gajera Hetalben Bharatbhai 03-0013-2004

Appendix-A

Agriculture Faculty :

Sr. No.	Subject	M. Sc. (Agri.)		Ph. D.	Total
		Open / SC / ST / SEBC	ICAR / GOI / OTHER		
1	Agronomy	17	03	03	23
	Water Management	03	01	-	04
2	Ag. Chem. & Soil Sci.	08	02	03	13
3	Biochemistry	07	01	02	10
4	Pl. Breeding & Genetics	17	03	10	30
5	Agril. Entomology	17	03	10	30
6	Ag. Statistics	04	02	06	12
7	Plant Pathology	11	03	06	20
8	Agril. Economics	03	01	-	04
9	Extension Education	15	03	10	28
10	Plant Physiology & Ecology	02	03	02	07
11	Agril. Meteorology	06	03	04	13
12	Nematology	04	02	02	08
13	Horticulture	09	01	04	14
14	Agril. Microbiology	14	01	04	19
15	Agril. Biotechnology	07	-	-	07
	TOTAL:	**144✶**	**32**	**66•**	**242**

✶ Intake Capacity of 144 Seats for M.Sc. (Agri.), 32 Seats shall be filled in by NRI/ NRI Sponsored / Payment Seat from Gujarat / Other States in order of preference / availability.

- Intake Capacity of 66 Seats for Ph.D., 33 Seats shall be filled in by NRI / NRI Sponsored / Payment Seat from Gujarat / Other States in order of preference / availability.

Veterinary Science Faculty :

Sr. No.	Subject	M.V.Sc. (Vety.)		Ph. D.	Total
		Open / SC / ST / SEBC	ICAR / GOI / OTHER		
1	Anatomy	07	01	01	09
2	Veterinary Pathology	05	01	02	08
3	Parasitology	05	01	-	06
4	Veterinary Microbiology	-	-	-	
5	Animal Physiology and Biochemistry	02	01	01	04
6	Livestock Production & Management	03	01	01	05
7	Animal Genetics and Breeding	05	01	02	08
8	Veterinary Surgery	09	01	01	11
9	Veterinary Pharmacology	02	-	01	03
10	Veterinary Obstetrics and Gynaecology	06	01	01	08

Sr. No.	Subject	M.V.Sc. (Vety.)		Ph. D.	Total
		Open / SC / ST / SEBC	ICAR / GOI / OTHER		
11	Veterinary Medicine	09	01	03	13
12	Animal Nutrition	07	01	02	10
13	Reproductive Biology	02	01	01	04
14	Veterinary Public Health	02	01	03	06
15	Poultry Science	06	-	01	07
16	Animal Biotechnology	07	-	-	07
17	Veterinary Extension	-	-	-	-
	TOTAL :	**77✶**	**12**	**20•**	**109**

✶ Intake Capacity of 77 Seats for M.V.Sc., 12 Seats shall be filled in by NRI / NRI Sponsored / Payment Seat from Gujarat / Other States in order of preference / availability.

- Intake Capacity of 20 Seats for Ph.D., 10 Seats shall be filled in by NRI / NRI Sponsored / Payment Seat from Gujarat / Other States in order of preference / availability.

Dairy Science Faculty :

Sr. No.	Subject	M. Sc. / M.Tech.		Ph. D.	Total
		Open / SC / ST / SEBC	ICAR / GOI / OTHER		
1	Dairy Technology	06	01	03	10
2	Dairy Engineering	05	01	02	08
3	Dairy Microbiology	01 M.Sc.	01	01	03
4	Food Biotechnology	02 M. Tech.	-	01	03
5	Dairy Chemistry	06	01	01	08
	TOTAL :	**20✶**	**04**	**08•**	**32**

✶ Intake Capacity of 20 Seats for M.Sc./M.Tech., 04 Seats shall be filled in by NRI / NRI Sponsored / Payment Seat from Gujarat / Other States in order of preference / availability.

- Intake Capacity of 08 Seats for Ph.D., 04 Seats shall be filled in by NRI / NRI Sponsored / Payment Seat from Gujarat / Other States in order of preference / availability.

Food Processing Technology & Bio-Energy Faculty :

Sr. No.	Subject	M. Tech. (FPT)		Ph. D.	Total
		Open / SC / ST / SEBC	ICAR / GOI / OTHER		
1	Food Processing Technology	05	01	**03**	**09**
	TOTAL :	**05✶**	**01**	**03•**	**09**

✶ Intake Capacity of 05 Seats for M.Tech. 01 Seat shall be filled in by NRI/NRI Sponsored / Payment Seat from Gujarat / Other States in order of preference / availability.

- Intake Capacity of 03 Seats for Ph.D., 50 % Seats from Gujarat / Other States should be on payment.

Chapter – 6

Research

Anand Agricultural University, a mission oriented educational institute which was carved from erstwhile Gujarat Agricultural University on May 2004 has completed five years successfully. Out of three objectives the main one is to enhance production and productivity of agricultural commodity through carrying out high standard research in the discipline of Agriculture and related Sciences and uplift the living standard of farming community.

Indian agriculture must continuously evolve to remain ever responsive to manage the change and to meet the growing and diversified need of different stakeholders in entire production to consumption chain. Accordingly, the researchable issues as per the requirement of farming community, agriculture base industries and stakeholder of Gujarat state with multidimensional approach are identified from different agro-ecological situations of Middle Gujarat (Zone-III) and coastal agro-climatic zones(Zone VIII) of six districts falling under the jurisdiction of Anand Agricultural University are identified, strategies are drawn and programmes have been indicated to commensurate projects in related field. The research fields include, Natural Resource Management; High Quality Seed Production; Post Harvest Technology with value addition; Biotechnological research in field of Agriculture, Animal, Dairy and Food sciences; Tissue culture etc. Scientific community of Anand Agricultural University put their sincere efforts and inputs to achieve results of high standards as per objectives and goal of university to make Indian Agriculture locally, regionally and globally competitive. Different field, horticultural and fruit crops, dairy, animal production and animal health and other agriculture related aspects, which are covered under research are conducted on research stations located in Anand Agricultural University jurisdiction.

Table- 6.1: Agro-climatic zone wise Research Stations of AAU and their area and activities.

	Name of Centre	Total area (ha.)	Cultivable area (ha.)	Research activity on
MIDDLE GUJARAT AGRO-CLIMATIC ZONE-III				
1	**Zonal Research Station, Anand**			
i	Bidi Tobacco Research Station	25.47	23.39	Tobacco
ii	Main Forage Research Station	18.44	16.65	Forage crops
iii	Regional Research Station (RRS)	35.51	33.49	Crop improvement work on Bajra, Cotton, Wheat, Pulses and Oil seed crops as well as agronomical and water requirements of important crops of the region
iv	Main Vegetable Research Station	23.99	22.96	Vegetable Crops
v	Centre of Excellence on Medicinal & Aromatic Plants	7.55	7.30	Medicinal & Aromatic Plants
vi	Centre of Excellence on Biotechnology	2.55	2.55	Plant Science, Animal Science and Food Biotechnology
vii	Centre for Organic Farming		RRS and College Agronomy Farm	Organic farming of different crops including use of bio-fertilizer, vermicompost, FYM cakes, Biocontrol, bio-pesticide agents
viii	Biofertilizer Project	-	RRS and Agronomy Farm	Isolation of efficient biofertilizer cultures and its application on different crops
ix	Micronutrient Project	-		Micro and secondary plant nutrients, heavy metal detection in industrial and sewage effluent

x	Pesticide Residue Project	-		Monitoring of milk and milk products, vegetables, edible oils, seed spices, feed and fodder for presence of pesticide residues and its amelioration technology
xi	Food Processing Technology & Bio-Energy	-	-	Post harvest technology / Bio diesel / Bio gas
xii	Bio-control Project	-	College farm	Biological control of pests, mass production of bioagents
xiii	Agronomy Farm/Weed Control Project	47.95	45.83	Agronomical and weed control experiments, PG research
xiv	Horticulture Farm	34.70	32.00	Horticulture Crops, PG research
xv	Nematology	2.30	2.30	Resistance spp. of nematodes and nematode control
xvi	Centre of Excellence on Animal Nutrition	1.93	1.93	Animal Nutrition
xvii	Reproductive Biology Research Unit	4.20	4.20	Reproductive biology of buffalo and goat
xviii	Poultry Complex	-	-	Genetic improvement of poultry breeds for higher production.
xix	HF Project	43.60	30.40	Maintenance of H. F. cow
xx	Instructional Farm, Veterinary College	12.56	9.80	Educational purpose
xxi	Live Stock Research Station	22.65	22.20	Live stock management and maintenance of kankrej and cross breed cattle
xxii.	Research in Dairy Science	-	-	Technology up-gradation for dairy products

2	Research at Off Campus			
Anand district				
i	Tobacco Research Station, Dharmaj	11.92	9.30	Chewing tobacco
ii	KVK, Devataj	18.92	15.52	KVK activities and Research in inland fisheries
Dahod district				
iii	Agricultural Research Station, Dahod	46.70	32.09	Research on Minor millet , Drilled paddy, Maize and Pulses
iv	Soybean and Tribal Research Cum Training Centre, Devgadhbaria	7.98	7.00	Soybean and Maize
Kheda district				
v	Main Rice Research Station, Nawagam	25.92	20.06	Rice and Rice based cropping
vi	Research Station for Irrigated Crops, Thasra	15.71	14.62	Sugarcane, Cotton, Paddy and Water Management in diff. crops
Panchmahal district				
vii	Main Maize Research Station, Godhra	22.15	12.82	Maize (grain and diff. types)
viii	Agril. Res. Station, Kakanpur	20.47	10.00	Maize (newly acquired farm)
ix	Agricultural Research Station, Derol	38.42	35.99	Drilled Paddy, Pulses and Oil seeds
Vadodra district				
x	Pulses Research Station, Vadodara	33.08	22.47	Pulse Crops
xi	Rice Research Station, Dabhoi	29.13	25.64	Paddy and Water Management
xii	Narmada Irrigation Research Station, Khandha	24.62	17.55	Water Management on field and hort. crops

Ahmedabad district				
NORTH GUJARAT AGRO-CLIMATIC ZONE –IV				
xiii	Castor and Seed Spices Research Station, Sanand	6.44	5.60	Castor and seed spices
xiv	Regional Cotton Research Station, Viramgam	24.43	21.30	Deshi Cotton and Dual Sorghum
BHAL AND COASTAL AGRO-CLIMATIC ZONE-VIII				
xv	Agril. Research Station, Bhal & Coastal Zone, Arnej	60.20	48.29	Evaluation of un-irrigated Wheat & Gram, Salinity amendments in diff. crops
xvi	Agricultural Research Station, Dhanduka	44.32	39.19	Un-irrigated Wheat, Gram, Cotton and Water Management
New farms				
xvii	Meenawada	43.22	-	Cattle Breeding Farm
xviii	Ramna Muvada	20.00	-	Goat
xix	Nenpur	40.00	-	Jatropha and seed production of different crops
xx	Sansoli	20.00	-	Seed production and IFS
xxi	Vaso	20.00	-	Agril.Polytechnic
xxii	Khambholaj	31.65	-	Horticultural crops
xxiii	Jabugam	21.52	-	Seed production of different crops
	Total Area of AAU	**910.20**	**788.83**	

SEASONAL WEATHER AND CROP CONDITION

The onset of SW monsoon took place during the 2nd week of June with one week advance to its normal onset with 59.8 mm rainfall on 14 -15 June 2008 (Table 1). However, this onset of monsoon was not regular and uniform in the state.

Because of early onset of monsoon all the farmers in the region could not start sowing operation, though some farmers took the risk of sowing. Thereafter, there was longer dry spell of 17 days caused poor plant

stand, hence, some of the farmers were forced for re-sowing of *kharif* cereals. The meteorological week number 9-15 (28th July) received 83.0 mm rainfall which helped in re-sowing and survival of earlier sown crops. Again there was dry spell of 12 days, which severely affected the growth of various crops.

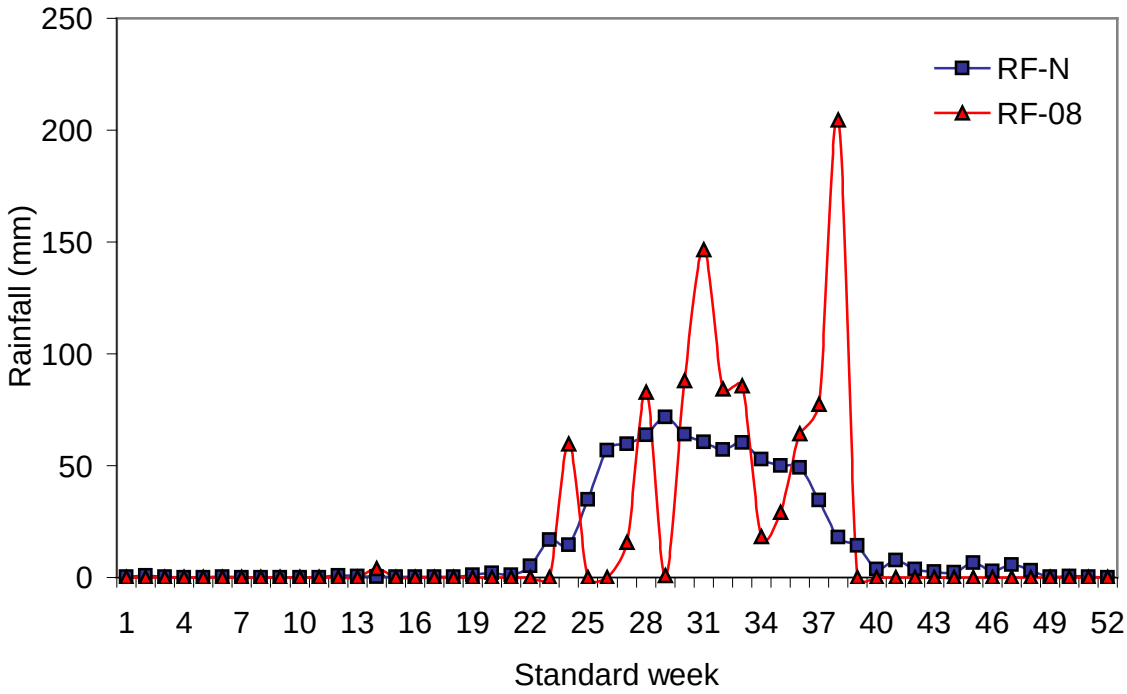


Fig. 6.1 Normal and actual weekly rainfall during 2008

Because of heavy rainfall on 18th September, there was water logging situation, due to which groundnut crop was severely infested with stem rot disease. The southwest monsoon withdrew on 20th September. During June only 59.8 mm rainfall was received in 2 rainy days against the normal of 107.5 mm. July month received only 187.6 mm in 7 rainy days against the normal of 287.7 mm. August month received the highest rainfall of 363.9 mm in 14 rainy days as compared to 256.6 mm of normal. September month received 346.1 mm rainfall with 9 rainy days against the normal of 138.0 mm. Thus, the total annual rainfall of 957.4 mm was received in 32 rainy days against the normal of 853 mm. The comparison of week wise actual and normal rainfall of Anand is depicted in Figure 6.1.

In the middle Gujarat region, which is comprised of Ahmedabad, Anand, Dahod, Kheda, Panchmahals and Vadodara districts, Ahmedabad and Anand districts received higher rainfall than normal (105 to 114 %), while, rest of the districts received the less than normal rainfall.

Ahmedabad and Anand districts received the highest rainfall in September month, while other districts received highest rainfall in the month of August (Figure 6.2).

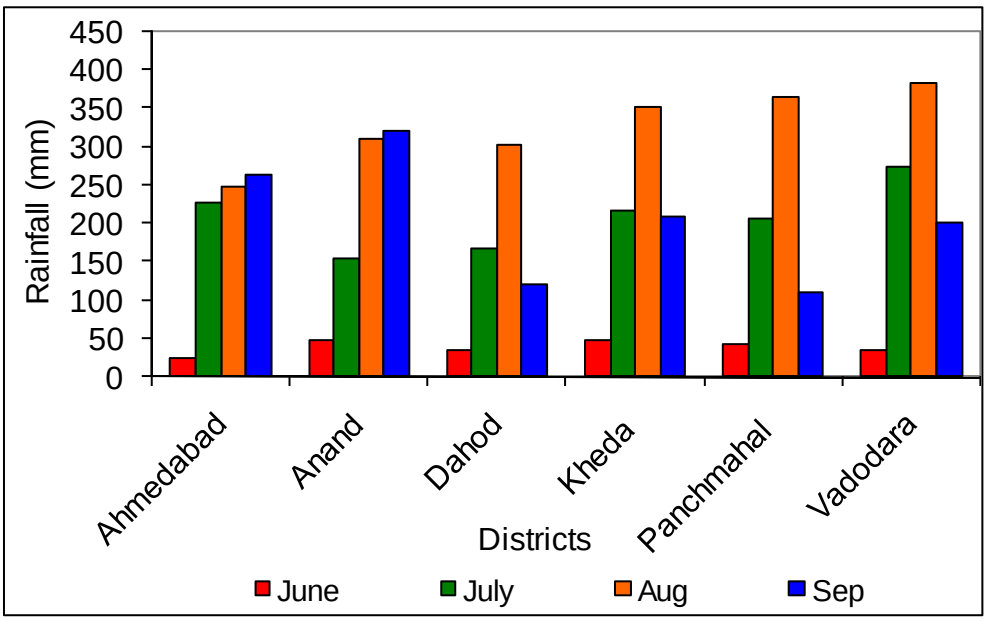


Fig. 6.2 District wise monthly rainfall during 2008 of Middle Gujarat

The weekly distribution of weather parameters of Anand is given in table 2 and alongwith their normal values are depicted in Figures 6.3 to 6.5. The maximum temperature was found to be highly fluctuating around the normal temperature during the season. From last week of January to end of February the maximum and minimum temperature remained lower by 3-5 ^{0}C than the normal creating a favorable situation for crops like wheat and mustard. This resulted in extension of growing period and higher yield in wheat of *rabi* season 2007-08. The maximum temperature was below normal during May to June. During monsoon period the maximum temperature fell down due to rainfall and cloudiness. Rise in maximum temperature during the period of dry spells was not significant. The lowering of maximum temperature during the MSW 32 and 33 with sudden rise in relative humidity during morning and afternoon than its normal after rainfall and subsequently water logging, resulted in massive attack of stem rot in groundnut crop.

The minimum temperature during second half of January month and February was favorable for crops of rabi season 2007-08, while rise in minimum temperature during November and December adversely affected the *rabi* crops of year 2008-09. Morning and afternoon relative humidity both were higher except few weeks than the normal during most of the weeks. During monsoon period evaporation and bright sun shine hours showed large fluctuations around their normal values. In most of the weeks both the parameters showed lower values than normal.

Table 6.2 Daily rainfall during 2008 at Anand.

Date	June	July	August	September
01	0.0	0.0	0.0	0.0
02	0.0	12.2	6.0	0.0
03	0.0	2.4	59.2	0.0
04	0.0	1.0	15.8	0.0
05	0.0	0.0	65.6	0.0
06	0.0	0.0	2.6	0.0
07	0.0	0.0	0.8	64.2
08	0.0	0.0	1.0	0.0
09	0.0	5.4	0.0	0.0
10	0.0	0.0	6.3	0.0
11	1.4	73.0	0.0	1.6
12	0.2	4.6	73.6	1.2
13	0.0	0.0	56.2	30.0
14	24.6	0.0	16.4	34.0
15	33.6	0.0	13.0	3.0
16	0.0	1.0	0.0	7.6
17	0.0	0.0	0.0	2.6
18	0.0	0.0	0.0	181.5
19	0.0	0.0	0.0	12.8
20	0.0	0.0	0.0	7.6
21	0.0	0.0	0.0	0.0
22	0.0	0.0	8.0	0.0
23	0.0	0.0	0.0	0.0
24	0.0	0.0	8.3	0.0
25	0.0	2.6	0.0	0.0
26	0.0	0.0	2.0	0.0
27	0.0	0.0	17.6	0.0
28	0.0	74.0	11.5	0.0
29	0.0	11.4	0.0	0.0
30	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0
Total	**59.8**	**187.6**	**363.9**	**346.1**
Rainy days	**2**	**7**	**14**	**9**

Table 6.3 Weekly weather parameters during the year 2008.

Week	EP	BSS	RF	WS	MAXT	MINT	RH1	RH2
01	3.6	8.7	0.0	3.6	27.1	13.0	76	46
02	3.0	8.5	0.0	3.0	29.3	13.5	77	36
03	3.9	8.8	0.0	3.9	29.7	11.8	73	38
04	3.8	9.5	0.0	3.8	24.7	7.5	79	29
05	3.5	9.0	0.0	3.5	26.5	9.5	85	54
06	4.0	9.3	0.0	4.0	22.3	6.7	81	53
07	5.1	10.4	0.0	5.1	29.5	9.6	69	28
08	4.6	10.3	0.0	4.6	32.3	12.2	80	23
09	5.2	10.2	0.0	5.2	33.7	11.8	72	15
10	5.4	8.8	0.0	5.4	35.3	16.2	74	22
11	6.5	8.0	0.0	6.5	36.0	19.7	66	24
12	6.4	9.7	0.0	6.4	37.3	19.2	68	21
13	6.8	9.5	0.0	6.8	36.8	21.4	76	29
14	7.1	9.1	4.0	7.1	34.2	20.8	73	36
15	8.7	10.0	0.0	8.7	38.8	21.9	61	26
16	8.8	10.2	0.0	8.8	39.6	21.2	69	17
17	8.8	10.6	0.0	8.8	40.7	24.1	69	20
18	7.4	8.4	0.0	7.4	37.9	24.2	81	35
19	7.9	9.8	0.0	7.9	36.8	25.2	78	39
20	8.5	11.1	0.0	8.5	37.8	25.0	80	40
21	9.1	11.0	0.0	9.1	38.3	25.2	76	36
22	9.6	10.9	0.0	9.6	38.8	26.3	73	37
23	8.2	8.3	0.0	8.2	36.8	26.9	81	52
24	4.6	3.2	59.8	4.6	34.3	26.3	76	62
25	6.9	4.8	0.0	6.9	35.7	27.2	78	49
26	6.9	4.8	0.0	6.9	35.7	27.2	81	52
27	2.5	2.4	15.6	2.5	32.3	26.1	76	46
28	2.2	0.8	83.0	2.2	30.4	25.6	77	36
29	4.2	4.4	1.0	4.2	33.4	26.0	73	38
30	4.6	4.4	88.0	4.6	32.7	25.9	79	29
31	2.1	2.0	146.6	2.1	31.0	25.1	95	74
32	2.7	1.1	84.3	2.7	29.7	25.1	94	84
33	2.7	3.1	85.6	2.7	29.6	24.7	94	75
34	3.9	4.6	18.3	3.9	31.5	24.2	89	65
35	3.7	5.8	29.1	3.7	32.0	25.0	89	60
36	4.2	5.7	64.2	4.2	34.5	25.6	90	65
37	3.5	4.4	77.4	3.5	32.7	24.9	94	75
38	2.3	2.9	204.5	2.3	29.6	24.6	92	76
39	4.8	8.4	0.0	4.8	32.2	21.9	94	56
40	4.6	7.5	0.0	4.6	33.8	24.7	91	54
41	5.1	8.9	0.0	5.1	36.4	22.9	87	39
42	5.0	9.3	0.0	5.0	36.9	20.2	77	28
43	5.0	9.6	0.0	5.0	36.1	17.5	75	23
44	4.4	9.5	0.0	4.4	35.0	17.6	80	28
45	5.0	9.4	0.0	5.0	34.7	16.7	77	25
46	4.4	7.9	0.0	4.4	32.8	15.9	76	28

47	4.8	7.4	0.0	4.8	30.9	16.2	70	36
48	4.6	5.6	0.0	4.6	29.5	16.5	59	36
49	4.2	9.5	0.0	4.2	33.8	17.1	74	30
50	3.0	7.0	0.0	3.0	30.5	16.9	86	44
51	2.9	4.9	0.0	3.1	28.2	16.9	78	43
52	3.1	9.2	0.0	1.8	27.3	10.3	91	34

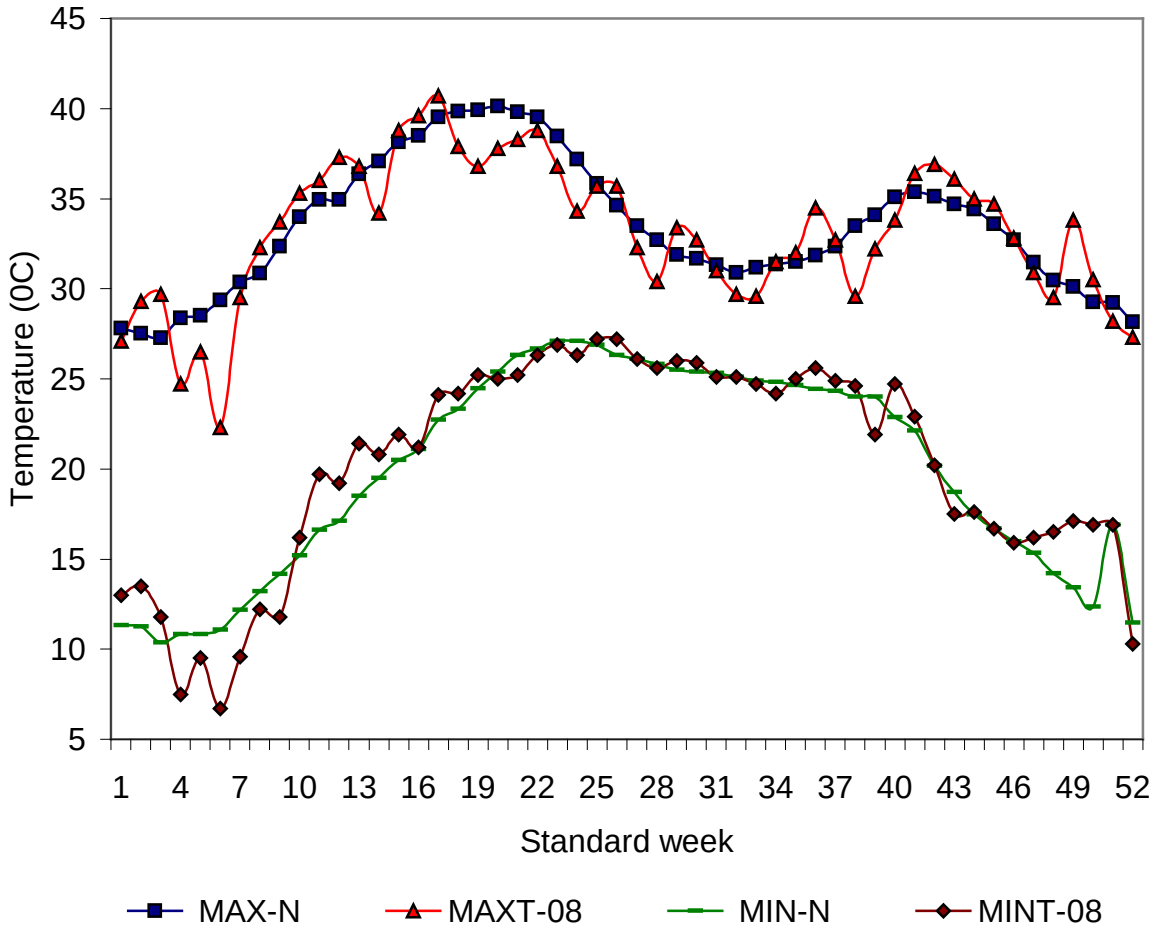


Fig. 6.3 Normal and actual weekly maximum and minimum temperature during 2008.

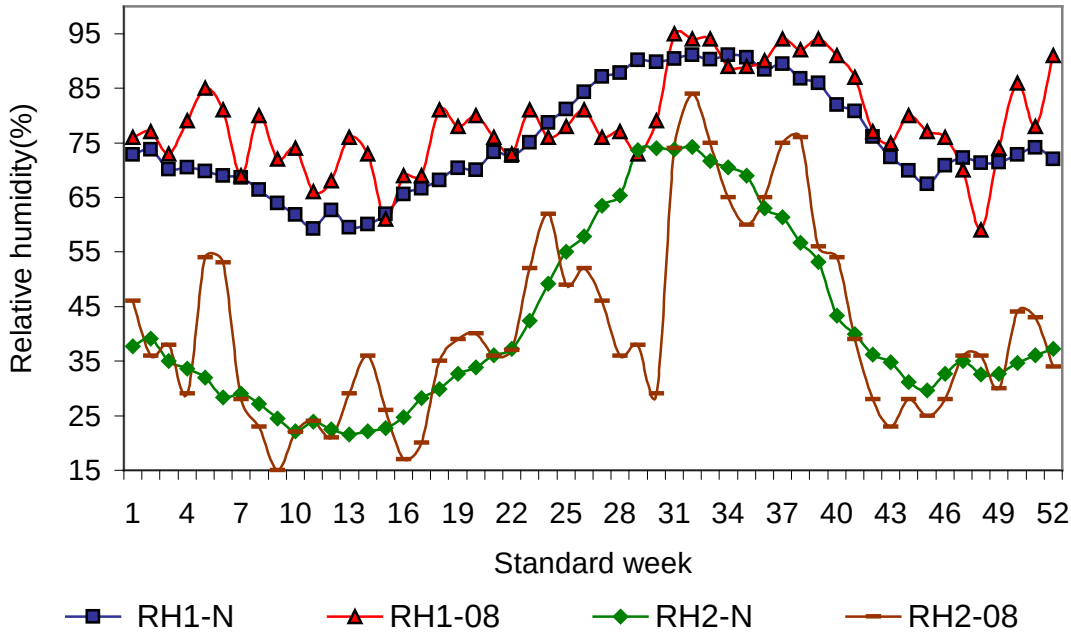


Fig.6.4 Normal and actual weekly relative humidity during 2008

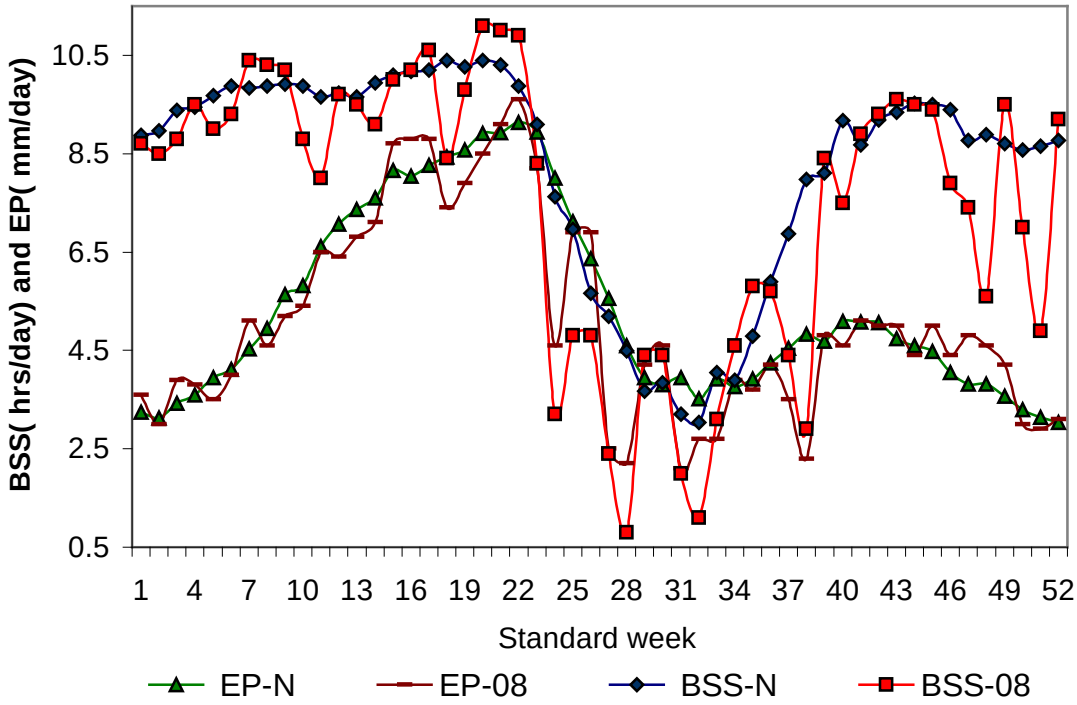


Fig. 6.5 Normal and actual EP and BSS during 2008

RESEARCH COUNCIL

As per the first statute of AAU (Proposed), Chapter 7, Item No. 42, the Research Council of AAU was formulated with following members.

Constitution of Research Council

S.No.	Name, Designation & Address		
A.	Prof. M.C. Varshneya, Vice Chancellor, AAU, Anand		Chairman
B.	Dr. A.R. Pathak, Director of Research & Dean, PG Studies, AAU, Anand		Secretary
C.	1.	Dr.R.H.Patel, Associate Director of Research, (Agriculture), AAU, Anand	Member
	2.	Dr. M.M. Pathak, Associate Director of Research (Animal Science), AAU, Anand	Member
D.	**Faculty Deans**		
	1.	Dr. A.M. Shekh, Dean, Faculty of Agriculture, BACA, AAU, Anand	Member
	2.	Dr. B. P. Shah, Dean, Faculty of Dairy Science, SMC Dairy Sci. College, AAU, Anand	Member
	3.	Dr. J.V.Solanki, Dean, Faculty of Vety. Science, College of Vety. Sci. & A.H., AAU, Anand	Member
	4.	Dr. D.C. Joshi, Dean, Food Processing Tech. & Bio-energy, AAU, Anand	Member
	5.	Dr. S.K. Dixit, Dean, Information Technology, AAU, Anand	Member
E.	Dr. P.P. Patel, Director Extension Education, AAU,Anand		Member
F.	**Conveners of the AGRESCO Sub-committee**		
	1.	Dr.G.C.Jadeja, Convener, Crop Improvement Sub-Committee and Professor of Botany, BACA, AAU, Anand.	Member
	2.	Dr.K.P.Patel, Convener, Crop Production Sub-Committee and Research Scientist (Micronutrient), AAU, Anand.	Member
	3.	Dr.R.N.Pandey, Convener, Plant Protection Sub-Committee and Professor of Pl. Pathology, BACA, AAU, Anand.	Member
	4.	Dr.D.C.Joshi, Convener, Dairy Science & Agril. Engineering and Processing Sub-Committee and Unit Officer, APPE, AAU, Anand.	Member
	5.	Dr.P.R.Patel, Convener, Animal Health Sub-Committee and Professor of Medicine, College of Vety. Sci. & A.H., AAU, Anand.	Member
	6.	Dr. P. H. Vataliya, Convener, Animal Production Sub-Committee and Professor of AGB, College of Vety. Sci. & A.H., AAU, Anand.	Member
	7.	Dr. P.P. Patel, Convener, Social Science Sub-Committee and Director Extension Education, AAU, Anand	Member

G.	**Two Eminent Scientists of ICAR Institutes nominated by th Vice-Chancellor**		
	1.	Dr. B. S. Bisht, Asstt. Director General (HRD 1), Indian Council of Agricultural Res., 217, Krishi Anusandhan Bhavan-II, New Delhi – 110 001	Member
	2.	Dr. H. B. Singh, Head, Central Soil & Water Conservation, Research & Training Institute, Vasad – 388 306, Distt. Anand	Member
H.	**Two Progressive Farmers nominated by the Vice-Chancellor**		
	1.	Shri Narsinhbhai Patel, Naika, Umiya Farm, Ta. Matar, Dist.: Kheda	Member
	2.	Shri Rohitbhai Pushottambhai Patel, "Patel Farm", At: Shardapur, Post: Vejpur, Ta: Savli, Dist.: Vadodara – 391 535	Member

The meeting of Research Council was held on 16th June, 2008 to review the work done during year 2007-08.

The council decision / recommendation are as under:

1. Approved the proceeding of 4th combined AGRESCO.
2. Approved new research schemes / projects funded by Government of Gujarat for ADP 2008-09.
3. Approved the research schemes / projects funded by GOG / GOI / ICAR / and other agency.
4. Approved the implementation of projects funded by ICAR under NAIP(Component - 3 & 4) & DBT.

RESEARCH SUB-COMMITTEES

To carry out research work in particular discipline, the research areas of different subjects under Anand Agricultural University has been sub-grouped in 7 research sub-committees, as follows.

FACULTY OF AGRICULTURE

- **Crop Improvement** : Plant Breeding & Genetics, Plant Biotechnology, Plant Physiology and Biochemistry
- **Crop Production** : Agronomy, Soil Science, Horticulture, Meteorology and Bio-fertilizer
- **Plant Protection** : Entomology, Plant Pathology and Nematology
- **Social Science** : Agril. Statistics, Economics and Extension Education.

FACULTY OF VETERINARY SCIENCE

- **Animal Production** : Animal Biotechnology, Animal Breeding and Genetics, Animal Physiology & Bio-chemistry, Livestock Production and Management, Animal Nutrition, Reproductive Biology and Poultry Sciences
- **Animal Health** : Vet. Medicine, Vet.Microbiology, Vet.Pharmacology, Vet.Surgery, Vet. Pathology, Gynaecology & Obstratics, Veterinary Public Health, Vet. Clinics and Anatomy.

FACULTY OF DAIRY SCIENCE AND FOOD PROCESSING TECHNOLGY & BIO ENERGY.

- **Dairy Science, Agril. Engineering and Processing** :Dairy Microbiology, Dairy Engineering, Dairy Technology, Dairy Busness Management Dairy Chemistry, Food Bio-technology, Post Harvest Technology, Food Processing and Packaging Technology and Bio-Energy

I. RESEARCH ACCOMPLISHMENTS.

Research Sub-Committees met and finalized different research programmes considering the feedback received from farmers through extension machinery and educational needs as per today's global requirement in agricultural sciences. As a result of sincere efforts of the scientists, the research accomplishments made are given below.

Name of the sub-committee	Meeting held on	No. of recommendations finalized	No. New Technical Programme
Crop improvement	07-08 April, 2008	**04**	**----**
Crop production	09-10 April, 2008	**11**	**16**
• Cultural practices		03	
• Nutrient management		02	
• Micronutrient		01	
• Water management		02	
• Horticultural crop		03	
Plant Protection	04 -05 April, 2008	**07**	**53**
• Pest Management		06	
• Disease management		01	
Dairy Science & Argil. Engineering	01-02 April, 2008	**04**	**04**
Animal Production	24-25 March, 2008	**06**	**46**
Animal Health	24-25 March, 2008	**01**	**10**
Social Science	03-04 April, 2008	**04**	**05**
Joint AGRESCO	11 April, 2008	**37**	
Combined AGRESCO of SAU's	03-05 May, 2008	**37**	

The details of recommendations approved in the combined AGRESCO meeting of SAUs of Gujarat held at Navsari are given here.

I CROP IMPROVEMENT

1. Anand Tobacco-10 (ABT-10)

Variety is highly resistant to root knot nematode. This genotype has given on an average 2697 kg/ha yield, showing yield increment of 17 and 3 % higher over existing check varieties A-119 and GT-5, respectively.

2. Anand Tomato-3 (AT-3)

This variety possesses high lycopene and carotenoids with fruit yield of 326.64 q/ha, which is 31 % higher than check variety GT-2. The growth habit of this variety is determinate type and suitable for cultivation under irrigated open field condition.

3. Anand Deshi Cotton-1 (ADC-1)

This variety is suitable for desi cotton growing area of North-west Agro climatic zone-VIII except Kutch. It has given on an average 1306 kg/ha cotton seed yield which is 27.8, 23.4 and 10.0 % higher than the check varieties V797, G. Cot-13 and G. Cot-21, respectively. This genotype also gave 25.23, 20.18 and 4.48 % higher lint yield over the check varieties V-757, G.Cot-13 and G. Cot-21, respectively, besides has big ball size and synchronious in maturity.

4. Effect of plant growth regulators on seed yield and quality of okra

Farmers of Middle Gujarat Agro-climatic Zone-III, growing okra var. Parbhani Kranti for seed production purpose, are advised to spray GA3 @ 50 mg/l (ICBR 1:10.5) at 30 days (vegetative stage) and 50 days (onset of flowering) after sowing for getting higher seed yield, better seed quality and net return.

II CROP PRODUCTION

[A] CULTURAL PRACTICES

1. Response of sowing dates and spacing to semi-*rabi* castor

The farmers of Middle Gujarat Agro-climatic Zone-III (AES-II) are advised to sow semi-rabi castor (GCH-5) during 10th to 25th September with a spacing of 120 cm x 75 cm to obtain higher yield and net return.

2. Evaluation of genotypes of rabi sorghum under different planting times.

Farmers of Bhal and Coastal Zone-VIII are advised to sow sorghum variety SSG-59-3 upto 30th October to obtain higher green and dry fodder yields and higher net return under conserved moisture condition in rabi season.

In case of delayed sowing, variety Maldandi (M 35-1) should be preferred.

3. Studies on optimum seed rate for rustica tobacco nursery.

The farmers of middle Gujarat agro-climatic zone-III (AES-II) are advised to use 8 kg seed/ha for raising rustica tobacco nursery to get more transplantable seedlings and net return.

[B] NUTRIENT MANAGEMENT

4. Response of maize to irrigation, nitrogen and phosphorus.

The farmers of Middle Gujarat Agro-climatic Zone-III (AES-II) growing maize (cv. GM-3) are advised to apply 120 kg N + 60 kg P_2O_5 per ha (Basal- 60 : 60 kg NP /ha, Top dressing -60 kg N/ha twice) and irrigate the crop at 1.0 IW/CPE ratio (total 7 irrigations each of 60 mm depth) in rabi season for securing higher yield and net return. First irrigation should be given at the time of sowing, second at 6 DAS and remaining five irrigations at 20 days interval.

5. Integrated nutrient management in bidi tobacco (GTH 1).

The farmers of Middle Gujarat Agro-climatic Zone-III growing bidi tobacco (Var. GTH-1) are advised to apply 187 kg N in form of ammoniaum sulphate and urea at the proportion of 1:3 + *Azotobacter chrococcum*, ABA-1 (4 kg/ha) or 187 kg N (AS + Urea 1:3) + *Azospirillum lipoferrenm*, ASA-1 (4 kg/ha) and FYM @ 12.5 t/ha for saving 15% N and obtain higher yield of tobacco.

[C] MICRONUTRIENT

6. Multi-micronutrient formulation in banana cv. Robusta.

The farmers of Middle Gujarat Agro-climatic Zone-III (AES-II) growing banana (var. Robusta) are advised to apply multi micronutrient mixture equivalent to Govt. notified grade-V (Fe-2%, Mn-0.5%, Zn-5%, Cu-0.2% and B-0.5%) as soil application @ 20g

per plant besides 10 kg FYM + 200-100-200 g NPK per plant in soil deficient to marginal in Zn and Fe for getting higher fruit yield and net return. Alternately, farmers can also apply 20 g ZnSO4 and 40 g FeSO4 per plant besides recommended dose of FYM and NPK for higher yield and net return.

[D] WATER MANAGEMENT

7. Conjunctive use of canal and tube well water in wheat.

The farmers of Middle Gujarat Agro-climatic Zone-III (AES-III) growing wheat (cv. GW-496) in Narmada command area are advised to irrigate the crop with canal water. The schedule of irrigations (Depth : 60 mm) is at sowing, CRI, tillering, flowering and grain filling stages for higher yield and net return.

Farmers may also apply irrigation with canal and tube well water alternatively or first 4 irrigations with canal water and one irrigation at grain filling stage with tube well water.

8. Nutrient and water management through fertigation in papaya Cv. Madhubindu.

The farmers of Middle Gujarat Agro-climatic Zone-III (AES-II) growing papaya (cv. Madhubindu) under drip irrigation are advised to irrigate the crop through drip for 5 hours and 20 minutes during September to February and 10 hours and 40 minutes during March upto onset of monsoon at alternate day for 20% water saving with maximum water use efficiency. They are further advised to fertigate with N (Urea), P_2O_5 (Orthophosphoric acid) and K_2O (Muriate of potash) @ 80% recommended dose (160-160-200 g NPK/plant) in sixteen equal splits starting from 60 days after transplanting at 15 days interval to save 20% fertilizers and to get higher yield. FYM 10 kg per plant as basal should be applied.

The distance between two laterals (16 mm) should be 2.5 m and each plant having two drippers (4 LPH), installed at 45 cm distance from the plant stem on both sides and run the system at 1.2 kg/cm^2 pressure.

[F] HORTICULTURAL CROPS

9. Effect of NPK on growth and yield of papaya cv. Madhubindu.

The farmers of Middle Gujarat Agro-climatic Zone–III (AES-II) growing papaya (cv. Madhubindu) are advised to apply 10 kg FYM at the time of transplanting and NPK fertilizers @ 200-150-200 g per plant in four equal splits at 2nd, 4th, 6th and 8th month after transplanting to obtain higher fruit yield and net return.

10. Organic farming in acid lime cv. Kagzi lime.

The farmers of Middle Gujarat Agro-climatic Zone-III (AES-II) interested to grow acid lime (cv. Kagzilime) organically are advised to apply 50 kg FYM in July and 22.5 kg castor cake per plant in two equal splits i.e. in middle of July and February for getting higher net return.

11. Effect of NPK on growth and flower production of chrysanthemum cv. IIHR – 6.

The farmers of Middle Gujarat Agro-climatic Zone-III (AES-II) growing chrysanthemum (cv. IIHR-6) are advised to apply 200 kg N/ha in four equal splits i.e. 1st at the time of transplanting and remaining three splits at 30, 60 and 90 days after transplanting in soil having adequate P and K for getting higher flower yield and net return.

III PLANT PROTECTION

[A] PLANT PATHOLOGY

1. Sesamum seed treatment.

Farmers of middle Gujarat are advised to grow sesamum crop by treating the seeds with carbendazim 25% SD @ 3 g/kg seed followed by spraying of carbendazim 50% WP @ 0.05% (ICBR 1:15.44) OR thiophenate methyl 70% WP @ 0.05 % (ICBR 1:8.59) OR chlorothalonil 75% WP @ 0.2% (ICBR 1:3.10) at 30 and 50 days after sowing for the management of macrophomina leaf blight disease.

[B] AGRICULTURAL ENTOMOLOGY

2. Fruit fly in small gourd.

In Middle Gujarat Agro-climatic Zone, *Bactrocera cucurbitae* and *Dacus ciliatus* are only species of fruit fly damaging small gourd. Therefore, the farmers of middle Gujarat are advised not to use methyl eugenol for the control of *Bactrocera cucurbitae* and *Dacus ciliatus*. For effective and economical management of above mentioned fruit flies following strategy is recommended.

Installation of Cue-lure impregnated wood blocks @ 16/ha at the initiation of the fruiting followed by spot application of poison bait made by mixing of Jaggery at 5% and Fenthion at 0.1% in water (500 g Jaggery + 10 ml of Fenthion 85EC in 10 liter of water) @ 8 liters/ha in the form of coarse droplets undersides the foliage at weekly interval. The spots should be spaced at 7 x 7 m distance. The traps should be placed or hung at the border of the pendal and just 1 foot below the foliage or vines. (CBR 1:17.46).

OR

Spot application of poison bait made by mixing Jaggery at 5% and Fenthion at 0.1% in water (500 g Jaggery + 10 ml of Fenthion 85EC in 10 liter of water) @8 liters/ha in the form of coarse droplets undersides the foliage at weekly interval starting from initiation of fruits. The spots should be spaced at 7 m x 7 m distance (ICBR 1:12.79).

OR

Installation of cue lure impregnated wood block trap @ 16/ha at equal distance. The traps should be placed or hung at the border of the pendal and just 1 foot below the foliage or vines (ICBR 1:7.45). If fenthion is not available, dichlorvos 76% @ 5 ml/10 litres should be used.

3. Okra seed treatment.

The farmers of middle Gujarat growing okra crop are advised to treat the seeds with imidacloprid 70 WS (ICBR 1:125.21) OR thiamethoxam 70 WS (ICBR 1:52.24) @ 5 g/kg seeds for effective and economical control of jassid, whitefly and shoot borer.

4. IPM in Cotton.

Farmers of middle Gujarat region growing Cotton Hybrid - 10 are advised to adopt following measures to enhance the activity of natural enemies and thereby to suppress the incidence of insect pests of cotton.

Interspersing of one row of *Cassia occidentalis* L. after every six rows of cotton and sowing of maize and planting of Zinnia (*Zinnia elegans*) @ 10% of total plant population of cotton plants (ICBR 1: 20.85).

OR

Interspersing of one row *Cassia occidentalis* after every six rows of cotton, sowing of maize and planting of Zinnia (*Zinnia elegans*) @ 10% of total plant population of cotton plants' and one

release of *Trichogramma chilonis* @ 1.5 lacs/ha + *Chrysoperla carnea* @ 5000 larvae (2-3 days old)/ha, coinciding with the appearance of pests (ICBR 1: 07.95).

Note : *Cassia occidentalis* should be harvested before ripening of the pods.

5. Herbicide residues in cotton.

Application of quizalofop ethyl @ 50 g a.i./ha in cotton as post-emergence herbicide (30 days after sowing) did not result in its residue in oil, oil cake, fodder and soil; and therefore application of this herbicide is safe from the view point of residue.

6. Herbicide residues in groundnut.

Application of quizalofop ethyl @ 50 g a.i./ha in kharif groundnut as post-emergence herbicide (30 days after sowing) did not result in its residue in oil, oil cake, fodder and soil; and therefore application of this herbicide is safe from the view point of residue.

7. Fruit fly in bitter gourd

The farmers of middle Gujarat are advised to execute male annihilation technique using Cue-lure impregnated wood blocks @ 10/ha OR bait application technique using 3% protein hydrolysate poison bait as wide area/village level control of fruit fly in bitter gourd. If protein hydrolysate is not easily available, jaggery 3% bait can be used.

IV DAIRY SCIENCE, AGRIL. ENGINEERING AND PROCESSING

[A] DAIRY SCIENCE

1. Continuous basundi making machine.

The continuous basundi making machine developed by AAU, Anand is recommended for manufacturing good sensory and hygienic quality basundi at economical cost as compared to traditional method.

2. Scraped surface heat exchanger for continuous Shrikhand Thermization Machine.

The continuous Shrikhand Thermization Machine consisting of SSHE, Teflon scrapper blades, variable frequency drive is recommended for the thermization of Shrikhand under optimum conditions. The thermization of Shrikhand gives superior quality products with enhance shelf life and the estimated cost of Shrikhand Thermization process is Rs.0.65/kg.

3. New functional dairy products Symbiotic dahi.

Milk containing probiotic culture, *Lactobacillus acidophilus* LBKV3 (@ 2.0% v/v) and *probiotic inulin* (@ 5.0% w/v) can be fermented to Synbiotic dahi (Blend A), and to this fruits/vegetables can be blended as follows :

(1) Tomato @ 14%, salt @ 0.8% and black pepper @ 0.3% to Blend-A (Blend-B).

(2) Cucumber @ 14%, salt @ 0.8 %, sugar @ 3.5 % and jeera powder @ 0.35% to Blend-A (Blend-C).

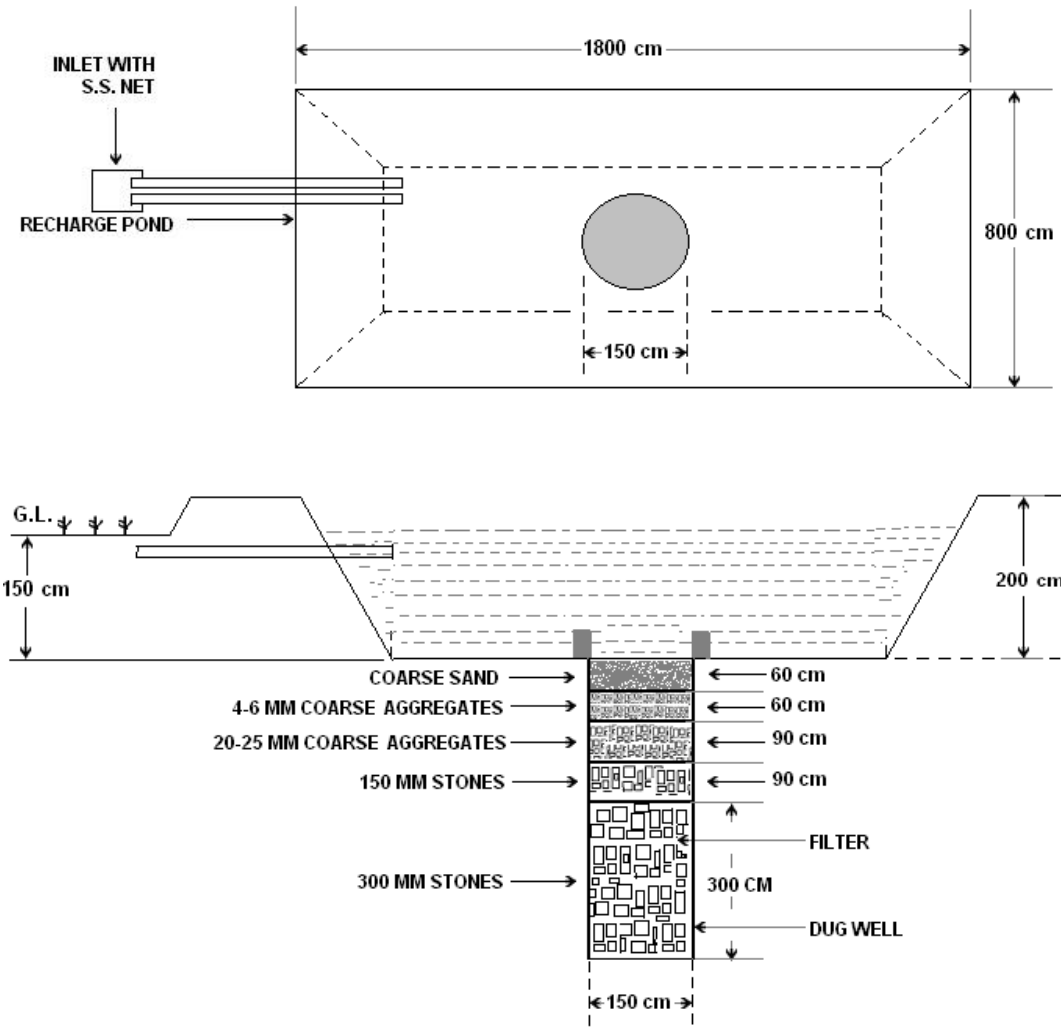
(3) Banana @ 22%, sugar @ 14.6% and vanilla flavour @ 0.04% to Blend-A (Blend-D).

(4) Sapota @ 22%, sugar @ 14.6% and cocoa powder @ 4.0% to Blend-A (Blend-E).

[B] AGRICULTURAL ENGINEERING

1. Ground water recharges system for Bhal region.

Construction of recharge well of 150 cm diameter and depth up to water bearing sandy strata with sand filter in ponds or natural depressions is recommended for the farmers of Bhal area for early drainage of stagnated water from the fields. This will also facilitate better recharging of the underground water.



V ANIMAL PRODUCTION

1. Cross bred : K x HF & K x J.

Crossbred cattle with 50% Kankrej and 50% exotic (HF and Jersey) inheritance, developed at LRS, Anand are well adapted to agro-climatic condition of middle Gujarat. Under optimum feeding and management, production of 2500 kg and even higher milk per standard lactation (300 days), birth weight of around 23 kg, growth rate of 450 g/day, age and weight at first calving, 41 months and 315 kg, respectively, and service period and calving interval of 125 and 407 days, respectively, were observed and thus, these crossbreds are recommended as suitable dairy animals for farmers of middle Gujarat as Triveni.

2. Concentrate Mixtures.

The farmers of Panchmahal district are advised to feed daily additional compound concentrate mixture 1.25 kg and 2.0 kg to indigenous cows (receiving 1.70 kg) and buffaloes (receiving 2.00 kg) producing up to 5 kg and 6-10 kg (cows receiving 2.20 kg and buffaloes 2.9 kg) milk/day respectively, during winter.

The crossbred cows of Panchmahal district producing 5-15 kg (receiving 2.6 to 4.6 kg) and more than 15 kg (receiving 5.3 kg) milk daily, should be fed additional 2 and 3 kg compound concentrate mixture, respectively during winter. However, during monsoon, cows producing daily 5-15 kg milk (receiving 3.6 to 5.5 kg), should be fed additional 1-1.5 kg compound concentrate mixture.

3. Economic Ration for bullocks.

Compared to conventional feeding system, bullocks can be maintained at 15% less feed cost on complete feed comprising of Bajri straw, 70%; Corn steep liquor, 15%; Deoiled Ground nut cake, 3%; Wheat bran, 2%; Deoiled Rice Bran, 3%; Molasses, 5%; Mineral mixture as per BIS specification, 1%; Salt, 0.5%; Urea, 0.5% and Vit. A @ 3000 I.U./kg and Vit. D3 @ 1000 I.U./kg.

4. Economic Ration for growing calves.

In growing crossbred calves feeding of 60% bajra straw based feed block (Bajra straw, 60%; Deoiled GNC, 18%; Maize, 5%; Rice polish, 5%; Molasses, 10%; in. Mix. as per BIS specification, 1%; Salt, 0.5%; Urea, 0.5 % and Vit. A @ 3000 I.U./ kg and Vit. D3 @ 1000 I.U./kg) can support daily gain of 380 g similar to conventional feeding system with 25.2% saving in feed cost.

5. Economic alternate roofing for sheep.

Shelter through Asbestos sheet/agronet (75%) roofing during intense summer reduces the thermal stress, water requirement (10-29%) and increases dry matter intake (4-7%) in adult Marwari and Patanwadi sheep.

VI ANIMAL HEALTH

1. Recommendations for farmers/pet owners.

Pet-dog should be subjected to professional periodontal therapy at least once in a year after three years of age.

Faculty of Veterinary Science and Animal Husbandry

Important Research Findings:

- The Anand Agricultural University is the first in the world to register 64212 genes of buffalo in International Gene Bank (NCBI).
- Veterinary College, AAU, Anand have contributed significantly in study of density diversity of rumen microbes through molecular genetic technique.
- The softwares based on information from microsatellites have been developed for identification of breeds of cattle and goat.
- Surgical protocols have been developed to removal of cataract and lense implant in dog, cat and horse.
- State of Art Semen Processing Laboratory have been established.
- Small unit of Gir cows and flock of Surti goat have been established for conservation study.

- Pharemacokinetic studies have been made to evaluate antibacterial and antimastitis properties of prosopic Julispora and Ocimen Sanctum plant species.
- Molecular Genetic characterization and PCR based detection protocols have been developed for Canine Parvo Virus and in dog and Mycoplasma in goat.
- Investigative pathological studies have been made for cynide poisoning in elephant, tuberculosis in captive and large felidie (Asiatic lion) and visceral goat in Vulture.

VII SOCIAL SCIENCE

[A] Messages recommended for farming community.

The farmers of Middle Gujarat are advised to sell the paddy directly to rice millers instead of selling to other intermediaries to get higher prices.

[B] Messages recommended for extension machinery.

1. Indigenous and scientific knowledge of the farmers about various agricultural uses of neem.

The results of the study indicated that though there are several scientific usages of each part of neem; there was poor knowledge among majority of the farmers about it. Thus, extension agencies involved in the development of eco-friendly agricultural practices should motivate farmers to grow more neem trees and convince them to make best usages of all the parts.

2. Study on constraints faced by the farmers in adoption of recommended practices of paddy in Anand district.

The results of the study indicated that there are some critical recommended practices of paddy cultivation which were not adopted by the majority paddy growers. Thus, extension agencies involved in the development of paddy needs to convince paddy growers to adopt following two critical production technologies.

1) The paddy growers should be encouraged to maintain proper recommended distance of plants while transplanting paddy.

2) The use of untreated urea in top-dressing by paddy growers should be discouraged. They should be encouraged to use neem oil coated urea to slow down release of nitrate in order to minimize loss of nitrogen.

3. Overall perception of farmers of Middle Gujarat about Krushi Mahotsav-2007.

The results revealed that Krushi Mahotsav-2007 organized by the Govt. of Gujarat was perceived as the most useful and timely intervention in acquiring the latest agricultural knowledge by majority of the farmers. Therefore, it is suggested to organize "Krushi Mahotsav" in order to accelerate the pace of transfer of new agricultural technologies.

II PATENTS – AAU, ANAND

Sr No	Departments & College	Product or Process sent for patenting	Details
1	Department of Dairy Microbiology, SMC College of Dairy Science, AAU, Anand	Pro-biotic culture	1. *Streptococcus thermophilus* MD2 MTCC 5460 2. *Streptococcus thermophilus* MD8 MTCC 5461 3. *Lactobacillus acidophilus* V3 MTCC 5462 4. *Lactobacillus acidophilus* I4 MTCC 5463
2	Department of Microbiology, B. A. College of Agriculture, AAU, Anand	Patenting of Liquid Biofertilizer culture	1. *Azotobacter chroococcum* MTCC 5464 2. *Bacillus coagulans* MTCC 5465 3. *Azospirillum lipoferum* MTCC 5467
3	Tissue Culture Laboratory Department of Agricultural Biotechnology, AAU, Anand	Protocol of Tissue culture	Protocol for Tissue culture of date palm
4	Department of Dairy Technology, SMC College of Dairy Science, AAU, Anand	Machine	Continuous Basundi Making Machine
5	Department of Animal Biotechnology, College of Veterinary Science & A.H., AAU, Anand	Techniques	Differentiation of cattle and buffalo meat through SNAP SHOT assay using an automated DNA sequencer.

VARIETY REGISTRATION (PPV & FR)

- Maize : Gujarat Maize 2
- Rice : Gujarat Rice 103 (Mini Mussouri), Gurjari and Gujarat Rice 7
- Vegetables : Anand Vegetable Pigeon pea 1
- Geographical Index of Bhal wheat : A 206, GW 1
- Pulses : Gujarat Chickpea 2

III NUCLEUS, BREEDER AND OTHER STAGES SEED PRODUCTION.

Production and productivity of any crop can be achieved by the quality seed supply to the farmers. University has made quantifiable progress in seed production after implementation of Mega Seed Project and started distribution of quality seed at reasonable price to the farmers with the brand name of ***Anubhav Seeds.*** University is producing nucleus as well as breeder seeds in enough quantities to cater the needs of seed industry in public and private sectors. Apart from the production of nucleus and breeder seed, the university has also produced certified / truthful seed of the most adapted varieties in large quantity.

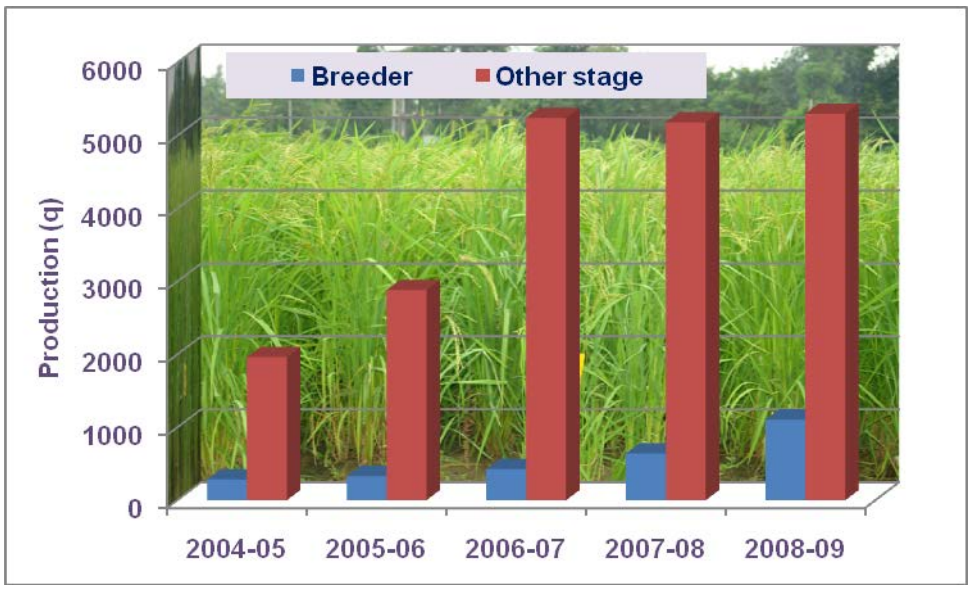


Fig.6.6 Seed production during last five years

The progress of seed production is depicted in figure 6.6. Centrally released variety of green gram (Meha) was tried on farmers field under adaptive trials to overcome epidemic of YVMV in summer season. The variety performed well and large number of farmers indented for the seeds. There is huge demand of soybean seeds by the farmers and university has multiplied centrally released variety Ahilya-4 in about 3.0 ha. land.

After implementation of ICAR Mega Seed Project the quantity of produced seed has considerably increased (major field crops – 180 %) with additional income to the tune of Rs.104 lakh in 2007-08 and Rs. 100 lakh in 2008-09 over the base year (2004-05).

Table- 6.4 Seed and Seedling production, 2008-09 (In quintals)

Sr. No.	Crops	Breeder seed	Other stage Seed
Cereals			
1.	Paddy	301.38	2531.23
2.	Maize	115.82	600.71
3.	Wheat	309.25	982.72
4.	Pearlmillet (Hyb.)	0.00	5.45
Pulses			
5.	Greengram	2.18	60.41
6.	Gram	36.66	144.41
7.	Blackgram	8.84	11.18
8.	Pigeonpea	0.00	37.28
Oilseeds			
9.	Castor (Hyb.)	6.28	116.50
10.	Soybean	0.00	13.40
Fibre crops			
11.	Cotton	155.79	00
12.	Sunhemp	0.00	115.29
Forage crops			
13.	Lucerne	58.03	123.19
14.	Oat	79.18	00
15.	Rajka-Bajra	0.44	00
16.	Sorghum	0.00	75.70
17.	Maize (Summer)	0.00	35.88
18.	Cowpea (F)	0.00	2.10
Other/ Vegetable			
19.	Tobacco	19.50	67.97
20.	Clusterbean (seed)	0.00	224.85
21.	Clusterbean (Veg.)	8.06	33.27
22.	Pigeonpea(Veg.)	0.00	9.20
23.	Chilli (Veg.)	0.00	0.77
24.	Brinjal	0.00	0.23
25.	Cucumber	0.42	0.02
26.	Okra	0.00	36.23
27.	Tomato	0.00	0.23
28.	Bottlegourd	0.57	1.42
29.	Cowpea (Veg.)	0.00	7.13
30.	Muskmelon	0.00	0.05
31.	Cumin	4.59	17.58
32.	Fennel	0.00	27.96
33.	Turmeric	0.00	13.98
34.	Ginger	0.00	0.23
35.	M & A plants Seed	0.00	4.17
	Total	**1107.00**	**5300.74**

Planting materials/ tissue culture plants:		
	Crops	**(in lakhs)**
1	Tobacco	50.00
2	Napier Hybrid Grass	1.50
3	M & A plants	0.61
	Total	**52.11**
Tissue culture plantlets		
	Date palm, Parval & Spine gourd	0.053

III RESEARCH PROJECTS.

Besides 83 state plan, 47 non-plan and 17 ICAR Co-ordinated projects, following **51** private agency / GOG and GOI's schemes were sanctioned during the year.

(Rs.in lakhs)

Sr. No.	Name of Project	Principal Investigator	Financing Authority	Grant Allotted
1	**2**	**4**	**5**	**8**
A. GOVERNMENT OF GUJARAT				
1.	To evolve and standardize protocol for immobilization of stray cattle for capture and rehabilitation from Rajkot city.	Dr. P. H. Tank, Professor of surgery, Dept. of Vety. Surgery and Radiology, College of Vety. Sci., AAU, Anand	Dy. Commissioner, Rajkot Municipal Corporation, Rajkot-360003	2.57
2.	Establishment of Market Research centre and Market Intelligence Benefit for farmers	Dr, Y. C. Zala, Associate Professor, Dept. of Economics, BACA, AAU, Anand	Director of Agriculture, Gujarat State, Gandhinagar	92.11
			Total	**94.68**
B. NATIONAL HORTICULTURE MISSION				
3.	Establishment of Plant Health Clinic Laboratory for Detection and Management of Diseases and Pests of Horticultural crops	Dr. R.N. Pandey, Professor of Plant Pathology, BACA, AAU, Anand	Director of Horticulture, Gandhinagar	10.00
4.	Establishment of Mass production laboratory and demonstration of usefulness of bioagents for suitable, economical returns in horticultural crops	Dr. D. M. Korat Research Scientist, Biological Control Research Laboratory, AAU, Anand	Director of Horticulture, Gandhinagar	80.00

5.	Farmer oriented workshop on Organic Farming	Dr. H. C. Patel, Professor & Head, Dept. of Horticulture, BACA, AAU, Anand	Director of Horticulture, Gandhinagar	2.74
			Total	**92.74**
C. RKVY Stream-I				
6.	Infrastructure Development for Quality Seed Production and Planting material at Research farms of AAU specially Chharodi, Derol, Kankanpur & Anand	Dr. J. A. Patel, Research Scientist, RRS, AAU, Anand	Government of India through Government of Gujarat	277.70
7.	Strengthening of Mass Multiplication of Tissue Culture Datepalm and Jatropha	Dr. R.S. Foghat, Unit Officer, Dept. of Agril.Biotechnology, AAU, Anand	Government of India through Government of Gujarat	60.12
8.	Maximization of crop productivity in saline and water logged area	Dr. M.S. Jakasaniya, Research Scientist, Agril Research Sationn, AAU, Arnej	Government of India through Government of Gujarat	83.31
9.	Genetic enhancement of rainfed and irrigated rice yield through molecular approaches	Dr. A.M.Mehta, MMRS, AAU, Nawagam	Government of India through Government of Gujarat	208.28
10.	Diversified cultivation for value added Maize	Dr. S.M.Khanorkar, Research Scientist, MMRS, AAU, Anand	Government of India through Government of Gujarat	50.92
11.	Development of Integrated farming system, Nenpur-Sansoli	Dr. P.C.Patel, Research Scientist, N.C.Farm, AAU, Anand	Government of India through Government of Gujarat	157.41
12.	Newer approaches in surgical treatment of animals	Dr. D.B.Patil, Prof. & Head, Dept. of Surgery, Vety. College, AAU,Anand	Government of India through Government of Gujarat	164.18
13.	Innovative approach for Agricultural Extension activities by village adoption	Dr. P.P.Patel, Dirctor of Ext. Edu., AAU,Anand	Government of India through Government of Gujarat	123.70

14.	Agricultural Extension activities for specialized agricultural innovations	Dr. P.P.Patel, Dirctor of Ext. Edu., AAU,Anand	Government of India through Government of Gujarat	37.03
			Total	**1162.65**
Stream-II				
15.	Biotechnological Approach for containment of animal diseases	Dr. C.G.Joshi, Prof. & Head, Dept. of Animal Biotechnology, Vety. College, AAU, Anand	Government of India through Government of Gujarat	400.00
16.	Strengthening Agricultural Extension Activities of Agricultural Technology Information Centre [ATIC]	Dr. P.P.Patel, Dirctor of Ext. Edu., AAU,Anand	Government of India through Government of Gujarat	40.00
17.	Master Trainer Training on Agriculture Extension Activities	Dr. P.P.Patel, Dirctor of Ext. Edu., AAU,Anand	Government of India through Government of Gujarat	136.00
			Total	**576.00**
C. PRIVATE ORGANIZATION				
18.	Testing of Imazethapyr 10% SL for efficacy, Phytotoxicity in Kharif Groundnut	Dr. R.B. Patel, Agronomist, AICRP on Weed Control,BACA,Anand	Tropical Agrosystem (India) Ltd., Chennai	0.80
19.	Residue analysis of UPI-206 on cotton	Dr. P. G. Shah, Residue Analyst Pesticide Residue Scheme, AAU, Anand	Net-work Coordinator, AINP on Pesticide Residue, New Delhi	1.50
20.	Residue / persistence of Deltarmethrin 100 EC on Chilli	Dr. P. G. Shah, Residue Analyst Pesticide Residue Scheme, AAU, Anand	Net-work Coordinator, AINP on Pesticide Residue, New Delhi	1.00
21.	Residue / persistence of Spiromesifen 240 SC on okra	Dr. P. G. Shah, Residue Analyst Pesticide Residue Scheme, AAU, Anand	Net-work Coordinator, AINP on Pesticide Residue, New Delhi	1.25

22.	Evaluation of Maize Hybrids	Dr. S. H. Patel Asso. Research Scientist,Agricultural Research Station, AAU, Derol	Monsanto India Pvt. Ltd, Mumbai	2.70
23.	Residue / persistence of Flubendiamide 24 % + Thiacloprid 24 % 480 scon chilli	Dr. P. G. Shah, Residue Analyst Pesticide Residue Scheme, AAU, Anand	Net-work Coordinator, AINP on Pesticide Residue, New Delhi	1.50
24.	Bio efficacy Phytotoxicity and effect on follow-up crops of Targa super 5 EC % (Quizalofop Ethyl) on Black gram	Dr.B.D.Patel Agronomist AICRP on Weed Control, BACA, AAU, Anand	Dhanuka Agritech Ltd, New Delhi	2.51
25.	PCR Based Indentification and Genotyping of Prokaryotes and Eukaryotes	Dr. C.G.Joshi, Prof. of Animal Biotechnology, Vety. College, AAU, Anand	Medical Director, Head, Dept. of Nephrology, MPUH, Nadiad	11.50

26.	Supervised Field Trials for the Persistence and Residue of Quizalofop Ethyl 5 EC (Targa super) on Black gram and Onion	Dr. P. G. Shah, Residue Analyst Pesticide Residue Scheme, AAU, Anand	Net-work Coordinator, AINP on Pesticide Residue, New Delhi	1.80
27.	Testing efficacy of vitavax 200 FF against Seed borne and soil borne diseases of cotton	Dr. R.N.Pandey Prof. of Plant Pathology, BACA, AAU, Ananad	Chemtura Chemicals Mumbai	1.25
28.	Assessment of Bollworm Population on Insect Transgenic cotton	Dr. R.C. Jhala Prof of Entomology, BACA, AAU, Anand	Monsanto Biotechnology Ltd., Mumbai	14.24
29.	Bioefficacy and phytotoxicity of Magister (Fenazaquin 10 EC) Agains Mites Infesting Okra and Brinjal	Dr. Jayesh J. Patel, Asstt. Res. Scientist, MVRS, AAU, Anand	DuPont India Pvt. Ltd., Gurgeon	2.90
30.	Residue study of Soloman 300 OD (Betacyfluthrin 9% + Imidacloprid 21% on Chick pea	Dr. P. G. Shah, Residue Analyst, Pesticide Residue Scheme, AAU, Anand	Network Coordinator, AINP on Pesticide Residues, New Delhi	1.50

31.	Bio- efficiency of flubendiamide (Fame)-480 Sc against shoot & fruit borere in brinjal	Dr. Jayesh J. Patel, Assistant Research Scientist (Ento.), Main Vegetable Research Station, AAU, Anand	Field Development Executive, Bayer Crop Science Limited, Ahmedabad	1.96
32.	Bio-efficiency of spiromesifen 240 sc (OBERON 240 SC) against whitefly and mites in tomato	Dr. Jayesh J. Patel, Assistant Research Scientist (Ento.), Main Vegetable Research Station, AAU, Anand	Field Development Executive, Bayer Crop Science Limited, Ahmedabad	1.82
33.	Tetsing the bio-efficiency and Phytotoxicity of HGW 10 OD against chilli thrips	Dr. Jayesh J. Patel, Assistant Research Scientist (Ento.), Main Vegetable Research Station, AAU, Anand	Research & Development Manager, Dupont India Private Limited, Gurgeon	2.23
34.	Field bioefficiency testing of Biofertilizer formulations in wheat cv. GW 496	Dr, R. V. Vyas, Professor , Dept. of Microbiology, BACA, AAU, Anand	Director, AGRILAND BIOTECH LIMITED, Mota – Motipura, Dist. Baroda	2.50
35.	Bioefficiency and Phytotoxicity of indoxacarb 14.5%+ acetamiprid 7.7.% sc against pest complex of okra	Dr. Jayesh J. Patel, Assistant Research Scientist (Ento.), Main Vegetable Research Station, AAU, Anand	Rallis India Ltd. Banglore	2.02
36.	Bioefficiency and Phytotoxicity of indoxacarb 14.5%+ acetamiprid 7.7.% sc against pest complex of tomato	Dr. Jayesh J. Patel, Assistant Research Scientist (Ento.), Main Vegetable Research Station, AAU, Anand	Rallis India Ltd. Banglore.	2.18
37.	Residue studies of B-cyfluthrin + Imiacloptrid(SOLOMON 300 OD) on Mango	Dr. P. G. Shah, Residue Analyst Pesticide Residue Scheme, AAU, Anand	Network Coordinator, AINP on Pesticide Residues, New Delhi	1.50
38.	Evaluation of Maize Hybrids	Research Scientist, Agricultural Research Station, AAU, Derol	Monsanto India Pvt. Ltd, Mumbai	2.80

39.	Multilocation Supervised field trial for residue study of Flupicolide 6.25% + Propamocarb Hydrochloride 62.5% - 68.75 SC (Infinito 68.75 SC) on Tomato at AAU, Anand	Dr. P. G. Shah, Residue Analyst Pesticide Residue Scheme, AAU, Anand	Network Coordinator, AINP on Pesticide Residues, New Delhi	1.50
40.	Bt cotton hybrid trials	Dr. B.N.Patel, Astt. Plant Breeder, RRS, AAU, Anand	Various companies (29 trials)	45.57
41.	Evaluation of Rice Hybrids	Dr. A.M.Mehta Research Scientist (Rice) MRRS Nawagam	Bayer Bioscience Pvt. Ltd. Hyderabad	2.70
42.	National Information System for Pest Management (Bt.Cotton)	Dr. R. C. Jhala, Prof. & Head, Dept. of Ento., BACA, AAU, Anand	Director, NCIPM, (ICAR) New Delhi	7.72
43.	Application of Extended Range Forecast for Climatic Risk Management in Rainfed / Irrigated System in Anand and Kheda districts of Middle Gujarat.	Dr. Vyas Pandey,Dept. of Agril. Meteorology, BACA, AAU, Anand	Centre of Atmospheric Science, Indian Institute of Technology, New Delhi.	2.50
			Total	**121.45**

D. GOVERNMENT OF INDIA				
44.	Weather Forecast for Gujarat using Regional Climate Model	Dr. Vyas Pandey Prof. & Head, Dept of Agril. Meteorology, BACA,Anand	Dept of Space, SAC, Ahmedabad	9.30
45.	Enhancement of yield and other economic traits of Jatropha through breeding	Dr.D.R.Patel Dept. of Agril. Biotechnology, Anand	NOVOD Board (Min. of Agri. GOI) Gurgaon, Haryana	9.76
46.	Conservation of Surti breed of Goat	Dr. P. H. Vataliya, Prof. & Head, Dept. of Animal Genetics and Breeding, College of Vet.Sci. & A.H., AAU, Anand	Dept. of A.H., Dairying and Fisheries, New Delhi	64.50
			Total	**83.56**

E. ICAR				
47.	Development of goat having knocked down of myostatin gene through RNA interference technology to enhance the meat production (NAIP-IV)	CCPI-Dr.C.G.Joshi Professor Co-PI Dr.D.N.Rank Asso. Professor Dept.of Biotechnology Vet. College, Anand	ICAR, New Delhi	93.80
48.	Integrated Project for Research on Development Process And Sustainability of Livelihood in Selected Disadvantage d District of Gujarat State (NAIP-III)	Co-PI. Dr.B.S.Patel, Prog. Coordinator,KVK, Dahod	ICAR, New Delhi	216.07
49.	Understanding the mechanism of variation in status of a few nutritionally important micronutrients in some important food crops and the mechanism of micronutrient enrichment in plant parts (NAIP-IV)	Dr. K. P. Patel, CCPI, Research Scientist, Micronutrient Project, AAU, Anand	ICAR, New Delhi	48.82
50.	Estimation of methane emission under different feeding system and development of mitigation strategies	Dr. P.R.Pandya , Asso.Prof, ANRS,AAU,Anand	AICRP of Improvement of feed…. NIANP, Adugodi	71.80
51.	Experiential Learning - setting up of Facilities for Hands on Training on Dairy processing	Professor and Head, Department of Dairy Processing and Operations, SMC College of Dairy Science , AAU, Anand	ICAR, New Delhi	135.00
			Total	**565.49**
			Grand Total	**2696.57**

V RESEARCH PUBLICATIONS

a. Research Papers Published

A.	FACULTY OF AGRICULTURE	:	067
B.	FACULTY OF DAIRY SCIENCE	:	004
C.	FACULTY OF VETERINARY SCIENCE	:	038
D.	FACULTY OF FOOD PROCESSING TECHNOLOGY & BIO-ENERGY	:	004

Research papers published are given in **Annexure-6.1**

b. Research Papers Presented

A.	FACULTY OF AGRICULTURE	:	092
B.	FACULTY OF DAIRY SCIENCE	:	040
C.	FACULTY OF VETERINARY SCIENCE	:	064
D.	FACULTY OF FOOD PROCESSING TECHNOLOGY & BIO-ENERGY	:	001

V PARTICIPATION OF SCIENTISTS FOR CONFERENCE/SEMINAR/ SYMPOSIUM / WORKSHOP / TRAINING

A.	FOREIGN / ABROAD	:	005
B.	NATIONAL LEVEL	:	436

VI DISTINGUISHED AWARDS/ HONORS

Best Research Award

i. Bronze Icon Award- Universities of India, 2008 for AAU- e-Governance (2008-09) by Dept. of Administrative Technology, GOI, New Delhi 12 Feb., 2009 at Goa.

ii. Dr. V. R. Bhatt, Professor and Head, Dept of Agril. Chem. was awarded Sadvichar Pariwar Award by GAAS on 18th September, 2008 at Gujarat Vidyapith, Ahmedabad sponsored by Sadvichar Pariwar for the year 2005.

iii. The Hari Om Ashram Ayojit Prof. J. P. Trivedi Award–2006 was presented to Dr. K. P. Patel and associates for the work on "Assessment and Impact of Waste water use on Soil-Plant Health and its Management for Sustenance of Soil Quality". The Award was presented by Shri Dilipbhai Sanghani Hon'ble minister of Agriculture & Co-operation, Govt. of Gujarat in the State Level Seminar organized by the GAAS on 18th September, 2008 at Gujarat Vidyapith, Ahmedabad.

Best Research Papers

i. Department of Agril. Botany awarded second winner in poster presentation at National Seminar on "Emerging Areas in Plant Sciences" organized by Dept. of Botany, MSU, Baroda.

ii. Department of Agril. Botany was second winner in Oral presentation at National conference on "Frontiers in Biological Sciences" organized by BRD school of Biosciences, SPU, VV Nagar-388120, Gujarat.

iii. Dr. J. A. Patel, Associate Professor (Gynaecology) awarded Sardar Patel research award for" Effect of Hormonal Therapies at Breeding on Plasma Progesterone Profile Fertility in Repeat Breeding Holstein Friesian Cows" published in International journal of cow.

iv. First prize of Sardar Patel Research award for best research paper entitled "Pesticide residues in cotton seed and lint" for the year 2006-07 on 15/12/2008 at Sardar Patel University, V.V.Nagar. The authors of the paper are Kalpana Diwan, Paresh G. Shah and Raj M. F.

v. Shah Rahul and Thakkar Purna (2008). “Manufacture of Pizza cheese from cream and rennet casein.” Paper presented and secured Second Prize in the National Seminar on “Health Food” in the student forum TECNNIK, organized by AFSTI and DFRL, Mysore at IIT, Kharagapur on 31st Dec, 2008 to 2nd Jan., 2009.

vi. N. Sridhar, D. B. Patil, N. H. Kelawala, P. V. Parikh and D. R. Barvalia awarded Smt Diwaliben Prabhudas Patel Research Award in student category for the paper entitled “Evaluation of oxidized regenerated cellulose in the prevention of induced intraperitoneal adhesions in calves”.

vii. N. H. Kelawala, M. Pal, D. B. Patil, P. V. Parikh and D. R. Barvalia awarded second prize of Shri Prabhudas Lalubhai Patel Research Award in teacher category for the research paper entitled “Chronic generalized trichophytosis in an adult cattle” .

VII IMPORTANT EVENTS

Seminar

- National Seminar on 'Agrometeorological services for farmers during 10 - 13 November, 2008. BACA, AAU, Anand.
- Workshop on "Organic farming in Horticultural Crops" organized at Department of Horticulture, BACA, AAU, Anand on 17 - 18 March, 2009.
- National seminar on "Innovations in Food Processing & Entrepreneurship Development" was organized by Faculty of Food Processing Technology & Bio-Energy, Anand Agricultural University, Anand on February 9 - 10, 2009 at Anand.

Conference

- 33rd IAUA Vice Chancellors' Conference on "Climate Change its Effect on Agriculture" during 3 - 5 December, 2008.

Training

- Short-Term Training programme on "Soil and Water Testing" organized at the Department of Agricultural Chemistry & Soil Science, BACA, AAU, Anand during August 25 – 29, 2008 for the College / School teachers of Panchmahals district.
- Training Programme on Postmortem examination and Veterolegal cases under Continuous Veterinary Education organized for field veterinarians, A. H., Department of Gujarat state during 04-02-09 to07-02-09 and 18-02-09 to 21-02-09 (Two Batches).
- Training course on "Advanced Laboratory Chemical Quality Assurance in Dairy Industry" for 10 days from June 18 to June 27, 2008, DSC, Anand.

Annexure-6.1

Research Paper published

A. FACULTY OF AGRICULTURE

1. Ajithkumar, B.; Savani, M.B.; Dakhore, K.K. (2008). Periodical changes and diurnal variation of stomatal conductance and leaf temperature in cauliflower var. Snowball 16. *Journal of Agrometeorology*. 10 (1): 86-88.
2. Bhattacharya, B.K.; Mallick, K.; Rao, V.U.M.; Reddy, D. R.; Banerjee, S.; Venkatesh, H.; Pandey,V.; Kar, G.; Mukherjee, J.; Vyas,S. P. and Patel, N. K.(2008).Regional Scale Evapotranspiration from MODIS Aqua and NOAA AVHRR: Validation over Indian Agro-ecosystem.*Journal of Agrometeorology*.10, Special issue:372-383.
3. Bhavani, A.P.; Sashidharan, N.; Shukla, Y. M. and Bhatt, M. M. (2009). Role of genetic variability in chickpea. *Int. J. Agril. Sciences*. 5(1):205 -206.
4. Chauhan, N.M. and Chauhan, N.B. (2008). Opinions and Expectations of the farmers towards ICT in agriculture at village level, *International Journal of Extension Education*.3:52-60.
5. Chauhan,Vikram Singh ; Sood ,V.K. and Pandey, V.(2008).Toposequence based cropping system for enhanced productivity in Nareshwar watershed of Vadodara.*Journal of Agrometeorology*.10: Special issue,:93-98.
6. Chauhan,Vikram Singh; Chaudhari, G. B. and Pandey,V. (2008).Medium Range Weather Forecast verification for Middle Gujarat region by Rainfall. *Journal of Agrometeorology*.10: Special issue:90-92.
7. Chavda, J. C,; Parmar, D. J. and Patel, B. K. (2007). Sucker management in bidi tobacco varieties as influenced by stage and level of topping. *Tob.Res*.33: 43-45.

8. Dakhore K.K.; Bhattacharya, B.K.; Mallick, K.; Nigam, R.; Patel,N.K.; Pandey ,V. and Shekh,A.M. (2008). Wheat Yield prediction in Semi-arid Region using Moderate Resolution Satellite Optical and Thermal Infrared Data.*Journal of Agrometeorology.* Special issue , 418-424.

9. Dakhore, K.K.; Bhattacharya,B.K.; Mallick, K.; Nigam, R; Patel, N.K.; Pandey,V. and Shekh,A.M. (2008). Energy budget over Semi-arid agro-ecosystem using satellite data. *Journal of Agrometeorology*. Special issue ,58-64.

10. Dakhore,K.K.; Pandey,V. and Shekh, A.M.. (2008). Economic Impact Assessment Using Agro-Advisory Services in Middle Agro climatic Zone of Gujarat. *Journal of Agrometeorology*.10: Special issue ,541-544.

11. Diwarkarsingh; Rita Mehta and Talati, J.G.(2008). Identification of chilli (Capsicum annuum L.) genotypes through RAPD. *Vegetable Sciences*. 35(1): 10-13.

12. Khandelwal, M. K. and Pandey, V.(2008).Comparison of PET computed by various methods in different agroclimatic zones of Gujarat state.*Journal of Agrometeorology*.10:Special issue:439-443.

13. Kumar,M.; Pandey, V.; Shekh ,A.M.(2009).Diffusion resistance, leaf conductance, stomatal conductance, and sensible heat flux in wheat crop as influenced by water stress at different growth stages.*World Applied science Journal*. 6(6):793-801.

14. Mahatma, M.K.; Bhatnagar, R. and Rawal, P. (2008). Changes in enzymes and proline levels in leaves of downy mildew resistant and susceptible pearl millet genotypes. *J. Mycol. Pl. Pathol*.38(2):277-281.

15. Mahatma, M.K.; Bhatnagar, R.; Solanki, R.K. and Mittal, G.K.(2007).Effect of seed soaking treatments on salt induced biochemical contents and polypeptide pattern of wheat (Triticum aestivum L.) leaves. *Indian Agric. Biochem*. 20(2): 73-77.

16. Mallick,K.; Bhattacharya,B.K.; Rao, V.U.M.; Reddy, R.; Banerjee,V.H.; Pandey, V.;Kar,G.; Mukharjee,J.; Vyas,S.P.; Gadgil,A.S. and Patel,N.K.(2009). Latent heat flux estimation in clear sky days over Indian agroecosystems using noontime remote sensing data. *Agricultural and Forest Meteorology*.(in press)

17. Nigam, R.; Mallick, K.; Bhattacharya, B.K.; Pandey, V. and Patel, N. K.(2008). Heat Flux Estimation from MODIS Satellite and Validation over a Semi-arid Agroecosystem Using Scintillometry and Model Simulation.*Journal of Agrometeorology*.10: Special issue:75-81.

18. Pal, P. and Shah, P.G. (2008).Effect of storage and processing on dissipation of five insecticides on wheat. *Pesticide Res. J.* 20(2):253-258.

19. Panchal,D.B.; Patel,G.R. and Siyolkar, R.D. (2009).Response of N, P and S on yield and quality of mustard and their residual effect on moong. GAU Res. J.31:(1&2):33-35.

20. Pandey, V.; Patel,V. J.; Vadodaria,R. P.; Patel, H. R. and Shekh, A. M. (2008). Irrigation water requirement and production potentials of major crops over Narmada canal command area in Gujarat. *Journal of Agrometeorology*.10: Special issue:314-320.

21. Parmar, H.P.; Bhalala, M.K. and Kher, H.R. (2008). Heterosis studies for yield in diverse seasons in forage maize. *Crop Res.* 36 (1, 2 & 3): 239-243.

22. Parmar, H.P.; Bhalala, M.K.; Dixit, S.K. and Kher, H.R. (2007). Combining ability for forage yield and its components in forage Maize (*Zea mays L.*). Int. J. Bioscience Reporter. 5:(2) : 521-524.

23. Parmar, H.P.; Bhalala, M.K.; Dixit, S.K.; Kher, H.R. and Patel, N.N. (2007). Heterosis studies for yield and yield attributing traits in forage Maize (Zea mays L.). *Int. J. Bioscience Reporter.* 5:(2):493-496.

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25. Patel, C. C. and Patel, A. M. (2008). Evaluation of some chemical / plant insecticides against citrus psylla Diaphorina citri (Kuwayana) infesting kagzi lime (Citrus aurantifolia Swingle). *J. Bioscience Reporter*. 6(1): 171-172.

26. Patel, C. C. and Patel, A. M. (2008). Population dynamics of citrus psylla Diaphorina citri (Kuwayana) in middle Gujarat. *J. Bioscience Reporter*. 6(1):79-80.

27. Patel, D. H.; Upadhyay, N. V.; Patel, M. A.; Dalal, K. C.; Macwan, S. J. and Sriram, S. (2008). Effect of date of incision for gum production in guggal Commiphora wightii Arnott (Bhand). *The Indian Journal of Research and Education in Indian Medicine*. 7-10.

28. Patel, D. J. and Patel, S. K. (2008). Integrated nematode management in groundnut and castor crops. In: *Review of Plant Pathol*. 4: 135-159.

29. Patel, H.B.; Bhatt, M.M.; Sasidharan, N.; Patel, J. A. and Patel, J. S.(2008). Study of heterotic effect for green fruit yield and its quality components in chilli. *Crop Research (Accepted).*

30. Patel, H.R. and Sharma D.N.P. (2007). Effect of bidi tobacco cv. GT 5 cured leaf extracts against nematodes in bidi tobacco nursery. *Tob.Res*. 33: 67-70.

31. Patel, H.R.; Patel, V.J. and Pandey,V.(2008).Impact assessment of climate change on maize cultivars in middle Gujarat Agro-Climatic region using CERES-maize model approach.*Journal of Agrometeorology*. 10:Special issue:292-295.

32. Patel, J.C and. Patel,K.C. (2008). Profile distribution of different forms of sulphur in prominent series of south Gujarat. *Asian J. Soil Sci*. 3 (1): 24-29.

33. Patel, K. C.; Patel, K.P.; Ramani, V. P. and Patel J. C.(2008). Effect of Pb and FYM application on spinach yield, Pb uptake and different fractions of Pb in sewage irrigated Fluventic ustochrepts soils of peri urban area of Vadodara. *An Asia J. of Soil Sci.*3(2): 227-230.

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37. Patel, K.C.; Patel,K.P.; Patel,B.K.; and Ramani,V.P. (2008). Effect of sewage irrigation on heavy metal contamination and soil fertility status in soils of peri urban area of Vadodara. *Eco. Env. & Cons.* 14(4):523-527.

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42. Patel, M.R.; Sadhu, A.C. and Patel, J.C. (2008). Effect of irrigation, nitrogen and bio-fertilizer inoculation on N, P and K content and uptake of forage oat (Avena sativa L.). *Res. on crops*. 9(3):544-546.

43. Patel, M.R.; Sadhu, A.C.;Patel,R.M.;Kher,H.R. and Parmar,D.J. (2008). Remunerative forage based cropping sequence for sustained productivity under irrigated conditions. *Res. on Crops*. 9(2): 322-324.

44. Patel, Meenaben C. (2008).Use of ICT for vocational Bakery Education and Training, *The Indian Baker*. 39:12 & 22-23.

45. Patel, Meenaben C. and Chauhan, N.B. (2008). A Scale to measure Attitude of Research Scholars towards use of Information Technology for their empowerment. *Agric.Sci. Digest*. 28(4):286-288.

46. Patel, Meenaben C. and Chauhan, N.B. (2008). Corollary of the profile of the farmers and their opinion regarding International Agri. Tech. *Agric.Sci. Digest*. 28 (4):235-240.

47. Patel, Meenaben C. and Chauhan, N.B. (2008). Impact of Television on capacity building of farmers. *Agric.Sci. Digest*. 28 (4):301-303.

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49. Patel, V.J.; Dodia,J.F.; Korat, D.M.; Mehta, A.M. and Pathak, A.R. (2008).Reaction of some promising Genotypes of Rice to leaf folder incidence and yield potential in middle Gujarat. *Insect Environment*. 14(2):81-85.

50. Patel, V.J.; Patel, H.R. and Pandey, V.(2008).Estimation of wheat yield gap in Anand and Panchmahal districts using CERES-wheat model. *Journal of Agrometeorology*. 10:Special issue: 393-397.

51. Rahula, B.V. and Shah, P.G. (2008). Degradation of λ-cyhalothrin and deltamethrin in rice due to storage and processing. *Pesticide Res. J.* 20(2):259-262

52. Raj, M.F.; Patel, A.R.; Diwan, K.D. and Shah, P.G. (2008). Dissipation of propineb in onion. *Pesticide Res. J.* 20(2): 266-268.

53. Sadhu, A.C.; Patel, M.R.; Patel R.M. and Parmar, D.J.(2008). Effect of stubble height and fertility levels on yield and quality of multicut forage sorghum cv.S.S.G.59-3. *Res. on crops*. 9(2): 328-330.

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60. Vaidya, V.B.; Pandey V.; Lunagaria, M. and Shekh, A.M. (2008). MAI based Crop Planning in Assured Rainfall Region of South Gujarat.*Journal of Agrometeorology.*10:467-469.

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62. Varshneya, M.C.; Vaidya, V.B.; Pandey ,V.; Chimote, L.D.; Damle, K.S.; Shekh,A.M. and Karande, B.I. (2009). Forecasting of rainfall for Gujarat based astromology. *Asian Agri – History.* 13(1): 25-37.

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65. Vihol, P.D.; Patel, J.H.; Ghodasara, D. J.; Joshi, B. P. and Prajapati, K.S.(2008). Genotoxicity studies of sodium dichromate in wistar rats. *Indian j. Field Veterinarians*. 4(2):13-15.

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B. FACULTY OF DAIRY SCIENCE

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C. FACULTY OF VETERINARY SCIENCE

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Chapter – 7
Extension Education:
Extension Education and Technology Transfer

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The Directorate of Extension Education has to plan, coordinate, organize and guide the extension education programs in the University and to ensure efficient working of the extension education activities in close coordination with the Development Departments, voluntary and private organizations. Moreover, this Directorate encourage, guide and support the extension education centres of university to organize different extension education activities for the benefit of farming community. Dr. P.P.Patel continued as Director of Extension Education for the period under report.

EXTENSION EDUCATION COUNCIL

The Extension Education Council has been constituted to consider and recommend the extension education programmes/activities of the University. The Extension Education Council is as under:

1	The Vice-Chancellor	Chairman
2	The Director of Research	Member
3	The Director of Agriculture or concerned Joint Director	Member
4	The Director of Animal Husbandry or concerned Joint Director	Member
5	The Director of Horticulture or concerned Joint Director	Member
6	The Dean, Faculty of Agriculture	Member
7	The Dean, Faculty of Dairy Science	Member
8	The Dean, Faculty of Veterinary Science	Member
9	The Dean, Faculty of Food Processing Technology and Bio-Energy	Member
10	The Dean Faculty of Information Technology	Member
11	The Principal, Extension Education Institute	Member
12	The Professor of Extension Education	Member

13	The Extension Educationist, EEI	Member
14	The Training Organizer, Krushi Vigyan Kendra, Dahod	Member
15	The Research Scientist , Poultry Training Centre	Member
16	The Associate Extension Educationist,(Publication)	Member
17	The Assistant Extension Educationist, Sardar Smruti Kendra	Member
18	The Assistant Extension Educationist, Agricultural School, Anand	Member
19	The Assistant Extension Educationist, Home Science School, Anand	Member
20	The Training Associate, TTC, Dahod	Member
21	The Director of Extension Education	Member Secretary

The Third meeting of Extension Education council was held on 01-07-08 at Navneet Hall, AAU,Anand under the chairmanship of Prof. M.C.Varshneya Hon. Vice Chancellor, AAU, Anand.

Zonal Research and extension Advisory Committee (ZREAC).

The Committee consists of representative of development department, the Centre of extension education, Director of Research, Deans of the faculty, Crop and Subject Matter Specialist, co-operative sector, industries and progressive farmers. Meetings were held regularly twice in kharif and rabi seasons. The discussions centred around adoption and feed back on research recommendations and their adoption by the farmers, and the existing transfer of technology programmes. The ZERAC *rabi* was held on 12-09-2008 & *Kharif* on 05-03-2009.

CENTERS OF EXTENSION EDUCATION

Under the umbrella of Directorate of Extension Education, following centers / activities are functioning:-

Sr. No.	Type	Name of Center	Location
1	Diploma/ Certificate Course	Agricultural Schools	Anand, Chharodi, Vadodara, Dahod
		Home Science School	Anand
		Bakery School	Anand
		Poultry Training Centre	Anand
		Mali Training Centre	Anand
2	Training Centers for Extension Workers	Extension Education Institute	Anand
		Training and Visit Training Centre	Anand
3	Training Centers for Farmers/ Farm women/ Rural Youth	Sardar Smruti Kendra	Anand
		Krushi Vigyan Kendra	Devataj, Dahod, Arnej
		Tribal Training Centre	Dahod
		Tribal Research cum Training Centre	D'baria
		Dept. of Extension Education	Anand
4	Advisory Services	Farm Advisory Services	Anand
		Agro-Advisory Services	Anand
		Publication Unit	Anand
5	Other	ATMA	Arnej, Dahod

EXTENSION EDUCATION AND TRAINING PROGRAMS

1. Diploma/Certificate Courses for Farm Youths

Anand Agricultural University conducts various Diploma/Certificate courses as per the details given below

Sr. No	Name of Diploma/Certificate Course	Duration	Centre	No. of Students Completed the Course
1.	Agricultural Diploma	TwoYears	Anand, Chharodi, Vadodara & Dahod	128
2.	Home Science Training	TwoYears	Anand	12
3.	Bakery Training (Two batches in a year)	Twenty weeks	Anand	36
4.	Poultry Training (Three batches in a year)	Ten weeks	Anand	27
5.	Mali Training (One batch in a year)	Six months	Anand	09

2. Training Programmes for Extension Workers

(a) Extension Education Institute

The Extension Education Institute, Anand caters to the extension training needs of middle level functionaries of various development departments of Western Zone States namely Gujarat, Rajasthan, Madhya Pradesh, Chhatisgarh, Maharashtra, Goa and UTs of Diu, Daman and Dadara Nagar Haveli. The aim is to improve upon their job performance whenever they are working in different capacities.

There is a Management Committee of EEI that approves action plan and review the progress of EEI activities. The constitution of the Management Committee is as under:

1. The Vice-Chancellor, AAU, Anand — Chairman
2. The Director of Extension (Trg.), Govt. of India, New Delhi. — Member
3. The Director of Administration, Govt. of India, New Delhi. — Member

4. The Additional Commissioner (Extn. Trg.), GOI, New Delhi. — Member
5. The Director General, National Institute of Agril. Extension Management (MANAGE), Rajendranagar, Hyderabad. — Member
6. The Director, Institute of Rural Management (IRMA), Anand. — Member
7. The Director of Agriculture, Govt. of Gujarat, Gandhinagar. — Member
8. The Director of Horticulture, Govt. of MP,Bhopal. — Member
9. The Director of Fisheries, Govt. of Chhatisgarh, Raipur. — Member
10. The Director of Agriculture, Govt. of Maharashtra, Pune. — Member
11. The Director of Extension Education, AAU, Anand. — Member
12. The Principal, B.A.College of Agriculture, AAU, Anand — Member
13. The Comptroller, AAU, Anand — Member
14. Shri Kanubhai K. Patel, Progressive Farmer, Boria. — Member
15. Shri Vishnubhai.Patel, MLA, Umreth, — Member
16. Brother Galicya, Mogar Farm, Mogar, Anand. — Member
17. The Principal, EEI, AAU, Anand. — Member Secretary

The details of the training courses conducted by the EEI, Anand during the year 2008-2009 are as follows:

Sr. No	Type of Training Course	No. of course	No. of participants
1	Scheduled Training courses 1. On campus 2.Off campus	 19 13	 369 316
2	Orientation workshop on ATMA of Anand district Anand (SAMATI, Gujarat)	01	68
3	Orientation workshop on Commodity Futures Market, Anand (NABARD)	01	30
4	SWPA farmers training programme (GOI sponsored)	17	910
5	Collaborative Training Courses	04	98

In addition to these Courses, six follow up and research studies were undertaken during the year.

(b) Training & Visit Centre

The Anand Agricultural University has taken up the task of training for the extension personnel of the Department of Agriculture through the Training and Visit Training Centers at Anand. The details about bi-monthly workshops, pre-seasonal training workshops and short-term training programs organized for the extension personnel of the Department of Agriculture, and the number of SMSs/ AEOs attended the programs are as under:

Sr. No	Type of program	No.	No. of Participant
1	Bi-monthly workshop	05	85
2	Pre-seasonal training programme	02	89
3	Short-term training programme	03	83
4	Special Training on Cotton Mini - Mission	10	329
5	Special Training on Soil sampling technique	01	40
6	Special Training on Training on Mealybug	01	200
7	Special Training on Medicinal plants	01	90
8	Special Training on Organic Farming and Amrut Mati	01	67
	Total	**24**	**983**

3. Training/Extension Education Programs for Farmers/Farm Women/ Farm Youths.

(a) Training Programs

Training is essential to increase the efficiency of the farmers, farm women and farm youths. On-campus as well as off-campus training programs are organized based on the needs and interests of the stakeholders.Through the Front Line Transfer of Technology (TOT) Centers, 185 on-campus and 219 off-campus training programs were organized. The details are depicted in Table-7.1:

Table – 7.1: Training Programmes Organized by the Transfer of Technology Centres for Farmers/Farm Women.

Sr. No.	TOT Centre	No.of trg. progs.	No. of participants				
			Farmers	Farm women	Farm Youths	Extension workers/ /other	Total
i	KVK, Devataj	28 A	359	18	66	159	602
		46 B	940	185	77	140	1342
ii	KVK, Dahod	34 A	554	266	-	-	820
		29 B	511	175	-	-	686
iii	KVK,Arnej	32 A	128	330	139	52	649
		62 B	478	294	514	45	1331
iv	SSK, Anand	74 A	915	845	599	71	2430
v	TTC, Dahod	05 A	84	121	-	-	205
		09 B	256	159	-	-	415
vi	TRTC, D'baria	02 A	40	20	-	-	60
		60 B	400	177	-	-	577
vii	TWTC * D'baria	10 -A	-	302	-	-	302
		13 -B	-	577	-	-	577
	Total (i to vi)	185 A	2080	1902	804	282	5068
		219-B	2585	1567	591	185	4928
	Grand Total (A+B)	**404**	**4665**	**3469**	**1395**	**467**	**9996**

A = On-campus B = Off-campus
*** Tribal Women Training Centre**

(b) Extension Education Activities.

The TOT centres have also planned and organized extension activities like, seminar /workshop /symposium, field/ farmers' day, agriculture fair/ exhibition, film/ slide/ video show, field visit, farmers group/ demonstration meeting, etc. The details of the extension activities organized and number of beneficiaries are given in Table-7.2, 7.3, & 7.4.

Table-7.2: Extension Education Activities carried out by TOT Centers.

Sr No	Name of Activity	Name of TOT centre					
		KVKs			SSK	TRTC	TTC
		Devataj	Dahod	Arnej	Anand	D'baria	Dahod
1	Farmers / field days	6(187)	9(316)	2(148)	-	-	-
2	Agril fairs /exhibitions	-	2(3600)	2(30)	-	-	-
3	Khedut / women shibir / meetings	1 (59)	-	5 (107)	35 (1471)	01 (126)	102 (23268)
4	Seminar/workshop/kisan gosthi	2(194)	-	3(86)	-	-	02(52)
5	Agirl. tour /field visits	71(859)	14(180)	18(109)	80(3256)		-
6	Film/slide/video cassette	22(493)	12(438)	12(420)	77(2534)	-	-

	show/radio talk/TV programmes						
7	Celebration of women in Agril.day/ world food day/van mahotsav	-	1(21)	3(89)	-	-	-
8	Guidance through letters/personal contact	71(770)	68(68)	118	-	-	-
9	Publication of farm literature	10(4000)	11	6	1	-	-
10	Press Note released	-	1	6(Mass)	-	05	-
11	Krishi-Go-Vidya subscriber registered	35	853	71	118	-	241
12	Escorting the visitors	119	2(52)	693	21(367)	-	-
13	Telephone helpline services	-	-	118	1(1466)	-	-
14	Crop diagnostic services	-	21(49)	28(126)	-	02	03(25)
15	Farmer-scientists interactions	-	-	1(60)	1 (mass)	-	-
16	Distribution of Farm literature	-	-	119(1500)	-	-	-
17	Ext.Res. Programme	2	3	2	-	-	-
18	Group Discussion	-	1(16)	18(418)	50(1793)	-	-
19	Field Visit of Scientists	71(859)	-	16(79)	-	06	-
20	Cattle Camp	-	13	2(49)	-	3(1490 Animal)	-
21	Video Conference	-	-	-	23(3625)	-	-
22	Guidance in farmers day/Field day	5(478)	26850	9(290)	4 (Mass)	-	-
23	Interactive demonstration	-	-	2(50)	49(1654)	-	-
24	Article Published	-	-	6	1	-	-
25	Lectures delivered for transfer of technology	-	-	7	239	-	-
26	Lectures delivered for crop seminar	-	-	2(82)	21	07	-

Note: Figures in brackets indicates numbers of participants/ beneficiaries

Table-7.3: Extension Education Activities carried out by different Centres of Diploma and Certificate Courses.

Sr No	Name of Activity	Name of the centre						
		Agricultural School				School of Baking	Home Science	Poultry
		Anand	Baroda	Chharodi	Dahod	Anand	Anand	Anand
1	Agril fair /exhibition							
2	Agirl.tour /Edu. tour/ field visit	1(40) 2(68)	02(67)	02(68)	2(62)	-	1(31) 1(270)	02
3	Film/slide/video cassette show /radio talk / TV programme	-	01	-	-	02	01	04
4	Celebration of women in Agril. day/world food day / van mahotsav /farmer's day	-	01(67)	1(116)	1(58)	-	02	-
5	Guidance through letters/personal contact	01	30	-	-	129	15(24)	10
6	Publication of farm literature	02	01(37)	-	-	07	02	01
7	Press Note released	-		-	-	-	02	-
8	Krishi-Go-Vidya subscriber registered	36		-	-	-	-	-
9	Escorting the visitors	-	01(50)	-	-	-	49	14(333)
11	Farmer-scientists interaction	-		-	-	-	-	2(200)
12	Ext. res. prg.	-	01	-	-	-	-	01
13	Guidance in Farmers day/Field day	-	03(160)	-	-	-	-	-
14	Bird diagnostic Service	-		-	-	-	-	01
15	Article /Success Stories published	-		-	-	01	03	-
17	Bakery Item Demonstration	-		-	-	82	-	-
18	Discussion about bakery	-		-	-	07	-	-
21	Seminar / National conference	-		--	-	01	-	1(14)
22	Internship	-		-	-	-	-	14(85)
23	Teachers day	-		-	-	1(22)	-	-
24	Educational tour	-	01(37)	-	-	1(47)	1(12)	-
25	Stall Exhibition	-		-	-	04	-	-
26	Training Information of Graduates	-		-	-	111	-	-
27	Lecture for transfer of technology	-		-	-	74	02	-
28	Letters for student employment	-	01(29)	-	-	04	-	-
29	Applications invited to offer job for trainees	-		-	-	02	-	-

Note: Figure in parenthesis indicated the no. of beneficiaries

Table-7.4: Extension Education Activities carried out by T&V Training Centre at Anand

Sr. No	Activity	No.
1	Farm Visits	14(85)
2	Krishi Shabir During Krushimahotasav-2008	74(310000)
3	Video Conference	3(1200)
4	Farmer's shibir/Farmer day/Crop Seminar	13(480)
5	Guidance to telephone	350
6	Office Visit	50
7	Article Published	5(Mass)
8	Reading Materials	10 (450)

Note : Figures in parenthesis indicates no. of beneficiaries.

(c) Agriculture Fair

To communicate the agricultural technology to many farmers at a time, AAU has participated in different agricultural fairs.

The profile of AAU and the latest technologies developed by the Institution were displayed. Interactions between scientists and the farmers were also organized. Literature on the latest technology was distributed during such fairs.

Sr. No.	Agriculture Fair/ Exhibition	Place	Period	Approximate beneficiaries
1	Agrl. Exhibition	AAU, Anand	16-06-2008	729
2	Agrl. Exhibition	Dahod	1-2-06-2008	500
3	Agrl. Exhibition	D,Baria	18/19-02-08	450
4	Agrl. Exhibition	Godhra	07-01-09	550
5	Agrl. Exhibition	Thasra	23-01-09	250
6	Agrl. Exhibition	Shehra	25-01-09	95000
7	Agrl. Exhibition	Garbada	16-02-09	614
8	Agrl. Exhibition	Dhanpur	20-02-09	657
9	Agrl. Exhibition	Arnej	22-12-08	62 Women
10	Agrl. Exhibition	Memar Ta. Bavla	21-02-09	78
11	Agri Fair	Morva	07-02-09	2500
12	Agri Fair	Dahod	20-02-09	2700
13	Agri Fair	Chhotaudipur	27-02-09	2300
14	Poultry Exhibition	Vet. Anand	10-12/12/08	Mass
15	International Agro Tech Fair	Gandhinagar	06-12-08 to 8-12-08	150000
16	Agri Fair and Rabi Pak Zumbesh	Bharuch	11-12-08 to 13-12-08	85000

(d) Celebration of *Krushi Mahotsav – 2008*.

As a measure towards enlightenment of farming community *"Krushi Mahotsav-2008:* a doorstep extension model of the State Government was launched from 7th May to 5th June 2008 though out the Gujarat State. Krushi Mahotsav-08 at Panchmahals district was inaugurated by Hon. Chief Minister of Gujarat state Shri Narendrabhai Modi in the presence of Cabinet Ministers, University Scientists district collector, district development officers, officers of different development departments, Sarpanchs of different villages, farmers and farm women.

The programme aimed at;

(i.) creating awareness amongst the rural masses regarding scientific innovations in crop production practices, farm implements, water conservation, irrigation methods, animal husbandry, etc. and bringing these innovations to the farming community through the concept of people's participation.

(ii.) bringing agricultural and rural development programmes at village level for the betterment of peasants implemented by various State Government Organizations and thereby to create an atmosphere to motivate the farmers for their participation in such programmes.

(iii.) The ultimate objective of the whole programme is to make the farmer's income double during the span of five years.

The Government has assigned an important responsibility to the state Agricultural Universities to have a Kisan Rath along with a team of scientists for the purpose of guidance and demonstration of latest agricultural technologies based on 'agro-climatic' conditions in the villages.

In all, the Government has prepared a total of 227 *Kisan Rath,* which had Mobile exhibition along with TV / Audio Video Systems for different agro-climatic areas.

- **Role of Anand Agricultural University in the Celebration of *KURHSI MAHOTSAVA – 2008***

The Anand Agricultural University, has territory in six districts namely, Ahmedabad, Anand, Dahod, Kheda, Panchmahals and Vadodara having 58 talukas. The Nodal Scientists at District and Taluka levels and other scientist, in total 502 scientists and similar number of supporting staff have been assigned the duties to move with *Kisan Rath* in the villages. Two group of scientists were formed to escort the *Kisan Rath* for 15 days each. During the visits in the villages, the scientists have delivered talk and interacted with farmers. They have guided them to prepare a crop production plan at village as well as individual levels, plant protection measures, farm implements, water conservation, irrigation methods bio-fertilizers, bio-pesticides, bio-control of insects / pests, animal husbandry, cultivation practices of major field crops, fruit crops, vegetable crops and medicinal plants of the area.

Further, the soil health cards and manuals of model action plan of crop production were distributed amongst the farmers.

The scientists of AAU have also participated in the *Khedut Shibirs* organized at Taluka levels by the Agricultural Produce Market Committees (APMCs) of respective talukas. In addition to this, the AAU has organized three training programmes for AOs, AEOs and STL Officers of Deptt. of Agriculture on Soil Health Card Programme.

The AAU has played a vital role in preparing Soil Health Cards, Model Action Plan and literature in the form of folders, leaflets, booklets C.D. etc.

The more emphasise were given on Animal Heard, clean milk production and Animal Vaccination.

The important activities carried out by AAU's scientists during the Krushi Mahotsav 2007 in middle Gujarat are as under:

No	District	Villages covered	Krushi Shibir		Farmers Training		Village meeting	Guidance to farmers by scientist
			No	Beneficiaries	No	Beneficiaries		
1	Ahmedabad	539	8	5262	5	31596	561	71599
2	Anand	365	6	13000	3	25384	365	57653
3	Dahod	702	6	14100	5	23016	702	115875
4	Kheda	640	9	7970	7	19508	636	77779
5	Panchmahal	1194	9	1405	1	18800	1156	89206
6	Vadodara	1386	11	5575	3	50522	1535	77855
Total		**4826**	**49**	**47312**	**24**	**160026**	**4955**	**489967**

➢ **Feedback of the Programme**

1. The farmers got chance to make face to face interactions with the scientists of AAU and with the personnel of various Line Departments.
2. They have been well acquainted with the technical Know-how of the latest scientific agricultural technology and various development programmes/ schemes run by the State Government for betterment of the rural masses.
3. The scientists of AAU have also got the unique experience to exchange their ideas and knowledge with the farmers. They have also learnt many things from the farmers, which will be useful in future research programmes.

Thus, The *Krushi Mahotsav- 2008* was a grand success.

(e) Frontline Demonstrations

The FLDs aim to demonstrate the production potentialities of newly released and pre-released production technologies on farmers' fields.

The KVKs have organized 356 FLDs on various crops such as castor, sesamum, gram, groundnut, maize and wheat in 166.2 ha during *kharif, rabi* and summer seasons. The details of these FLDs are Given in Table 7.5:

Table:-7.5 Frontline Demonstrations conducted

Sr. No.	Crop/Variety	No. of FLDs	Area (ha)	Yield (Kg/ha)		Increase in yield (per cent)
				Demonstration	Local	
I - KVK, Devataj						
1	Castor GCH-5	20	10	2522	2086	21
2	Mustard GM 3	20	10	2260	1920	19
3	Wheat GW322	20	10	4160	3524	18
4	BT cotton RCH 118	25	10	2276	2092	09
5	Greengram GG-4	10	05	1053	900	17
6	Fertilizer Management (Wheat) GW-496	10	05	4285	3605	19
7	Mineral Mixture 6-Buffalo 4-Cow	10	-	-	-	4-Buffalo + 3-Cow are Pregnant
II - KVK – Arnej						
1	Paddy GR-11	10	05	30.6	27.2	12.50
2	Wheat GW-1	20	10	13.4	10.8	24.07
3	Cumin GC-4	20	10	4.8	4.2	14.29
4	Okra PK GO-2	05 05	2.5 2.5	Due to heavy incidence of YVMV yield was very low	-	-
5	Chickepa-Component demo GG-2	10	05	6.9	6.6	4.5
III- KVK - Dahod						
1	Maize G.M.-6	38	15	20.5	18.1	11.4
2	Wheat GW-496	25	10	32.6	30.9	5.3
3	Cluster bean	10	05	Not conducted		
4	Chilly GVC-111	10	1	42.4	35.0	21.2
5	Okra GO-2	10	1	46.6	37.8	18.9
6	PigeonpeaICPL-87 (*Trichoderma*)	12	05	6.5	6.5	1.0
7	Gram (*Trichoderma*) GG-1	25	10	4.7	4.7	1.0
8	Gram (NPV) GG-1	15 10	6 4	11.9 4.5	11.5 4.3	1.0 3.8
9	Cotton Rashi Bollguard	(Diversification) 24 (IPM)22	10 9.6	8.6 9.4	8.6 7.7	1.0 18.0
IV TRTC, D'baria						
1	Maize (Kharif) GM-6	08	1.6	1750	-	-
2	Rice (SRI Technique) Gurjari	04	2.0	5495	4750	15068
3	Soyabean (Kharif) J.S.235	04	1.0	1225	750	63.3
	Total....	**356**	**166.2**			

(f) Department of Agricultural Extension Education.

The Extension Wing is to provide theoretical and practical field trainings to undergraduate and postgraduate students for offering knowledge and experience of extension principles, techniques and education psychology.

The 20 weeks program of one semester (i.e., 7th Sem.) is being run by the department with a view to producing well trained graduates in the field of agriculture having broad-based knowledge and technical know-how to meet the emerging challenges in agriculture. The students are exposed to research stations, high-tech cells, farmers' fields in villages, NGOs, agro-based industries, cooperative sectors and agriculture related organizations/institutions of the state and the nation.

4. Advisory Services

(a) Farm Advisory Services (FAS)

The Farm Advisory Service Centre, Anand provides guidance and information to farmers on scientific farming. The farmers are advised on their farm problems through correspondence and field visit. This center acts as a link among research scientists, extension workers and farmers. During the year under report, various extension activities carried out by the scheme are Given in Table 7.6

Table:-7.6 Extension Activities carried out by FAS

Sr. No.	Activity	No of Activity	No of Beneficiaries
1	Farmer's / field Day	15	5020
2	Farm Women Meeting	15	230
3	Farm Women Shibir	15	1850
4	Field Visit	18	521
5	Krishi Goshthi	5	364
6	Film/Slide/VC show	1	155
7	Agricultural Literature Published	2	Mass
8	Escorting the visitors for guidance	26	1800
9	Distribution of Farm Literature	1500	-
10	Crop diagnostic service	15	-

Sr. No.	Activity	No of Activity	No of Beneficiaries
11	Articles published for farming community	03	-
12	Lectures for transfer of technology delivered	02	-
13	Lectures in crop seminar delivered	500	-
14	Field visit of scientists	60	-
15	Farmers –scientist interaction	03	-
16	Telephone helpline	250	250
17	Cattle camp	15	1125

(b) Agriculture Technology Information Centre (ATIC) at Anand.

The Agriculture Technology Information Centre (ATIC) (a single window system) was established from August, 2005 in order to disseminate Agricultural information and Technology to the farmer and other Stakeholders with the following objectives.

(i) To provide direct access for information & knowledge to the needy farmers.

(ii) To bring together different research divisions/units and users of technology i.e farmers.

(iii) To develop, publish and supply latest technology via folders, booklets, C.D.'s, Video Films and other media.

(iv) To help farmers in devising effective solutions to their problems, and to increase their acute decision making competence.

(v) To supply seeds, planting materials, bio-fertilizers, bio-pesticides, earth worms and vermin composts etc.

(vi) To provide animal health service at ATIC.

(vii) To provide various analytical service of plants, soil & water for the nutrients contents etc.

(viii) To popularize the new technologies developed by the university & allied institutes in Agricultural Science.

(ix) To facilitate dynamic, enthusiastic feed-forward and feed-back.

The following extension activities are carried out by the centre during the year under report in given in Table 7.7.

Table:-7.7 Extension Activity carried out by ATIC

Sr. No.	Activity	No of Activity	No of Beneficiaries
1	Field Visit	14	579
2	Film / Slide / V.C. Show	16	482
3	Escorting the visitors for guidance	01	791
4	Press note published	05	Mass
5	Guidance through telephone / letter	01	08
6	Extension Research Programme	01	01
7	Training Program – on campus	15	436
8	Agricultural Literature Published	01	Mass
9	Registration of KRUSHIGOVIDHYA subscribers	01	40
10	Group Discussion	13	434
11	Guidance For Animal Health Care	01	239
12	Guidance in Farmers Day/Field Day	04	450
13	Interactive Demonstration	12	485
14	Crop Diagnostic Services	01	141
15	Article Published for Farming Community	04	Mass
16	Lectures for Transfer of Technology	62	4547
17	Telephone help line	01	567

(c) Transfer of Technology Centre at Anand and Arnej

The New programme on Transfer of Technology Centre at Anand and Arnej has been sanctioned in the year 2004-05 by the Govt. of Gujarat, in which demonstrations, field days, training, advisory activities are under taken by the university in Anand and Ahmedabad district. The following extension activities are carried out by the centre given in table 7.8.

Table:-7.8 Extension Activities Carrie out by TOT Centers.

Sr No	Activity	Centres	
		Anand	Arnej
1	Training Programme	15(450)	07(179)
2	Farmers Shibir	11(2200)	-
3	Crop Demonstration	5(350)	19(86)
4	Video conference	3(570)	-
5	Guidance through letters	31	18
6	Publication of farm literature	-	-
7	Distribution of farm literature	-	25(1588)
8	Escorting the visitors	-	25(360)
9	Crop diagnostic services	-	-
10	Field Visit	24(1200)	18(83)
11	Telephone talk for information	65	09
12	Guidance in farmers day, filed day / khedut shibir	-	03(257)
13	Farmers scientist interaction and filed visit of scientist	-	-
14	Krishi Goshti	-	08(27)
15	Group Discussion	27(5670)	08(127)
16	T.V. Programme	3(5000)	01(Mass)
17	Article Published for Farming Community	5(1500)	-
18	Lectures in crop seminar	-	03(309)

Note : The figures in parenthesis indicates numbers of Beneficiaries

(d) Centre for Communication Network (CCN) at Anand.

Since there will be an immediate need to develop strong communication network for maintaining regular contacts with agricultural university once WTO is implemented, the Govt. of Gujarat has accorded sanction for the scheme “Centre for communication Network", under Tenth plan from the year 2005-2006 with following specific objectives:

a. To establish the Gram Kisan Samities (GKS) in the rural areas.
b. To train the members of Gram Kisan Samities in leadership communication and co-operation for transfer of technologies.
c. To disseminate the latest agricultural and allied technologies through Gram Kisan Samities in rural areas.
d. To carry out different extension activities through GKS in different villages
e. To know the feedback from the farmers.

Various extension activities carried out by the scheme are given in Table 7.9.

Table:-7.9 Extension Activities Carried out by CCN

Sr. No.	Activity	No of Activity	No of Beneficiaries
1	Agricultural Tour	01	38
2	Film/slide/video cassette show	17	1153
3	Farm literature / distribution	21	1330
4	Field Visit	11	421
5	Crop Seminar	04	215
6	Krishi Goshthi	02	114
7	T.V. Programme	04	Mass
8	Escorting the visitors for guidance	19	59
9	Group discussion	05	95
10	Guidance through telephone/letter	57	57
11	Crop diagnostic service	11	25
12	Lectures for transfer of technology delivered	14	871
13	Farmers –scientist interaction	02	320
14	Press note published	06	Mass
15	Establishment of Gram Kissan Samit (GKS)	20	350

(e) Extension activities carried out under NARP project at Main Maize Research Station, Godhra.

During the year under report, various extension activities carried out by the scheme are given in Table7.10

Table:-7.10 Extension Activities carried out by NARP, MMRS, Godhra

Sr. No.	Activity	No of Activity	No of Beneficiaries
1	Escorting the visitors for guidance	23	1537
2	Guidance in farmes day / khedut shibir	23	4083
3	Guidance through telephone/letter	13	5442
4	Articles published for farming community	04	Mass
5	Lectures for transfer of technology delivered	24	2789
6	Distribution of the farm literature	22000	Mass
7	Press note published	06	Mass
8	Agril Tour	1 RAWE	246
9	Field visit	35	360
10	Krishi goshthi	24	2789
11	Film/Slide/V.C.show	01	49
12	Radio talk	04	Mass
13	T.V.programm	01	Mass
14	Field training for graduates	4 RAVE	315
15	Ext Res Programme	01	669
16	Lectures for crop seminar	04	1093
17	Field Visit of scientists	15	360
18	Farmers scientist interaction	15	360
19	Other ext.edu.activities	01	46
20	Agricultural Literature Publishes	04	Mass

(f) Mass Media

(i) Radio Talks

The scientists of the University delivered Radio talks on agriculture and allied topics from All India Radio, Vadodara. During the year, 11 scientists have delivered talks on different topics related to agriculture, horticulture, agricultural engineering, animal husbandry, etc. The details of radio talks are given in Appendix-1

(ii) TV Talks

In all, 20 television programs on different aspects covering agriculture, animal science, agricultural engineering, horticulture, home science, etc. were telecast through Doordarshan Kendra, Ahmedabad in *"Gram Jagat"* program for the benefit of farming community. The details ate given in Appendix-2

(g) Publication

(i) Farm Magazine

The publication unit publishes the monthly farm magazine *"Krushigovidya"* regularly. There were 8400 subscribers registered for this magazine during 2008-2009.

Further five special issues on different subjects have been published during period under report. A zero-budget revolving fund has been created to make this magazine self-sufficient.

Moreover, Krushigovidya Publication unit has provided guidance to farming community (about 25400 beneficiaries) through telephone / letters.

(ii) Publication of AAU Newsletter

The Director of Extension Education publishes a quarterly "Anand Agricultural University Newsletter" regularly. The AAU Newsletter gives research highlights, technical events / news, extension activities, noteworthy work done by any agricultural educationist, research scientist, and extension educationist.

(iii) Publication of Agricultural Literature

Different folders / books/ leaflets on various subjects were published by different extension education centres of AAU during year under report. The details of 46 publications are given in Appendix-3

5. Others

5.A Agricultural Technology Management Project

The Central Govt. sanctioned a project as support to State Extension Plan as ATMA Project in 8 districts of Gujarat State. The Project aim is bottom of planning suggested by the farmers and it is demand driven and farmer accountable. Ahmedabad and Dahod districts are selected for the ATMA Project. The following extension activities are carried out by the Ahmedabad and Dahod centres are given in Table 7.11.

Table:-7.11 Extension Activities carried out by ATMA Project

Sr. No.	Activity	AHMEDABAD	Dahod
1	Publication of farm literature/ Distribution	4(56000 copies)	-
2	Mobilization of farmers group	-	-
3	Agricultural Tour /Farmers Exposure Visit	13(584)	1(350)
4	Crop Demonstration	69 (34.5 ha)	70 (Mass)
5	Kishan Goshti	1(86)	-
6	Training rogramme	1(39)	-
7	State Level	1(32)	-
	District Level	5(207)	2 (60)
	Village Level		
	District level Exhibition cum krushi mela	-	-
8	Press not released	-	1(Mass)
9	Registration of KRUSHIGOVIDHYA Subscriber	-	05
10	Farmers Scientist Interaction	1(62)	-

Note : Figures in paranthesis indicates no. of beneficiaries.

5. B Rashtriya Krishi Vikas Yojana(RKVY) Under RKVY following four schemes were allotted to this directorate.

Strem-I a. Innovative approach for Agricultural Extension Activities by Village Adoption (B.H. 18376)

b. Agricultural extension Activities for Specialized Agricultural Innovations (B.H. 18377)

Strem-II c. Master Trainer Training on Agricultural Extension Activities (B.H. 18367)

d. Strengthening Agricultural Extension Activities of Agricultural Technology Information Centre (ATIC, B.H. 18368)

a. Activities carried out under Innovative approach for Agricultural Extension Activities by Village Adoption (B.H. 18376)

1. Cattle Camp (Every 15 adopted villages)
2. Mahila Shibir (Every 15 adopted villages)
3. Khedut Shibir (Every 15 adopted villages)
3. Soil Health Card (Every 15 adopted villages)
4. Inputs demonstration (seed viz. Wheat (GW-496), Paddy (For SRI), Bajra (GHB-558), Green Gram (GM-4), Maize (GM-6), Castor (GCH-7), Guar (PNB), Okra (Parbhani kranti)
5. Pesticides- chlorpyriphos 20 E.C.-10lit) for Termite control as a demonstration.
6. Mineral Mixture for animal health.
7. Bio-fertilizer-1500 lit. as demonstration.
8. Grass root- 36000 nos. for forage purpose.
9. Agro-shed net as a Demon for raising nursery, Vermibeds.
9. Portable Vermibeds as a demonstration for preparing of Vermicompost.
10. Publication, folder-6 (18000 nos.) for spreading technology about different crops and Animal Husbandry.

b. Activities carried out under Agricultural extension
Activities Specialized Agricultural Innovations (B.H. 18377)

c.

Sr. No.	Date of Training	Number of Trained persons	Imparting knowledge
1	Specialized training for wheat cultivation" Gav No mablakh pak: kyare? kevi rite? " based on problem being faced by farmers jointly organized by Anand Agricultural university and Sajjata Sangh, Development Support Centre Ahmedabad during 6-7 Nov 2008. 	59 Innovative farmers from all over Gujarat	• Integrated bio-nutrient management – seed treatment – soil application • irrigation at critical stage • high yielding varities released by university as well as private company
2	Specialized training for modern technology of flower cultivation training based on problem being faced by farmers, organized by State Agricultureal University and Sajjata Sangh Development Support centre Ahmendabad during 23-24 Nov 2008 at Navasari Agri. University, Navasari.	65 Innovative farmers from all over Gujarat among than 19 trible farmers from Dahod and Baroda district	• Integrated bio-nutrient management – seed treatment – soil application • high yielding varities released by university as well as private company
3	Soil Health Card training at Anand during 03-Jan. 2009	17 Innovative farmers from Middle Gujarat	how to take soil sample balance use of fertilizers Integrated bio-nutrient management – seed treatment –soil application • How to find-out soil health card from internet
4	Mahila training camp (Zakhariya) 	96	• child health care • Animal nutrition management • milking method Clean milk production etc.

5	Khedut Sibir – Field visit (piplav-07/02/09)  	400 Innovative farmers from all over Gujarat	• Integrated bio-nutrient management – seed treatment – soil application • irrigation at critical stage • high yielding verities release by university as well as private company • prepare press note and given into newspaper dated 12/02/09 (nayapadkar), 17/02/09 (Gujarat Samachar), 24/02/09 (Sandesh)
6	Farmers training 08 (off campus) in Middle Gujarat	340	• Innovative technology to increase production income from unit area under cultivation of hybrid maize ,cumin, potato, banana, hybrid chilli • Guidance to the farmers regarding marketing and export of production
7	Multi colord publication of agriculture literature.	2000-5000 Copies of each publication	• Innovative technology for wheat, turmeric, zingar, flower, cotton as well as bio fertilizers and technology to increase milk production.

8	Dissemination of innovative technology through participation in Agricultural Fair organized by Directorate of Agriculture, Government of Gujarat at Gandhinagar and Bharuch	Mass gathering approximately 2 lakh	• Distribution of literature on innovative technology • Arranged exhibition stall on innovative technologies of Maize, Paddy, Vegetables etc.
9	Seaminar. participated Biotechnology and Nanotechnology for sustainable Agriculture for ASSOCAM in New Delhi during 13 & 14 Feb 2009 presented by Ketanbhai J patel Boriya village Dist:- Anand Nominated By Govt. of Gujarat through Anand Agricultural University  	Approximate Deligate 250	• Agri.innovation technology through using Integrated bio-nutrient management technology that is **IBNM**.and low and zero cost technology adopted by farmers in seed treatment, soil application in Banana, potato and wheat crops and getting Bumper yield with good quality. • They get Award for Best presentation.
10	Farmers training and distribution of literature *krushigovidya* in kapadvanj Taluka during 15/02/09 Dist Kheda 	Mass grathering (12000) Tranning - 40 in presence of Agriculture Minister of Govt. of Gujarat 	• Innovative technology to increase production income from unit area under cultivation of cumin crop • Guidance to the farmers regarding marketing and export of production • Distribution of literature on innovative technology

11	Farmers training and distribution of literature *krushigovidya* in Petlad and Ajarpura Village during 20/02/09 	Petlad-45 Ajarpura-40	• Innovative technology to increase production income from unit area under cultivation of tobacco,wheat crop • Guidance to the framers regarding marketing and export of production • Distribution of literature on innovative technology
12	Khedut Shibir – Field visit (J&k Farm, Boriya - 24/02/09).  	400 Innovative farmers from all over Gujarat  	• Integrated bio-nutrient management – seed treatment – soil application • irrigation at critical stage • high yielding varieties released by university as well as private company • prepare press note and give into newspaper

c. Activities carried out under Master Trainer Training on Agricultural Extension Activities (B.H. 18367)

(1) Innovative approach for Agril. Ext. avtivities as village adoption have selected 15 villages situated near to Anand. The Sarpanch and Gram Mitra of each villages trained "How to take soil sample" for soil analysis to get soil health card, 3000/15 villages. Total 28 candidates participated.

(2) Now a days farmers are using weedicide which required skill and knowledge to use it to prevent hazards, considering this point we are going to organize training programme, of 24th to z26th Feb. for the Agril. officers of State Agril. Dept. to disseminate the weed and weedicide knowledge and technology. Total 30 candidates participated.

(3) Training Programme on Medicinal & Aromatic Plants. (No of Trainees 30)

(4) Training programme on SRI technique in Paddy crop for Dept. of Agriculture Gujarat.

(5) Training on Paddy SRI Technology for University Staff

d. Activities carried out under Strengthening Agricultural Extension Activities of Agricultural Technology Information Centre (ATIC, B.H. 18368).

(i) Publication of Book

No.	Publication of Literature	No. of Copies
1	Mulya Vardhan	1000
2	Kheduto Udhyog Sahsik Bano	1000
3	Sakbhaji Adharit Udyogo	1000
4	Falfaladi Adharit Udhyogo	1000
5	Kheti Adharit Udhyogo	1000
6	Doodh nu Mulyavardhan	1000
7	Krushima Urjano Upyog	1000

(ii) **Khedut shibir –cum- Training Programme:-** At 22nd June near about 200 farme from Barvala Taluka ware visited Anand campus and SSK and got information about Cotton, Sesamum, and Vegetable crops.

(iii) **VRC Programme :-** VRC Programme was held on SSK on different subject like Horticulture, Animal Husbandry, Pathology, Integrated Pest Management. Farmer, Farm-women and Youth ware participated in the VRC Programme and got information about The experts also gave answers to their questions.

(iv) **Film/TV Show:-** By film and TV show farmers, Farm-women and youth ware got information by audio-visual aids. Our experts also give information regarding topic which was delivered on TV and Film.

(**vi**) **Group Discussion and Escorting Visitors :-** By Group discussion our experts and visitors ware conveyed their message by face to face and eye to eye information. This was the most relevant method to convey message to the person in need. The Farmers and Farm-women asked about their problem which they faced during farming and they got satisfactorily answers from our experts.

6. Coordination with Development Departments

- The Anand Agricultural University has planned and organized various extension education programs/activities in close coordination with line departments of the State. The structural linkages exist under Training and Visit system by way of constituting technical committees at district, zonal and state levels.
- The functional linkages also exist under T&V System through bi-monthly workshops, pre-seasonal trainings, fortnightly trainings, diagnostic team, and state level crop seminars/workshops etc. The coordination exist in follow-up programs as well as planning of farm trials. In AGRESCO, the officers of the line departments are the members, and they

generously contribute to the formulation of technical programs as well as in finalizing recommendations for the farmers.

- Interface of AAU scientists with functionaries of the departments of the State, NGOs and other agencies organized at state as well as at campus level.
- The agricultural programs of All India Radio as well as Doordarshan ware finalized by such coordinated efforts.
- For transfer of technologies to the farmers at large, Farmers' Day, Krushi Mela, farmer-scientist interactions, group discussions etc. ware organized by collaborative efforts.

APPENDIX-1

Radio Talks Delivered

Sr. No	Scientist	Topic	Date (Time of broadcast 6.00 to 6.30 pm
1	Dr. H. C. patel	KERI NI MULY VRUDHHI NI BANAVATO	06-05-08
2	Prof. Heenaben Chavada	GRAMYA KASSAYE BAHENO MATE VIVIDH UPAYOGI TALIMO ANE MAHATVA	23-05-08
3	Dr. P. K. Borad	KAPAS ANE TAMACU PAK MA MILLIBUG NU ASARKARAK NIYATRAN	01-07-08
4	Dr. J. S. patel	SIYALU PAKOMA SANSODHAN ADHARIT BHALAMANO	10-10-08
5	Dr. D.S. Patel	MUKHAY AUSHADHIYA PAKONI KHETI	25-11-08
6	Dr. S. J. Patel	SILYALU PAKOMA ROG NIYATRAN	28-10-08
7	Dr. V. V. Sonani	KATHOL PAKOMA NAVA SANSODHANO	02-12-08
8	Dr. Atul maheta	UNALU DANGAR MAA KHATAR ANE PIYAT VYAVASTHA	30-12-08
9	Dr. M. V. Patel	RAVI DHANYA PAKOMA PIYAT ANE ANYA MAVJATO	09-01-09
10	Dr. P. P. Patel	VISTRAN NI RASTRIYA KRYSHI VIKAS YOJANA NO KRUSHI VIKAS MA FALO	20-02-09
11	Dr. H. R. Kher	GASCHARANA PAKONI KHETI	20-02-09

APPENDIX-2

Television Talks Delivered

Sr. No	Scientist	Topic	Date / Time of broadcast 6.00 to 6.30 pm
1	Dr. P. V. Patel	PASHUOMAA VIVIDH KRUMIONI JANKARI ANE TENU NIYATRAN	07-04-08
2	Dr. J. A. Patel	ANAND KRUSHI UNIVERSITY NAA VIVIDH BIJ UTTPADANONI JANKARI	05-05-08
3	Prof. Heenaben Chavada	GRAMYA KASSAYE BAHENO MATE VIVIDH UPIYOGI TALIMO ANE MAHATVA	22-04-08
4	Dr.R. H. Patel	KHARIF PAKONU NINDAN NIYATRAN VYAVASTHA	24-06-08
5	Dr.M. V. Patel	SANKALIT KHATAR VYAVATHA (PHONE IN LIVE)	25-04-08
6	Dr.K. B. Kathiriya	UNADU SAKBHAJI MAA MAVJAT (PHONE IN LIVE)	02-05-08
7	Dr. M. A. Patel	SAJIVA KHETI NAA PRASHNO	01-08-08
8	Dr. H. C. Patel	FAL PAKOMA KHATAR VYAVATHA	07-07-08
9	Dr. A. R. Pathak	NAVA SANSODHANO BHALAMANO	11-08-08
10	Dr. K.B. Khathiriya	SHAKBHAJI DHARUVADIYU ANE MAVJAT	26-08-08
11	Dr.H. R. Kher	BAREMASS LILO GASCHARO UTPADAN KARVANU AAYOJAN	23-09-08
12	Dr.H. C. Patel	SIYALU FULONI KHETI	05-09-08
13	Dr. K.B. Kathiriya	TAMETA NI KHETI	01-07-08
14	Dr.H. C. Patel	FAD PAKOMA KHATAR POSAN VYAVASTHA	07-07-08
15	Dr. A. R. Pathak	KHETI PAKOMAA UNI.NI SANSODHAN BHALAMANO NI KHEDUT UPIYOGITA	11-08-08
16	Dr. R. G. Jadav	KEL PAKOMA POSAN VYAVASTHA ANE VIVIDH MAVAJATO	06-10-08
17	Dr. Mahesh Patel	VIVIDH SUGANDHIT PAKONU VAVETAR ANE TENU EARTHKARAN	03-11-08
18	Dr.K.B. Kathiriya	UNADU SHAKBHAJI MAA VADHU UTPANDAN MELAVO	05-12-08
19	Dr. P. P. Patel	ANAND KRUSHI UNI.NI KHEDUT MATENI VISTARAN SEVAO	25-11-08
20	Dr. A. R. Pathak	A. A.U. NAA KHEDUT LAKSHI NAVA SANSODHANO	23-12-08

APPENDIX-3

Publication of Agricultural Literature

Sr. No.	Name of publication
1	PASHU NA ROGO, NIYANTRAN ANE MAVJAT (BOOK)
2	MUSHRUM NI KHETI (BOOK)
3	*AMBANI KHETI*
4	*VRUXONI KHETI*
5	*KATHOL PAKO*
6	KRUSHI MAHOTSAV DIARY 2008-09 (BOOK)
7	KHADUT MARG DARSHIKA BHAG-4 (BOOK)
8	KHEDUTOPYOGI SHANSHODHAN BHALAMNO 2006-07 (BOOKLET)
9	KHETI KHARCH GHATADO AAVAK VADHARO (FOLDER)
10	VARSHA VIGYAN SHANSHONDHAN PANCHANG (GUJARATI CALENDER)
11	MONSOON RESEARCH ALMANAC (ENGLISH CALENDER)
12	KRUSHI MAHOTSAV-2008 KRUSHOGOVIDHYA SPECIAL ANK MAY-08
13	KRUSHI MAHOTSAV – 2007 (REPORT)
14	IBNM – INNOVATIVE TECHNOLOGY (GUJARATI FOLDER)
15	MALI TALIM KENDRA – EK PARICHAY (FOLDER)
16	MARGHA UCHHER TALIM KENDRA – EK PARICHAY (FOLDER)
17	BAKERY NI BANAVTO – EK PARICHAY (FOLDER)
18	SVASTHYA NA BHAYANK SHATRU (FOLDER)
19	SHUKSHM TATVONU MAHTAV (FOLDER)
20	SHIYALU MAKAI NI KHETI (FOLDER)
21	KRUSHI PADASHONU MULYA VARDHAN (BOOK)
22	TRANSFAR OF TECHNOLGY – EK PARICHAY (FOLDER)
23	KRUSHI VIGYAN KENDRA - EK PARICHAY (FOLDER)
24	JIVATONA JAIVIK NIYANTRAYAN MATENA AGTYANA JAIVIK NIYANTRAKO (FOLDER)
25	JIVAT NASHK DAVAO ANE TENO UPEYOG (FOLDER)
26	AMLANI JIVATONU SANKLIT VYAVSHATAPAN (FOLDER)
27	AADHUNIK KRUSHIMA JAIVIK KHATRONU MAHTV (BOOKLET)
28	KAPASHNA PAKMA MILIBUG (FOLDER)
29	VELAVALA SHAKBHAJIMA FALMAKHINU SHANKLIT NTYANTRAN (FOLDER)
30	AGTYANA KIT BHAKSHI PAKSHIO (FOLDER)
31	KHETI AADHARIT UDYOGO (BOOK)
32	FAL AADHARIT UDYOGO (BOOK)
33	SHAKBAHJI AADHARIT UDYOGO (BOOK)
34	DUDHANU MULYA VARDHAN (BOOK)
35	KRUSHIMA URJANO UPAYOG (BOOK)
36	KHDUTO UDYOGSHAHASHIK BANE (BOOK)
37	MULYA VARDHAN (BOOK)

Chapter – 9

Finance & Accounts: Navigating through fiscal flow

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The Accounts Officer-cum-Comptroller

The Accounts Officer-cum-Comptroller under Item-14, the Gujarat Agricultural University Act, 2004 No.5, ordains the responsibility to follow the directives mentioned there under.

Shri P.S. Vyas was appointed as the Accounts Officer-cum-Comptroller by the Government of Gujarat vide Office Order No.GKV/102004/1661/K.2, dated 11.5.2004 and continued to shoulder the responsibility under the year of reporting.

Annual Income/Expenditure Grant Statement

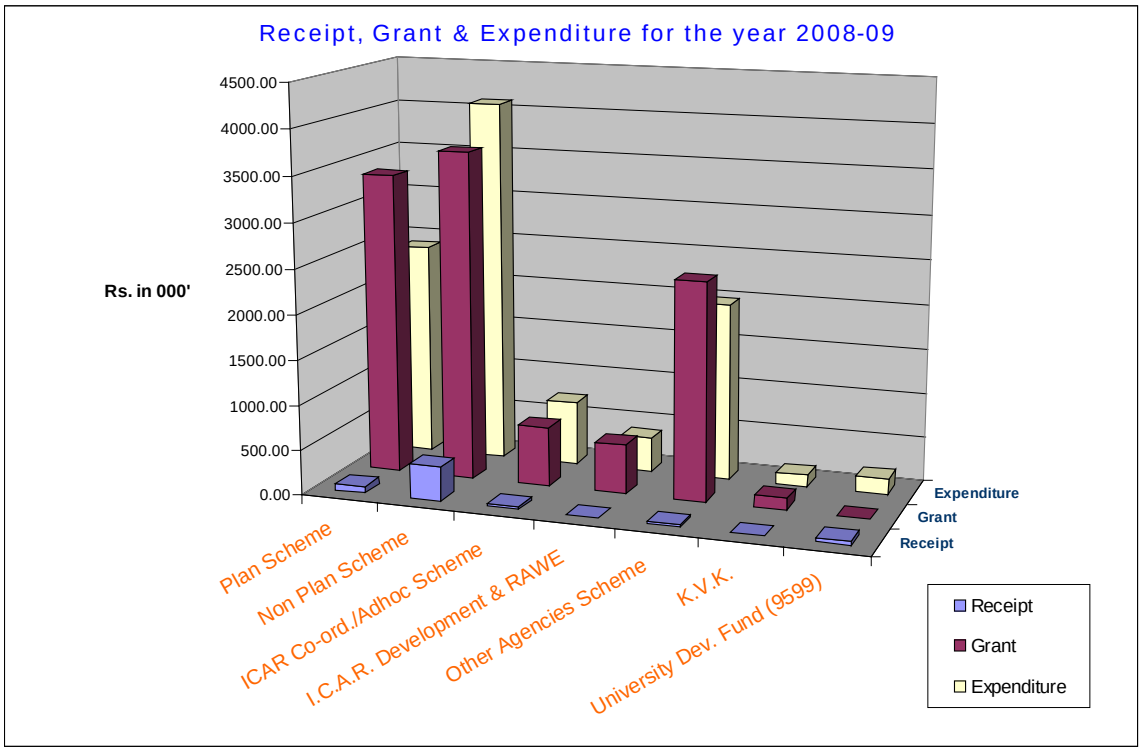
Anand Agricultural University has received State Plan & Non-Plan grants from Government of Gujarat. The research, extension & development grants were received from I.C.A.R., New Delhi. Further, Plan and Non-Plan grants for Extension Education Institutes were received from Government of India. The University also received grants from other related departments of State & Central Government including private industries, private agencies and NGOs.

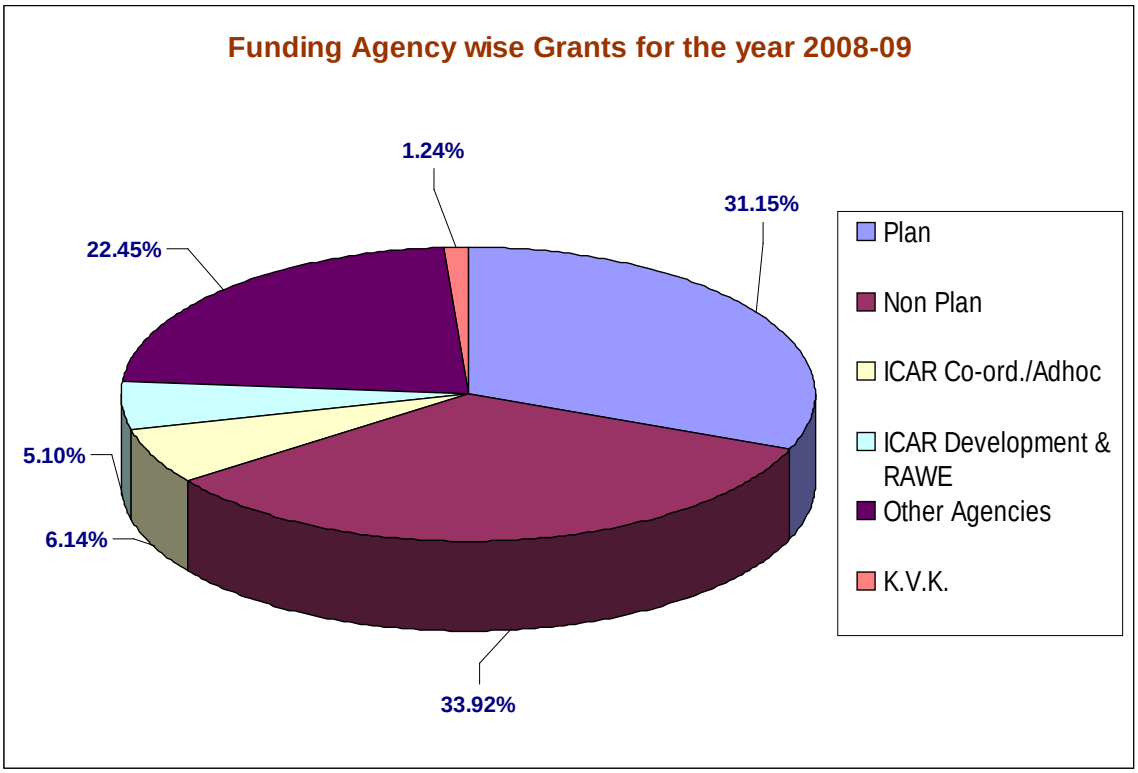
Grant Received / Expenditure Incurred / Income Generated (2008-09)

(Rs. in lakhs)

Sr. No.	Particulars	Grant received	Income generated	Expenditure incurred
1	2	3	4	5
(A)	**Govt. Grant**			
1	Plan Scheme	3366.00	72.39	2393.83
2	Non Plan Scheme	3665.47	384.11	4082.07
	TOTAL (A)	**7031.47**	**456.50**	**6475.90**
(B)	**Revenue Account**			

1	I.C.A.R Co-ord./Adhoc Scheme	663.17	29.67	716.16
2	I.C.A.R. Development	545.40	0.00	379.69
3	RAWE	5.63	0.00	3.98
4	Other Agencies Scheme	2425.31	20.73	1979.86
5	K.V.K. Centre in AAU	134.51	0.00	130.51
6	University Development Fund (9599)	0.00	42.98	180.15
	TOTAL:(B)	**3774.02**	**93.39**	**3390.35**
	TOTAL : (A+B)	**10805.49**	**549.89**	**9866.25**





Audit

(i) Internal Audit

Due to shortage of manpower, the Internal Audit could not be conducted for the year 2008-09. However, actions are being taken to organize system of Internal Inspection.

The pay verification of pay fixation cases under R.O.P. & C.A.S, and also higher pay scale are verified by this Audit office.

(ii) Examiner Local Fund Audit :

During the year 2008-09, Local Fund Audit party verified the campus offices/different centers for the year 2004-05 & 2005-06 of Anand Agricultural University & submitted Audit Report to the Examiner, Local Fund Audit, Gujarat State, Gandhinagar. Audit Report for the year 2004-05 is completed and the process of printing is under progress.

The action taken audit report for the year 2003-04 & 2004-05 Local Audit Para are 127 & 71.

(iii) A.G. Audit

The Accountant General (Civil Audit), Rajkot team has done the Audit for the period from 07/08/2009 to 25/08/2009 for the financial year 2005-06, 2006-07 & 2007-08. Follow up actions for the Audit points are under progress.

Physical Store Verification

Due to the shortage of manpower in the office of A-O-Cum-Comptroller, the physical store verification is also could not be conducted. However, the actions are being taken to conduct it as early as possible.

Resources of Income and Financial Estimates

The Revenue generated by the University during 2008-09 is mainly through sale of farm produces, milk & milk products, animal, bakery products, transport & guest house services, examination fee, tuition fee, hostel revenue, tender fee, house rent deductions, library fee, etc.

Financial Estimates

Following are the Plan and Non-Plan Budget Estimates for 2008-09, as approved by the State Government.

Sr. No.	Details of Head	Estimates for 2008-2009 (Rs.in lakhs)	
		Original	Revised
1	2	3	4
1.	**Non Plan**		
	Non-Plan (Normal)	3350.45	3611.82
	Non-Plan (Tribal)	50.68	53.65
	TOTAL (A)	**3401.13**	**3665.47**
2.	**Plan**		
	Education	894.00	894.00
	Extension Education	240.35	240.35
	Research	1108.65	1108.65
	Earmarked for I.T.	5.00	0.00
	Veterinary University	1000.00	440.00
	TOTAL (B)	**3248.00**	**2683.00**

Training being looked after by the Registrar.

Pension

Details of Pension cases (2008-09)		No. of cases finalized
(1)	Final pension cases	**68**
(2)	Revised pension cases	**18**
(3)	Restoration pension cases	**10**

Provident Fund (PF)

The details of P.F. cases disposed during the year 2008-09.

No. of Final withdrawal cases	**69**
No. of Part-final withdrawal cases	**283**

In addition the monthly PF accounts subscription, withdrawals & balanc of university employees in form of broad sheet & ledger were maintained. Initial P.L. accounts with Anand Treasury is opened & maintained.

The work of computerization of the system has been taken up and implemented on trial basis.

Others

Looking to the duties and functions of Accounts Officer-cum-Comptroller; total number of schemes, Budget Estimates, Manpower and number of offices, the manpower of the office is insufficient for entire financial control and accounts matters. Hence, manpower is required for Accounts Officer-cum-Comptroller office as per norms.

Chapter – 10

Estate Management :

All the works related to construction and maintenance of Anand Agricultural university campus falls under the purview of Executive Engineer, who supervise the work with the assistance of the Deputy Engineer and Junior Engineers.

In addition, the office of the Executive Engineer also looks after transport, communication and security services, the University Guest Houses and housing facilities. Presently, Er. B.N. Bhalia is acting as the Executive Engineer of the university.

CONSTRUCTION COMMITTEE:

The Construction Committee is constituted to frame regulations, planning and approval of major works and excess/extra items as per power delegated in statue-28.

The Construction committee consists of following members:

Sr. No.	Name member	Designation	
1	Prof. M.C. Varshneya	Vice Chancellor	Chairman
2	Dr. A.R. Pathak	Director of Research	Member
3	Dr.P.P. Patel	Director of Extension Education	Member
4	Dr. A. M. Shekh	Principal BACA	Member
5	Dr.J.V. Solanki	Principal, Vet. Sci. College	Member
6	Dr. B.P. Shah	Principal, Dairy Sci. College	Member
7	Dr. D.C. Joshi	Dean, FPT & BE	Member
8	Shri V.P. Macwan	Registrar	Member
9	Shri P.S. Vyas	Account officer-cum- comptroller	Member
10	Dr. M.S. Jakasania	Research Scientist, Arnej	Member
11	Dr. B.S. Patel	Research Scientist, Dahod.	Member
12	Er. B.N. Bhalia	Executive Engineer	Member Secretary

MEETINGS OF COMMITTEE:

Sr. No.	Meeting	Date
1	12th meeting	04-09-2008
2	13th meeting	11-12-2008

Total 44 items were presented for approval; all the items were approved after elaborate discussion.

As per provision of grant, total number of 69 administrative approval and 116 technical/part technical sanctions were accorded.

Following works are completed during the period of report:-

(1) Construction of U.G. Girls hostel (First Floor).

The building is constructed for first & second floor with harmonious 26 rooms (two seated), central open to sky foyer, Kitchen with dinning hall, T.V./indoor game room, and guest room.

(2) Construction of Farmers hostel.

The building is constructed in old dirty khadda used to deliver all waste of road side zoopadpatti & lying idle since institute formed. The building is located at beautiful easily approachable Borsad chaukadi of road crossing Tarapur to N.H.8 and Anand to Borsad. The building is designed for twenty double occupied rooms with attached toilet & balcony, three single occupied rooms, four eight occupied dormitory, kitchen & dinning, A.V. laboratory with meeting hall, office for in charge & large foyer for farmers gathering & exhibition, under ground parking.

(3) Construction of Bio-technology laboratory at AAU Anand

The centrally located building constructed to be used by girls student even at late night near to tissue culture laboratory and at entrance of campus for easy approach to Farmers, Scientist & Visitors. The building is design as green building by providing cutout in floor to use maximum sunlight for lighting from terrace to ground of building which also serve as hot air outlet, resulting cool the building. To save wood as in green building concept no wood is used in door and windows. The Polycarbonate domes are provided in central lobby for indirect sunlight which give light in lobby as well in rooms ultimately saves electricity during day as well as in moonlight.

(4) Construction of Fruit processing Center.

The building constructed on to Horticulture farm as the farm produce can be transported to develop ready to use products by student as experiential learning. The building is constructed at the ideal place of selling the product just near to service center & main road approaching to campus as well as nearby villages.

(5) Construction of Medicinal & Aromatic processing plant building.

For Ayurvedic plant processing the beautiful colored building is constructed. The concept is colorful SATAYUSHI health for Ayurved medicine users. No wood is used in building to save wood as in green building concept. The building constructed adjoins to Medicinal farm in vicinity of college as the medicinal farm product can be by student as experiential learning.

(6) Construction of Feed manufacturing unit for Nutrition & poultry.

The Feed manufacturing building is constructed adjoining to nutrition laboratory, nearby animal sheds, for easy transport of feed to Animals. The Polycarbonate domes are provided in central lobby for indirect sunlight which give light in building ultimately saves electricity during day.

(7) Construction of seed processing unit building.

The fully ventilated industrial type shed, laboratory, large storage & working facility have been provided. A small training hall with cooling system gives ideal training facilities in the unit.

(8) Construction of Office cum Laboratory building under SSNNL at AAU, Thasra.

The building designed for central open foyer for small experiment on plants for irrigated crops. The full light & air ventilation provided to all laboratory as well as working place by providing central OTS & front lobby to all rooms. Building is constructed for three laboratories, a small training hall, working place for all scientist & storage facility.

(9) Construction of Bio-diesel shed.

The beautiful building constructed for production of Bio-Diesel from Jetroffa seeds. The top ventilators give indirect sun light & natural air ventilation. A small meeting/training hall provided for brief instruction or training to visitors/farmers/students.

Bore well at AAU, Dabhoi.

(10) Construction of compound wall for RRS at Navli farm.

(11) Construction of Compound wall to Atic building.

(12) Construction of Compound wall from Gayatri mandir to Rangmanch.

Providing approach road, parking, A.C. in Farmers hostel.

(14) Renovation of Jercy & IDC cow sheds for LRS.

(15) Renovation of Guest house (Lobby flooring)

(16) Additional work in Rajnigandha (Toilet block)

(17) Painting to P.G. hostel.

(18) Providing tukdi tiles water proofing to Munshi hostel.

(19) Providing RCC approach to Bio-diesel shed.

(20) Resurfacing to roads of BACA & hostels

(21) Painting to health center.

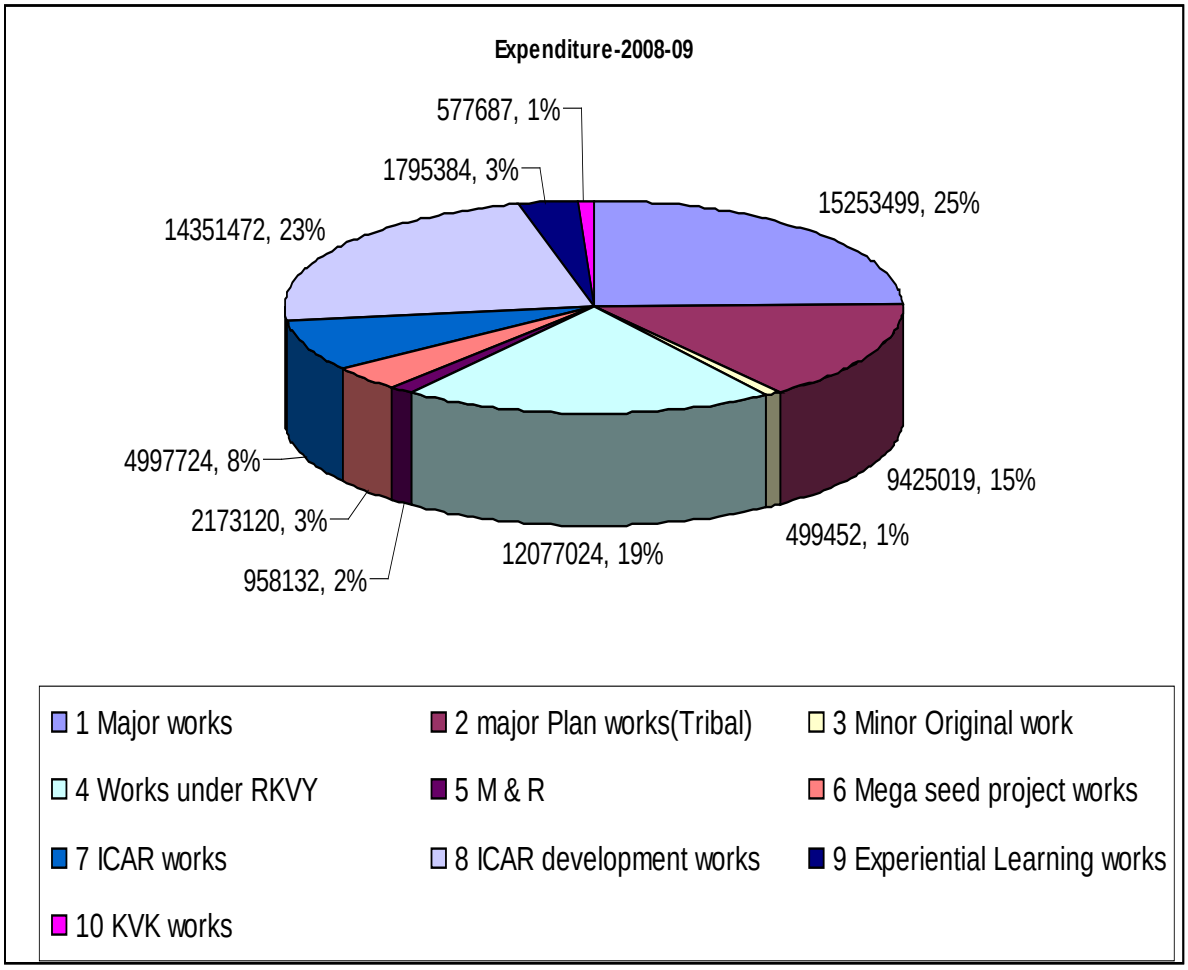
(22) Construction of staff quarters for KVK at AAU, Devataj.

(23) Construction of Office cum Laboratory for KVK at AAU, Arnej.

The building designed for central open foyer for small experiment on plants for irrigation treatment as farm is located at arid area. The full light & air ventilation provided to all laboratory as well as working place by providing central OTS & front lobby to all rooms. Building is constructed with two laboratories, a training hall for farmers, the Audio Visual laboratory for digital display of training material and working place for all scientist.

Statement showing expenditure for works.

Sr. No.	Plan/Scheme	Expenditure in Rs.
1	Major works	15253499.00
2	Major plan works (Tribal)	9425019.00
3	Minor original work	499452.00
4	Works under RKVY	12077024.00
5	Maintenance & Repairing work (M. & R.)	958132.00
6	Mega seed project works.	2173120.00
7	ICAR woks	4997724.00
8	ICAR development works.	14351472.00
9	Experiential Learning-setting up of facilities for hands on training works.	1795384.00
10	KVK works.	577687.00
	TOTAL	6,21,08,513.00


Expenditure-2008-09
577687, 1%
1795384, 3%
15253499, 25%
14351472, 23%
4997724, 8%
9425019, 15%
2173120, 3%
499452, 1%
12077024, 19%
958132, 2%
1 Major works
2 major Plan works(Tribal)
3 Minor Original work
4 Works under RKVY
5 M & R
6 Mega seed project works
7 ICAR works
8 ICAR development works
9 Experiential Learning works
10 KVK works

MAJOR EVENTS:

Sr. No.	Detail Of Event	Date
1	Bhoomi pujan of Agriculture Engineering college	09-05-2008
2	Bhoomi pujan Polytechnic/Policlinic	02-06-2008
3	Bhoomi pujan of Tribal training centre	19-06-2008
4	Inauguration of Medicinal & Aromatic plant processing building.	05-08-2008
5	Inauguration of Thasra laboratory.	23-01-2009

BHOOMI PUJAN OF AGRICULTURE ENGINEERING & TECHNOLOGY COLLEGE AT AAU, GODHRA on Dt. 09-05-2008.

Bhoomi pujan of " AGRICULTURE ENGINEERING & TECHNOLOGY COLLEGE, GODHRA" was performed by Hon. Chief Minister Shri Narendra Modi on Dt. 09-05-2008 in august presence of Hon. Agriculture Minister Shri Dileep Sanghani, Hon. Vice Chancellor Prof. M.C. Varshneya, Hon. Member of Parliament (Rajyasabha) & Pradesh Adhyaksha, BJP Shri Purshotam Rupala.

BHOOMI PUJAN OF TRIBAL FARM WOOMAN TRAINNING CENTER, AT AAU, DEGADHBARIYA on Dt. 19-06-2008.

Bhoomi pujan of " TRIBAL FARM WOOMAN TRAINNING CENTER, DEGADHBARIYA" was performed by Hon. Adijati vikas Minister Shri Mangubhai Chhaganbhai Patel on Dt. 19-06-2008 in august presence of Hon. Adijativikas state Minister Shri Jasvantsing Bhabhor, Land donor Shrimati Urvashidevi Maharoulji, and Hon. Vice Chancellor, Prof. M. C. Varshneya.

BHOOMI PUJAN OF POLYTECHNIC IN AGRICULTERE ENGINEERING & POLICLINIC LABORATORY AT AAU, DAHOD on Dt.02-06-2008.

Bhoomi pujan of " POLYTECHNIC IN AGRICULTURE ENGINEERING AND POLICLINIC LABORATORY" was performed by Hon. Agriculture Minister Shri Dileep Sanghani,on Dt. 02-06-2008 in august presence of Hon. Vice Chancellor Prof. M.C. Varshneya & Hon. Adijativikas state Minister Shri Jasvantsing Bhabhor.

INAUGRATION OF "SHATAYUSHI" MEDICINAL & AEROMATIC PLANT PROCESSING BUILDING ON Dt. 05-08-2008.

The Medicinal and aromatic plant processing building "SHATAYUSHI" was performed by Dr. S. P. Tiwari, Deputy Director (Education), ICAR, New Delhi in august presence of Hon. Vice Chancellor Prof. M.C. Varshneya on Dt.05-08-2008. The building cost is Rs. 35.00 lac constructed by L.V. Prajapati, Anand, Architect of building is A.D. Desai, Surat.

INAUGRATION OF OFFICE CUM LABORATORY BUILDING (VARUN) AT THASRA, Dt.23-01-2009.

The Office cum laboratory "VARUN" was dedicated to Nation by Shri Naranbhai V. Patel in august presence of Hon. Vice Chancellor Prof. M.C. Varshneya on Dt.23-01-2009. The building cost is Rs. 35.00 lac, complete project was financed by SSNL, Gandhinagar, Architect of building is Pradip Gandhi & Associate, Vadodara.(Photo :- L to R, Shri Naranbhai V. Patel, Prof. M.C. Varshneya, Scientist Dr. R.P.Kaccha)

HOUSING ACCOMODATION COMMITTEE:

Accommodation committee is constituted for allotment of quarters to University employees as per rules under statute 42.A (G.A.U.).

The Housing Accommodation committee is statutory body formulated under statute 42.A Schedule XXVI para 4.1 as below :

Sr. No	Name member	Designation	
1	Dr. A. R. Pathak	Director of Research	Chairman
2	Dr. P.P. Patel	Director of Extension Education	Member
3	Dr. A.M. Shaikh	Principal B.A.C.A.	Member
	Dr. J. V. Solanki	Principal, Vet. Sci. College	Invited member
5	Dr. B.P. Shah	Principal, Dairy Sci. College	Invited member
6	Dr. R.H. Patel.	Asso. Director of Research	Member
7	Dr. A.D. Patel	Research Scientist(Tobacco)	Invited member
8	Shri M.G. Vasava	Deputy Registrar	Invited member
9	Er. B.N. Bhalia	Executive Engineer	Member Secretary

Meetings of Committee :

Two meetings of the committee were conducted as below.

Sr. No.	Meeting	Date
1	13th meeting (118)	07-08-2008
2	14th meeting (119)	19-11-2008

Chapter - 11

Information Technology
Hi-Tech Savvy

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The Information Technology Center at Anand Agricultural University caters the demand for the use of Information Technology in the field of agriculture for the State Agricultural Universities of Gujarat.

NETWORK SERVICES

Internet, Intranet, ERP, AAU Web-mail, E- Library, CAB Database, J-Gate, Scientists, Personal Research, Annual Reviews, Springer Link and Consortium for e-Resources in Agriculture services at Anand Agricultural University have been provided and maintained through Local Area Network (LAN) having GSWAN and BSNL connectivity.

BENEFICIARIES

More than 5100 persons including the university staff, Undergraduate, Post-graduate students and the officials from various departments of the State have taken benefit of ITC network services. These services are very useful to the students in their educational and research activities.

TRAINING

Following short-term training courses were conducted for the officers of the Agricultural Department, Government of Gujarat, Gandhinagar for Soil Health Card System.

Batch No.	Period	No. of Trainees
Batch - 1	11-8-08 to 13-8-08	09
Batch - 2	20-8-08 to 22-8-08	20
Batch - 3	25-8-08 to 27-8-08	19
Batch - 4	28-8-08 to 30-8-08	19

NETWORK INSTALLATION & MAINATNCE

ITC looks after installation and maintenance services of the Network at the University level. A sizeable amount of money has been saved by using a free Network Operation System i.e. **Fedora 9, RHEL4, RHEL5**. The network is continuously monitored .The problem if any, is attended and rectified. The Network Operating System is up-graded regularly adding the useful features.

PRESENTATIONS/ MODELS

ITC has following Multimedia presentations covering various areas of University activities, which are updated from time to time. These presentations have been shown or displayed during the visits of the Guests, Board of Management Meetings and Agriculture Fairs or at Government level Meeting.

1. Soil Health Card System
2. Krishi Mahotsav- 2008

REFERENCE SERVICES

E- Library facility using CAB Database, J-Gate, Science Direct Personalizing Research, Annual Reviews, Springer Link and Consortium for e-Resources in Agriculture services has been put on intranet. This enables the end users to get quick information through computer on any reference related to Agricultural research published from 1972 to 2008 through Network. This is unique kind of service not found anywhere in India which is provided free of cost to the scientists and the student of the University. This has made the reference services very fast and has saved a lot of time of the scientists and the students.

SPECIAL CONTRIBUTION/ACHIEVEMENTS

- **The 12th National Award Winner in e-Governance 2008-09.**

The 12th National Award was conferred upon Anand Agricultural University for e-Governance(2008-09) by the Department of Administrative Reforms and Public Grievances, jointly with Department of Information Technology, Government of India, on 12th February, 2009 at Goa for its contribution in the field of outstanding performance in Citizen – Centric Service Delivery.

- **AAU Web Application**

ITC has prepared a Web Site for Anand Agricultural University; the domain name is www.aau.in.This web site includes various aspects and activities of Anand Agricultural University like administration, faculties, colleges, education, and extension, e-library, tender, Right to Information Act etc.

- **AAU Web Mail**

A web mail service has been incorporated in the Web Site enabling the users to read and reply their e-mail from any computer

of LAN. There are more than 5100 e-mail users. The web site has been maintained and updated regularly.

- **Web Based Application for Soil Health Card Programme.**

  Government of Gujarat has selected the Anand Agricultural University to establish and implement the state wide programme on Soil Health Card. Under this programme, centre has developed the web-base application software, which generates and provides the fertilizer recommendations on the basis of soil analysis and the nutrient requirements of the crop for each field. This will increase the efficiency of the fertilizer and saving in consumption of the fertilizer.

  On the basis of Moisture Availability Index and other soil and meteorological parameters, Soil Health Card programme also advises the individual farmer for the selection of crop and cropping system for his field with economic benefit. It also provides cultivation practices for all the crops.

  The action plan for the agricultural production at taluka and village level is available under this programme to coordinate the efforts of all the functionaries.

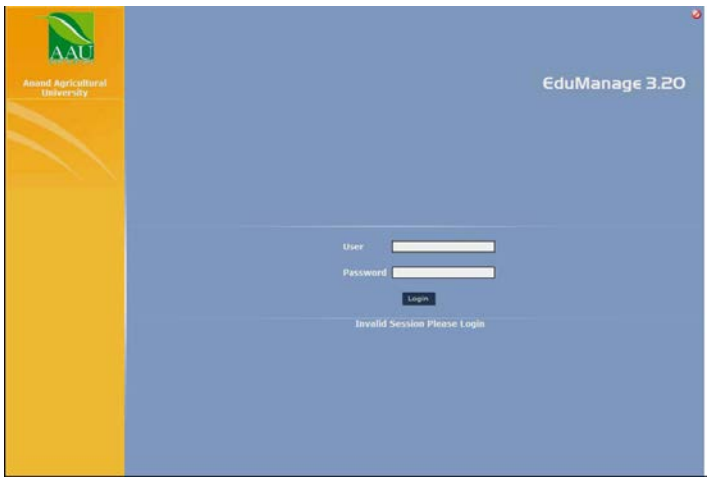
  The web-sites for agricultural universities, Department of Agril, Department of Animal Husbandry, Department of Horticulture and other Boards / Corporations engaged in agriculture has been established under this program, which provide information regarding different schemes, statistics, working system etc.

ERP Software

AAUEduManage© is a comprehensive educational ERP software for an educational Institution Management. The University has developed EduManage© after an extensive research on various faculties, units and departments. This software has incorporated the functional requirements of the University.

AAUEDU has been developed using state of the art open source web technologies to reduce the development and implementation cost significantly. No additional software needs to be purchased to implement AAUEDU.

AAUEDU enables multiple user level access. Many different users like, Vice-Chancellor, DR, Deans, Registrar, other university Officers, Units Head, Departments Head, Faculties Students etc. can access the software using a unique user id and password. Each user will be able to access the functionality of the software pertaining to them.



Once user opens the main menu, user can see all the modules like Campus, Department, Student, Staff, Admission, Exam, Web. If user clicks the module name or icon, it opens. The left side of the screen displays a quote and it changes dynamically whenever user visits the Main menu. On the right side, user can see links like Manage Password.

National Knowledge Network (NKN):

Convergence of IT and communication (often referred to as ICT), and exponential growth in the communication capacity opens up new vistas for application of these technologies. ICT, when properly deployed in a country, has the potential of solving major challenges faced by human race, such as, Climate Change, Energy Security, Green Design, and so on. Besides, ICT coupled with processing power is a potent

instrument for any planning process. ICT, when properly harnessed, can render the country flat (devoid of social inequities) and convert it to knowledge society. The National Knowledge Network is an initiative in that direction to enable India leapfrog into Knowledge Society and Knowledge Economy.

- **NKN Features**
  - ✓ High Capacity, Highly Scalable Backbone
  - ✓ Provide Quality of Service (QoS) and Security
  - ✓ Wide Geographical Coverage
  - ✓ Common Standard Platform
  - ✓ Bandwidth from Many NLD's
  - ✓ Highly Reliable & Available by Design
  - ✓ Test beds (for various implementation)
  - ✓ Dedicated and Owned.

After IIT-Gandhinagar, Anand Agriculture University (AAU) has become the second institution in the state to be included under National Knowledge Network.

The Department of Information Technology under the Ministry of Communication and IT has recently included AAU as a centre of the National Knowledge Network (NKN) along with 26 others. The main objective of NKN is to interconnect libraries, laboratories, agricultural institutions enabling nationwide sharing of data and resources.

The important objective of NKN service is to establish connectivity among member institutions to enable collaborative research in emerging areas such as climate modeling, bio-informatics and agriculture.

Moreover, the network will facilitate distance education in specialized fields such as medicine and other departments which depend heavily on wide-ranging research.

- **Technical Help**

  On inclusion in various committees of the university, the Director, IT took the measures to carry forward the IT activities at various levels. During the year, substantial work was done not only in the technical or administrative matters of ITC, but also pertaining Network problems at all the four universities.

Because of the hands-on training given to various employees on computer applications, administrative and account capabilities have been improved. Further, theoretical and practical knowledge about IT and its related equipments are made available to other line department of the state, which help the other organization also to strengthen their IT activities.

Most importantly the Director, IT was given state level responsibilities regarding IT work of Soil Health Card by Agriculture and Co-operation Department, Government of Gujarat. The required activities were carried out effectively. The schedule of meetings of the Soil Health Card programme committees are given in table 1.

The Hon'ble Vice-Chancellor has formed the Soil Health Card empowered committee for exchange of information pertaining to the project.

The committee members are discussing various important issue of soil health card project like system development, testing, implementation and training.

Table 1 Meetings of Soil Health Card Programme Committee

Sr. No	Particulars	Date
1	1st Meeting	06-06-08
2	2nd Meeting	24-06-08
3	3rd Meeting	23-09-08

Visitors

The Center has been visited by a number of persons, who has remarked AAU a front-runner in IT activities out of all the Agricultural Universities of the Country.

Chapter - 12

Dr. M.D. Patel Regional e-Library

Dr. M.D. Library Regional e-Library is functioning independently as separate unit with pride as "University Library." Presently the library is in collections of 233 Foreign & Indian Journals, Bar-corded books (79813) for all the faculty of university. Transaction / circulation of books using WEB OPAC & e-card has fasten the system. Library is enriched with online access, e-journals and CDROM database along with standard stored databases on AAU server. Information Technology unit is maintaining & rendering services of connectivity 2 mbps as well storage of Database. The following CD ROM Database & online e-services has been extended for the new up coming faculties such as Food Processing Technology (UG /PG), Agricultural Polytechnics, Agricultural Information Technology, International Agri-Business Management and International Project of Dairy Science faculty.

Sr. No.	Particular	Features
A:	**CD ROM Database:**	
	CAB Abstract (CD ROM) Database	Update of year 1973 to 2009 International Agricultural & Applied Sciences -4 Million records
	CMIE Indian Harvest Databases	Agriculture Commodity, Market, Meteorological data, Industry Information, Indian trade & others.
B:	**Online e-journals :**	
1	J-Gate Online full text with customized all Foreign journals of AAU	e-Journals & Database subject collection e-Journals No.16700, Articles 22,051,776 -Agricultural & Biological Science -Biomedical Science -Library & Information Science -Basic Science -Engineering & Technology -Social Management Science
2	Management & Organization studies (SAGE e- Package)	Full text collections 40 journal useful for MBA faculty, Extension Education, Dairy Business Management, FPT & Bio-energy Economic Dept.& others

3	Food Science & Technology Abstracts(FSTA)	Collection from 1969 + 2009-10, 7,40,000 bibliography records with Food Science, Technology & Food nutrition related and Microbiology abstracts.
C: Online e-books :		
	E-books(521+)Period from January -2009 to Dec.2010	1. CRC Net BASE e-Books collection, FOOD, net BASE Pub.Tayler and Francies Group) – access through CRC Net BASE) 2. CRC Net BASE collection, : NUTRIENT Net BASE (Pub.Tayler and Francies Group – access through CRC Net BASE)

Workshop: Faculty has attended workshop of Krishi Prabha Indian Agricultural Doctorate Dissertation Reposition" ICAR, NAIP Project at CCS, AAU, Hissar during 22 to 29 Feb., 2009.