



# Anand Agricultural University



**ANNUAL REPORT**

*2011–2012*

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Gujarat Agricultural University Act., 2004

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Anand Agricultural University  
Anand - 388110, Gujarat, INDIA

# Our Symbol



## **This is our Emblem;**

One Square, One Leaf  
with "AAU" firmly embedded

The Square with lighter and darker shades of green  
Stands for Lusciousness, Fertility and Abundance of this land.  
This is our Mother Land  
With all the three elements abounding

Among the entire world, there is only one thing  
That Could photo synthesize solar rays  
into biomass i.e., the LEAF.  
Hence, the LEAF stands as our symbol  
Which could transform sun rays i.e. energy into matter

Thus leaf as a symbol of our commitment;  
Our Dream  
to make our Country  
abundant in agriculture

Leaf is our tribute to  
Our Mother Land  
Our pledge to make Country prosperous

## **Our Motto is :**

कृणवन्तो राष्ट्रं कृषिसंपन्नम्

Means

We, the Scientists, Students and  
all the employees of AAU unitedly  
stand to make the solemn pledge  
that we enrich and glorify  
the grandeur of our Country  
and make it agriculturally prosperous



*"Live as if you were to die tomorrow. Learn as if you were to live forever."*

**— Mahatma Gandhi**

*"Education is the most powerful weapon which you can use to change the world."*

**— Nelson Mandela**



## Foreword

I am pleased to present 8<sup>th</sup> Annual Report of the Anand Agricultural University for the year 2011-12. This annual report features several examples of the high-quality academic endeavor demonstrating the huge range of work being carried out at the University in the field of Agriculture and allied subjects. The AAU has made rapid stride in all the facets of its basic activities of teaching, research and extension education in agricultural sciences to make the Gujarat State Agriculturally prosperous.

As any year draws to a close, there is the opportunity both to reflect on the past 12 months and look ahead to the next. At what is a critical and hugely challenging time for universities in this country, it is important that we recognize our achievements and look clearly to the future.

The University also seeks to make a major contribution in improving the quality of life of people in the region through its research-led engagement in agriculture and its allied disciplines, and a host of other modern-day challenges.

Priorities and concerns keep on changing by time and the university has made all the efforts to match with stride. The university is aimed to address the basic and applied issues related to agriculture production and livestock wealth in addition to human resource development and overall improvement in the socio-economic status of farmers. The university had provided a meaningful scientific and technological support to farmers through its different faculties, research stations/substations/centres and Krishi Vigyan Kendras located in different parts of the middle Gujarat.

This report of the Anand Agricultural University is presented in pursuance to Section 49 of the Gujarat Agricultural Universities Act 2004. As a Nodal Officer of the Agricultural Universities of Gujarat State, vigorously pursued various matter of academic resulted into betterment of all four SAUs with cutting age approaches.

The year 2011-12 brought out in several outstanding achievements to the university. During the year various MoUs were signed by the university with national as well as foreign institutes for collaboration in research and education. The establishment of new faculties and new departments in addition to the establishment of four new colleges and five polytechnics are the noteworthy progress of the university. The university was fortunate to get 72 new research projects to the tune of Rs.3168.45 lakh sanctioned by GOI, GOG and other agencies. "Krusha Mahotsav 2011" was launched from the university to motivate the farmers of Middle Gujarat for adopting modern scientific methods of farming. The Eighth Annual convocation of the AAU, Anand was conducted on 14.02.2012 successfully.

I express my sincere gratitude to State Government, ICAR and other funding agencies for their support in sponsoring our education and research programmes. I firmly believe that the sincere and dedicated efforts put forward by my entire team of scientists, academicians, administrators and subordinates for carrying out the various activities, the university will achieve new heights of success in forthcoming year.

**A. M. Shekh**

**Vice Chancellor**

**Anand Agricultural University**



## Our Song

हो संस्कृति कृषि वत्सलम्, कल्याण क्रीणे मंगलम्  
कृष्यावन्तो राष्ट्रं कृषिसंपन्नम् कृष्यावन्तो राष्ट्रं कृषिसंपन्नम्  
कृष्यावन्तो राष्ट्रं कृषिसंपन्नम्

सरदार गाथा गुर्जरी, याइ अमुल यरोतरी,  
क्षीर संस्कृति महीसागरी, आतिथ्य आदर से लरी,  
कृष्यावन्तो राष्ट्रं कृषिसंपन्नम्

डाकोर श्रीठाकोर डा, कायावरोहण कलिका,  
वडताल लाल गुलाल, सून करताल धून नारायणी,  
कृष्यावन्तो राष्ट्रं कृषिसंपन्नम्

संतराम ओडाणा श्रीमद्, हरि मारगी जेवन लगत,  
दिल के दिये जलते किये, गुंजु गीरा रविशंकरी,  
कृष्यावन्तो राष्ट्रं कृषिसंपन्नम्

सरदार रास अडासमें, आपु चले थे साथ में,  
विधानगर आशंढ में, विज्ञान ज्ञान गंगोतरी,  
कृष्यावन्तो राष्ट्रं कृषिसंपन्नम्

- डॉ. आलकृष्ण जेधी

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## OUR PLEDGE

We, the scientist, students  
and the employees of  
Anand Agriculture University  
Unitedly stand to make  
the solemn pledge  
That  
we enrich the glorify,  
The grandeur of our country  
And  
make it agriculturally prosperous;  
And  
will devote ourselves  
with heart and soul to Realize  
the objectives  
of our institution



**Sardar Vallabhbhai Patel**  
**(Iron Man of India)**



**B.A. College of Agriculture, Anand**



# CHAPTER 1

## Vision & Mission

Anand Agricultural University has metamorphosed from *Krishi-go-Vidya* Bhavan established way back in the forties, by the Iron Man of India, Shri Sardar Vallabhbhai Patel not as merely an educational institution, but as a mission; a cause, primarily conceived to revitalize agriculture, following Mahatma Gandhiji's call for village regeneration.

Anand Agricultural University (AAU) was carved out from the erstwhile Gujarat Agricultural University, to establish and incorporate teaching and imparting education in Agriculture and Allied Sciences in the State of Gujarat, by the Government of Gujarat, through enactment of Gujarat Act No. 5 of 2004. The Act was passed by the Gujarat Legislative Assembly and was assented by H.E. the Governor of Gujarat on 4<sup>th</sup> March, 2004. Farming community is being provided support in all the three facets viz. education, research and extension activities in agriculture and its allied fields through AAU.

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

### Vision

Agriculturally Prosperous Gujarat and India

### Mission

The mission is to provide teaching,

research and extension education services related to Agriculture, Dairy, Veterinary and Allied Sciences including newer Sciences like Agricultural Information Technology, Agricultural Engineering and Technology, Food Processing Technology, Agricultural Business Management, etc.; and thereby develop excellent human resource and innovative technologies to serve the farming community with the motto of making Gujarat and India agriculturally prosperous.

### Goals and Objectives

- ✦ Make provision to impart education and thereby develop quality human resource.
- ✦ Furthering the advancement of learning through research.
- ✦ Passing the knowledge gained through research to the stake holders – the farmers, through extension education.
- ✦ Promoting partnership and linkages with national and international institutions.
- ✦ Budding cutting edge technologies for national and international arena/markets.

### Teaching

- ✦ 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, International Agri Business Management and leading to diploma in various Polytechniques in Agriculture, Horticulture, Nutrition and Dietetics, Agril. Engineering, etc.

- ✦ To provide integrated agricultural education at different levels to increase efficiency and effectiveness of skill of students.
- ✦ To upgrade the technical competence of 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 Agricultural, 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

- ✦ 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.
- ✦ Develop package of practices for cultivation of various crops and cropping systems of middle Gujarat.
- ✦ Develop integrated farming system, Integrated Pests and Disease Management Systems, Organic Farming and Biological control.
- ✦ Develop cutting edge technologies in the filed of Nanotechnology pertaining to agriculture, Animal husbandry and Food sciences.
- ✦ Develop technologies in the field of Milk production, Food processing and Bio-energy.
- ✦ Develop specific indigenous and cross breeds suitable to ago-climate of Middle Gujarat

## Extension

- ✦ Impart training to the officers and extension workers of line department of Government of Gujarat, Govt. of India, field functionaries, staff of the University, NGOs, farmers, entrepreneurs etc.
- ✦ Conduct short and long duration vocational training for farmers, farm women, farm youth, entrepreneurs and tribals.
- ✦ Assess, refine and demonstrate latest agricultural technologies of University through front line demonstrations for their wider adoption.

- ✎ Transmit agricultural technologies to the farmers and rural masses of Gujarat through mass media, information technologies and video conferencing.

## History

Anand Agricultural University (AAU) has entered into sixth year of its being, established by the Gujarat Act No. 5 of 2004, passed by the Gujarat Legislature and assented by Her Excellency, Governor of Gujarat on 4<sup>th</sup>, March 2004. AAU has been incorporated as a teaching and affiliating University for imparting education in agriculture and allied sciences. AAU has a long cherished history. Sardar Vallabhbhai Patel, an Iron man of India and Dr. K. M. Munshi, who played a significant role in affable and unobtrusive manner both as member of the Drafting Committee and as an active member of the Constituent Assembly of Indian Constitution established *Krush-Go-Vidhya Bhavan* and Institute of Agriculture and animal genetics, Anand in 1938 to revitalize agriculture, train the 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.

Institute of Agriculture was popularly known as '*Khetiwadi*' which later in June, 1972 became a part of the Gujarat Agricultural University. Institute of Agriculture, Anand had two Colleges viz., B. A. College of Agriculture established in 1947 and Sheth M. C. College of Dairy Science established in 1960, which were then affiliated to Sardar Patel University, Vallabh Vidhyanagar. Later, 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, 27 Research Stations, one Extension Education Institute, 16 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 and Mali Training Centre.

## Power and Functions of the University

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

- (1) Provide education and instruction in agriculture and allied sciences and in such other branches of learning as the University may deem fit;
- (2) Make provision for research in agriculture and allied branches of learning;
- (1) Make provision for dissemination of the findings of research and technical information through extension education programmes;
- (3) Make such provision which would enable affiliated colleges and recognised institutions to undertake specialisation in

- different fields of studies;
- (4) Institute degrees, diploma and other academic distinctions;
- (5) Lay down courses of study and instruction for various examinations;
- (6) Hold examinations and confer degrees, diploma and other academic distinctions and confer certificates to persons who -
- (a) have pursued approved courses of study at the University or at 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;
- (7) Withdraw or cancel any degree, diploma or certificate conferred or granted by the University in such manner as may be prescribed;
- (8) Confer Honorary degree and other distinctions in the manner prescribed;
- (9) Provide lectures, instructions and training to persons who are not enrolled students of the University and grant such certificates to them as may be prescribed;
- (10) Co-operate with any other University or authority in such manner and for such purpose as the University may determine;
- (11) Establish and maintain colleges for imparting education in agriculture and allied sciences,
- (12) Establish and maintain classrooms laboratories, libraries, English language laboratory, research stations, institutions and museums with latest technology for teaching, research and extension education;
- (13) Create such teaching, administrative and other posts as the University may deem necessary from time to time and make appointments thereto;
- (14) Institute and award fellowships, scholarships and prizes in accordance with the Statutes;
- (15) Associate or admit educational institutions imparting education in agriculture and allied sciences with, or to the privilege of the University by way of affiliation or recognition;
- (16) Withdraw or modify, either in whole or part, affiliation or recognition of educational institutions;
- (17) Inspect colleges and recognised institutions and take necessary 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;
- (18) Lay down and regulate the salary scales, allowances and other service conditions of the members of teaching, other academic and non-teaching staff of the University;
- (19) 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;

(20) To

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

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

(21) Institute and maintain residential accommodation for students and staff of the University;

(22) Fix demand and receive or recover such fees and other charges as may be prescribed;

(23) Supervise, regulate and control the residence, conduct and discipline of the students of the University, make arrangements for promoting their health

and general welfare;

(24) Conduct, co-ordinate, supervise, regulate and control post-graduate teaching and research work at the University departments and affiliated colleges and recognised institutions;

(25) Co-ordinate, supervise, regulate and control conduct of undergraduate teaching and instruction in the affiliated colleges and undertake the same in University colleges;

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

(27) Perform 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.





**B.A. College of Agriculture, Anand**



**College of Veterinary Science and Animal Husbandry, Anand**

# CHAPTER 2

## Functioning of Authorities

Decision making is a Science, Implementation is an Art

### Authorization

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

AAU is a body corporate established under GAU Act, 2004 (Gujarat Act No. 5 of 2004) and comprises of Chancellor, Vice-Chancellor, Board of Management, Academic Council and Officers of the University. It has a 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 Chart 1 and 2 respectively.

### Board of Management

The Board of Management considers

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

During the year under report, two regular meetings and circulation meeting were held under the Chairmanship of Dr. A. M. Shekh, Vice Chancellor Dr. P. R. Vaishnav, Registrar acted as the Member Secretary of the Board. Following decisions were taken at the said meetings.

### 25<sup>th</sup> Meeting of the Board of Management held on 28-06-2011

25.1 Confirmation of the Minutes of 24<sup>th</sup> Meeting of Board of Management held on 17-03-2011.

25.2 Report of the Action Taken on the Minutes of 24<sup>th</sup> Meeting of the Board of Management held on 17-03-2011.

25.3 આણંદ કૃષિ યુનિવર્સિટીના સને ૨૦૧૧ – ૨૦૧૨ની અંદાજપત્રીય જોગવાઈ (આયોજન બહાર) મંજૂર કરવા અંગે.

25.4 સીનિયર ટેકનીકલ આસિસ્ટન્ટ (કૃષિ ઈજનેર) તરીકે ડીમ ડેઈટનો લાભ આપવા બાબત શ્રી વી. બી. ભાલોડીયા, સીનિયર રીસર્ચ આસિસ્ટન્ટ (એગ્રિકલ્ચરલ એન્જિનીયરિંગ)

25.5 પોલીટેકનિકના વિદ્યાર્થીઓને સ્ટાઈપન્ડ આપવા બાબતે.



25.6 Approval of the Governing Body of Business Planning and Development Unit, AAU, Anand.

25.7 શ્રી વી. એસ. કુંપાવત, માજી સીનિયર રીસર્ચ આસિસ્ટન્ટ સામેની નવેસરની ખાતાકીય તપાસ અંગે.

25.8 Reservation for admission from Diploma to Degree Course (D to D).

25.9 પ્રમાણપત્ર અભ્યાસક્રમોના કોર્ષના નામને "આકર્ષક નામાભિધાન" આપવા બાબત.

25.10 વિવિધ વિસ્તરણ શિક્ષણ કેન્દ્રો ખાતે યોજાતા ટૂંકાગાળાના તાલીમ વર્ગો દરમિયાન ચૂંટા-નાસ્તા અને જમવાની રકમની મર્યાદામાં વધારો મંજૂર કરવા બાબત.

25.11 Providing more functional and financial autonomy to E.E.I. regarding.

25.12 પોલીટેકનિક ડિપ્લોમા અભ્યાસક્રમોમાં પ્રવેશ રદ કરતાં વિદ્યાર્થીઓની પ્રોસેસિંગ ફી નહીં કાપવા બાબત.

25.13 સ્નાતક કક્ષાના વિદ્યાર્થીઓની ફેલોશિપની યોજનામાં ફેરફાર કરવા અંગે.

25.14 સુજલ એડવર્ટાઈઝર્સ પ્રા. લિ. કંપની તરફથી મોડેલ ફાર્મ, વડોદરા ખાતે હોર્ટીગસ ડિસ્પ્લે ઈન્સ્ટોલ કરવા બાબત.

25.15 વર્ષ ૨૦૧૧-૨૦૧૨ ની કૃષિ શિક્ષણની નવી બાબતો હેઠળનાં બાંધકામોની વહીવટી મંજૂરી આપવા બાબત.

25.16 કન્સ્ટ્રક્શન ઓફ ગર્લ્સ હોસ્ટેલ અન્ડર આઈ.સી.એ.આર. એટ એ.એ.યુ., આણંદના કામની વહીવટી મંજૂરી બાબત.

25.17 વાર્ષિક વિકાસ કાર્યક્રમ: ૨૦૧૧-૨૦૧૨.

25.18 સીધી ભરતી તથા કેરીયર એડવાન્સમેન્ટ યોજના અંતર્ગત સ્ટેચ્યુટ-૪૦ ગ્રુપ-એ શિક્ષકો માટેની પસંદગી સમિતિમાં નિયુક્તિ માટે નિષ્ણાંત સભ્યોની યાદી મંજૂર કરવા બાબત.

25.19 Agenda with the permission of the Chairman.

### **26<sup>th</sup> Meeting of the Board of Management to be held on 05-11-2011**

26.1 Confirmation of the Minutes of 25<sup>th</sup> Meeting of Board of Management held on 28-06-2011.

26.2 Report of the Action Taken on the Minutes of 25<sup>th</sup> Meeting of the Board of Management held on 28-06-2011.

26.3 કન્સ્ટ્રક્શન ઓફ પી.જી. ગર્લ્સ હોસ્ટેલ ફોર એમ.બી.એ. એટ એ.એ.યુ., આણંદ.

26.4 આણંદ કૃષિ યુનિવર્સિટીના સને ૨૦૧૦-૧૧ના વાર્ષિક હિસાબો મંજૂર કરવા અંગે.

26.5 આણંદ કૃષિ યુનિવર્સિટીના પરિસરમાં / આજુબાજુ હોર્ટીંગ ડિસ્પ્લે ઈન્સ્ટોલેશન કરવા અંગેની નીતિ નક્કી કરવા અંગે.

26.6 Engaging Consultant for new college.

26.7 શ્રી કે. જે. હઠિલા-પટાવાળા, બં. અ. કૃષિ મહાવિદ્યાલય, આ.કૃ.યુ., આણંદની ૧૦૮૦ થી વધુ પડડ અસાધારણ (બિનપગારી) રજાઓ મંજૂર કરવા અંગે.

26.8 જાહેરાત ક્રમાંક: ૧/૨૦૧૧ના અનુસંધાનમાં સંશોધન નિયામક અને અનુસ્નાતક વિદ્યાશાખાધ્યક્ષ તથા વિસ્તરણ શિક્ષણ નિયામકની નિમણૂક અંગે પસંદગી



સમિતિની ભલામણો મંજૂર કરવા બાબત.

26.9 વાર્ષિક વિકાસ કાર્યક્રમ ૨૦૧૧-૧૨ માં મંજૂર થયેલ કૃષિ શિક્ષણ (નોર્મલ અને ટ્રાયબલ)ની નવી યોજનાઓના અમલ કરવા બાબત.

26.10 કેન્દ્રિય મીઠાજળ જીવપાલન (મત્સ્યપાલન) અનુસંધાન સંસ્થા ભૂવનેશ્વર ધ્વારા કૃષિ વિજ્ઞાન કેન્દ્ર, દેવાતજ ખાતે વિભાગીય સંશોધન કેન્દ્ર સ્થાપવાની મંજૂરી બાબત.

26.11 રાજ્યની કૃષિ યુનિવર્સિટીઓના કોમન સ્ટેચ્યુટ મંજૂર કરવા બાબત.

26.12 ડિપ્લોમા ઈન ન્યુટ્રિશન એન્ડ ડાયેટેટિક્સ અભ્યાસક્રમ માટે "શ્રદ્ધા દિપકભાઈ શેઠ મેડલ" માટેના વિનિયમો મંજૂર કરવા બાબત.

26.13 Gujarat State's First batch Agricultural Graduates Golden Jubilee (1960-2010) Memorial Gold Medal" સ્નાતક કક્ષાએ કૃષિ વિદ્યાશાખાના વિદ્યાર્થીને એનાયત કરવા અને તેના વિનિયમો મંજૂર કરવા બાબત.

26.14 "SHRI SATYENDRABHAI K. PATEL OF DABHOU GOLD MEDAL" : સ્નાતક કક્ષાએ કૃષિ વિદ્યાશાખાના "કૃષિ અર્થશાસ્ત્ર" વિષયોના અભ્યાસક્રમમાં આઠમાં સેમેસ્ટરના અંતે સૌથી વધુ ગુણ (O.G.P.A.) મેળવતા વિદ્યાર્થીને એનાયત કરવા અને તેના વિનિયમો મંજૂર કરવા બાબત.

26.15 "POSHAK POULTRY & CATTLE FEED PVT. LTD., SARSA MEDAL" ના નામનો Gold Plated Silver Medal સ્નાતક કક્ષાએ વેટરનરી વિદ્યાશાખાના "ANIMAL NUTRITION" વિષયોના અભ્યાસક્રમમાં ચોથા સેમેસ્ટરના અંતે સૌથી વધુ ગુણ

(C.G.P.A.) મેળવતા વિદ્યાર્થીને એનાયત કરવા અને તેના વિનિયમો મંજૂર કરવા બાબત.

26.16 રાષ્ટ્રિય કૃષિ વિકાસ યોજના અંતર્ગત નવા ઈન્ફ્રાસ્ટ્રક્ચરનાં બાંધકામની વહીવટી મંજૂરી આપવા બાબત.

26.17 Agenda with the permission of the Chairman

26.17 (1) ચાલુ નોકરી દરમ્યાન અવસાન પામનાર વર્ગ-૩ અને વર્ગ-૪ના કર્મચારીઓના આશ્રિત કુટુંબને ઉચ્ચક નાણાંકીય સહાય ચૂકવવા બાબત.

26.17 (2) શૈક્ષણિક સંવર્ગની જગ્યા માટેના ભરતીના નિયમોમાં પ્રથમ તથા માસ્ટર્સ ડીગ્રીમાં ૫ ટકાની છૂટછાટ આપવા અંગે.

26.17 (3) બઢતી/ડીમહેઈટ વગેરે પ્રકારના અધિકારીઓ / કર્મચારીઓના વિસંગતતાના કેસો નિરાકરણ માટે યુનિવર્સિટી કક્ષાએ પર્સનલ કમિટીની રચના કરવા અંગે.

### **27<sup>th</sup> Meeting of the Board of Management to be held on 13-02-2012**

27.1 Confirmation of the Minutes of 26<sup>th</sup> Meeting of Board of Management held on 05-11-2011.

27.2 Report of the Action Taken on the Minutes of 26<sup>th</sup> Meeting of the Board of Management held on 05-11-2011.

27.3 Approval of list of eligible candidates for award of degrees at the Eighth Annual Convocation.

27.4 આણંદ કૃષિ યુનિવર્સિટીના સ્નાતક કક્ષાના

વિદ્યાર્થીઓને સને ૨૦૧૦-૨૦૧૧ના વર્ષ માટે "કુલપતિ સુવર્ણચંદ્રક" મંજૂર કરવા બાબત.

27.5 આણંદ કૃષિ યુનિવર્સિટીના અનુસ્નાતક કક્ષાના વિદ્યાર્થીઓને સને ૨૦૧૦-૨૦૧૧ના વર્ષ માટે "કુલાધિપતિ સુવર્ણચંદ્રક" મંજૂર કરવા બાબત.

27.6 દાતાઓશ્રીઓના દાનના વ્યાજમાંથી સુવર્ણચંદ્રકો, ચંદ્રકો અને રોકડ ઈનામો મંજૂર કરવા બાબત.

27.7 જાહેરાત ક્રમાંક : ૧/૨૦૧૧ તથા જાહેરાત ક્રમાંક : ૧/૨૦૧૨ના અનુસંધાનમાં આચાર્યશ્રી (એગ્રિકલ્ચર / વેટરીનરી / એગ્રિ. એન્જિનીયરિંગ એન્ડ ટેકનોલોજી / ઈન્ટરનેશન એગ્રિબિઝનેસ મેનેજમેન્ટ ઈન્સ્ટિટ્યૂટ) નિમણૂક અંગે પસંદગી સમિતિની ભલામણો મંજૂર કરવા બાબત.

27.8 સને ૨૦૧૨-૧૩થી સ્નાતક/અનુસ્નાતક કક્ષાના અભ્યાસક્રમોમાં ફીનું ધોરણ વધારો કરવા બાબત.

27.9 વોકેશનલ કોર્સીસ ઓન એગ્રિકલ્ચરલ એન્જિનિયરિંગ એન્ડ ટેકનોલોજી અભ્યાસક્રમ બાબત.

27.10 દાતાશ્રીઓની બેઠકો જનરલ બેઠકોમાંથી આરક્ષિતમાં તબદીલ કરી પુનઃજીવિત કરવા બાબત.

27.11 વોકેશનલ કોર્ષ ઓન લેન્ડસ્કેપ ગાર્ડનિંગ અભ્યાસક્રમ મંજૂર કરવા બાબત.

27.12 ડિપ્લોમા ઈન એગ્રિકલ્ચરલ એક્સ્ટેન્શન સર્વિસીસ ફોર ઈનપુટ ડીલર્સ અભ્યાસક્રમ બાબત.

27.13 Annual Report of Anand Agricultural University for the year 2009-10.

27.14 નામદાર સરકારશ્રીના તા.૫/૮/૨૦૦૮ના પત્ર ક્રમાંક :ગકવ-૧૪૨૦૦૬-૩૨૮૨-ક-૨,ના નેટ પરીક્ષામાં થી મુક્તિ આપવા બાબતના પત્ર પહેલાં અને પછી

વિદ્યાઉત નેટ નિમણૂક પામેલા મદદનીશ પ્રાધ્યાપક અને તેની સમક્ષને ત્રણ વર્ષ બાદ પણ નેટની પરીક્ષા પાસ કર્યેથી તેમનો અજમાયશી સેવા નિયમિત કરવા તથા ભારતીય કૃષિ અનુસંધાન પરિષદ, નવી દિલ્હીના તા.૨૬/૧૨/૨૦૧૧ના અંગ્રેજી પત્ર ક્રમાંક : ૨૩(૪૬)/૨૦૧૦-ઈકયુઆર(એજયુ.) મુજબ પી.એચ.ડી. ડીગ્રી ધરાવતા ઉમેદવારોને મદદનીશ પ્રાધ્યાપકની સીધી ભરતીમાં નેટ પરીક્ષામાંથી મુક્તિ આપવા બાબત.

## Academic Council

Academic Council has been established in the University under Section 21 of GAU Act. 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 Dr. A. M. Shekh, Vice Chancellor was the Chairman while Dr. P. R. Vaishnav, Registrar acted as Member Secretary of the Academic Council. The list of members of the Academic Council as well as officers and heads of the Department is given in Appendix -2, 3 & 4 respectively.

During the year under report, three meetings of Academic Council were held to consider various issues pertaining to improvement of education, course curricula, course credits and 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.

**27<sup>th</sup> Meeting of Academic Council held on 16-05-2011**

- 27.1 Confirmation of the Minutes of 26<sup>th</sup> Meeting of Academic Council held on 14-03-2011.
- 27.2 Report of the Action Taken on the Minutes of 26<sup>th</sup> Meeting of the Academic Council held on 14-03-2011.
- 27.3 ડિપ્લોમા ઈન ન્યુટ્રિશન એન્ડ ડાયેટીટિક્સ અભ્યાસક્રમ માટે "શ્રદ્ધા દિપકભાઈ શેઠ મેડલ" માટેના વિનિયમો મંજૂર કરવા બાબત.
- 27.4 વિવિધ વિસ્તરણ શિક્ષક કેન્દ્રો ખાતે યોજાતાં ટૂંકાગાળાના તાલીમ વર્ગો દરમિયાન ચૂંટા-નાસ્તા અને જમવાની રકમની મર્યાદામાં વધારો મંજૂર કરવા બાબત.
- 27.5 પ્રમાણપત્ર અભ્યાસક્રમોના કોર્સના નામને "આકર્ષક નામાભિધાન" આપવા બાબત.
- 27.6 Approval of course curriculum (Third Year) and syllabus (Third Year) of B.Tech. (AIT) for under graduate programme in the Faculty of Agricultural Information Technology.
- 27.7 Reservation for admission from Diploma to Degree course (D to D).
- 27.8 સ્નાતક કક્ષાના વિદ્યાર્થીઓની ફેલોશિપની યોજનામાં ફેરફાર કરવા અંગે.
- 27.9 "Gujarat State's First Agricultural Graduates Golden Jubilee (1960-2010)

Memorial Gold Medal" સ્નાતક કક્ષાએ કૃષિ વિદ્યાશાખાના વિદ્યાર્થીને એનાયત કરવા અને તેના વિનિયમો મંજૂર કરવા બાબત.

**28<sup>th</sup> Meeting of Academic Council held on 16-09-2011**

- 28.1 Confirmation of the Minutes of 27<sup>th</sup> Meeting of Academic Council held on 16-05-2011.
- 28.2 Report of the Action Taken on the Minutes of 27<sup>th</sup> Meeting of the Academic Council held on 16-05-2011.
- 28.3 Proposal for equivalence of courses and credit of IABMI, AAU students underwent EMECW-13/15 fellowship at European Union.
- 28.4 Gujarat State's First Agricultural Graduates Golden Jubilee (1060-2010) Memorial Gold Medal" સ્નાતક કક્ષાએ કૃષિ વિદ્યાશાખાના વિદ્યાર્થીને એનાયત કરવા અને તેના વિનિયમો મંજૂર કરવા બાબત.
- 28.5 Recognition of staff of private organizations as member of student's advisory committee of AAU.
- 28.6 Introduction of residency programme in PG studies of Veterinary faculty.
- 28.7 Cross listing of P. G. Courses in Veterinary Faculty.
- 28.8 Discontinuation of "Post Graduate Diploma in Dairy & Food Quality Assurance" programme.

28.9 કેન્દ્રિય મીઠાજળ જીવપાલન (મત્સ્યપાલન) અનુસંધાન સંસ્થા ભૂવનેશ્વર દ્વારા કૃષિ વિજ્ઞાન કેન્દ્ર, દેવાતજ ખાતે વિભાગીય સંશોધન કેન્દ્ર સ્થાપવાની મંજૂરી બાબત.

28.10 અનુસ્નાતક કક્ષાએ પ્રવેશ માટેના વિનિયમોમાં સુધારા વધારા કરવા બાબત.

28.11 રાષ્ટ્રીય કક્ષાએ યોજાતી સ્પર્ધાઓમાં (એગ્રિકલ્ચરલ યુનિવર્સિટી સ્પોર્ટ્સ અને એગ્રિકલ્ચરલ યુનિવર્સિટી ફેસ્ટીવલ સહિતની આવી સ્પર્ધાઓ)માં પ્રથમ, દ્વિતીય કે તૃતીય સ્થાન મેળવે ત્યારે પ્રોત્સાહનરૂપે ખેલાડીઓને ઈન્સેન્ટીવ આપવા બાબત.

28.12 "SHRI SATYENDRABHAI K. PATEL OF DABHOU GOLD MEDAL" : નાતક કક્ષાએ કૃષિ વિદ્યાશાખાના "કૃષિ અર્થશાસ્ત્ર" વિષયના અભ્યાસક્રમમાં સૌથી વધુ ગુણ (O.G.P.A.) મેળવતા વિદ્યાર્થીને એનાયત કરવા અને તેના વિનિયમો મંજૂર કરવા બાબત.

28.13 Agenda with the permission of the Chairman

28.13(1) ગુજરાતની કૃષિ યુનિવર્સિટીઓમાં અભ્યાસક્રમોની સ્નાતક/અનુસ્નાતક/પોલીટેકનિક કક્ષાની વર્ષ ૨૦૧૧-૧૨ની આણંદ કૃષિ યુનિવર્સિટીની કેન્દ્રિય પ્રવેશની કામગીરીનો અહેવાલ.

28.13(2) વાર્ષિક વિકાસ કાર્યક્રમ ૨૦૧૧-૧૨ માં મંજૂર થયેલ કૃષિ શિક્ષણ (નોર્મલ અને ટ્રાયબલ)ની નવી યોજનાઓના અમલ કરવા બાબત.

28.13(3) "POSHAK POULTRY & CATTLE FEED PVT. LTD., SARSA MEDAL" ના નામનો

Gold Plated Silver Medal સ્નાતક કક્ષાએ વેટરનરી વિદ્યાશાખાના "ANIMAL NUTRITION" વિષયના અભ્યાસક્રમમાં સૌથી વધુ ગુણ (C.G.P.A.) મેળવતા વિદ્યાર્થીને એનાયત કરવા અને તેના વિનિયમો મંજૂર કરવા બાબત.

### 29<sup>th</sup> Meeting of Academic Council held on 03-02-2012

29.1 Confirmation of the Minutes of 28<sup>th</sup> Meeting of Academic Council held on 16-09-2011.

29.2 Report of the Action Taken on the Minutes of 28<sup>th</sup> Meeting of the Academic Council held on 16-09-2011.

29.3 સને ૨૦૧૨-૧૩થી સ્નાતક/અનુસ્નાતક કક્ષાના અભ્યાસક્રમોમાં ફીનું ધોરણ વધારો કરવા બાબત.

29.4 જુદા જુદા ડિપ્લોમા ઈન પોલીટેકનિક અભ્યાસક્રમમાં પ્રવેશ મેળવેલ વિદ્યાર્થીઓ માટે ડિપ્લોમા સર્ટિફિકેટ અને ટ્રાન્સક્રીપ્ટના નમૂનામાં જરૂરી ભૂલ સુધારો મંજૂર કરવા બાબત.

29.5 બી.ટેક. (એગ્રિ.એન્જિ) વિદ્યાશાખામાં NSS/ NCC/ફીઝીકલ એજ્યુકેશન (0+1) નોન ક્રેડિટેબલ કોર્સનો સમાવેશ પ્રથમ અને બીજા વર્ષમાં ચાલુ છે તથા બી.ટેક.(એગ્રિ.એન્જિ) વિદ્યાશાખાના વિનિયમોની આઈટમ.નં.૭ અને ૭.૪ મુજબ ત્રીજા અને ચોથા સેમેસ્ટરમાં ચાલુ કરવા બાબત.

29.6 પ્રથમ સેમેસ્ટરનો કોર્સ "ઈલેક્ટ્રીકલ સર્કીટ" (APE-101) તથા બીજા સેમેસ્ટરનો કોર્સ "કોમ્પ્યુટર પ્રોગ્રામીંગ એન્ડ ડેટા સ્ટ્રક્ચર્સ" (APE-102) ની



અદલા બદલી કરવા અંગે.

29.7 કૃષિ વિદ્યાશાખામાં આગામી સત્રાંત પરીક્ષાથી Make-up પરીક્ષા રદ કરવા બાબત.

29.8 To get accreditation with all India Council for Technical Education (AICTE), New Delhi.

29.9 "ડિપ્લોમા ઈન એગ્રિકલ્ચરલ એક્ષ્ટેન્શન સર્વિસીસ ફોર ઈનપુટ ડીલર્સ" અભ્યાસક્રમ બાબત.

29.10 Approval of list of eligible candidates for award of degrees at the Eighth Annual Convocation.

29.11 આણંદ કૃષિ યુનિવર્સિટીના સ્નાતક કક્ષાના વિદ્યાર્થીઓને સને ૨૦૧૦-૨૦૧૧ના વર્ષ માટે "કુલપતિ સુવર્ણચંદ્રક" મંજૂર કરવા બાબત.

29.12 આણંદ કૃષિ યુનિવર્સિટીના અનુસ્નાતક કક્ષાના વિદ્યાર્થીઓને સને ૨૦૧૦-૨૦૧૧ના વર્ષ માટે "કુલાધિપતિ સુવર્ણચંદ્રક" મંજૂર કરવા બાબત.

29.13 દાતાઓશ્રીઓના દાનના વ્યાજમાંથી સુવર્ણચંદ્રકો, ચંદ્રકો અને રોકડ ઈનામો મંજૂર કરવા બાબત.

29.14 નામદાર સરકારશ્રીના તા.૫/૯/૨૦૦૮ના પત્ર ક્રમાંક :ગકવ-૧૪૨૦૦૬-૩૨૮૨-ક-૨,ના નેટ પરીક્ષામાં થી મુક્તિ આપવા બાબતના પત્ર પહેલાં અને પછી વિદ્યાઉટ નેટ નિમણૂક પામેલા મદદનીશ પ્રાધ્યાપક અને તેની સમકક્ષને ત્રણ વર્ષ બાદ પણ નેટની પરીક્ષા પાસ કર્યેથી તેમનો અજમાયશી સેવા નિયમિત કરવા તથા ભારતીય કૃષિ અનુસંધાન પરિષદ, નવી

દિલ્હીના તા.૧૬/૧૨/૨૦૧૧ના અંગ્રેજી પત્ર ક્રમાંક : ૨૩(૪૬)/૨૦૧૦-ઈક્યુઆર(એજ્યુ.) મુજબ પી.એચ.ડી. ડિગ્રી ધરાવતા ઉમેદવારોને મદદનીશ પ્રાધ્યાપકની સીધી ભરતીમાં નેટ પરીક્ષામાંથી મુક્તિ આપવા બાબત.

29.15 Agenda with the permission of the Chairman

29.15(1) LATE SHRI KAMENDU C. VASAVADA MEDAL ના નામનો MEDAL અનુનાતક કક્ષાએ ડેરી વિદ્યાશાખાના “M.Tech. in Dairy Technology” વિષયના અભ્યાસક્રમમાં સૌથી વધુ ગુણ (O.G.P.A.) મેળવતા વિદ્યાર્થીને એનાયત કરવા અને તેના વિનિયમો મંજૂર કરવા બાબત.

29.15(2) LATE Dr. R. S. SHARMA GOLD MEDAL” ના નામનો GOLD MEDAL અનુસ્નાતક કક્ષાએ ડેરી વિદ્યાશાખાના “M.Tech./M.Sc. in Dairy Chemistry” વિષયના અભ્યાસક્રમમાં સૌથી વધુ ગુણ (O.G.P.A.) મેળવતા વિદ્યાર્થીને એનાયત કરવા અને તેના વિનિયમો મંજૂર કરવા બાબત.

29.15(3) “LATE SHRI KAMENDU C. VASAVADA MEDAL”ના નામનો MEDAL અનુનાતક કક્ષાએ ડેરી વિદ્યાશાખાના M.Tech. in Dairy Engineering વિષયના અભ્યાસક્રમમાં સૌથી વધુ ગુણ (O.G.P.A.) મેળવતા વિદ્યાર્થીને એનાયત કરવા

અને તેના વિનિયમો મંજૂર કરવા બાબત.

29.15(4) "LATE SHRI KAMENDU C. VASAVADA MEDAL"ના નામનો MEDAL અનુસ્નાતક કક્ષાએ ડેરી વિદ્યાશાખાના "M.Tech./M. Sc. in Dairy Microbiology" વિષયના અભ્યાસક્રમમાં સૌથી વધુ ગુણ (O.G.P.A.) મેળવતા વિદ્યાર્થીને એનાયત કરવા અને તેના વિનિયમો મંજૂર કરવા બાબત.

29.15(5) "Dr. A. D. Dave Medal"ના નામનો Gold Plated Silver Medal સ્નાતક કક્ષાએ વેટરનરી વિદ્યાશાખાના "Livestock Production and Management" વિષયના અભ્યાસક્રમમાં ચોથા સેમેસ્ટરના અંતે સૌથી વધુ ગુણ (C.G.P.A.) મેળવતા વિદ્યાર્થીને એનાયત કરવા અને તેના વિનિયમો મંજૂર કરવા બાબત.

29.15(6) "વોકેશનલ કોર્સ ઓન લેન્ડસ્કેપ ગાર્ડનિંગ" અભ્યાસક્રમ મંજૂર કરવા બાબત.

29.15(7) વોકેશનલ કોર્સીસ ઓન એગ્રિકલ્ચરલ એન્જિનીયરિંગ એન્ડ ટેકનોલોજી અભ્યાસક્રમ બાબત.

29.15(8) બં.અ.કૃષિ મહાવિદ્યાલયના દાતાશ્રીઓની બેઠકો પુનઃજીવિત કરવા બાબત.

29.15(9) આણંદ કૃષિ યુનિવર્સિટી વિદ્યાર્થી ઈન્ટરનેશનલ હોસ્ટેલના નિયમો મંજૂર કરવા બાબત.

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 Agriculture
- Faculty of Dairy Science
- Faculty of Veterinary Science & Animal Husbandry
- Faculty of Food Processing Technology & Bio-Energy
- Faculty of Agricultural Information Technology
- Faculty of International Agri-Business Management
- Faculty of Agril. Engineering and Technology
- Faculty of Post Graduate Studies

The constitution of faculty is given in *Appendix-5*

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.

### **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.

### **Faculties**

Sr. No.	Name of Board of Studies
<b>Faculty of Agriculture</b>	
1	Board of Studies of the subject of Crop Production
2	Board of Studies of the subject of Plant Science
3	Board of Studies of the subject of Plant Protection
4	Board of Studies of the Basic and Social Science subjects
<b>Faculty of Dairy Science</b>	
1	Board of Studies of the subject of Dairy Technology
2	Board of Studies of Basic subjects of Dairy Science Faculty
3	Board of Studies of Dairy Business Management
<b>Faculty of Veterinary</b>	
1	Board of Studies of the Basic Subjects of Veterinary Faculty
2	Board of Studies of the Pre-clinical subjects of Veterinary Faculty
3	Board of Studies of the Clinical subjects of Veterinary Faculty.
4	Board of Studies of the subjects of Animal Production
<b>Faculty of Food of Processing Technology and Bio-Energy</b>	
1	Board of Studies of subjects of Post Harvest Engineering and Technology.
2	Board of Studies of subjects of Food Science, Nutrition, Food Processing and Business Management.
3	Board of Studies of subjects of Agricultural, Horticultural, Livestock and Aqua-cultural Produce Processing and Food Engineering, Agricultural Engineering & Technology.
4	Board of Studies of subjects of Bio-Energy.
<b>Faculty of Agricultural Information Technology</b>	
1	Board of Studies of subjects of Agricultural Information Technology.
<b>Faculty of International Agri-Business Management</b>	
1	Board of Studies of subject of Agri-Business Economic & Finance.
2	Board of Studies of subject of Marketing Management & Production Management.
3	Board of Studies of subject of HRD & Personnel Management.
4	Board of Studies of subject of Communication IT & Project Management.
<b>Faculty of Agril. Engineering and Technology</b>	
1	Board of Studies of subject of Soil & Water Conservation Engineering
2	Board of Studies of subject of Farm Machinery & Power
3	Board of Studies of subject of Agril. Process & Engineering
4	Board of Studies of subject of Renewable Energy
<b>Faculty of Post-Graduate Studies</b>	
1	Board of Studies of Faculty of Post Graduate Studies.

The Board of Studies of all faculties specially considered the following six 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 Evaluation of examination results of all semesters and their analysis.
- 6 Review the syllabus in context to needs of state holder, frame the syllabus.



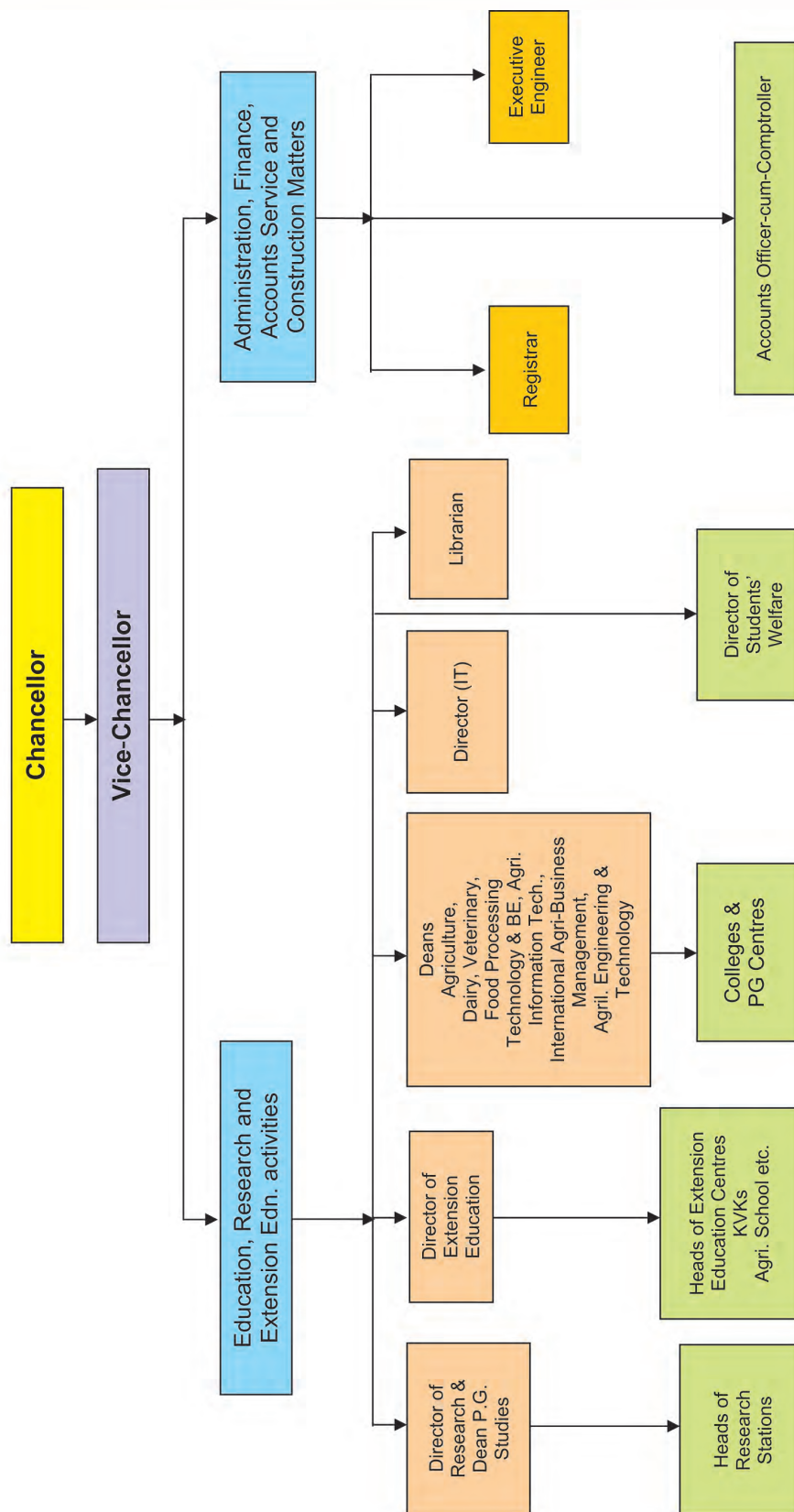
Sheth M.C. College of Dairy Science, Anand



College of Food Processing Technology & Bio-Energy, Anand

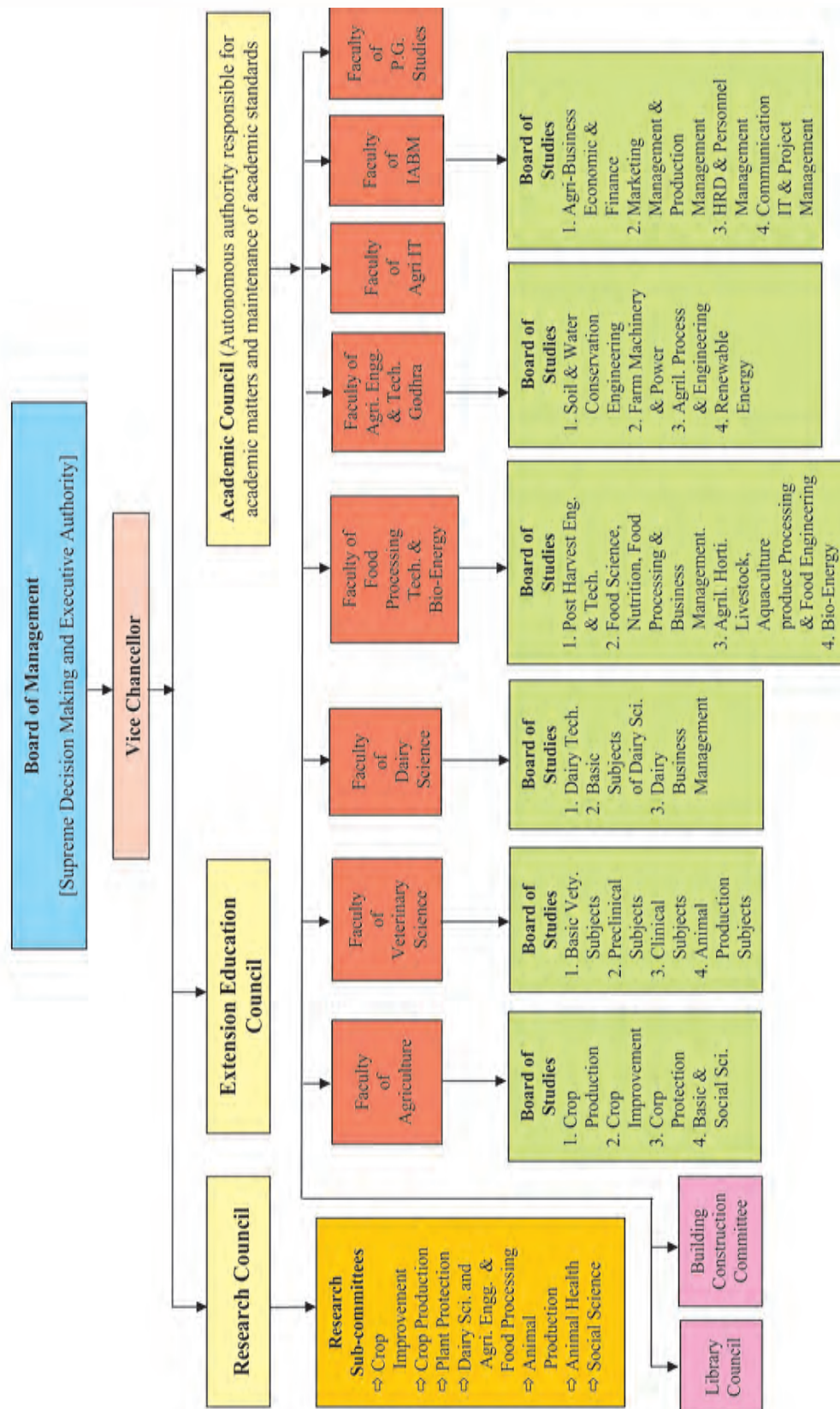


**Chart-1**  
**ORGANIZATIONAL SET-UP**



**Chart-2**

**Organizational Chart & Decision channels**



# 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 order to the Board of Management regarding appointment, dismissal, suspension of the officers, teachers and employees of the University.

Dr. A. M. Shekh, a renowned Agro-Meteorologist took over as the second Vice-Chancellor on 15-04-2011 and continued to be Vice-Chancellor of the University during the year under report.

As the second Vice-Chancellor of the Anand Agricultural University, Dr. A. M. Shekh followed the authorities like Academic Council, Faculties, Board of Studies of different groups of subjects, Research Council, Extension Council and made them effectively functional.

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

The Major contributions of Dr. A. M. Shekh as Vice Chancellor are as follows:

- Organized 7<sup>th</sup> *Krusha Mahotsav* of one month duration in all six districts of Middle Gujarat. The Mega event was organized at Petlad during May 12-14, 2012, in which more than 70000 farmers were benefited through exhibition.
- MoU between AAU and CIFA for establishment of Regional Research Centre for aqua-cultural activities.
- Establishment of The Educational Museum.
- C-DAP of middle Gujarat were prepared.
- Seed Village Production Programme was/were conducted.
- Decision Support System Software on Soil Health Card Project covering 10 lakh farmers of 18,000 villages of Gujarat through internet was implemented.
- Provided dynamic leadership to AAU Scientific Community having 7 colleges with different faculties, 5 polytechnics, 24 research stations, 16 extension centres including three KVKs under University and three KVKs with NGO's.
- During the year under report teachers and supporting/technical staff were appointed through systematic recruitment proceedings.



The leadership role played by Dr. A.M. Shekh 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 of 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.
- ♦ Streamlined the Research and Extension activities of university
- ♦ Streamlined admission and examination, reducing delay.

### State level Representation

Dr. A.M. Shekh has been nominated / appointed on the various State and National Level Committees by the competent authorities, viz.

- ♦ Gujarat State Biotechnology Mission (GSBTM)
- ♦ Invitee Member – Gujarat Agro Industries

Corporation, Ahmedabad

### ACTIVITIES AS NODAL OFFICER

#### Administrative Matters

Dr. A. M. Shekh, as a 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.

As the Nodal Officer, he has also provided constant guidance in the matter of academic and personnel/management and solved many problems with innovative approaches.

#### Academic and Examination Matters

As the Nodal Officer for Academic and Examination matters, Dr. A. M. Shekh successfully organized tedious and tiresome exercise of central admission at UG and PG level for four SAUs of Gujarat. 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 during 2011-12 are given below:

#### UNDER GRADUATE LEVEL (2011-12)

Degree	Number of Application received for admission	No. of student's admitted			
		AAU	JAU	NAU	SDAU
B.Sc.(Agri.) Hons.	5073	128	110	106	121
B.V.Sc. & A.H,		71	31	50	65
B.Tech. (DT)		54	-	-	-
B.Tech. (AET)		29	80	-	-
B.Tech. (AIT)		32	-	-	-
B.Tech. (FPT)		28	-	-	-

### POST GRADUATE LEVEL (2011-12)

Degree	Number of Application received for admission	No. of student's admitted			
		AAU	JAU	NAU	SDAU
M.V.Sc.	142	53	03	15	43
Ph.D. (Vet.)		09		02	04
M.Sc. (Agri.)/ M.Sc.	746+88	99	65	63	97
Ph.D. (Agri.)	170	29	17	31	27
M.Sc. (D.T.)/ M.Tech. (D.T.)	33	15	-	-	-
Ph.D. (D.T.)	05	02	-	-	-
M.Tech. (F.P.T.)	58	15	-	-	-
MBA (IAB)	83	30	20	-	-
M.Sc. (Horti.)	149	08	11	35	10
Ph.D. (Horti.)		02	03	15	01
M.Sc. (Forestry)		-	-	10	-
Ph.D. (Forestry)		-	-	02	-
M.Tech. (Agri. Engg.)	27	22	-	-	-
M.F.Sc.	19	-	13	-	-
Ph.D	06	-	-	03	-

### POLYTECHNIC (2011-12)

Diploma	Number of Application received for admission	Actual admission given in SAU's			
		AAU	JAU	NAU	SDAU
Agriculture, Anand	1616	35	35	35	35
Agriculture, Vaso		35	35	35	35
Horticulture		35	35	35	35
Agri.Engg		35	35	35	35
Nutrition & Dietetics		35	35	35	35

### University Administration

Dr. A. M. Shekh provided direction and pace to the university through participative management and committee approaches. During the year under report, 5 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. 76 new research projects to the tune of Rs.3,208.08 lakh were sanctioned during the year under report by Government of

Gujarat, Government of India, Overseas and other agencies.

### **Seminars and Meetings**

During the year under report Dr. A.M. Shekh attended various seminars and meetings and presented papers. The details are as under:

- IAUA Interaction Meeting for Improving Higher Education at New Delhi on April 22, 2011.
- Stockholder Consultation in R & D in Food Processing Seminar at New Delhi on June 29, 2011.
- ICAR Foundation day & Award Ceremony at ICAR, New Delhi on July 15, 2011.
- Brain Storming Session on Human Resources at Nagpur on August 5, 2011.
- Green revolution IT farming Industries conference at Ahmedbad on August 5, 2011.
- ICAR,SAU Dean's Committee Meeting held at Sardarkrushinagar Dantiwada Agricultural University, Sardarkrushinagar on August 12, 2011.
- GSBTM Technical Advisory Committee Meeting at Gandhinagar on September 13, 2011.
- Agril.-leadership Award and Leadership Summit – 2011 at Tajpalace, New Delhi on September 14, 2011.
- 2<sup>nd</sup> Special Vice-Chancellor's Meeting at NASV, New Delhi on September 26, 2011.
- Gujarat Agro Industries Board of Director's Meeting at Gandhinagar on September 28, 2011.
- State Credit Seminar, NABARD on December 7, 2011.
- 5<sup>th</sup> Agro Meteorological Research & Science to Climate Changes Seminar at Bidhanchandra Agril. University at Mohanpur on December 9-10, 2011.
- Vice Chancellor Convention at Assam Agril. University, Jorhat on December 13-14, 2011.
- Gujarat State Biotechnology Mission Committee meeting at Gandhinagar on December 17, 2011.
- Annual Vice Chancellor's Conference at New Delhi on February 15-16-17, 2012.
- Gujarat Agro Industries Board meeting at Gandhinagar on March 26, 2012.

# CHAPTER 4

## Human Resource (HR) Activities

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

Agricultural Universities are mainly working on three aspects i.e. teaching, research and extension. Teaching imparts knowledge, research provides wisdom, which ultimately leads to strengthening of extension activities in agriculture sector. Manpower at University is broadly divided into two parts i.e. technical and non-technical. Technical manpower includes staff involved in teaching and research. They are positioned as Professor, Associate Professor, Assistant Professor, Research Scientist, Associate Research Scientist, Assistant Research Scientist, etc. Non-Technical personnel are concerned with administrative and allied activities.

Anand Agricultural University was formed from erstwhile Gujarat Agricultural University during May 2004 with three colleges for Under Graduate & Post Graduate programme and 4 Diploma schools for imparting agricultural and

allied science education. Technical personnel included the staff at the main campus as well as 16 research stations, who carried different activities like crop improvement, crop protection, live stock management & improvement practices etc. at their domain of work. Our researches have not only revealed excellence in agriculture but also other allied sectors like dairy science, veterinary, engineering etc.

Presently, Anand Agricultural University has total 2288 sanctioned posts, out of which 1386 are filled and remaining 902 posts are vacant. Increase in numbers of post are due to the newly introduced faculties like Agricultural Information Technology, Food Processing Technology & Bio-Energy, Agricultural Engineering and P.G. courses of M.B.A. (International Agri-Business).

AAU organizes various programmes and activities to expand wings of knowledge of its scientists and the staff.

During the year under report following programmes; conference / trainings / workshops / seminars / winter school / group meeting are organized by the University scientists.

### Conference/Seminar

- One day Technical Seminar on “Emerging Horizons in Veterinary profession” Organized by Alumni Association of Veterinary College



Anand (AAVCA) at Veterinary College, Anand on 27<sup>th</sup> August, 2011.

- Organised two days seminar on Role of Veterinarians in Wildlife Health in collaboration with State forest Department, GOG, Gandhinagar during 7-8<sup>th</sup> October, 2011.
- National conference on “Cow based Agriculture, Health and Environment” organized by Gauseva Ayog Gujarat and Anand Agricultural University, Anand held at Anand Agricultural University on 25-26 Feb, 2012.
- Under the Swarnim Gujarat year, one day seminar entitled “Technology Interventions to Enhance Camel Productivity” was organized on 13<sup>th</sup> March, 2011 at Bhuj first time in Gujarat with collaboration of Department of Animal Husbandry, Government of Gujarat, Samasta Mahajan Trust, Mumbai and Sahjeevan Trust, Bhuj and camel health check up camp was organized on 14<sup>th</sup> March, 2011 at Chhari Dhandh, Bhuj.

### **Training/Winter School/Workshop**

- Two Training Programmes on “Quality Seed Production of Forage Crops” were organized at Anand under Mega Seed Project during 25<sup>th</sup> January 2011 and 16<sup>th</sup> March 2011.
- Training programme on “Implementing Good Agricultural Practices (GAP)” under FICCI-RNE Project organized by Department of Plant Pathology, B. A. College of Agriculture, AAU, Anand during 18-19 April, 2011.
- Department of Ag. Meteorology had organised

DSSAT modeling training workshop for Agro-advisory services in July 2011 and crop modeling training on groundnut at Anand during 8-12 August 2011.

- 21 days Winter School on “Diagnostics, Genomics, Implications and Integrated Management of Plant Pathogens” at Department of Plant Pathology, B. A. College of Agriculture, AAU, Anand during 2-22 November, 2011.
- One Day training programme on “Seed Processing and storage for Quality Seed Production” was organized on 6<sup>th</sup> September, 2011 at AAU, Anand.
- One Day training programme on “Quality Seed Production in Hybrid Castor” was organized on 8<sup>th</sup> December, 2011 at AAU, Anand.
- One Day training programme on “Quality Seed Production and Storage in Wheat” was organized on 5<sup>th</sup> March, 2012 at AAU, Anand.
- One Day training programme on “Good Agricultural Practices for Quality Seed Production” was organized during 8<sup>th</sup>-20<sup>th</sup> March, 2012 at AAU, Anand.
- Two training programmes of three days each for the farmers of Vadodara district on seed production technology in different crops were organized at Anand.
- Four Field Scout Trainings programmes of one day each organized in the year 2011-12 for the Agricultural Field Scouts at Anand.
- “A two days Farmers Training” programme on cultivation of Medicinal and Aromatic Crops



was organized on 9-10 February, 2012. Dr. S. Maiti, Director, Directorate of Medicinal and Aromatic Plants Research, Boriavi, Dist.-Anand was the Chief Guest of the function. During the function the Book on “Cultivation of Aromatic Crops” was released and distributed to all participants.

- Total 23 training programmes were organized for the Dairy as well as Non-Dairy Technologists working in various capacities in the commercial dairy plants and marketing federation of the country at Anand by the Faculty of Dairy Science in collaboration with Vidya Dairy, Anand during the year 2011-12.
- National Training Programme on “Development of Value added a fermented symbiotic functional food” was conducted at SMC College of Dairy Science, AAU, Anand from 29<sup>th</sup> November to 12<sup>th</sup> December, 2011.
- Two ASCAD Training Programmes on “Advances in Diagnostic Microbiology” were conducted at AAU, Anand during 7<sup>th</sup>-12<sup>th</sup> November 2011 and 21-26 Nov 2011.
- Four ASCAD Training Programmes on “Laboratory Techniques in Disease Diagnosis” were conducted at AAU, Anand during the year 2011-12.
- Two ASCAD Training programmes were organized for Veterinarians of Department of Animal Husbandry, Government of Gujarat on “Gynaecological Aspects including Sonography and AI Techniques” in Sept. 2011 and Feb. 2012 at AAU, Anand.
- The refresher training course under ASCAD

on Advances in Poultry Breeding, Health and Management was organized during 23-28 January, 2012 at AAU, Anand.

- Two trainings to impart training on feeding, breeding and management of goats. were conducted for Goat keeper’s on 19<sup>th</sup> December, 2011 and 26<sup>th</sup> March, 2012 at AAU, Anand.
- ICAR sponsored Short Course entitled “Recent Advances in Crop Residue Based Total Mixed Rations for Improving Animal Productivity” was organized during 15-24<sup>th</sup> February, 2012 at AAU, Anand.
- The Awareness programme on CLIMATE CHANGE was organized at Chakalasi village of Anand taluka on 15 March, 2012.
- A two days training cum workshop entitled “Awareness for remedies for farmer’s problem with concern to chemical fertilizers” was jointly organized for all MBA college of SAU’s by Ocean Agro India Ltd. and International Agri-Business Management Institute on 1-2 June, 2012.
- Under the ICAR sponsored Tribal Sub Plan “Benefits of supplementing most limiting nutrients to dairy animals of Vadodara and Panchmahal districts of Gujarat State” two workshops were organized by Animal Nutrition Research Department, at Guda village, Taluka Chhotaudepur , district Vadodara on 26<sup>th</sup> March 2012 and at Amthani village, Taluka Kadana , District Panchmahal on 27<sup>th</sup> March 2012. About 100 livestock owners were participated in each workshop.

## Group Meetings

- A group meeting of “Goat Breeders’ Association of Gujarat” was organized on 19<sup>th</sup> December 2011 at Anand Agricultural University, Anand. The goat breeders as well as goat keepers across the state were remained present in the meeting.
- 17<sup>th</sup> Biennial Group Meeting of All India

Coordinated Research Project on Plant Parasitic Nematodes with Integrated Approach for Their Control was organized during 19-21 January 2012 at AAU, Anand.

- Indian Association of Veterinary Pathologist Gujarat Chapter 3<sup>rd</sup> Annual Meet and Technical Seminar was held on 28<sup>th</sup> August, 2011.

## Managerial Training From 01/04/2011 to 31/03/2012

Sr. No.	Name of Training	Place	Duration period	Total participants
1	Administrative personnel of S & T Department of Govt. of India.	New Delhi	12/09/2011 to 30/09/2011	02

## Human Resource

The staff position as on 31-03-2012 in the Anand Agricultural University is given as under:

### Staff Position as on 31-03-2012

Sr. No.	Cadres	Sanctioned post	Filled up Posts	Vacant posts
1	<b>University Officers</b>			
	A Vice-Chancellor	1	1	0
	B Director of Research	1	1	0
	C Registrar	1	0	1
	D Director of Extension Education	1	1	0
	E Account Officer-cum-Comptroller	1	0	1
	F Director ( I.T.)	1	0	1
	G Director, Students’ Welfare	1	0	1
	H University Librarian	0	0	0
	<b>Total</b>	<b>7</b>	<b>3</b>	<b>4</b>
2	<b>Teaching / Research / Extension</b>			
	A Principal	7	5	2
	B Associate Director of Research	2	2	0
	C Asso. Director of Extension Education	1	1	0
	D Professor & equivalent	76	44	32
	E Associate Professor & equivalent	200	129	71

Sr. No.	Cadres	Sanctioned post	Filled up Posts	Vacant posts
	F Asstt.Professor & equivalent	352	249	103
	G Asstt. Librarian	1	1	0
	H Physical Instructor	2	1	1
	I Farm Manager	4	2	2
	J Asstt. Farm Manager	2	1	1
<b>Total</b>		<b>647</b>	<b>435</b>	<b>212</b>
3	<b>Administration - Class-I</b>			
	A Assistant Registrar	2	1	1
	B Adm-cum-Accounts Officer	1	0	1
<b>Total</b>		<b>3</b>	<b>1</b>	<b>2</b>
4	<b>Non Technical Class-I</b>			
	A Executive Engineer	1	1	0
	B Deputy Engineer	2	1	1
	C Medical Officer	1	0	1
<b>Total</b>		<b>4</b>	<b>2</b>	<b>2</b>
5	<b>Administration - Class-II</b>			
	A Accounts Officer (Cash)	1	1	0
	B Accounts Officer (PF/Cash)	1	0	1
	C Assistant Adm. Officer	7	4	3
	D Audit Officer	1	0	1
	E Dy. Comptroller (Redeployed from SRA)	1	1	0
<b>Total</b>		<b>11</b>	<b>6</b>	<b>5</b>
6	<b>Adm- Class -III</b>			
	A Office Superintendent	28	11	17
	B Head Clerk	22	13	09
	C Senior Clerk	105	80	25
	D Junior Clerk	156	91	65
<b>Total</b>		<b>311</b>	<b>195</b>	<b>116</b>
7	<b>Technical Class -III</b>			
	A Agril Officer/S.R.A.(Agri) & equivalent	129	29	100
	B Programme Assistant	9	1	8
	C Veterinary Officer & equivalent	15	1	14
	D S.R.A. (Agri. Engg)	12	7	5
	E S.R.A. (Dairy)/Dairy Supervisor	17	2	15
	F Agril Supervisor & equivalent	54	7	47
	G Agril Asstt. & equivalent	178	170	8
<b>Total</b>		<b>414</b>	<b>217</b>	<b>197</b>

Sr. No.	Cadres	Sanctioned post	Filled up Posts	Vacant posts
8	<b>Non Technical – Class- III</b>			
	A Steno Grade – I	3	3	0
	B Steno Grade – II	15	7	8
	C Steno Grade –III	11	1	10
	D Lab Technician & equivalent	86	47	39
	E Driver	57	35	22
	F Tractor Driver	21	10	11
	G Stockman / Live Stock Assistant	12	3	9
	<b>Total</b>	<b>205</b>	<b>106</b>	<b>99</b>
9	<b>Isolated Cadres (Details given below)</b>	<b>88</b>	<b>56</b>	<b>32</b>
10	<b>Class – IV Cadres (Regular)</b>	<b>336</b>	<b>178</b>	<b>158</b>
11	<b>Posts Created as per Supreme Court directives.</b>			
	A Class–III(Jr.Clerk/Agril Asstt./Driver/Tractor Driver )	15	13	2
	B Class - IV	247	174	73
	<b>Total</b>	<b>262</b>	<b>187</b>	<b>75</b>
	<b>Grant Total</b>	<b>2288</b>	<b>1386</b>	<b>902</b>

#### Details of Isolated Cadres (as mentioned at Sr.No.9 above)

Sr. No.	Cadres	Sanctioned post	Filled up Posts	Vacant posts
1	Junior Engineer (Civil/Electric)	4	2	2
2	Programmer	4	3	1
3	Data Processor	1	0	1
4	Library Assistant	1	1	0
5	Senior Technician	2	1	1
6	Instructor (Baking /Science)	3	0	3
7	Senior Lab Technician (Electronics)	1	0	1
8	Draftsman	1	0	1
9	Junior Instructor	2	0	2
10	Junior Instructress	1	1	0
11	Assistant Instructor	1	1	0
12	Computer Operator	2	1	1
13	Artist	1	0	1

Sr. No.	Cadres	Sanctioned post	Filled up Posts	Vacant posts
14	Artist/ Photographer	1	1	0
15	Librarian	1	0	1
16	Mechanic-cum-Draftsman	1	1	0
17	Junior Instructor (Bakery)	1	0	1
17	Junior Research Assistant (Dairy)	1	1	0
18	Senior Wireman	1	0	1
19	Compounder	2	1	1
20	Qualified midwife	1	0	1
21	Project Operator	2	1	1
22	Electrician	1	0	1
23	X- ray Technician	2	1	1
24	Proof reader	1	0	1
25	Data Entry cum Disk Librarian	1	1	0
26	Hatchery Supervisor /Chick Sexer	1	0	1
27	Fitter	2	1	1
28	Boiler Attendant	3	2	1
29	Compressor Attendant	2	2	0
30	Junior Mechanic-cum-wiremen	1	1	0
31	Balwadi Teacher	1	1	0
32	Sewing Teacher	1	1	0
33	Teaching Assistant	3	1	2
34	Craft Teacher	2	1	1
35	Bakery Operator	1	1	0
36	Craftsman(Welder,Fitter,Turner,Electrician)	4	4	0
36	Statistical Assistant	1	1	0
37	Carpenter	2	2	0
38	Blacksmith	2	2	0
39	Junior Wireman	2	2	0
40	Sanitary Inspector	1	0	1
41	Mechanic/Sr. Mechanic/Jr. Mechanic	5	4	1

Sr. No.	Cadres	Sanctioned post	Filled up Posts	Vacant posts
42	Tracer/Draftsman Tracer	2	2	0
43	Wireman (Electrical)	1	0	1
44	Hostel Warden	8	7	1
45	Plumber	1	1	0
46	Foreman Instructor	2	2	0
47	Supervisor Instructor	2	2	0
<b>Total</b>		<b>88</b>	<b>56</b>	<b>32</b>

### New Appointments

During the year under report, following posts were filled up by direct recruitment/by promotion under various cadres is given in Table 4.1.

**Table 4.1 Appointments during the year (1.4.2011 to 31.3.2012)**

Sr. No.	Cadre	Direct Recruitment/ Promotion	Total
1	Professor	Direct Recruitment	05
2	Associate Professor	Direct Recruitment	25
3	Assistant Professor	Direct Recruitment	18
4	Administrative Officer Class-II	Promotion	01
5	Agricultural Officer	Direct Recruitment	08
6	Senior Research Assistant (Agri Eng.)	Direct Recruitment	03
7	Senior Research Assistant (Dairy)	Direct Recruitment	02
8	Office Superintendent	Promotion	02
9	Head Clerk	Promotion	08
10	Senior Clerk	Promotion	23
11	Junior Clerk	Direct Recruitment	01
12	Supervisor Instructor Grade-3	Direct Recruitment	02
13	Foreman Instructor Grade-3	Direct Recruitment	02
14	Boiler Attendant	Direct Recruitment	01
15	Hostel Assistant Warden	Direct Recruitment	07

### Retirement:

During the year under report, number of persons in Teaching & Non-teaching staffs retired from the University services is given in Table 4.2.



**Table 4.2 Number of persons retired by superannuation/Voluntarily/ Resignation/ Death / Appointed in other University during the year (01.04.2011 to 31.03.2012)**

Sr. No.	Cadre	Number of person retired on				
		Retired	Voluntarily	Resignation	Death	Appointed in other University
1	Professor	6	2	1	1	-
2	Asso. Professor	2	2	1	1	-
3	Asstt. Professor	6	1	4	1	4
4	Accounts Officer-cum-Comptroller	1	-	-	-	-
5	Asstt.Registrar (Adm)	1	-	-	-	-
6	Asstt.Adm.Officer/ A/c Officer (Cash)	2	-	-	-	-
7	Steno Gr.I	1	-	-	-	-
8	Agri. Officer	6	-	2	-	-
9	SRA (Dairy)/ Dairy Supervisor	-	-	1	-	-
10	Agri. Supervisor	3	-	-	1	-
11	Agri. Assistant	5	-	-	-	-
12	Office Supdt.	4	-	-	-	-
13	Head Clerk	1	-	-	-	-
14	Senior Clerk	7	1	-	-	-
15	Junior Clerk	4	-	3	-	-
16	Driver	3	-	-	-	-
17	Tractor Driver	3	-	-	-	-
18	Junior Instructor	-	1	-	-	-
19	Teaching Asstt.	1	1	-	-	-
20	Stat. Assistant	1	-	-	-	-
21	Wireman	-	-	-	1	-
22	Class-4	15	2	-	5	-



International Agribusiness Management Institute, Anand



College of Agricultural Information Technology, Anand



# CHAPTER 5

## Education

### Admission Procedure (Graduation and Diploma course)

AAU is mainly a residential University and follows Semester system of education. Courses of B.Sc.(Hons.) Agriculture, B. Tech. (Dairy Technology), B. Tech. (Agricultural Engineering), B.Tech. (Agricultural Information Technology), B. Tech. (Food Processing Technology) study are of four years duration, divided into eight semesters, while B.V.Sc. & A.H. course is of five years duration, divided into ten semesters. The

medium of instruction is English. The Universities impart resident instruction for the graduate programmes at their constituent colleges with the eligibility and admission requirements as given in Table 5.1. Under the Semester system of education, all students are compulsorily required to stay in a University hostel, except otherwise permitted. Through online receipt of applications, a common merit list is prepared on the basis of Academic Regulations. Girl students (except girls of NRI/payments seats) are exempted from tuition and hostel fees.

**Table 5.1 Eligibility criteria for admission in various degree programmes**

Name of the graduate programme	Category wise minimum % requirement of marks in theory subjects in Physics, Chemistry and Mathematics / Biology of HSSCE examination			
	Category			
	General	SC	ST	SEBC
B.Sc. (Hons.) Agriculture	40	35	35	40
B.Sc.(Hons.) Horticulture	40	35	35	40
B.V.Sc. & A.H.	Marks of theory subjects in Physics, Chemistry and Biology of HSSCE examination			
	50	40	40	40
	A candidate under General Category must have passed in each of the subjects (Physics, Chemistry and Biology & English) and obtaining 50% aggregate marks in these subjects at the qualifying examination. The student shall be admitted only on the basis of merit in GUJCET marks in Physics, Chemistry & Biology in the ratio of 30:30:40. No other weightage shall be considered for the admission.			

	Marks of theory subjects in Physics, Chemistry and Mathematics of HSSCE examination			
B.Tech. (Agricultural Engineering)	40	35	35	40
B.Tech. (Agricultural Information Technology)	40	35	35	40
B.Tech. (Food Processing Technology)	40	35	35	40
B.Tech. (Dairy Technology)	40	35	35	40
	Admission will be considered on the merit basis of 60% of PCM theory and 40% PCM GUJCET marks.			

Students who have passed Secondary School Certificate Examination with English as compulsory subject are eligible for admission at three years (six semesters) Diploma programme in various subjects run at the Polytechnics of the University.

The college wise details i.e., number of seats, actual admitted and passed out students for the academic year 2011-2012 are given in Table 5.2.

**Table 5.2 Students intake, admitted and passed out in different graduation programme for academic year 2011-2012**

Degree & its duration	Name of the College	Admission Capacity			No of students	
		Gen / SC / ST / OBC	NRI / Payment	ICAR / VCI	Admitted	Passed
B.Sc. Hons. (Agri.) 4 years (8 semesters)	B. A. College of Agriculture, Anand	94	20	12	110	76
B.V.Sc. & A.H. 5 years (10 semesters)	College of Vety. Sci. & A. H., Anand.	57	15	08	68	67
B.Tech. (Dairy Tech.) 4 Years (8 Semesters)	Sheth M. C. College of Dairy Science, Anand.	36	15	06	55	48
B.Tech. (AET) 4 years (8 Semesters)	College of Agril. Engineering & Technology , Godhra	30	0	05	29	28
B.Tech. (AIT) 4 years (8 semesters)	College of Agricultural Information Technology, Anand.	30	0	05	32	-
B.Tech. (FPT) 4 years (8 semesters)	Food Processing Technology & Bio-Energy, Anand.	30	0	05	29	-

The detail of number of seats and actual admitted & passed out students different

polytechnics for the academic year 2011-2012 are given in Table 5.3

**Table 5.3 Students intake, admitted and passed out in different diploma programme for academic year 2011-2012**

Name of the Diploma Programme	Name of the polytechnic College	Admission capacity	No of students	
		Gen/ SC/ ST / OBC	Admitted	Passed
Diploma in Agriculture 3 years	Polytechnic College of Agriculture, Anand	35	35	23
	Polytechnic College of Agriculture, Vaso	35	35	-
Diploma in Agricultural Engineering 3 years	Polytechnic College of Agricultural Engineering, Dahod	35	35	14
Diploma in Food Science & Home Economics. 3 years	Polytechnic College of Food Science & Home Economics, Anand	35	35	-
Diploma in Horticulture. 3 years	Polytechnic College of Horticulture, Vadodara	35	35	22

### Admission Procedure (Post Graduate)

A candidate aspiring to take admission in PG studies should have a graduate degree of the related field with an OGPA of not less than 6.00/10.00. A basic science graduate should have 60% in aggregate as well as in the field in which he/she seeks admission.

Entrance test and personal interview are conducted and admission is given as per the intake capacity.

For admission in International Agri. Business Management Institute, graduates of agriculture and its allied science are eligible. Selection is 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 & 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

Intake capacity for Post Graduate programmes in a particular discipline fixed on the basis of the concerned department's

infrastructure and the experts / recognized teachers available. On the basis of the decision taken by the Academic Council, the intake capacity has been fixed and shown in Table 5.4.

**Table 5.4 Intake capacity in different faculty Intake capacity in different faculty for the year 2011-2012**

### Agriculture Faculty

Sr. No.	Subject	M. Sc. (Agri.)		Doctorate + Payment	Total
		Master + Payment	ICAR		
1	Agronomy	20+3	05	5+0	33
2	Ag. Chem. & Soil Sci.	15+1	04	2+1	23
3	Biochemistry	03+0	--	1+0	04
4	Pl. Breeding & Genetics	24+4	06	6+2	42
5	Agril. Entomology	18+4	05	3+1	31
6	Ag. Statistics	04+0	01	2+0	07
7	Plant Pathology	12+1	03	3+0	19
8	Agril. Economics	04+1	01	2+0	08
9	Extension Education	22+2	06	4+0	34
10	Crop/Plant Physiology	04+0	01	1+0	06
11	Agril. Meteorology	03+0	--	2+0	05
12	Nematology	04+0	01	2+0	07
13	Agril. Microbiology	05+1	01	-	07
14	Plant Molecular Biology & Biotech.	07+3	02	1+1	14
15	Seed Technology	02+0	--	1+0	03
<b>TOTAL</b>		<b>147+20</b>	<b>36</b>	<b>35+5</b>	<b>243</b>

### Horticulture Faculty

Sr. No.	Subject	M. Sc. (Horti.)		Ph. D.	Total
		Open / ST/ SC/ SEBC	ICAR		
1	Fruit Science	10+0	03	2+1	16



### Veterinary Science Faculty

Sr. No.	Subject	M. V. Sc.		Doctorate + Payment	Total
		Master + Payment	ICAR		
1	Anatomy	8+0	02	2+0	12
2	Veterinary Pathology	6+1	01	1+0	09
3	Parasitology	6+0	01	2+0	09
4	Veterinary Microbiology	3+0	01	1+0	05
5	Animal Veterinary Physiology	1+0	-	1+0	02
6	Livestock Production & Management	8+0	02	1+0	11
7	Animal Genetics and Breeding	3+0	-	1+0	04
8	Veterinary Surgery & Radiology	8+2	02	3+1	16
9	Veterinary Pharmacology	3+1	-	-	04
10	Veterinary Obstetrics and Gynaecology	7+2	02	2+1	14
11	Veterinary Clinical Medicine, Ethics and Jurisprudence	7+1	02	1+1	12
12	Animal Nutrition	6+0	02	1+0	09
13	Veterinary Public Health	-	-	2+0	02
14	Poultry Science	10+0	02	-	12
15	Animal Biotechnology	10+2	02	3+2	19
16	Veterinary & Animal Husbandry Extension	3+0	-	1+0	04
17	Veterinary Epidemiology & Preventive Medicine	-	-	-	-
18	Veterinary Biochemistry	1+0	-	1+0	02
<b>TOTAL</b>		<b>90+9</b>	<b>19</b>	<b>23+5</b>	<b>146</b>

### Dairy Faculty

Sr. No.	Subject	M. Sc. / M.Tech.		Doctorate + Payment	Total
		Master + Payment	ICAR		
1	Dairy Technology	11+1	03	3+0	18
2	Dairy Engineering	7+1	02	1+0	11
3	Dairy Microbiology	4+1	01	1+0	07
4	Dairy Chemistry	3+1	01	1+0	06
<b>TOTAL</b>		<b>25+4</b>	<b>07</b>	<b>6+0</b>	<b>42</b>

### Food Processing Technology Faculty

Sr. No.	Subject	M.Tech.(FPT)		Doctorate + Payment	Total
		Master + Payment	ICAR		
1	Food Processing Technology	6+1	01	5+2	15

### Agribusiness Management Faculty

Sr. No.	Subject	MBA		Doctorate + Payment	Total
		Master + Payment	ICAR		
1	International Agribusiness	30+10	07	-	47
The student of MBA (International Agri Business) will be deputed to abroad for project work, however travel cost will be borne by the candidates.					

Sr.No.	Subject	Anand	
		Master	Doctorate
Horticulture & Forestry			
1	Fruit Science	8+2	-

Sr.No.	Subject	Anand	
		Master	Doctorate
PG Diploma			
1	Agricultural Information Technology (Part Time)	15+0	-

**Note :** 15% seats are reserved for ICAR/GOI candidates

### Post-Graduate study centre

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

### Nodal Officer

As the Nodal Officer for Academic and Examination, Dr. A. M. Shekh 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

arranged for smooth conduct of examinations and paper evaluation.

### 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 admission to various degree courses at 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 & Vice Chancellor, Anand Agricultural University.

### Admission and Output

The advertisement was published in leading daily news papers for the admission. The application were processed through computer OMR system and merit list was prepared and

declared on internet to call candidates for personnel interview / counseling. During the year under report, details of applications received and students admitted in four SAUs are given in Table 5.5.

**Table 5.5 Student Admitted in Four SAUs (2011-12)**

Degree	Actual admission given Anand/Junagadh/ Navsari/Sardar Krushi Nagar
<b>Under Graduate</b>	
B.Sc. (Agri)	432
B.V.Sc. & A.H.	145
B.Tech (DT)	91
B.Tech (AET)	100
B.Tech (AIT)	-
B.Tech.(FPT)	-
<b>Post Graduate</b>	
M.V.Sc.	53
Ph.D (Veterinary)	08
M.Sc.(Agri.)/M.Sc.	122
Ph.D (Agri.)	33
M.Sc.(D.T.)/M.Tech(Dairy)	21
Ph.D. (Dairy)	07
M.Tech (FPT)	14
Ph.D	-
IABM	31
M.Sc.(Horti)	10

### Passed Output (Graduate and Post Graduate) of AAU

Students passed in different faculties at Graduate, Masters and Doctorate during the year under report is given in Table 5.6

**Table 5.6 The number of students out with different level of success during the academic year 2011-2012**

Degree	First class with Distinction	First class	Second Class	Pass Class	Total
<b>Graduate</b>					
B.Sc.(Agri.)	08	49	18	01	76
B.V.Sc. & A.H.	07	34	26	-	67
B.Tech.(DT)	09	15	24	-	48
<b>Post Graduate</b>					
M.Sc.(Agri.)	11	64	39	-	114
M.Sc.	-	-	-	-	-
M.V.Sc.	06	26	07	-	39
M.Sc.(Dairying)	-	-	02	-	02
M.Tech. (DT)	-	04	01	-	05
M.Tech. (FPT)	-	06	01	-	07
Ph.D. Dairy	-	-	-	-	01
Agriculture	-	-	-	-	14
Veterinary	-	-	-	-	09
MBA (IAB)	03	20	15	-	38

## Convocation

### Eighth Annual Convocation

February 14, 2012 was the historic day for Anand Agricultural University as Seventh Annual Convocation was held in the presence of H.E., Governor of Gujarat and the Chancellor of the University, Dr. Shrimati Kamla, the Guest of Honour Shri Dileepbhai Sanghani Hon'ble Minister of Agriculture Gujarat State, the Chief Guest Shri Pravin K.Laheri, IAS (Retd.), Former Chief Secretary, Govt. of Gujarat.

Shri Modha Kaushalkumar a student of Faculty of Agriculture and Shri Fefar Dhaval Tribhuwanbhai student of Faculty of Veterinary

Science were awarded Chancellor's Gold Medal for Ph.D and Master's degree respectively. Also, Shri. Vikram Bairwa, a student of Faculty of Agriculture and Kum. Jyotika, a student of Faculty of Veterinary Science and Shri Parekh Gaurav Bhadresh, a student of Faculty of Dairy Science were awarded Vice-Chancellor's Gold Medal. The list of Gold Medal with name of Faculty and students shown in *Appendix-6* in detail.

H.E. Governor of Gujarat and Chancellor of AAU, Anand Dr. Shrimati Kamla conferred the Degrees on the graduates and Post-graduates in person and in absentia. Total 442 graduate and Post-graduate candidates received the degrees at the Convocation.









# CHAPTER 6

## Research

More than 60% of Indian population depends on agriculture for their livelihood. Agriculture has potential to enhance socio-economic conditions of millions of Indians. Anand Agricultural University is working with the main objective of enhancing production and productivity of agricultural commodities in Gujarat and Nation as a whole. University has high standards in the research of different disciplines of agriculture and related fields such as Veterinary Science, Animal Science, Dairy Science, Food

Processing, Agriculture Engineering, Agriculture Business Management, Agriculture Information Technology etc. The research is being carried out on multi-disciplinary aspects considering the needs of farming community of Gujarat state and nation. Efforts of scientists of Anand Agricultural University helped in development of agricultural research and related fields.

This chapter gives details of research work carried by different departments of Anand Agricultural University during 2011-2012.

**Table- 6.1: Agro-climatic zone wise Research Stations of AAU with available land and activities**

Name of Centre		Total area (ha.)	Cultivable area (ha.)	Research activity on
<b>MIDDLE GUJARAT AGRO-CLIMATIC ZONE-III</b>				
<b>1</b>	<b>Zonal Research Station, Anand</b>			
i	Bidi Tobacco Research Station	25.47	23.39	Crop improvement in Tobacco as well as development of package of practices of tobacco and seed production
ii	Main Forage Research Station	18.44	16.65	Crop improvement in Forage crops as well as development of package of practices of forage crops and seed production
iii	Regional Research Station (RRS)	43.51	41.49	Crop improvement work on Bajra, Cotton, Wheat, Pulses and Oil seed crops as well as agronomical research and water requirement, research work on important crops of the region
iv	Main Vegetable Research Station	23.99	22.96	Crop improvement work on Vegetable Crops as well as development of package of practices of Vegetable Crops and seed production

Name of Centre		Total area (ha.)	Cultivable area (ha.)	Research activity on
v	Centre of Excellence on Medicinal & Aromatic Plants	7.55	7.30	Crop Improvement work as well as production technology of Medicinal & Aromatic Plants
vi	Centre of Excellence on Biotechnology	2.55	2.55	Agril. Science, Animal Science and Food Biotechnology
vii	Centre of Organic Farming	-	RRS and College Agronomy Farm	Organic farming of different crops including use of vermicompost, FYM cakes, Biocontrol agents
viii	Biofertilizer Project	-	RRS and Agronomy Farm	Isolation of efficient biofertilizer cultures
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	FPT & BE	-	-	Post harvest technology / Bio- diesel / Biogas
xii	Bio-control Project	-	College farm	Research work on Biological control of pests, mass production of promising bioagents
xiii	Horticulture Farm	34.70	32.00	Horticultural Crops, PG research
xiv	Horticulture Farm	34.70	32.00	Horticultural Crops, PG research
xv	Nematology	2.30	2.30	Identification of resistant genotypes against nematodes & its control in important crops.
xvi	Centre of Excellence on Animal Nutrition	6.17	6.17	Animal Nutrition
xvii	Reproductive Biology Research Unit	5.40	5.40	Reproductive biology of buffalo and goat



Name of Centre		Total area (ha.)	Cultivable area (ha.)	Research activity on
xviii	Poultry Complex	-	-	Genetic improvement of poultry breeds for higher production.
xix	Veterinary College (Dept. of Gynecology)	13.5	9.80	Livestock improvement work
xx	Instructional Farm, Veterinary College	16.30	13.54	Educational purpose
xxi	Live Stock Research Station	36.40	29.20	Live stock management and maintenance of kankrej and cross breed cattle
xxii	Research in Dairy Science	-	-	Technology up-gradation for dairy products
2	Research Sub- Stations			
Anand district				
i	Tobacco Research Station, Dharmaj	11.92	9.30	Research work on chewing tobacco
ii	KVK, Devataj	18.92	15.52	Extension activities and research in inland fisheries
iii	Khambholaj	31.64	31.64	Horticultural crops(Papaya and potato)
Dahod district				
iv	Hill Millet Research Station, Dahod	46.70	32.09	Minor millet , Drilled paddy, Maize and Pulses
v	Tribal Research Cum Training Centre, Devgadhbaria	7.98	7.98	Soybean and Maize
Kheda district				
vi	Main Rice Research Station, Nawagam	25.92	20.06	Crop improvement work of paddy as well as development of package of practices of paddy and seed production
vii	Research Station for Irrigated Crops, Thasra	15.71	14.62	Water Management in different crops, Research in rice, wheat, gram and vegetable crops.
viii	Meenawada	43.22	-	Cattle breeding farm
ix	Ramna Muvada	20.00	-	Goat project, Silvipasture Research Project
x	Nenpur	40.00	-	Jatropha and seed production of different crops
xi	Sansoli	20.00	-	Castor Research, Seed production and evaluation of hybrid maize

Name of Centre		Total area (ha.)	Cultivable area (ha.)	Research activity on
xii	Vaso	20.00	-	Degree Agril College and Diploma Polytechnic
<b>Panchmahal district</b>				
xiii	Main Maize Research Station, Godhra	20.55	18.72	Crop improvement work in maize as well as development of package of practices of maize and seed production
xiv	Agril. Res. Station, Kakanpur	20.47	20.47	Arid fruits research, Maize seed production and workshop for Agri. Engg. College
xv	Agricultural Research Station, Derol	38.42	35.99	Research work on Drilled Paddy, Pulses and Oil seeds and seed production
<b>Vadodara district</b>				
xvi	Pulses Research Station, Vadodara	33.08	22.47	Crop improvement work in pigeonpea and other Pulse Crops
xvii	Rice Research Station, Dabhoi	29.13	25.64	Research work on Paddy and Water Management
xviii	Narmada Irrigation Research Station, Khandha	24.62	17.55	Water Management on field and hort. crops
xix	Jabugam	21.52	-	Seed production of different crops
<b>NORTH GUJARAT AGRO-CLIMATIC ZONE -IV</b>				
<b>Ahmedabad district</b>				
xx	Castor and Seed Spices Research Station, Sanand	6.44	5.60	Castor and seed spices
xxi	Regional Cotton Research Station, Viramgam	24.43	21.30	Deshi Cotton and Dual Sorghum
<b>BHAL AND COASTAL AGRO-CLIMATIC ZONE-VIII</b>				
<b>Ahmedabad district</b>				
xxii	Agril. Research Station, Bhal & Coastal Zone, Arnej	60.84	48.41	Evaluation of un-irrigated Wheat & Gram, Salinity amendments in different crops
xxiii	Agricultural Research Station, Dhandhuka	44.32	39.19	Un-irrigated Wheat, Gram, Cotton and Water Management
Total Area of AAU- 909.61 ha and cultivable area 805.30 (ha)				

## SEASONAL FEATURES AND CROP CONDITION

The onset of SW monsoon was late by two week to its normal and took place during the 27<sup>th</sup> MSW with 64 mm rainfall causing late sowing of all the rainfed crops in *kharif* 2011. Thereafter up to 38<sup>th</sup> MSW all the weeks received rainfall. During this period there was no any severe dry spell was observed. Good and evenly distributed rainfall helped in successful growing of all the *kharif* crops. There was no rainfall during June month against its normal of 108.4 mm. July month received 233.6 mm rainfall in 14 rainy days against the normal of 319.3 mm. August month received the rainfall of 491.2 mm in 15 rainy days as compared to 252.3 mm of normal rainfall. September month received 153.0 mm rainfall in 13 rainy days as compared to 114.8 mm of normal rainfall. Seasonal total rainfall was 877.6 mm which was higher than normal (862.00 mm) with 42 rainy days.

The maximum temperature was found to be higher than the normal during most part of the year except 21, 28 and 32 to 40 MSW. The

weekly minimum temperature was lower during 1 to 3 MSW and higher during 44 to 50 MSW than the normal. The higher maximum and minimum temperature during 44 to 50 MSW adversely affected the yield of various winter crops sown during October and November. while lower minimum temperature during 1 to 3 MSW boosted the yield of winter crops.

### District wise rainfall distribution in Middle Gujarat

The district wise seasonal rainfall of all the 6 districts of the middle Gujarat and its percentage departure from normal is presented in Table 6.2. State as a whole received 933 mm rainfall, this was about 102 per cent of its normal values.

In middle Gujarat region, Ahmedabad district received lowest (612 mm) rainfall as compared to rest of the districts. All the districts of the region received higher rainfall in the month of August followed by July, September and June month.

**Table: 6.2 District wise total rainfall and its percentage departure from normal**

Districts	Average Rainfall , m.m. (1999-2009)	Average Rainfall 2011 (mm)	Average Rainfall received compare to normal (%)
Ahmedabad	710	612	86
Anand	719	877	122
Dahod	704	574	82
Kheda	858	552	64
Panchmahal	794	792	100
Vadodra	977	838	86
<b>Middle Gujarat</b>	<b>794</b>	<b>708</b>	<b>90</b>

## RESEARCH COUNCIL

The Research Council has been constituted as per the provision made in Gujarat Agricultural Universities Act – 5 of 2004.

### Constitution of Research Council

Sr.No.	Name, Designation & Address	
<b>A</b>	Dr. A.M. Shekh, Vice Chancellor, AAU, Anand	
<b>B</b>	Dr. K.B. Kathiria, Director of Research & Dean, PG Studies, AAU, Anand	
<b>C</b>	1	Dr.R.H.Patel, Associate Director of Research, (Agriculture), AAU, Anand
	2	Dr. M.M. Pathak, Associate Director of Research (Animal Science), AAU, Anand
<b>D</b>	<b>Faculty Deans</b>	
	1	Dr. K. P. Patel, Dean, Faculty of Agriculture, BACA, AAU, Anand
	2	Dr. B. P. Shah, Dean, Faculty of Dairy Science, SMC Dairy Sci. College, AAU, Anand
	3	Dr. A. M. Thakar, Dean, Faculty of Vety. Science, College of Vety. Sci. & A.H., AAU, Anand
	4	Dr. D.C. Joshi, Dean, Faculty of Food Processing Tech. & Bio-energy, AAU, Anand
	5	Dr. Y. R. Ghodasara, I/c Dean, Information Technology, AAU, Anand
<b>E</b>	Dr. P.P. Patel, Director of Extension Education, AAU, Anand	
<b>F</b>	<b>Conveners of the AGRESCO Sub-committee</b>	
	1	Dr. A. M. Mehta, Convener of Crop Improvement Sub-Committee & Research Scientist ( Rice ), MRRS, AAU, Nawagam
	2	Dr. Vyas Pandey, Convener of Crop Production Sub-Committee & Prof. & Head, Dept. of Agril. Meteorology, BACA, AAU, Anand
	3	Dr. B. A. Patel, Convener of Plant Protection Sub-Committee & Professor & Head, Dept. of Namotology, BACA, AAU, Anand
	4	Dr. J. B. Prajapati, Convener of Dairy Science Sub-Committee & Prof. & Head, Dept. of Dairy Microbiology, SMC College of Dairy Science, AAU, Anand
	5	Dr. J. J. Hasnani, Convener of Animal Health Sub-Committee & Prof. & Head, Dept. of Parasitology, College of Vety. Science, AAU, Anand
	6	Dr. D. N. Rank, Convener, Animal Production Sub-Committee & Prof. & Head, Dept. of AGB, College of Vety. Sci. & A.H., AAU, Anand.
	7	Dr. C. P. Desai, Convener of Social Science & Ext. Educationalist, EEI, AAU, Anand
	8	Dr. R. F. Sutar, Convener of Food Processing Sub-Committee & Professor, FPT & BE, AAU, Anand
	9	Dr. M. L. Gaur, Convener of Agril. Engineering Sub-Committee & Principal, College of Agril. Engg., AAU, Godhra



<b>G</b>	<b>Two Eminent Scientists of ICAR Institutes nominated by the Vice-Chancellor</b>		
	1	Dr. R. S. Kurothe, Principal Scientist (Engg.), Head, Central Soil & Water Conservation Research & Training Institute, Opp. Railway Station, Vasad	Member
	2	Dr. P. Manivel, Principal Scientist (Plant Breeding), Medicinal & Aromatic Plants (ICAR), Boriavi, Anand	Member
<b>H</b>	<b>Two Progressive Farmers nominated by the Vice-Chancellor</b>		
	1	Shri. Kanubhai Ravjibhai Patel (Mukhi), Near Vaniya wad No.2, Vaso Ta. Nadiad, Dist. Kheda	Member
	2	Shri. Narsinhbhai Patel, Naika, Umiya Farm, Taluka.: Matar, Dist. Kheda	Member
<b>I</b>	<b>Scientists from AAU</b>		
	1	Dr. J. A. Patel, Research Scientist, Regional Research Station, AAU, Anand	Member
	2	Dr. Y. C. Zala, Professor & Head, Dept. of Economics, BACA, AAU, Anand	Member
	3	Dr. M. K. Jhala, Professor & Head, Dept. of Microbiology, Veterinary College, AAU, Anand	Member
	4	Dr. R. V. Prasad, Professor & Head (FQA), FPT & BE, AAU, Anand	Member
	5	Dr. J. B. Prajapati, Professor & Head, Dept. of Dairy Microbiology, College of Dairy Science, AAU, Anand	Member

## RESEARCH SUB-COMMITTEES

To evaluate the research work and to finalize the technical programme for research in particular direction, the research areas of different subjects has been sub-grouped in 7 research sub-committees, as follows.

### Faculty of Agriculture

- ❖ **Crop Improvement** : Plant Breeding & Genetics, Plant Biotechnology, Nanotechnology, 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, Agril. Economics, Extension Education, Agril Information Technology and International Agril. Business Management.

### Faculty of Veterinary Science

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

Engineering, Dairy Technology, Dairy Economics, Food Bio-technology, Dairy Chemistry

- ❖ **Food Processing Technolgy & Bio Energy** : Post Harvest Technology, Food Processing and Packaging Technology and Bio-Energy
- ❖ **Agril. Engineering** : Soil and Water Conservation, Farm Power Machinery, Agril. Product Processing and Renewable Energy

## 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	Date of Meeting	No. of recommendations finalized	
		For farmers	For scientific community and entrepreneurs
Crop Improvement	04-05 April 2011	09	01
❖ Variety Release		07	-
❖ Plant Phisiology		02	01
Crop Production	06-07 April 2011	11	02
❖ Cultural Practices		01	-
❖ Cropping Sequence		02	-
❖ Nutrient Management		05	-
❖ Water Management		03	-
❖ Weed Management		-	02
Plant Protection	14-15 March 2011	37	02
❖ Insect Pest Management		26	02
❖ Disease Management		11	-
Dairy Science	08 March, 2011	-	04
Food Processing	07 March, 2011	-	05
Animal Production	10-11 March, 2011	03	07
Animal Health	10-11 March, 2011	01	09
Social Science	09-10 March, 2011	-	02
Joint AGRESCO	13 April, 2011	61	32
Combined AGRESCO of SAU's at AAU, Anand	25-27 April 2011	61	32

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

## Recommendations for farming community

### I CROP IMPROVEMENT

#### [A] PLANT BREEDING

##### (i) Rice: Gujarat Anand Rice-2 (GAR-2)



The variety was developed from a cross Gurjari X IET-14714. The variety is of mid-early maturity group showing resistance to BLB, sheath rot, false smut and grain discoloration. It has yielded 4625 kg/ha which is 23.1 per cent higher over check GR-4. It has advantage in grain quality, easy threshability and can add to the export group of non scented quality. It also showed 24 % higher per day productivity than GR-4. This genotype is fertilizer responsive, non-lodging and possesses awnless long slender fine grains. In cooking and milling quality, its performance is better than the checks. It is recommended for cultivation in Middle Gujarat.

(Research Scientist (Rice), Main Rice Research Station, AAU, Nawagam)

##### (ii) Maize: High Quality Protein Maize-1 (HQPM-1)



This is a yellow seeded mid maturity group single cross hybrid with long cylindrical cobs. The hybrid exhibited grain yield of 4973 and 4426 kg/ha in *rabi* and *kharif* season, respectively. The yield is 42.8, 20.6 and 15.5 per cent higher yield over check varieties GM 3, Ganga Safed 2 and Shaktiman-1, respectively during *rabi* season. In *kharif* season, it showed 19.5 per cent yield advantage over the check GM-2. The hybrid was also tolerant to maydis leaf blight and stem borer under natural conditions besides tolerant to drought stress. Quality wise it possesses nearly double lysine and tryptophan content than normal maize. It is therefore endorsed for cultivation across the state in *kharif* and *rabi* seasons.

(Research Scientist (Maize), Main Maize Research Station, AAU, Godhra)



### **(iii) Okra: Gujarat Anand Okra-5 (AO-5)**



This variety yielded 141 q/ha fruits yield that is 35.9 and 55.9 per cent higher than checks GO-2 and Pusa Sawani, respectively. The fruits of this variety have attractive shape, size and deep green colour fruits and fetches higher price in the market as compared to other released varieties. Under the YVMV hot spot condition, it has 7.86 % YVMV infection as compared to 76.27 and 83.82 % infection in GO 2 and Pusa Sawani checks, respectively. It is also recorded less per cent of fruit borer damage and low population of Jassids and whitefly as compared to the checks. It is particularly suitable for YVMV prone belt of Gujarat during *kharif* season.

*(Research Scientist (Vegetable), Main Vegetable Research Station, AAU, Anand)*

### **(iv) Chilli: Gujarat Anand Vegetable Chilli-112 (GAVC-112)**



The variety was recommended for cultivation in Gujarat on account of its 18.7 and 24.5 per cent higher green fruit yield (127.05 q/ha) over GVC-101 and GVC-111, respectively. The fruits are elongated, straight, pungent and compact having light green colour. The variety also exhibited low incidence of anthracnose, thrips and fruit borer, as compared to check varieties. The fruit picking is easier than GVC-111 which reduces the labour cost.

*(Research Scientist (Vegetable), Main Vegetable Research Station, AAU, Anand)*

### **(v) Chilli: Gujarat Anand Vegetable Chilli Hybrid-1 (GAVCH-1)**



This is the first CMS based hybrid of Gujarat having green fruit yield of 237 q/ha which is 31.7, 35.0, 56.0 per cent higher over ARCH-228 (Hybrid), GVC-101 and GVC-111 checks, respectively. The hybrid also exhibited low incidence of anthracnose, thrips and fruit borer as compared to checks. The fruits of this hybrid possess elongated shape, light green colour semi wrinkled surface and pungency. The proposed chilli hybrid is recommended for the Gujarat state during *kharif* - *rabi* season under irrigated conditions.

*(Research Scientist (Vegetable), Main Vegetable Research Station, AAU, Anand)*



**(vi) Forage crop: Gujarat Anand Anjan Grass-1 (GAAG-1)**



The recommended genotype is a selection from natural population of Anjan Grass from *Kutchh* and it was tested in trial as ACS-26. It is a tall growing perennial grass. It revealed 44.9 and 51.9 per cent higher green fodder yield (214 q/ha) and dry matter yield (72 q/ha) than national check CAZRI-75, respectively. High leaf to stem ratio with low oxalates and nitrate contents and better palatability are other favourable characters of the variety. It is recommended for cultivation under rainfed pasture lands of Gujarat state.

*(Research Scientist (Forage), Main Forage Research Station, AAU, Anand)*

**(vii) Medicinal crop: Gujarat Anand Senna-1 (GAS 1)**



This culture is isolated as a selection from germplasm. It is the first genotype recommended for release in the state. It recorded 1834 kg dry leaf yield which is 71.4 and 53.6 per cent higher than check varieties ASNTV and Sona, respectively. The sennoside content of the variety is also higher (1.58 %) as compared to 1.33 % and 1.18 % of ASNTV and Sona, respectively. The sowing time of this culture is onset of monsoon (June-July).

**[B] PLANT PHYSIOLOGY**

**(i) Defoliation in chilli**

Farmers of Middle Gujarat, Agro climatic Zone-III planting chilli crop cv. Guj.Veg. Chilli-111 for vegetable fruit production purpose are advised to adopt 25 - 50% random defoliation at 30 DATP for getting higher fruit yield and net return.

*(Research Scientist (Pl. Phy.), Main Vegetable Research Station, Anand)*

**(ii) Spraying of NAA on Bottle Gourd**

Farmers of Middle Gujarat, Agro climatic Zone-III growing bottle gourd cv. Anand Bottle Gourd-1 for vegetable fruit production purpose are advised to spray NAA @ 50 mg/l at 3-4 leaf stage for getting higher fruit yield with the higher net realization.

*(Research Scientist (Pl. Phy.), Main Vegetable Research Station, Anand)*

**II CROP PRODUCTION**

**[A] CULTURAL PRACTICES**

- (i) Effect of sowing methods and irrigation scheduling on new introducing crop rajgira (grain amaranthus)

The farmers of AES II of middle Gujarat agro-climatic zone growing rajgira crop are advised to adopt line sowing method at 45 x 10 cm spacing and apply five irrigations each of 5 cm depth at an interval of 20-30 days (IW/ CPE: 0.6) after sowing to get higher yield and net profit.

*(Associate Research Scientist, Irrigated Crop Research Station, Thasra)*

## **[B] CROPPING SEQUENCE**

- (i) Production potential of different cropping systems grown in rustica tobacco area of middle Gujarat

The rustica tobacco growing farmers of AES II of middle Gujarat agro climatic zone are advised to adopt paddy (kharif) – rustica tobacco (rabi) or paddy (kharif) – grain amaranthus (rabi) crop sequence to obtain higher net realization.

*(Research Scientist, BTRS, Anand)*

- (ii) Studies on cropping sequence system in goradu soil of middle Gujarat condition

The farmers of AES II of middle Gujarat agro-climatic zone growing rajgira in rabi are recommended to adopt rajgira based cropping system, growing either maize or pearl millet in kharif and okra in summer to get higher net profit.

*(Associate Research Scientist, Irrigated Crop Research Station, Thasra)*

## **[C] NUTRIENT MANAGEMENT**

- (i) **Integrated nutrient management in mustard**

The farmers of AES II of middle Gujarat

agro-climatic zone growing mustard (G M-2) are advised to apply FYM @ 10 t/ha along with 50 kg N and 50 kg  $P_2O_5$ /ha in the form of urea and SSP, respectively, for getting higher yield and net income. Out of the total quantity of fertilizer, 25 kg N + 50 kg  $P_2O_5$  should be applied at the time of sowing and remaining quantity of nitrogen should be applied at 30-35 days after sowing.

*(Research Scientist, RRS, Anand)*

- (ii) **Integrated nutrient management in rustica tobacco GCT- 3**

The farmers of AES II of middle Gujarat agro climatic zone growing rustica tobacco (GCT 3) are advised to apply 85% of recommended dose (200 kg N/ha) of fertilizer [170 kg N/ha (25% from A. S. + 75% from Urea)]. The bio-fertilizer *Azospirillum lipoferum* ASA-1 @ 5ml/litre of water should be applied by root dipping of seedlings for 15 minutes which saves 15% nitrogen without affecting quality, yield and net realization.

*(Research Scientist, BTRS, Anand)*

- (iii) **Effect of different organic manures and spacing on yield and quality of kalmegh panchang (*Andrographis paniculata* Wall).**

Farmers of AES II of middle Gujarat agro climatic zone growing *Kalmegh* are advised to apply FYM @ 10 t /ha or castor cake @ 1.0 t /ha and sow at a spacing of 30 x 15 cm to obtain higher yield and net realization.

*(Research Scientist, M & AP, Anand)*

#### **(iv) Integrated nutrient management in cotton**

The farmers of AES II of middle Gujarat agro-climatic zone growing Bt. cotton are advised to apply vermicompost @ 2 t/ha and fertilize the crop with nitrogen @ 240 kg N /ha to get higher yield and net profit. Nitrogen should be applied in four equal splits at monthly interval starting from sowing.

*(Associate Research Scientist, Irrigated Crop Research Station, Thasra)*

#### **(v) Response of soybean to N,P,K & S fertilization**

The farmers of AES II of middle Gujarat agro-climatic zone growing soybean in *kharif* are advised to apply 45kg N/ha, 60kg P<sub>2</sub>O<sub>5</sub>/ha and 20 kg S/ha to get higher yield and net return.

*(Research Scientist, TRTC, Devgadbaria; Research Scientist (Micronutrients) and Prof., & Head, Soil Science, BACA, Anand)*

### **[D] WATER MANAGEMENT**

#### **(i) Irrigation methods and fertilizer levels on performance of cabbage**

The farmers of AES II of middle Gujarat agro climatic zone are advised to adopt drip irrigation system in *rabi* cabbage (cv. Golden acre) planted in paired row system (45-75 X 45 cm) with fertigation of water soluble NPK -160:60:60 [N and P through Urea + Urea phosphate (17:44- N:P) and K

through MOP] in five equal splits starting from 15 DATP at an interval of 10 days along with 25 t FYM/ ha to get maximum yield and net realization with 40% saving of water.

The system should be laid out by keeping 120 cm distances between two laterals with drippers (4 lph) at 45 cm distance. The system should be run at 1.2 kg/cm<sup>2</sup> for 43 minutes at alternate day.

*(Professor, IFFCO Chair, Soil Science, BACA, Anand)*

#### **(ii) Testing of feasibility of drip irrigation with mulching in castor**

The farmers of AES II of middle Gujarat agro-climatic zone are advised to adopt drip irrigation system for castor to get higher yield and net return with 31% saving in irrigation water (0.6 FPE). For drip irrigation, castor crop should be sown in paired row (60-180 x 60 cm). The system should be laid out one month after cessation of monsoon at a lateral distance of 2.4 m (in paired row) and dripper (4 LPH) spaced at 0.6 m. The system should be operated at 1.2 kg/cm<sup>2</sup> pressure for 1: 30 to 2: 1.5 hours an alternate day.

They are also advised to mulch their crop with paddy straw @5 t/ha just after installation of drip system for getting higher yield and net return.

*(Research Scientist, RRS, Anand)*



### **(iii) Response of clusterbean to irrigation, FYM and sulphur application**

The farmers of AES II of middle Gujarat agro climatic zone growing clusterbean (variety GG 2) in late *kharif* are advised to fertilize their crop with 5 t FYM /ha coupled with 20 kg sulphur /ha in elemental form as basal and recommended dose of 20 kg N /ha + 40 kg P<sub>2</sub>O<sub>5</sub> /ha before sowing for securing higher yield and net return. The crop should be irrigated at branching and flowering stages, if rainfall is not received during these stages.

*(Research Scientist, ARS, DeroI)*

## **III PLANT PROTECTION**

### **[A] AGRICULTURAL ENTOMOLOGY**

#### **(i) Persistence and residue studies of quinalphos 25 EC in/on cauliflower**

Three foliar applications of quinalphos 25 EC @ 500 g a. i. ha<sup>-1</sup> at an interval of 15-days do not pose residue problem in cauliflower heads if harvested 10 days after the last spray and therefore, pre-harvest interval of 10 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

#### **(ii) Residue studies of oxydemeton methyl 25 EC in/on cotton**

Four foliar applications of oxydemeton methyl 25 EC @ 300 g a.i. ha<sup>-1</sup> at an interval of 15-days do not pose residue problem in cotton seed, lint and seed oil if harvested 68 days after the last spray and

therefore, pre-harvest interval of 68 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

#### **(iii) Residue studies of methyl parathion 50 EC/ 2 DP in/on cotton**

Four foliar applications of methyl parathion 50 EC or 2 DP (dusting powder) @ 500 g a.i. ha<sup>-1</sup> at an interval of 15-days do not pose residue problem in cotton seed, lint and seed oil if harvested 68 days after the last spray and therefore, pre-harvest interval of 68 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

#### **(iv) Residue studies of dichlorvos 76 EC in/on groundnut**

Two foliar applications of dichlorvos 76 EC @ 750 g a.i. ha<sup>-1</sup> in *kharif* groundnut at an interval of 15-days do not pose residue problem in kernel and oil if harvested 51 days after the last spray and therefore, pre-harvest interval of 51 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

#### **(v) Residue studies of quinalphos 1.5 DP / 25 EC in/on groundnut**

Two foliar applications of quinalphos 1.5 % DP @ 375 g a.i. ha<sup>-1</sup> or 25 EC @ 350 g a.i. ha<sup>-1</sup> at an interval of 15-days in *kharif* groundnut do not pose residue problem in kernel and oil if harvested 51 days after



the last spray and therefore, pre-harvest interval of 51 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(vi) Residue studies of quinalphos 25 EC in/on potato**

Three foliar applications of quinalphos 25 EC @ 0.5 kg a.i. ha<sup>-1</sup> at 15-day interval do not pose residue problem in potato tubers if harvested 34 days after the last spray and therefore, pre-harvest interval of 34 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(vii) Residues and persistence studies of b-cyfluthrin 9% + imidacloprid 21%-300 OD in/on brinjal**

Three foliar sprays of a combination product beta-cyfluthrin 9% + imidacloprid 21%-300 OD @ 18+42 g a.i.ha<sup>-1</sup> at 7-day interval do not pose residue problem in brinjal fruits if harvested 3 days after the last application and therefore, pre-harvest interval of 3 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(viii) Residue studies of endosulfan 35 EC in/on groundnut**

Three foliar applications of endosulfan 35 EC @ 350 g a. i. ha<sup>-1</sup> at an interval of 15-days do not pose residue problem in *kharif* groundnut if harvested 53 days after the last spray and therefore, pre-harvest interval of 53 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(ix) Residues and persistence studies of fipronil 18 % + imidacloprid 36 % - 540 SC in/on maize**

Seed coating of maize with fipronil 18 % + imidacloprid 36 % - 540 SC @ 2.7 + 5.4 g a. i. kg<sup>-1</sup> seed do not pose residue problem in tender leaves 20 days after the treatment and grains at harvest i.e. 81 days after the treatment and therefore pre-harvest interval of 81 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(x) Residues and dissipation of b-cyfluthrin 9 % + imidacloprid 21 % -300 OD in/on mango.**

Three foliar sprays of a combination product β- cyfluthrin 9 % + imidacloprid 21 % -300 OD @ 2.5 ml per 10 L water in mango at 10-days interval starting from fruit initiation do not pose residue problem in mango fruits if harvested one day after the last application and therefore, pre-harvest interval of one day is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(xi) Residues and persistence studies of β-cyfluthrin 9% + imidacloprid 21% - 300 OD in/on okra**

Three foliar applications of a combination product, β-cyfluthrin 9% + imidacloprid 21% -300 OD @ 18 + 42 g a.i.ha<sup>-1</sup> at 7-days

interval do not pose residue problem in okra fruits if harvested 3 days after the last application and therefore, pre-harvest interval of 3 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(xii) Residues and persistence studies of spiromesifen 240 SC in/on okra**

Two foliar sprays of spiromesifen 240 SC @ 120 g a.i.ha<sup>-1</sup> in *kharif* okra at 10-days interval do not pose residue problem in okra fruits if harvested 3 days after the last application and therefore, pre-harvest interval of 3 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(xiii) Residue studies of spinosad 45 SC in/on pigeon pea**

Three foliar applications of spinosad 45 SC @ 73 g a.i. ha<sup>-1</sup> at 15-days interval do not pose residue problem in pigeon pea grains if harvested 26 days after the spray and therefore, pre-harvest interval of 26 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(xiv) Residue studies of endosulfan 35 EC in/on sugarcane**

Four foliar sprays of endosulfan 35 EC @ 350 g a.i.ha<sup>-1</sup> at 15-days interval do not pose residue problem in sugarcane juice if harvested 38 days after the last spray and therefore, pre-harvest interval of 38 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(xv) Residues and persistence studies of spiromesifen -240 SC in/on tomato**

Two foliar sprays of spiromesifen 240 SC @ 150 g a.i. ha<sup>-1</sup> at 7-days interval do not pose residue problem in *rabi* tomato if the fruits are harvested 24 hours after the last spray and therefore, pre-harvest interval of one day is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(xvi) Residue and persistent study of flubendiamide (24%) + thiacloprid (24%) 480 SC in/on tomato**

Three foliar applications of a combination product, flubendiamide 24% + thiacloprid 24% -480 SC @ 48 + 48 g a.i. ha<sup>-1</sup> at 10-days interval do not pose residue problem in tomato, if fruits are harvested 3 days after the last spray and therefore, pre-harvest interval of 3 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(xvii) Residues and persistence studies of b-cyfluthrin 9%+ imidacloprid 21%-300 OD in/on tomato**

Three foliar applications of a combination product,  $\beta$ -cyfluthrin 9% + imidacloprid 21%-300 OD @ 18+42 g a.i. ha<sup>-1</sup> at 7-days interval do not pose residue problem in tomato fruits if harvested one day after the last spray and therefore, pre-harvest interval of one day is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(xviii) Residue studies of emamectin benzoate 5 SG in/on tomato**

Three sprays of emamectin benzoate 5 SG @ 11 g a.i.ha<sup>-1</sup> at 10-days interval do not pose residue problem in tomato fruits if harvested 3 days after the last application and therefore, pre-harvest interval of 3 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(xix) Residue studies of emamectin benzoate 5 SG in/on okra**

Two sprays of emamectin benzoate 5 SG @ 11 g a.i.ha<sup>-1</sup> at 15-days interval do not pose residue problem in okra fruits if harvested one day after the last application and therefore, pre-harvest interval of one day is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(xx) Residue and persistence studies of deltamethrin 10 EC in/on chilli**

Three foliar applications of deltamethrin 10 EC @ 17.5 g a.i. ha<sup>-1</sup> at 7-days interval do not pose residue problem in green chilli fruits if harvested one day after the last spray and therefore, pre-harvest interval of one day is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(xxi) Residues and persistence studies of fipronil 80 WG in/on chilli**

Two foliar applications of fipronil 80 WG @ 50 g a.i. ha<sup>-1</sup> at an interval of 10-days do not

pose residue problem in green chilli fruits if harvested 10 days after the last spray and therefore, pre-harvest interval of 10 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(xxii) Residues and persistence studies of flubendiamide 24% + thiacloprid 24% -480 SC in/on chilli**

Three foliar sprays of a combination product flubendiamide 24% + thiacloprid 24% - 480 SC @ 60 g a.i. ha<sup>-1</sup> at 10-days interval do not pose residue problem in green chilli fruits if harvested one day after the last application and therefore, pre-harvest interval of one day is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(xxiii) Residue studies of  $\alpha$ -endosulfan 35 EC in/on cotton**

Four foliar applications of  $\alpha$ -endosulfan 35 EC @ 700 g a.i. ha<sup>-1</sup> at an interval of 15-days do not result in its residues in lint, cotton oil and soil if harvested 90 days after the last spray and therefore, pre-harvest interval of 90 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(xxiv) Residues and persistence of flonicamid 50 WG in/on cotton**

Four foliar sprays of flonicamid 50 WG @ 75 g a.i. ha<sup>-1</sup> at 15-days interval do not pose residue problem in cotton seed, lint, oil and cake at first picking i.e., 25 days after

the last spray and therefore, pre-harvest interval of 25 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(xxv) Influence of spray equipments on the bio-efficacy of NPV against *H. armigera* in pigeon pea**

The framers of Middle Gujarat Agro-climatic Zone III growing pigeon pea are advised to spray their pigeon pea crop with HaNPV @ 250 LE/ha ( $1.5 \times 10^{12}$  POB /ha) using lever operated continuous Knapsack sprayer for effective and economical control of *Helicoverpa armigera*. The spray should be carried out three times during evening hours *i. e.* (1) at initiation of flower bud (2) flowering on 50% plants and (3) podding on 50% plants.

*(Assistant Research Scientist (Ento), ARS, Derol)*

**(xxvi) Assessment of IPM modules for the control of *H. armigera* in chickpea**

The farmers of Middle Gujarat Agro-climatic Zone III growing chickpea are advised to follow the following module for effective and economical management of gram pod borer, *Helicoverpa armigera*.

The first spray of Neem Seed Kernel Extract @ 5% at flowering on 50% plants, second spray of HaNPV @ 250 LE/ha ( $1.5 \times 10^{12}$  POB /ha) at pod formation on 50% plants and fenvalerate 20 EC @ 0.02% at 15 days after second spray.

*(Assistant Research Scientist (Ento), ARS, Derol)*

**[B] PLANT PATHOLOGY**

**(i) Management of Alternaria blight, anthracnose and angular leaf spot diseases of Bt cotton**

For effective and economical management of Alternaria blight, anthracnose and angular leaf spot diseases of Bt cotton; farmers of middle Gujarat are advised to soak the delinted seeds of cotton in streptomycin sulphate @ 0.025 % for 30 minutes followed by shade drying and treating with thiram @ 3 g/kg along with four alternate sprays of streptomycin sulphate 0.02 % + copper oxychloride 0.10% and ready mix formulation mancozeb 63 %+ carbendazim 12 %, 0.2 % OR only mancozeb 63 %+ carbendazim 12 %, 0.2 % starting at disease initiation and at 10 days interval.

*(Professor & Head, Department of Plant Pathology, BACA, Anand)*

**(ii) Management of Alternaria blight of cumin**

For effective and economical management of Alternaria blight of cumin, farmers of middle Gujarat are advised to treat the seeds with thiram @ 5 g/kg seed followed by six sprays of propineb 70% WP, 0.2% **or** metiram 70 WG, 0.2% **or** propiconazole 25% EC, 0.1% starting from disease initiation and at 7 days interval.

*(Professor & Head, Department of Plant Pathology, BACA, Anand)*



**(iii) Management of bacterial blight of cluster bean for seed purpose**

For effective and economical management of bacterial blight for seed production of cluster bean; farmers of middle Gujarat are advised to treat the seeds by soaking for one hour in solution of streptomycin sulphate 90% + tetracycline hydrochloride 10% (Streptocycline), 0.025% followed by three sprays of streptomycin sulphate 90% + tetracycline hydrochloride 10% (Streptocycline), 0.01% **OR** three alternate sprays of streptomycin sulphate 90% + tetracycline hydrochloride 10% (Streptocycline), 0.01%, followed by spray of copper oxychloride, 0.2% and streptomycin sulphate 90% + tetracycline hydrochloride 10% (Streptocycline), 0.01% starting from 35 days of sowing and at 10 days interval.

*(Professor & Head, Department of Plant Pathology, BACA, Anand)*

**(iv) Persistence and residue studies of mancozeb 75 WP in/on cauliflower**

Three foliar applications of mancozeb 75 WP @ 1500 g a.i. ha<sup>-1</sup> in cauliflower at an interval of 7 days do not pose residue problem in cauliflower head if harvested 7 days after the spray. Therefore, pre-harvest interval of 7 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(v) Residue studies of mancozeb 75 WP in/on ginger**

Six foliar applications of mancozeb 75 WP @ 450 g a.i. ha<sup>-1</sup> in ginger at an interval of 15 days do not pose residue problem in rhizomes if harvested 74 days after the last spray. Therefore, pre-harvest interval of 74 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(vi) Residue studies of mancozeb 75 WP in/on groundnut**

Two foliar applications of mancozeb 75 WP @ 1125 g a.i. ha<sup>-1</sup> in groundnut at 15-days interval do not pose residue problem in kernel and oil if harvested 51 days after the spray. Therefore, pre-harvest interval of 51 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(vii) Persistence and residue studies of mancozeb 75 WP in/on onion**

Three foliar applications of mancozeb 75 WP @ 1500 g a.i. ha<sup>-1</sup> in onion at an interval of 10-days do not pose residue problem in immature bulb with green leaves or matured onion if harvested 10 days after the spray. Therefore, pre-harvest interval of 10 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(viii) Residue studies of mancozeb 75 WG / 75 WP in/on potato**

Three foliar applications of mancozeb 75 WG/ 75 WP @ 750/ 1500 g a.i. ha<sup>-1</sup>, respectively in potato at 10 days interval do not pose residue problem in tuber if harvested 34 days after the last spray. Therefore, pre-harvest interval of 34 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(ix) Residue studies of zineb 75 WP in/on turmeric**

Six foliar applications of zineb 75 WP @ 1500 g a.i. ha<sup>-1</sup> in turmeric at an interval of 15 days do not pose residue problem in rhizome if harvested 33 days after the last spray. Therefore, pre-harvest interval of 33 days is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(x) Residue and persistence of fluopicolide 6.25 % + propamocarb hydrochloride 62.5 % - 68.75 SC in tomato**

Three foliar sprays of a combi product, fluopicolide 6.25% + propamocarb hydrochloride 62.5% - 68.75 SC @ 93.75 + 937.5 g a.i.ha<sup>-1</sup> in tomato at 7 days interval do not pose residue problem if the fruits are harvested one day after the last spray. Therefore, pre-harvest interval of one day is recommended.

*(Residue Analyst, AINP on Pesticide Residues, Anand)*

**(xi) Bio-efficacy of newer fungicides against turicum leaf blight (TLB) disease in rabi maize**

Farmers of the middle Gujarat growing *rabi* maize are advised to treat the maize seeds with captan (@ 3 g /kg seed) at the time of sowing followed by four sprays of ready mix fungicide carbendazim 12 % + mancozeb 63 % @ 0.2%, first spray at 40 DAS and remaining three sprays at 15 days interval from the first spray for effective and economical management of turicum leaf blight (TLB) disease.

*(Assistant Research Scientist (Patho), Main Maize Research Station, Godhra)*

**IV DAIRY SCIENCE, AGRIL. ENGINEERING AND FOOD PROCESSING TECHNOLOGY**

**[A] DAIRY SCIENCE**

**(i) Fermentation of double toned milk**

Carbonated fermented milk containing more than 30 million live lactobacilli/ml can be prepared by fermentation of double toned milk using *Streptococcus thermophilus* MTCC 5460 and probiotic culture *Lactobacillus helveticus* MTCC 5463 with shelf-life of 28 days at 5±2°C.

*(Dairy Microbiology Dept, SMC College of Dairy Science, Anand)*

**(ii) Synbiotic lassi**

Synbiotic *lassi* could be prepared by fermentation of toned milk with

*Streptococcus thermophilus* MTCC 5460 and a probiotic culture *Lactobacillus helveticus* MTCC 5463 with incorporation of processed honey. The product provide optimum dose of probiotic lactobacilli and is organoleptically acceptable till 21 days at  $5\pm 2^{\circ}\text{C}$ .

*(Dairy Microbiology Dept, SMC College of Dairy Science, Anand)*

### **(iii) Low fat ice cream**

Low fat ice cream with acceptability similar to a regular ice cream can be prepared using whey protein concentrate and maltodextrin as fat replacers and bulk fillers, respectively. The product has additional advantage of more than three times lower fat, 25% higher protein content and about 40% reduction in cost as compared to normal ice cream.

*(Dairy Technology Dept, SMC College of Dairy Science, Anand)*

### **(iv) Treatment of dairy effluent**

A hybrid reactor having combined features of Upflow Anaerobic Sludge Blanket (UASB) and anaerobic fixed film reactor with polypropylene or ceramic saddles as packing media is recommended for treatment of dairy effluent, which gives about 85% reduction in chemical oxygen demand (COD) in 2-3 days hydraulic retention time (HRT) with added advantage of biogas production.

*(Dairy Engineering Dept, SMC College of Dairy Science, Anand)*

## **[B] FOOD PROCESSING TECHNOLOGY**

### **(i) Evaporatively cooled transportation system**

The evaporatively cooled transportation system developed by College of Food Processing Technology and Bio- Energy, Anand Agricultural University, Anand is recommended for safe and cool transportation of fruits/vegetables to preserve freshness with less physiological loss in weight and longer shelf-life. The system can be easily fitted on existing body of any goods transporting vehicle and removed when not required.

*(College of FPT & BE, Anand)*

### **(ii) Shelf life of aonla fruits**

The farmers and orchard owners are recommended to precool aonla fruits by dipping in chilled water maintained at  $8^{\circ}\text{C}$  for 9 minutes and then stored at  $4^{\circ}\text{C}$  and 85-90 % RH. This will extend the shelf life of aonla fruits by additional 30%.

*(College of FPT & BE, Anand)*

### **(iii) Ready-to-serve unripe mango beverage**

The entrepreneurs and food processors interested in production of superior quality ready-to-serve unripe mango beverage, panna are recommended to use the "Production technology for RTS (ready-to-serve) unripe mango beverage" developed by College of Food Processing Technology & Bio- Energy, Anand Agricultural University, Anand. The

technology involves processing of unripe (green) and matures mango fruit using pressure cooking, pulping, straining and addition of appropriate level of water, sugar and salt, thermal treatment, addition of preservative and filling in bottles. The product is to be stored at 4°C for higher shelf life.

*(College of FPT & BE, Anand)*

#### **(iv) Pumpkin powder**

The entrepreneurs and food processors interested in production of pumpkin powder are advised to use the “Production technology of pumpkin powder” developed by Anand Agricultural University, Anand, which results in a superior quality, carotene and mineral rich, self stable pumpkin powder for various food uses. The technology involves blanching and sulphiting of approximate size of pumpkin pulp cube followed by drying under specified conditions and packaging the powder in light/oxygen barrier type packs.

*(College of FPT & BE, Anand)*

#### **(v) High fiber bun**

A satisfactory high fiber bun can be prepared by replacing Refined Wheat Flour with maximum 6% Pigeon Pea Husk using formula, treatment and procedure standardized by Anand Agricultural University.

*(Polytechnic in Food Science and Home Economics, Anand)*

## **V ANIMAL PRODUCTION**

### **(i) Concentrate mixture for buffaloes**

In Kheda district, buffaloes yielding 5-7, 7-9 and 9-12 kg milk/day receive on an average daily 4.1, 4.2, and 5.3 kg concentrate mixture, respectively. In order to fulfill their nutrient requirement, the farmers are advised to feed additional 1.0 and 1.5 kg compound concentrate mixture during winter to buffaloes yielding daily 5-7, and 7-9 kg and 1.5 kg round the year to buffaloes that yield daily 9-12 kg milk.

*(Research Scientist, Animal Nutrition Research Station, Anand)*

### **(ii) Concentrate mixture for bullocks**

In Kheda district, the bullocks receive on an average daily less than 200 g concentrate mixture during winter and summer seasons. In order to fulfill their nutrient requirement for maintenance, the farmers are advised to feed additional 800g compound concentrate mixture or 4.0 kg leguminous fodder.

*(Research Scientist, Animal Nutrition Research Station, Anand)*

### **(iii) Total mixed ration**

Total mixed ration comprising of 50 % mature pasture grass and 50 % compound concentrate mixture with bypass protein source resulted in 22 % more body weight gain in crossbred calves without any increase in feed cost.

*(Research Scientist, Animal Nutrition Research Station, Anand)*



## **VI ANIMAL HEALTH**

### **(i) Hoof care**

Stall fed milch animals maintained on pakka floor are prone to hoof disorders with reduction in milk production (32%), hence regular hoof care is advocated.

*(Professor & Head, Dept. of Surgery & Radiology, Vet. College, Anand)*

### **Recommendations for scientific community and entrepreneurs**

## **I CROP IMPROVEMENT**

### **PLANT PHYSIOLOGY**

#### **(i) Tobacco seed & oil yield**

Application of 40 kg S/ha in the form of ammonium sulphate or bentonite significantly improved the tobacco seed yield & oil yield.

*(Associate Research Scientist, BTRS, Anand)*

## **II CROP PRODUCTION**

### **WEED MANAGEMENT**

#### **(i) Residues and persistence studies of quizalofop ethyl 5 EC in blackgram**

Control of grassy weeds in blackgram following post-emergence foliar application of quizalofop ethyl 5 EC @ 50 g a.i./ha (20 ml formulation per 10 lit. water) as post emergence 29 days after sowing, do not pose residue problem in blackgram grains at harvest. Therefore, the PHI of 47 days is recommended.

*(Research Scientist, Pesticide Residue scheme, Anand)*

#### **(ii) Residue and persistence studies of quizalofop ethyl – 5 EC in onion**

Control of grassy weeds in onion following a single spray of quizalofop ethyl 5 EC as post-emergence @ 50 g a.i./ha (20 ml formulation per 10 lit. water) 22 days after transplanting do not pose residue problem in onion plants, if harvested 3 day after the application. Therefore, PHI of 3 days for green onion recommended. Onion bulbs at harvest were also safe from residue point of view.

*(Research Scientist, Pesticide Residue scheme, Anand)*

## **III PLANT PROTECTION**

### **ENTOMOLOGY**

#### **(i) Influence of crop habitat diversity on biodiversity of natural enemies in pigeon pea pests**

Pigeon pea crop intercropped with sunflower in the ratio of 9:1 with maize as border crop enhanced the population of predatory insects such as chrysopids and coccinellids which ultimately suppress the incidence of *Helicoverpa armigera* (Hubner) Hardwick on pigeon pea.

*(Research Scientist, AICRP on Biocontrol, Anand)*

#### **(ii) Screening of promising accessions for resistance against shoot fly**

Sorghum accessions PB-215, PB-257, IS-3260, IS-7053, IS-7650, IS-23262 and SS-96-784 were found to be resistant or moderately resistant against shoot fly.

These accessions can be used in breeding programme for developing resistant varieties against shoot fly.

*(Asstt. Research Scientist (Ento), Main Forage Research Station, Anand)*

#### **IV ANIMAL PRODUCTION**

##### **(i) Estrus synchronization protocol**

Estrus synchronization protocol involving i/vg insertion of CIDR for 7 days in combination with estradiol valerate i/m 1.0 mg on first day followed by i/m injection of PGF2 $\alpha$  500  $\mu$ g on sixth day and estradiol valerate 0.75 mg 24 hrs later while removing CIDR with double inseminations performed at 48 and 72 hrs after PGF2 $\alpha$  injection resulted in 100 % ovulatory estrus induction and more than 50 % conception at induced estrus in postpartum anestrus cows and buffaloes and is cost effective as compared to Ovsynch or Ovsynch + CIDR protocol (CR 33.33 & 50.00%), hence CIDR is advocated.

*(Research Scientists, LRS & RBRU and Prof., Dept. of Gynaecology, Anand)*

##### **(ii) Use of USG**

The transrectal ultrasound scanning using 5 MHz linear transducer on day 26 and 40 post-AI in Kankrej cows revealed sensitivity up to 85.71 and 93.75 %, specificity 75.00 and 100.00 %, and diagnostic accuracy up to 80.77 and 96.15 %, respectively, for early pregnancy. Hence, the use of USG at day 40 post-AI is advocated for early pregnancy diagnosis in cattle with its advantages of instant

result and detecting fetal viability over plain rectal palpation.

*(Research Scientist, Livestock Research Station, Anand)*

##### **(iii) Bypass protein**

Supplementation of 1.25 kg bypass protein concentrate mixture replacing 1kg home-made concentrate mixture in the ration of buffaloes yielding 7.0-9.0 kg milk had similar blood biochemical profile, viz., serum total protein, albumin, globulin, blood glucose, total cholesterol, triglycerides, urea, creatinine, calcium and phosphorus and activities of aspartate aminotransferase and alanine aminotransferase.

*(Research Scientist, Animal Nutrition Research Station, Anand)*

##### **(iv) Bypass fat**

During early lactation, buffaloes yielding daily 8-12 kg milk, when supplemented with bypass fat @ 20 g/kg milk yield had similar blood biochemical profile, viz., serum total protein, albumin, globulin, blood glucose, total cholesterol, triglycerides, urea, uric acid, creatinine, calcium and phosphorus and activities of aspartate aminotransferase and alanine aminotransferase.

*(Research Scientist, Animal Nutrition Research Station, Anand)*

##### **(v) Nutritional requirement to crossbred calves**

Growing crossbred calves subjected to nutritional inadequacy to the extent

of 25% of ICAR standard for 120 days compensated the bodyweight gain during subsequent 60 days, when fed 25% more than the actual requirement with 10% reduction in feed cost per kg live weight gain and without any adverse effect on rumen fermentation, digestibility of nutrients and blood biochemical profile, viz., serum total protein, albumin, globulin, blood glucose, total cholesterol, triglycerides, urea, uric acid, creatinine, calcium, phosphorus, magnesium, and activities of aspartate aminotransferase and alanine aminotransferase except triglycerides level that was higher during feed restriction.

*(Research Scientist, Animal Nutrition Research Station, Anand)*

#### **(vi) Concentrate mixture of bullocks**

The inclusion of live yeast (*Saccharomyces cerevisiae*) @ 5-10 g/day in concentrate mixture of bullocks have improved digestibility of ether extract and nitrogen free extract by 9 and 6 %, respectively.

*(Research Scientist, Animal Nutrition Research Station, Anand)*

#### **(vii) Detoxified jatropha or neem seed cake**

The replacement of soyabean meal protein with detoxified jatropha or neem seed cake up to 75% level in the diet of growing kids had no any adverse effect on feed intake,

growth performance, nutrient utilization, feed conversion and blood biochemical profile, viz., haemoglobin, glucose, total protein, albumin, globulin, cholesterol, triglycerides, blood urea nitrogen, calcium, phosphorus and activities of alanine- aminotransferase and aspartate aminotransferase.

*(Research Scientist, Animal Nutrition Research Station, Anand)*

## **V ANIMAL HEALTH**

### **(i) Cefepime administered**

Pharmacokinetics of Cefepime administered intramuscularly in cow calves (5 mg/kg body weight), sheep and goat (20 mg/kg body weight) get altered in febrile state (induced by *E. coli* lipopolysaccharide, 0.2 µg/kg body weight, intravenous). Repeated intramuscular administration of Cefepime in calves, sheep and goat every 12 hr for five days is safe based on haematological and serum biochemical evaluation.

*(Professor & Head, Dept. of Pharmacology, Anand)*

### **(ii) Oral administration of Piperine**

Oral administration of Piperine (an alkaloid of *Piper nigrum* / *Piper longum*, 15 mg/kg body weight) and Trikatu (polyherbal ayurvedic preparation containing an equal ratio of *Piper longum*,

*Piper nigrum* and *Zingiber officinale*, 2 g/kg body weight) increases bioavailability of Gatifloxacin in poultry and sheep by 11 per cent.

*(Professor & Head, Dept. of Pharmacology, Anand)*

### **(iii) In House designed primer**

In House designed primer

F-5' AGCCGAGCTGAATGAGAAACA 3'

R-5' AACCCACCGAACATATACAC 3'

can be used for specific detection of *Gastrothylax indicus* by PCR.

*(Professor & Head, Dept. of Parasitology,  
Veterinary College, Anand)*

### **(iv) Variant strain of Canine parvovirus-2**

New variant strain of Canine parvovirus-2 i.e. CPV-2c detected in different canine population of the world is also circulating in the dogs of middle Gujarat region.

*(Professor & Head, Dept. of Microbiology,  
Veterinary College, Anand)*

### **(v) Endoscopic teat surgery**

The wet lab model using cadaver teats is useful for hands on training in endoscopic teat surgery. During theloscopy and theloressectoscopy teats filled with air and water, respectively provides better visualization.

*(Professor, Dept. of Surgery & Radiology,  
Veterinary College, Anand)*

### **(vi) Ultrasonography of forestomach**

For ultrasonography of forestomach in goats, 7.5 MHz convex probe is suitable, while 15-18 MHz linear probe is ideal for rumeno-reticular groove, longitudinal, transverse and coronary omaso-abomasal grooves, rumen papillae and reticular wall.

*(Professor, Dept. of Surgery & Radiology,  
Veterinary College, Anand)*

### **(vii) Conservative technique for amputation of preputial prolapse**

In bulls, the conservative technique for amputation of preputial prolapse by resecting inverted 'V' shaped triangular portion minimizes postoperative stricture formation, and hence advantageous over circumcision technique for functional recovery.

*(Professor, Dept. of Surgery & Radiology, Veterinary  
College, Anand)*

### **(viii) Ilizarov technique**

Ilizarov technique for immobilization of tibial fractures in dogs nullifies the disadvantages of intramedullary pinning by preventing axial rotation, torsional and bending forces and thus giving additional stability to the fractured bone for earlier restoration of normal limb functions.

*(Professor, Dept. of Surgery & Radiology,  
Veterinary College, Anand)*

### **(ix) Tie-in configuration technique**

Tie-in configuration technique for immobilization of femoral fractures



in dogs nullifies the disadvantages of intramedullary pinning by preventing proximal migration of the pin and by resisting axial compressive as well as rotational fracture forces and also provides added stability to the fractured bone for earlier restoration of normal limb functions.

*(Professor, Dept. of Surgery & Radiology,  
Veterinary College, Anand)*

## VI SOCIAL SCIENCE

### 1 Scale to measure attitude towards application of distance education in agriculture and allied fields

Following scale is recommended for scientific community to measure attitude towards application of distance education in agriculture and allied fields. The statements are as follow. The reliability of 1<sup>st</sup> and 2<sup>nd</sup> year was 0.78 and 0.74 respectively.

### 2 Scale to measure attitude of farmers towards soil health card programme

Following scale is recommended for scientific community to measure

Sr. No.	Statements for Final Scale
1 (+)	I feel that DEAAF is need of hours to fill gap between actual need of able human recourses for agril. Development and their availability.
2 (+)	I believe that there is need to implement DEAAF programme because of its flexibility.
3 (-)	I don't think offering master and doctorate programme on agriculture through DE is possible.
4 (-)	I dislike DEAAF because it does not follow formal way of learning.
5 (+)	I like to learn through DEAAF as it provides opportunity to learn at any time.
6 (+)	I feel that DEAAF creates educational opportunity to those who want to learn while earning.
7 (+)	I feel that DEAAF is relevant to the ever increasing higher agricultural educational needs of India.
8 (+)	I believe that DEAAF has the potential to bring out innovation.

*(Assist. Prof., Polytechnic in FS&HE, Anand)*

attitude of farmers towards soil health card programme. The statements are as follow. The reliability of 1<sup>st</sup> and 2<sup>nd</sup> year was 0.78 and 0.83 respectively.

Sr. No.	Statements for Final Scale
1 (+)	I believe that Soil Health Card (SHC) programme is blessing for the farmers.
2 (+)	I realize that SHC is useful to know the physical properties of the soil to ensure the soil productivity.
3 (+)	I trust that SHC is useful to save input cost for the farmers.
4 (+)	I believe that SHC is useful scheme for farmers.
5 (-)	I feel that SHC programme is not useful for illiterate farmers.
6 (+)	I feel that SHC is useful scheme to understand fertility status of the soil.
7 (+)	I recognize that SHC is worthy for balanced use of chemical fertilizers.
8 (+)	I recognize that SHC is useful to adopt Integrated Nutrient Management practices in the crops.

*(Professor & Head, Department of Ext. Edu., BACA, Anand)*

## ACHIEVEMENTS IN SEED PRODUCTION

All the seed producing centres of Anand Agricultural University, Anand is well equipped with seed production machineries required for all operations starting from land preparation to harvesting. Laser land leveler also used at required centres. Controlled / micro irrigation facilities also created at most of the centres. The total seed

production of the year 2011-12 reached all time high 6742.33 quintals. The seed processing and seed testing facilities also created which boosted the efforts seeds quality assurance. For ensuring quality of seeds to farmers, Anand Agricultural University has also registered its trademarks and logo of "ANUBHAV SEED" with the Trademark Registration Authority of India.

**Table- 6.3 Seed and Seedling production**

Seed Production in Anand Agricultural University, 2011-12 ( quintal)				
Sr. No.	Crops	Breeder	Other stage	Total Seed
<b>A</b>	<b>Seeds</b>			
<b>1</b>	<b>Cereals</b>			
	Rice	243.77	2361.75	2605.52
	Wheat	787.50	1504.75	2292.25
	Maize	124.95	419.91	544.86
	<b>Total</b>	<b>1156.22</b>	<b>4286.41</b>	<b>5442.63</b>
<b>2</b>	<b>Pulses</b>			
	Chickpea	69.90	136.15	206.05
	Pigeon pea	0	12.50	12.50
	Green gram	1.00	160.93	161.93
	Cowpea	6.55	3.00	9.55
	Clusterbean(Seed)	0	169.65	169.65
	Clusterbean(Veg.)	1.60	14.40	16.00
	Pigeonpea (Veg.)	0	3.40	3.40
	<b>Total</b>	<b>79.05</b>	<b>500.03</b>	<b>579.08</b>
<b>3</b>	<b>Oilseeds</b>			
	Groundnut	27.08	0	27.08
	Rapeseed/ Mustard	0	20.00	20.00
	Soybean	0	106.40	106.40
	Sesame	0	8.00	8.00
	Castor	0	174.04	174.04
	<b>Total</b>	<b>27.08</b>	<b>308.44</b>	<b>335.52</b>
<b>4</b>	<b>Fibre crops</b>			
	Cotton	31.39	37.00	68.39
	Sun hemp	0	15.00	15.00
	<b>Total</b>	<b>31.39</b>	<b>52.00</b>	<b>83.39</b>
<b>5</b>	<b>Forage/ Fodder Crops</b>			
	Oats	60.00	22.00	82.00
	Lucerne	19.00	33.12	52.12

Seed Production in Anand Agricultural University, 2011-12				(quintal)
Sr. No.	Crops	Breeder	Other stage	Total Seed
	Fodder Sorghum	0	18.12	18.12
	Rajka Bajra	0	10.70	10.70
	<b>Total</b>	<b>79.00</b>	<b>83.94</b>	<b>162.94</b>
<b>6</b>	<b>Other Crops</b>			
	Tobacco	0	103.77	103.77
	Cumin	0	26.90	26.90
	<b>Total</b>	<b>0</b>	<b>130.67</b>	<b>130.67</b>
	<b>Grand Total</b>	<b>1372.74</b>	<b>5361.49</b>	<b>6734.23</b>
<b>B</b>	<b>Planting Material/ Root Slips (Lakhs)</b>			
	Tobacco	0	247	247.00
	Napier Hybrid	0	1.93	1.93
	<b>Total</b>	<b>0</b>	<b>248.93</b>	<b>248.93</b>

#### Horticulture (including all classes of seeds/ pl. materials)

(quintal)

Sr. No.	Crops	Truthful Labelled
<b>A</b>	<b>Seeds</b>	
<b>1</b>	<b>Vegetables</b>	
	Tomato	0.03
	Chillies	0.27
	Bhendi	2.44
	Brinjal	0.88
	Cucurbits	0.13
	Bottle gourd	1.34
	Pumpkin	0.16
	Indian Bean	0.25
	Ridge Gourd	0.09
	<b>Total</b>	<b>5.59</b>
<b>2</b>	<b>Medicinal &amp; Aromatic Crops</b>	<b>2.51</b>
	<b>Grand Total</b>	<b>8.10</b>

#### Planting Materials/ Saplings Production

(Nos. in lakh)

Sr. No.	Crops	2011-12
<b>1</b>	<b>Fruits (Nos.)</b>	
	Mango	1756
	Sapota	1140
	Aonla	400

Sr. No.	Crops	2011-12
	Kagzilime	15731
	Custard apple	3274
	Others	75098
	<b>Total (Lakhs)</b>	<b>0.97399</b>
<b>2</b>	<b>Vegetables (Lakhs)</b>	
	Chilli	4.70
	Brinjal	1.29
	Tomato	0.91
	<b>Total (Lakhs)</b>	<b>6.90</b>
<b>3</b>	<b>Flower crops (Nos.)</b>	
	Rose	20000
	Marigold	85000
	Tuberose	3000
	Golden rod	500
	Chrysanthemum	2500
	Gerbera	500
	Others	74500
	<b>Total (Lakhs)</b>	<b>1.86000</b>
<b>4</b>	<b>Medicinal &amp; Aromatic Crops (Lakhs)</b>	<b>1.94000</b>
	<b>Grand Total (Lakhs)</b>	<b>11.67399</b>

#### Tissue Culture Seedlings Production

(Nos. in lakh)

Sr. No.	Crops	2011-12
1	Date palm, Parwal, Spine gourd	0.016
	<b>Total</b>	<b>0.016</b>

#### RESEARCH PROJECTS

In addition to regular state plan, non-plan and ICAR Co-ordinate projects, following 72 new schemes were sanctioned during the year.

ICAR	06	RKVY	01
GoI	06	NHM	03
State Plan	08	Other Agency	43
GoG	05	<b>Total</b>	<b>72</b>





Sr. No.	Name of Project	Principal Investigator	Financing Authority	Grant Allotted (Rs. in lakhs)
<b>A ICAR</b>				
•	Emeritus scientist scheme on Development, Implementation and promotion/Parapheromone based IPM strategy (Mass trapping & male annihilation) for the management of fruit flies in cucurbits, Mango and Guava; shoot & fruit borer in Brinjal & Okra; & <i>Heliothis</i> in Okra, Pigeonpea & Chickpea.	Dr.R. C. Jhala Emeritus Scientist, Biological Control Res. Lab., AAU, Anand	ADG(HRD) ICAR, New Delhi	5.25 1 <sup>st</sup> yr
•	Niche Area Excellence project- Metagenomic Analysis of Ruminant Microbes	Project In charge- Dr. C. G. Joshi, Professor & Head, Department of Animal Biotechnology, Vete. College, AAU, Anand	ADG (EPD), ICAR, New Delhi	258.00
•	Development of e-Courses for B.Tech. (Agricultural Engineering) (NAIP-I)	CPI- Dr. D.C.Joshi, Dean, FPT & BE, AAU, Anand	National Coordinator, NAIP, PIU, New Delhi. (ICAR)	419.34
•	Experiential Learning Unit – Processing of Food Crops for value addition	Principal, College of FPT&BE, AAU, Anand	ADG(EPD), ICAR, New Delhi	90.00
•	Experiential Learning Unit- Entrepreneurship Oriented Broiler Production Unit	Research Scientist Department of Poultry Science, Vet. College, AAU, Anand	ADG(EPD), ICAR, New Delhi	32.80
•	Experiential Learning Unit- Protective Cultivation for High-Tech Horticulture	Professor & Head Dept. of Horticulture, BACA, AAU, Anand	ADG(EPD), ICAR, New Delhi	75.00
<b>Total</b>				<b>880.39</b>

Sr. No.	Name of Project	Principal Investigator	Financing Authority	Grant Allotted (Rs. in lakhs)
<b>B</b>				
<b>GOI</b>				
•	High throughput exome sequence analysis in four buffalo breeds of Gujarat to detect single nucleotide polymorphisms	Dr. C. G. Joshi, Professor & Head, Department of Animal Biotechnology, Vete. College, AAU, Anand	Joint Director, Ministry of Science & Technology, DBT, GOI, New Delhi	92.524
•	Modelling for estimation of Incident Photosynthetically Active Radiation (IPAR) using INSAT 3D Data	Dr. Manjusha Kulshrestha, Associate Professor (Maths) ,BACA, AAU, Anand	Project Director, Space Application Centre, GOI, Dept. of Space, Ahmedabad	5.250
•	Single nucleotide polymorphism detection in coding region of poultry genome and its association with feed conversion ratio of broilers	Project Coordinator Dr. C. G. Joshi, Professor & Head, Department of Animal Biotechnology, Vete. College, AAU, Anand PI- Dr. S. J. Jakhesara Assistant Professor	Joint Director, Ministry of Science & Technology, DBT, GOI, New Delhi	58.862
•	Metagenomic and clinical investigation of symbiotic fermented dairy product containing Probiotic <i>Lactobacillus helveticus</i> MTCC 5463 in geriatric Volunteers	Dr.J. B. Prajapati, Professor & Head, Dept. of Dairy Microbiology, DSC, AAU, Anand	Scientist -C, Ministry of Science & Technology, DBT, GOI, New Delhi	48.938
•	Genetic diversity and haplotyping of innate immune genes in Indian cattle and Buffalo	Dr. P. G Koringa, Assitant Professor, Department of Animal Biotechnology, College of Veterinary Science & A.H., AAU, Anand	Scientist 'E' and Joint Director, Ministry of Science & Technology, DBT, GOI, New Delhi	49.976



Sr. No.	Name of Project	Principal Investigator	Financing Authority	Grant Allotted (Rs. in lakhs)
•	Molecular understanding of Progressive Retinal Atrophy in dogs bred in India	Dr. D.B. Patil, Professor & Head, Department of Veterinary Surgery and Radiology, College of Veterinary Science & A.H., AAU, Anand	Scientist 'C', Ministry of Science & Technology, DBT, GOI, New Delhi	92.764
<b>Total</b>				<b>348.314</b>
<b>C Plan</b>				
•	Maize Productivity enhancement through single cross hybrid(s)	Research Scientist (Maize), Main Maize Research Station, Anand Agricultural University, Godhra	Agril. & Co-operation, G.S. Gandhinagar	6.15
•	Varietal Development in Chickpea for Tribal Area	Associate Research Scientist, Hill Millet Research Station, Anand Agricultural University, Dahod	Agril. & Co-operation, G.S. Gandhinagar	19.60
•	Establishment of Research Centre of Castor for Development of Production Technology, Sanand	Assistant Research Scientist, Castor and Seed Spices Research Station, Anand Agricultural University, Sanand	Agril. & Co-operation, G.S. Gandhinagar	4.05
•	Improvement of fiber Quality in Rainfed Cotton, Viramgam	Associate Research Scientist, Regional Cotton Research Station, Anand Agricultural University, Viramgam	Agril. & Co-operation, G.S. Gandhinagar	7.50
•	Varietal development of chickpea in residual moisture condition of <i>Bhal region</i> at Arnej	Research Scientist, Agriculture Research Station, Anand Agricultural University, Arnej	Agril. & Co-operation, G.S. Gandhinagar	3.00



Sr. No.	Name of Project	Principal Investigator	Financing Authority	Grant Allotted (Rs. in lakhs)
•	Research on Silvipasture Systems at Ramna Muwada and Forage Crops at Anand	Associate Research Scientist, LRS, AAU, Ramna Muwada	Agril. & Co-operation, G.S. Gandhinagar	11.25
•	Improvement of Nutritional Quality of Rice	Research Scientist, Main Rice Research Station, Anand Agricultural University, Nawagam	Agril. & Co-operation, G.S. Gandhinagar	6.00
•	Allele Mining for Fragrance and colour Principles from saffron ( <i>Crocus sativus</i> L.) and sandalwood ( <i>Santalum album</i> L.)	Unit officer and Professor & Head, Department of Agricultural Biotechnology, AAU, Anand	Agril. & Co-operation, G.S. Gandhinagar	192.45
<b>Total</b>				<b>250.00</b>
<b>D GOVERNMENT OF GUJARAT</b>				
•	Whole Genome Sequencing of Isabgol ( <i>Plantago ovata</i> F)	Dr. R. S. Fogat, Unit Officer, Dept. of Agricultural Biotechnology, AAU, Anand	Mission Director, GSBTM, Gandhinagar	19.18
•	Identification and molecular characterization of genes for nutritional quality and stress resistance in major cereals of Gujarat State	Dr. Subhash N., Professor, Dept. of Agricultural Biotechnology, AAU, Anand and Dr. Sasidharan N., Associate Professor, Dept. of Botany, BACA, AAU, Anand	Mission Director, GSBTM, Gandhinagar	20.00
•	Transcriptome Profiling of Horn Cancer in Kankrej Bullock	Dr. Prakash G. Koringa, Assistant Professor, Dept. Of Animal Biotechnology, Vety. College, AAU, Anand	Mission Director, GSBTM, Gandhinagar	15.13

Sr. No.	Name of Project	Principal Investigator	Financing Authority	Grant Allotted (Rs. in lakhs)
•	Changing role of bioinformatician in next generation sequencing era	Professor & Head, Department of Animal Biotechnology, Vety. College, AAU, Anand	Mission Director, Gujarat State BioTechnology Mission, Dept. of Science & technology, GoG, Block-11, 9th floor, Udyog Bhavan, Gandhinagar - 382 017	0.60
•	Assistance for Strengthening of Feed Testing Laboratory	Research Scientist, Dept. of Animal Nutrition Research Station, College of Veterinary Science and Animal Husbandry, AAU, Anand	Director of Animal Husbandry, Gujrat State, Gandhinagar	200.00
<b>Total</b>				<b>254.91</b>
<b>E RASHTRIYA KRUSHI VIKAS YOJNA [RKVY]</b>				
•	Establishment of Education & Extension facilities for farmers and students ❖ Hostel facilities for farmers trainees & students ❖ Hostel for farms Women / Girls students ❖ Facilities of Classroom for trainees / students ❖ Development of new amenities for training centre	Executive Engineer, Anand Agricultural University, Anand	Director of Agriculture, GoG, Gandhinagar	900.00
<b>Total</b>				<b>900.00</b>
<b>F NATIONAL HORTICULTURE MISSION</b>				
•	Establishment of Mushroom Cultivation Laboratory and Training Centre	TRTC, AAU, Devgadhbaria	Director of Horticulture, Gandhinagar	50.00
•	Small Scale Nursery	Polytechnique in Agriculture, Anand Agril. University, Vaso	Director of Horticulture, Gandhinagar	6.25

Sr. No.	Name of Project	Principal Investigator	Financing Authority	Grant Allotted (Rs. in lakhs)
•	Establishment of New Commercial Tissue Culture Laboratory for Date Palm and other Horticultural Crops	Dept. of Biotechnology, AAU, Anand	Director of Horticulture, Gandhinagar	100.00
<b>Total</b>				<b>156.25</b>
<b>G</b>	<b>PRIVATE ORGANIZATION</b>			
•	Residue and dissipation study of Propamocarb Hydrochloride 530 + Fosetyl-AL 310 - 840 SL on Tomato, Cabbage and Chilli	Dr. P. G. Shah, Residue Analyst, Pesticide Residue Scheme, ICAR Unit-9, AAU, Anand	Network Coordinator, AINP on Pesticide Residues, New Delhi	9.00
•	Evaluation of Athlete and Langdu as Biopesticides for their efficacy against pest complex of Okra	Dr. D. M. Korat, Principal Research Scientist, Biological Control Research Laboratory, AAU, Anand	Ocean Agro (India) Ltd., Vadodara	2.10
•	Technical Evolution of Ocean Agro Products	Dr. M. V. Patel, Professor & Head, Dept. of Agronomy, BACA, AAU, Anand	Ocean Agro (India) Ltd., Vadodara	5.00
•	Effect of Rhizomyx and Rhizomyco on yield and its attributes of Bt. Cotton	Dr. K.C. Patel, Assistant Professor, (Soil Science), BACA, AAU, Anand	Business Development Executive, Novozymes South Asia Pvt. Ltd., Bangalore	3.00
•	Solar/Wind powered portable Greenhouse for growing fodder for sustainable Dairy Development	Dr. Subhash Parnerkar, Res. Sci. & Head, Animal Nutrition research Dept., AAU, Anand	Greenfield Hydroponics System Inc, Ontario, Canada	16.50
•	Evaluation of performance of rice hybrids	Research Scientist, MRRS, AAU, Nawagam	Fortune Hybrid Seeds Limited, Hyderabad	4.20
•	Evaluation of performance of rice hybrids	Research Scientist, MRRS, AAU, Nawagam	Nuziveedu Seeds Pvt. Ltd., New Delhi	12.00
•	Evaluation of performance of maize hybrids	Dr. B. N. Patel, Asstt. Research Scientist, ARS, AAU, Nenpur / Sansoli	Nuziveedu Seeds Pvt. Ltd., Secunderabad	9.60

Sr. No.	Name of Project	Principal Investigator	Financing Authority	Grant Allotted (Rs. in lakhs)
•	Evaluation of performance of maize hybrids	Dr. V. V. Sonani, Unit Head, Pulse Research Station, Model Farm, AAU, Vadodara	Prabhat Agri Biotech Ltd., Hyderabad	4.20
•	Evaluation of performance of maize hybrids	Dr. V. V. Sonani, Unit Head, Pulse Research Station, Model Farm, AAU, Vadodara	Pravardhan Seeds Pvt. Ltd., Hyderabad	4.20
•	Evaluation of performance of maize hybrids	Dr. B. N. Patel, Asstt. Research Scientist, ARS, AAU, Nenpur / Sansoli	Fortune Hybrid Seeds Limited, Hyderabad	4.20
•	Evaluation of performance of rice hybrid	Dr. R.P.Kacha, Ass.Res. Sci., ARS for Irrigated Crops, AAU, Thasra	Seed Works International Pvt. Ltd., Hyderabad	1.50
•	Evaluation of performance of pearl millet hybrids	Dr. J.A.Patel, Research Scientist, Regional Research Station, AAU, Anand	Devgen Seeds and Crop Technology Pvt. Ltd., Secunderabad	1.50
•	Evaluation of performance of rice hybrid	Dr. R.P.Kacha, Ass.Res. Sci., ARS for Irrigated Crops, AAU, Thasra	Nath Bio-Genes (I) Ltd., Ahmedabad	1.00
•	Evaluation of performance of rice hybrid	Dr. R.P.Kacha, Ass.Res. Sci., ARS for Irrigated Crops, AAU, Thasra	Lead Technology Development, Devgen Seeds and Crop Technology Pvt. Ltd., Secunderabad	2.10
•	Testing fees for evaluation of bio-efficacy of penflufen 154 + trifloxystrobin 154 - 308 fs (w/v) against seed & seedling diseases of groundnut as seed treatment	Mr. Y.M.Rojasara, Assistant Research Scientist(Pl. Pathology), Regional Research Station, AAU, Anand	Field Development Executive, Bayer CropScience Ltd, Ahmedabad	3.54



Sr. No.	Name of Project	Principal Investigator	Financing Authority	Grant Allotted (Rs. in lakhs)
•	Evaluation of performance of maize hybrids	Shri. H.C.Parmar, Asstt. Res. Scientist, ARS, AAU, Jabugam	Syngenta India Limited, C/o Gandhi Agro Seeds Pvt. Ltd., opposite Sardar Patel Vegetable Market, Kevdabaug, Baroda	2.10
•	Evaluation of performance of maize hybrids	Shri. H.C.Parmar, Asstt. Res. Scientist, ARS, AAU, Jabugam	Monsanto India Limited, Ahura Centre, B Wing, 5th floor, 96, Mahakali Caves Road, Andheri (East), Mumbai - 400 093	3.30
•	Evaluation of performance of rice hybrids	Research Scientist, MRRS, AAU, Nawagam	PHI SEEDS Pvt. Ltd., 1, Sukh Appartment, 14 Motinagar Society, Nr. Sarda School, Darpan six Road, Ishwar Bhuvan Road, Navrangpura, Ahmedabad-380 009	3.30
•	Evaluation of performance of rice hybrids and varieties	Research Scientist, MRRS, AAU, Nawagam	Yaaganti Seeds Pvt. Ltd., 8-2-277/45, UBI Colony, Road No. 3, Banjara Hills, Hyderabad	4.20
•	Evaluation of performance of maize hybrids	Shri. H.C.Parmar, Asstt. Res. Scientist, ARS, AAU, Jabugam	Bioseed Research India Pvt. Ltd., Plot No. 206, Road No. 14, Jubilee Hills, Hyderabad - 500 033	1.50
•	Bio-efficacy of Penflufen 154 + Trifloxystrobin 154 - 308 FS (W/V) as seed treatment against seed & seedling diseases of Soybean	Dr. R. N. Pande, Prof. & Head, Dept. of Plant Pathology, BACA, AAU, Anand	Bayer CropScience Limited, 4 <sup>th</sup> Floor, B. D. Patel House, Near Sardar Patel Colony, Naranpura, Ahmedabad - 380 013	2.49

Sr. No.	Name of Project	Principal Investigator	Financing Authority	Grant Allotted (Rs. in lakhs)
•	Evaluation of Bio-efficacy & Phytotoxicity of Fipronil 200 SC against insect-pests (Thrips) of infesting Cotton	Dr. C. C. Patel, Research Scientist, Dept. of Entomology, BACA, AAU, Anand	Bayer CropScience Limited, 4 <sup>th</sup> Floor, B. D. Patel House, Near Sardar Patel Colony, Naranpura, Ahmedabad-380013	3.58
•	Evaluation of Bio-efficacy & Phytotoxicity of BYI 02960-SL 200 (Flupyradiflurone 200 SL) against sucking pests complex of cotton	Dr. C. C. Patel, Research Scientist, Dept. of Entomology, BACA, AAU, Anand	Bayer CropScience Limited, 4 <sup>th</sup> Floor, B. D. Patel House, Near Sardar Patel Colony, Naranpura, Ahmedabad - 380 013	3.58
•	Evaluation of performance of maize hybrids	Dr. B. N. Patel, Asstt. Research Scientist, ARS, AAU, Nenpur - Sansoli	Asian Agri Genetics Ltd., 608,609, Span Trade Center, Paldi, Ahmedabad	1.50
•	Bioefficacy of Diafenthiuron 50 WP against Chilli Mites	Dr. Jayesh J. Patel, Asstt. Res. Scientist (Ento.), Main Vegetable Research Station, AAU, Anand	Syngenta India Ltd., Crop Protection Division, 14, Shiv Tenaments, Nr. Astha Darshan, Anand- V.V. Nagar Road, Anand - 388 001	4.00
•	Bioefficacy of UPF - 509 against major diseases of chilli	Dr. R. N. Pande, Professor & Head, Dept. of Plant Pathology, BACA, AAU, Anand	United Phosphorus Ltd., Uniphos House, Madhu Park, 11 <sup>th</sup> road, Khar (W), Mumbai - 400 052	2.27
•	Bioefficacy of Diafenthiuron 50 WP against Brinjal Whitefly	Dr. Jayesh J. Patel, Asstt. Res. Scientist (Ento.), Main Vegetable Research Station, AAU, Anand	Syngenta India Ltd., Crop Protection Division, 14, Shiv Tenaments, Nr. Astha Darshan, Anand- V.V. Nagar Road, Anand - 388 001	4.00

Sr. No.	Name of Project	Principal Investigator	Financing Authority	Grant Allotted (Rs. in lakhs)
•	Evaluation of bio-efficacy of Thiamethoxam 12,6 % + Lambdacyhalothrin 9.5 % ZC (Alika 247 ZC) against Corn insect pests	Shri. S. D. Patel, Asstt. Res. Scientist (Ento.), Agricultural Research Station, AAU, Derol	Syngenta India Ltd., Crop Protection Division, 14, Shiv Tenaments, Nr. Astha Darshan, Anand- V.V. Nagar Road, Anand - 388 001	4.86
•	Evaluation of bio-efficacy of Diafenthiuron 50 WP from New Source against Cotton insect pests	Dr. C. C. Patel, Research Scientist, Dept. of Entomology, BACA, AAU, Anand	Syngenta India Ltd., Crop Protection Division, 14, Shiv Tenaments, Nr. Astha Darshan, Anand- V.V. Nagar Road, Anand - 388 001	4.62
•	Evaluation of transgenic stacked corn (MON 89034 x NK 603) against lepidopteran pests, bioefficacy, phytotoxicity and carryover of Roundup formulation (MON 76366)	Dr. K. B. Kathiria, Res. Sci., MVRs, AAU, Anand	Monsanto India Ltd., Ahura Centre, B Wing, 5th floor, 96, Mahakali Caves Road, Andheri (East), Mumbai 400 093	7.85
•	To study the bio-efficacy of Shriram Agrinos products HYT-A, HYT-B and HYT-C on tomato	Prof. Seema Sharma, Assistant Professor, Department of Agronomy, BACA, AAU, Anand	Shriram Fertilisers & Chemicals, Kirti Mahal, 19 Rajendra place, New Delhi - 110 125	10.00
•	Bioefficacy and Phytotoxicity of flubendiamide (Takumi) 20% WG against borer pests of chilli	Dr. J. J. Patel, Assistant Research Scientist (Entomology), Main Vegetable Research Station, AAU, Anand	Rallis India Limited, II floor, III block, KSCMF Ltd. Building, # 8, Cunningham Road, Bangalore - 560 052	4.35
•	Supervised field trial of Flupyradifurone SL 200 on Okra	Dr. P. G. Shah, Residue Analyst, Pesticide Residue Scheme, ICAR Unit-9, AAU, Anand	Network Coordinator, AINP on Pesticide Residues, Divisional of Agricultural Chemicals, B-2 Block, L.B.S. Building, Indian Agricultural Research Institute, New Delhi - 110 012	0.40

Sr. No.	Name of Project	Principal Investigator	Financing Authority	Grant Allotted (Rs. in lakhs)
•	“(1) To study the bioefficacy of Privi Nutrivit Trypto on Brinjal (2) To study the bioefficacy of Privi Nutrivit Super Set on Brinjal (3) To study the bioefficacy of Privi Gold on Tomato and (4) To study the bioefficacy of Privi Silver on Tomato	Dr. Jitendra J. Dhruve, Assistant Research Scientist (Biochem.), Main Vegetable Research Station, AAU, Anand	Privi Pharma Pvt. Ltd., A - 71, Privi House, TTC Ind. Area, Thane-Belapur Road, Koparkhairane, Navi Mumbai - 400 709	14.16
•	Evaluation of efficacy of transgenic corn hybrids with stacked events of TC1507 x NK603 in 3 <sup>rd</sup> Season of Bio-safety Research Level-I	Dr. A.D.Patel, Research Scientist & Unit Head, BTRS, AAU, Anand	PHI Seeds Pvt. Ltd., 3rd floor, 6-3-1099/1100, Babukhans' Millennium Centre, Raj Bhavan Road, Somajiguda, Hyderabad - 500 082	9.27
•	Testing of Spinetoram 12% SC w/v (11.7% w/w) against lepidopteran insect pests of transplanted rice	Dr. V. J. Patel, Associate Research Scientist (Ento.), MRRS, AAU, Nawagam	Dow AgroSciences India Pvt. Ltd., C/o Shri. S.R.Mule, Shivkrupa General Store, N-6, M2, 13/1, Sinhagad Colony, CIDCO, Aurangabad - 431 003	3.72
•	Evaluation of transgenic corn hybrids with event GA21 and (Bt11 x GA21) stacked against lepidopteran pests, bioefficacy, phytotoxicity and carryover of K salt of glyphosate	Dr. M. V. Patel, Professor & Head, Dept. of Agronomy, BACA, AAU, Anand	Syngenta Bioscience Pvt. Ltd., Plot No. 9-1-164/A, 165, 166, 4 <sup>th</sup> floor, Amsri Faust, Opp. Sigma Hospital, SD Road, Secunderabad - 500 003	9.27
•	Testing performance of new nematicide MCW-2 (10% GR) (Fluensulfone) against root-knot nematodes in tomato	Dr. R. K. Thumar, Assistant Professor, Dept. of Nematology, BACA, AAU, Anand	Makhteshim Agan India Pvt. Ltd., A-Block, 5 <sup>th</sup> floor, Q City, Nanakramguda Village, Gachibowli, Hyderabad - 500 032	6.60



Sr. No.	Name of Project	Principal Investigator	Financing Authority	Grant Allotted (Rs. in lakhs)
•	Testing of Polymer Coated Urea	Dr. V. R. Bhatt, Professoer & Head, Dept. of Agril. Chemistry & Soil Science, BACA, AAU, Anand	Gujarat State Fertilizers & Chemicals Ltd., P.O. Fertilizer nagar, 391 750, Vadodara.	2.24
•	Evaluation of performance of rice hybrids and varieties	Research Scientist, MRRS, AAU, Nawagam	Nuziveedu Seeds Pvt. Ltd., Hyderabad group	2.50
•	Evaluation of transgenic stacked corn hybrids (MON 89034 x NK 603) against lepidopteran pests as well as bioefficacy and phytotoxicity of Roundup formulation (MON 76366)	Research Scientist, ARS, Derol	Monsanto India Ltd., Ahura Centre, B wing, 5 <sup>th</sup> floor, 96, Mahakali Caves Road, Andheri (East), Mumbai – 400 093	9.79
•	Evaluation of Bt Cotton Hybrids	Dr.M.B.Parmar Asstt. Res. Sci., RRS, AAU, Anand	41 Trials of Various 18 companies	110.70
	Evaluation of Bt Cotton Hybrids (Dire. of Agri. through NAU)	Dr.M.B.Parmar Asstt. Res. Sci., RRS, AAU, Anand	80 entry at RRS 18 entry at Dhandhuka	58.80
<b>Total</b>				<b>378.59</b>

#### IV RESEARCH PUBLICATIONS

#### b. Research Papers Presented

##### ❖ Research Papers Published (Appendix-7)

❖	<b>Research Papers Published (Appendix-7)</b>			1	FACULTY OF AGRICULTURE	:	150
1	FACULTY OF AGRICULTURE	:	126	2	FACULTY OF DAIRY SCIENCE	:	046
2	FACULTY OF DAIRY SCIENCE	:	016	3	FACULTY OF VETERINARY SCIENCE	:	141
3	FACULTY OF VETERINARY SCIENCE	:	110	4	FACULTY OF FOOD PROCESSING TECHNOLOGY & BIO-ENERGY	:	010
4	FACULTY OF FOOD PROCESSING TECHNOLOGY & BIO-ENERGY	:	005	5	FACULTY OF AGRICULTURAL INFORMATION TECHNOLOGY	:	004
5	FACULTY OF AGRICULTURAL INFORMATION TECHNOLOGY	:	011				

## **V PARTICIPATION OF SCIENTISTS FOR CONFERENCE / SEMINAR / SYMPOSIUM / WORKSHOP / TRAINING ETC.**

A	FOREIGN / ABROAD	:	004
B	NATIONAL LEVEL	:	370

## **VI DISTINGUISHED AWARDS / HONOURS / RECOGNIZATION**

- ❖ Prof. J.P. Trivedi Award Sponsored by Shri Hari Om Ashram, Nadiad for the year 2009 awarded for persevering research contribution to Agriculture Science, 2009 in the field of Assessment and Impact of Degradation and Harvest time residues of pesticide in/on different crops for good agricultural practices (GAP). This was awarded to the scientist/technical staff of AINP on Pesticide Residues, AAU, Anand at Gujarat Vidhyapeeth, Ahmedabad on 12-01-2012.
- ❖ Dr. K. C. Patel received IZA – FAI Award on “Promoting the use of Zinc in Indian Agriculture” for the year 2011 by International Zinc Association, Belgium and Indian Fertilizer Association, New Delhi on 7<sup>th</sup> December, 2011.
- ❖ Dr. Dakhore K. K. received Dr. P. D. MISTRY Gold medal for Best Ph.D thesis sponsored by Association of Agrometeorologist for the year 2007-08 at Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, West Bengal during 9-10<sup>th</sup> Dec. 2011.
- ❖ Amin Rahul R., Kuldeep Khatri, Harit K. Patel and R. V. Vyas received best research paper award on paper entitled,

“Production scale up and efficiency of native *Bacillus thuringiensis* isolates” at National symposium on Status, Challenges & opportunities in Life Sciences organized by Environmental Biotechnology & ARIBAS, Vallabh Vidynagar held on 10<sup>th</sup> September 2011.

- ❖ Dr. B. Joshi awarded 2<sup>nd</sup> prize for his research paper entitled “Isolation and Diversity Analysis of Rhizobacteria from sugarcane and Its Biocontrol potential against *Rhizoctonia solani*- A Common Plant Pathogen” in the International Conference on Biotechnology for Environment, Agriculture and Society organized by GSBTM & Hemchandracharya North Gujarat University Patan during 30<sup>th</sup> March to 1<sup>st</sup> April 2012.
- ❖ Khushbu B. Singh (2012) PG student received P. R. Verma Award for the best paper presentation for M.Sc research in Third Global Conference organized by *Indian Society of Mycology and Plant Pathology* held at Maharana Pratap University of Agriculture & Technology, Udaipur (India) during 10-13 January, 2012.
- ❖ Khushbu B. Singh (2012) PG student M.Sc.(Agri.) Plant Pathology received two Gold Medals i.e. (i) Late Shri Madhubhai Vallabhbhai Desai Medal (Year : 2010-11) and (ii) Dr. Davabhai Jethabhai Patel Medal (Year : 2010-11) for best Post-Graduate student in the subject of Plant Pathology.
- ❖ Anandcentre of AICRP on Agrometeorology

was awarded as the Best centre for the year 2011-12 by Project Coordinator (AICRPAM) CRIDA, Hyderabad during XII Biennial Workshop of AICRP held at Maharana Pratap University of Agriculture & Technology, Udaipur. The award is given based on overall performance of the center on fifteen parameters evaluation rating.



- ❖ Dr. B. N. Satodiya, Asstt. Res. Sci., received best Ph. D. Thesis Award from the Gujarat Association for Agricultural Scientists (GAAS) -2012



- ❖ First Best Research Paper Award given by Indian Dairy Association at XL Dairy Industry Conference held at New Delhi

during 2-5 Feb., 2012 for research paper titled "*Characterization of Halvasan from market and a process of its manufacture.*" Published in Indian Journal of Dairy Science, (2010) 63(5):376-380 by H.G. Patel, J.P. Prajapati, M.J. Solanky, P.S. Prajapati and Soni Dipal.



- ❖ First Prize was awarded to Sunil Patel by Dr S H Srivastava, Hon. Vice-Chancellor of Sardar Patel University, Vallabh Vidyanagar (Gujarat) for oral presentation of research paper on 'Innovative Equipment Design and Standardization of Process for Mechanized Production of 'Halwasan – A Value Added Functional Food' in National seminar on "Functional Foods: Managing Health in the Modern Age' held at Post Graduate Department of Home Science, Sardar Patel University, Vallabh Vidyanagar, Gujarat- 388 120 on October 7-8, 2011.





- ❖ Dr J. B. Prajapati, Professor & Head of Dairy Microbiology is honoured with "IDA Fellowship Award" in recognition of the valuable services rendered by him in furthering the cause of the Indian Dairy Association in particular and the Indian Dairy Industry in general. This was awarded by Indian Dairy Association in 40th Dairy Industry Conference held at New Delhi on 2nd February 2012.



- ❖ Goswami R. P. and Prajapati J. B. awarded first prize as best research poster entitled "Isolation of Bifidobacteria from human breast milk" presented at National seminar on paradigm shift in Indian Dairy Industry organized by Anand Agricultural University, Anand, Gujarat during 21-22 May, 2011.
- ❖ Gadhiya D. K., Prajapati J. B., Jana A. H. and Shaikh AI awarded second prize for research poster paper entitled "Development of probiotic chocolate" presented at National seminar on paradigm shift in Indian Dairy Industry organized by Anand Agricultural University, Anand, Gujarat during 21-22 May, 2011.
- ❖ Aswani Kumar Rathour, Harsev Singh, K. D. Aparnathi and Mukesh Rastogi won first prize on the poster presentation entitled "AR protein test for raw milk as platform test at field level" at XL Dairy Industry Conference, 2012, IDA, New Delhi.
- ❖ Sathe T. G., Pandya P. R., Joshi C. G. and Jhala M. K. awarded FIRST position for oral presentation for the research paper entitled "Tannin tolerant rumen bacterial diversity studies in goat by PCR-DGGE, Cloning and Sequencing" in National Symposium on Microbial Diversity and its Applications in Health, Agriculture and Industry organized by ICAR Research Complex for Goa, Old Goa during 4-5<sup>th</sup> March, 2011.
- ❖ Dr R. G. Jani received National award for outstanding contribution on wildlife health sponsored by Agri/Forest/A.H. Minister at NCWHF, Jabalpur in September 2011.
- ❖ Dr. R. G. Jani and Dr. Nikhil Patel awarded for best paper for paper on snake rescue at NCWHF, Jabalpur.
- ❖ Dr. D. B. Patil and Dr. P.V. Parikh received professor J.P. Trivedi Award in the XXXV Annual Congress of ISVS and International Symposium on "Nanobiomaterials in Biomedical Research: Their Application in Veterinary Surgery" at WBUAFS, Kolkata from 11-13<sup>th</sup> November, 2011.
- ❖ Dr. J. B. Nayak and Dr. M. N. Brahmabhatt received Best Ph.D thesis Award from the Gujarat Association for Agricultural Sciences (GAAS) by Honorable State Agriculture Minister Shri.K.M. Bhalala.
- ❖ Dr. D. C. Joshi, Principal and Dean, College



of FPT and BE has been awarded “Fellow” of Indian Society of Agricultural Engineers in annual convention of the society held at G. B. Pant University of Agriculture & Technology, Pantnagar on 29<sup>th</sup> Feb., 2012.

## VII IMPORTANT EVENTS

### Conference/Seminar/Symposium

- ❖ One day Technical Seminar on “Emerging Horizons in Veterinary profession” Organized by Alumni Association of Veterinary College Anand (AAVCA) at Veterinary College, Anand on 27-08-2011.
- ❖ Organised two days seminar on Role of Veterinarians in Wildlife Health in collaboration with State forest Department, GOG , Gandhinagar during 7-8<sup>th</sup> October 2011.
- ❖ National conference on “Cow based Agriculture, Health and Environment” organized by Gauseva Ayog Gujarat and Anand Agricultural University, Anand held at Anand Agricultural University on 25-26 Feb, 2012

### Training/Winter School

- Department of Ag. Meteorology had organised DSSAT modeling training workshop for Agro-advisory services in July 2011 and crop modeling training on groundnut at Anand during 8-12 August 2011.
- 21 days Winter School on “Diagnostics, Genomics, Implications and Integrated Management of Plant Pathogens” at Department of Plant Pathology, B. A. College of Agriculture, AAU, Anand from 2-22 November, 2011.
- One Day training programme on “Seed Processing and storage for Quality Seed Production” was organized on 6<sup>th</sup> Sept, 2011 at AAU, Anand.
- One Day training programme on “Quality Seed Production in Hybrid Castor” was organized on 8<sup>th</sup> Dec., 2011 at AAU, Anand.
- One Day training programme on “Quality Seed Production and Storage in Wheat” was organized on 5<sup>th</sup> March, 2012 at AAU, Anand.
- One Day training programme on “Good Agricultural Practices for Quality Seed Production” was organized on 8<sup>th</sup> 20<sup>th</sup> March, 2012 at AAU, Anand.
- Two training programmes of three days each for the farmers of Vadodara district on seed production technology in different crops were organized at Anand.
- Four Field Scout Trainings programmes of one day each organized in the year 2011-12 for the Agricultural Field Scouts at Anand.
- “A two days Farmers Training” programme on
- Two Training Programmes on “Quality Seed Production of Forage Crops” were organized at Anand under Mega Seed Project during 25 January, 2011 and 16<sup>th</sup> March, 2011.
- Training programme on “Implementing Good Agricultural Practices (GAP)” under FICCI-RNE Project organized by Department of Plant Pathology, B. A. College of Agriculture, AAU, Anand on 18-19 April, 2011.

cultivation of Medicinal and Aromatic Crops was organized on 9-10 February, 2012. Dr. S. Maiti, Director, Directorate of Medicinal and Aromatic Plants Research, Boriavi, Dist.-Anand was the Chief Guest of the function. During the function the Book on “Cultivation of Aromatic Crops” was released and distributed to all participants.

- Total 23 training programmes were organized for the Dairy as well as Non-Dairy Technologists working in various capacities in the commercial dairy plants and marketing federation of the country at Anand by the Faculty of Dairy Science in collaboration with Vidya Dairy, Anand during the year 2011-12.
- National Training Programme on “Development of Value added a fermented symbiotic functional food” was conducted at SMC College of Dairy Science, AAU, Anand from 29<sup>th</sup> November to 12<sup>th</sup> December, 2011.
- Two ASCAD Training Programmes on “Advances in Diagnostic Microbiology” were

conducted at AAU, Anand from 7-12 Nov. 2011 and 21-26 Nov. 2011.

- Four ASCAD Training Programmes on “Laboratory Techniques in Disease Diagnosis” were conducted at AAU, Anand during the year 2011-12.
- Two ASCAD Training programmes were organized for Veterinarians of Department of Animal Husbandry, Government of Gujarat on “Gynaecological Aspects including Sonography and AI Techniques” in Sept. 2011 and Feb. 2012 at AAU, Anand.
- The refresher training course under ASCAD on Advances in Poultry Breeding, Health and Management was organized during 23-28<sup>th</sup> January, 2012 at AAU, Anand.
- Two trainings to impart training on feeding, breeding and management of goats. were conducted for Goat keeper’s on 19<sup>th</sup> December, 2011 and 26<sup>th</sup> March, 2012 at Anand Agricultural University, Anand.



**Demonstration of Pregnancy Diagnosis in Goat by Ultrasonography**



**Ultrasonography in goats using rectal transducer for early pregnancy diagnosis**

- ❖ ICAR sponsored Short Course entitled “Recent Advances in Crop Residue Based Total Mixed Rations for Improving Animal Productivity” was organized during 15-24<sup>th</sup> February, 2012 at AAU, Anand.



- ❖ The Awareness programme on CLIMATE CHANGE was organized at Chakalasi village of Anand taluka on 15<sup>th</sup> March, 2012.
- ❖ A two days training cum workshop entitled “Awareness for remedies for farmer’s problem with concern to chemical fertilizers” was jointly organized for all MBA college of SAU’s by Ocean Agro India Ltd. and International Agri-Business Management Institute during 1<sup>st</sup>-2<sup>nd</sup> June, 2012.



- ❖ Under the Swarnim Gujarat year, one day seminar entitled “Technology Interventions to Enhance Camel Productivity” was organized on 13<sup>th</sup> March, 2011 at Bhuj first time in Gujarat with collaboration of Department

of Animal Husbandry, Government of Gujarat, Samasta Mahajan Trust, Mumbai and Sahjeevan Trust, Bhuj and camel health check up camp was organized on 14<sup>th</sup> March, 2011 at Chhari Dhandh, Bhuj.

## Group Meetings



A group meeting of “Goat Breeders’ Association of Gujarat” was organized on 19-12-2011 at Anand Agricultural University, Anand. The goat breeders as well as goat keepers across the state were remained present in the meeting.

- ❖ Under the ICAR sponsored Tribal Sub Plan “Benefits of supplementing most limiting nutrients to dairy animals of Vadodara and Panchmahal districts of Gujarat State” two workshops were organized by Animal Nutrition Research Department, at Guda village, Taluka Chhotaudapur, district Vadodara on 26-03-2012 and at Amthani village, Taluka Kadana, District Panchmahal on 27-03-2012. About 100 livestock owners were participated in each workshop.
- ❖ 17<sup>th</sup> Biennial Group Meeting of All India Coordinated Research Project on Plant Parasitic Nematodes with Integrated Approach for Their Control was organized from 19-21 January, 2012 at AAU, Anand.
- ❖ Indian Association of Veterinary Pathologist



Gujarat Chapter 3<sup>rd</sup> Annual Meet and Technical Seminar was held on 28<sup>th</sup> August, 2011.



- ❖ “Mini Horse Show 2011-12” was organized by AAU on 8<sup>th</sup> January 2012 at Dholera. Around 200 horses participated in various events.



### Important Visitors

- Honourable Chief Minister of Gujarat, Shri Narendra Modi along with other dignitaries viz., Shri Dileepbhai Sanghani, Minister, Agriculture, Co-Operation Animal Husbandry, Fisheries, Cow-Breeding, Prison, Excise Law & Justice, Legislative & Parliamentary Affairs, Shri Mangubhai Chhaganbhai Patel, Minister, Tribal Welfare, Forest and Environment, Shri Purushottambhai Solanki, Gujarat Animal

Husbandry, Fisheries & Cow – breeding, Shri Jaysinh Mansinh Chauhan, Minister of State Education, (Primary, Secondary, Adult), Protocol, Shri Kanubhai Mepabhai Bhalala, Minister of State, Agriculture, Water Resources and Shri Jaydrathsinhji Chandrasinhji Parmar, Minister of State, Roads & Buildings visited the Institute on 20 May 2011 for the inaugural function of newly developed infrastructure of CAET, Godhra.







- ❖ Dr. Ramkrishna Kusmariya, Cabinet minister, holding portfolio of Farmer welfare and Agriculture Development, Animal husbandry, Fisheries, Backward & Minority Welfare, Madhya Pradesh state, along with Vice Chancellor, AAU visited Microbiology & Biofertilizer Project on 20<sup>th</sup> Sept. 2011 and given impression about promoting microorganisms in soil and appreciated AAU microbiologist efforts and lab to land activities of Anubhav Liquid Biofertilizers.
- ❖ Dr. Vandana Dwivedi, Jr. Advisor (Agri.), Planning Commission, New Delhi-1 visited Department of Plant Pathology, BACA, AAU on



12<sup>th</sup> October, 2011.

- ❖ Dr. T. R. Sharma, NRCPB, IARI, New Delhi visited Department of Plant Pathology, BACA, AAU on 5<sup>th</sup> November, 2011.
- ❖ Mr. Mandavia ( Ex. Legislator & Parliament member ), Chairman Gujarat Agro Industries Corporation Ltd, Ahmedabad along with Mr. N. N. Singh, Managing Director and Mr Sudhir Dave, visited Microbiology & Biofertilizer Project on 22<sup>th</sup> Nov, 2011 and appreciated AAU microbiologist efforts for development and commercialization of Anubhav Liquid Biofertilizers for farmers.



- ❖ Dr. S. S. Shah, Vasant Vihar, Thane visited Department of Plant Pathology, BACA, AAU on 1st January, 2012.
- ❖ Shri Deelipbhai Sanghani, Honorable Minister

of Agriculture and Animal husbandry visited AAU on occasion of inauguration function of Kapila-Teaching Complex, Trainee's hostel and Semen Processing Laboratory on 09.01.2012



- ❖ Dr Romeo Toledo, Professor Deptt. of Food Engineering, University of Georgia, USA had visited College of Food Processing Technology & Bio-Energy under Full Bright Exchange Programme.
- ❖ Dr Shyam Sablani, Deptt. of Biological System Engineering, Washington State University,

USA had visited College of Food Processing Technology & Bio-Energy and delivered a special lecture.

- ❖ A group of students from Pennsylvania University visited the various departments of Anand Agricultural University, Anand.



# CHAPTER 7

## Extension Education

### Extensive Education and Technology Transfer

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 encourages, guides and supports the extension education centres of University to organize different extension education activities for benefit of farming community.

#### EXTENSION EDUCATION COUNCIL

The Extension Education Council has been constituted to consider and recommend the extension education programmes/activities of the University. The Fifth meeting of Extension Education council was held on 23/05/2011 under the chairmanship of Dr. A.M. Shekh, Hon. Vice Chancellor, AAU, Anand. The Extension Education Council contained the following members:

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



### Zonal Research and Extension Advisory Committee (ZREAC)

The Committee consisted of representative of development departments, Centres of extension education, Director of Research, Deans of the faculty, Crop and Subject Matter Specialists, co-operative sector, industries and progressive farmers. Meeting is held

regularly twice in kharif and rabi season. The committee discussed in depth the adoption and its feed backs on research recommendations and existing Transfer of technology programs. The approved recommendations are then passed to the concerned. The ZREAC *rabi* was held on 17/09/2011 & *Kharif* on 28/02/2012.

### CENTERS OF EXTENSION EDUCATION

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

Sr. No.	Type	Name of Center	Location
1	Certificate Course	Bakery School	Anand
		Poultry Training Centre	
		Gardeners Training Centre	
		Training Program on Food Processing Technology	
		Training Program on Organic Farming	
		Training Program on Weed Management	
		Training Program on Integrated Pest Management	
		Training Program on Medicinal and Aromatic Plants	
		Training Program on Seed Production	
2	Training Centres for Extension Workers	Extension Education Institute (EEI)	Anand
		Training and Visit Training Centre	
3	Training Centres for Farmers/ Farm Women/ Rural Youth	Sardar Smruti Kendra (SSK)	Anand
		Krushi Vigyan Kendra (KVK)	Devataj, Dahod, Arnej
		Tribal Training Centre (TTC)	Dahod
		Tribal Research cum Training Centre (TRTC)	Devgadhbaria
		Tribal Women Training Centre (TWTC)	
4	Advisory Services	Farm Advisory Services (FAS)	Anand
		Agricultural Technology & Information Centre (ATIC)	Anand
		Transfer of Technology Centre (TOT)	Anand, Arnej
		Centre for Communication Network (CCN)	Anand
		Agri Polyclinic Centre (APC)	Dahod
		Publication Unit	Anand
5	Other	Main Maize Research Station (MMRS)	Godhra
		Krushi Mahotsav	Anand
		Rastriya Krushi Vikash Yojana(RKVY)	



## EXTENSION EDUCATION SCHEMES

Under the Directorate of Extension Education, 18 plan schemes, 7 non plan schemes, 4 ICAR schemes and 6 other agency schemes were operated during the year as under:

Sr. No.	Scheme	Centre
Plan		
1	Training Programme on Food Processing Technology	Anand
2	Training Programme on Organic Farming	
3	Training Programme on Weed Management	
4	Training Programme on Integrated Pest Management	
5	Training Programme on Seed Production	
6	Training Programme on Medicinal and Aromatic Plants	
7	Establishment of Gardeners Training Centre	
8	Establishment of Transfer of Technology Centre	Arnej
9	Establishment of Women Training Centre	Devgadhbaria
10	Upgrading of Poultry Training Centre	Anand
11	Establishment of Demonstration cum Training Centre for Fish Culture	Devataj
12	Establishment of Agri Poly Clinic for Tribal Farmers	Dahod
13	Centre for Communication Network	Anand
14	Strengthening of Directorate of Extension Education	
15	Establishment of Centre to Agricultural Extension Information System	
16	Establishment of Transfer of Technology Centre	
17	Agricultural Technology Information Centre (ATIC)	
18	Upgrading of Existing Sardar Smruti Kendra	
Non Plan		
19	Director of Extension Education	Anand
20	Publication Scheme	
21	Establishment of Sardar Smruti Kendra Museum	
22	Farm Advisory Scheme (FAS)	
23	Training and Visit Scheme	
24	Tribal Training Centre(TTC)	Dahod
25	Tribal Research and Training Centre (TRTC)	Devgadhbaria
ICAR		
26	Krushvi Vigyan Kendra	Anand
27	Krushvi Vigyan Kendra	Devataj
28	Krushvi Vigyan Kendra	Dahod
29	Krushvi Vigyan Kendra	Arnej
Other Agency		
30	Krushvi Mahotsav	Anand
31	Training and Visit Scheme (Plan)	
32	Kisan Call Centre (KCC)	
33	Seed Village Scheme	
34	NARP Extension Scheme	Godhra
35	NARP Extension Scheme	Arnej

## EXTENSION EDUCATION AND TRAINING PROGRAMS

### 1 Certificate Courses for Farm Youths

Anand Agricultural University conducted various certificate courses as per the details given below during the year 2011-12.

Sr. No.	Name of Certificate Course	Duration	No. of Students Completed the Course	No. of training
1	Baking Technology (Two batches in a year)	20 Weeks	22	01
2	Poultry Training (Three batches in a year)	10 Weeks	39	01
3	Gardeners Training	6 Months	20	01
4	Training Program on Food Processing Technology	3 Days	14	01
5	Training Program on Organic Farming	3 Days	166	04
6	Training Program on Weed Management	3 Days	76	02
7	Training Program on Integrated Pest Management	3 Days	62	02
8	Training Program on Medicinal and Aromatic plants	-	-	-
9	Training Program on Seed Production	3 Days	49	01

### 2 Training Programs for Extension Workers

#### (a) Extension Education Institute

The Extension Education Institute, Anand caters 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. The Management Committee of EEI approves action plan and reviews the progress of EEI activities. The details of the training courses conducted by the EEI, Anand during the year 2011-12 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	24 19	450 593
2	SWPA farmers training program (GOI sponsored)	20	1015
3	Consultancy courses	16	363

In addition to these courses, two follow up and seven research studies were undertaken during the year.

### (b) Training & Visit Centre

The Anand Agricultural University has taken up the task of training extension personnel of the Department of Agriculture through the Training and Visit Training Centers at Anand. The main objectives of the training are:

- (i) To coordinate research, training and extension activities effectively
- (ii) To research more effectively by catering to the local needs and situation
- (iii) To evolve an intensive training program on a systematic basis for extension workers and farmers and to ensure effective supervision and technical support to VEWs/ADOs.

The details about bi-monthly workshops, pre-seasonal training workshops and special training programs organized for the extension personnel of the Department of Agriculture, and the number of SMSs/AEOs attended the programs during 2011-12 are as under:

**Table 7.1 : Training Programs Organized by the Transfer of Technology Centres for Farmers/ Farm Women**

Sr. No.	TOT Centre	No. of trg. progs.	Farmers	Farm women	Farm Youths	Extension workers/ other	Total
i	KVK, Devataj	59 A	888	113	75	106	1182
		64 B	1256	33	-	16	1305
ii	KVK, Dahod	52A	1013	403	-	-	1416
		55B	826	322	-	-	1148
iii	KVK, Arnej	36A	564	295	218	-	1077
		81B	1057	446	388	-	1891
iv	SSK, Anand	133A	2929	1364	654	124	5071

Sr. No.	Type of program	No.	No. of Participant
1	Bi-monthly Workshop	04	173
2	Pre-seasonal Training	02	88
3	Training on ISOPOM Oilseeds	04	124
4	Training on Organic Farming	01	15
5	Short Term Training	02	20
6	Training on Cotton Production Technology	01	29

### 3 Training / Extension Education Programs for Farmers/Farm Women/ Farm Rural Youth

#### (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 were organized based on the needs and interest of the stakeholders through the Front Line Transfer of Technology (TOT) Centres. The details are depicted in Table-7.1

Sr. No.	TOT Centre	No. of trg. progs.	Farmers	Farm women	Farm Youths	Extension workers/ other	Total
v	ATIC, Anand	05 A	34	85	28	-	147
		02 B	-	270	-	-	270
vi	TRTC, Devgadhbaria	06 A	226	49	-	-	275
		04 B	144	81	-	-	225
vii	TWTC Devgadhbaria	10 A	63	349	-	-	412
		04 B	107	114	-	-	221
viii	APC Dahod	01A	40	11	-	-	51
		12B	254	70	-	-	324
Total (i to viii)		302A	5757	2679	975	230	9631
		222B	3781	1336	388	16	5384
Grand Total (A+B)		524	9538	4015	1363	246	15015
A = On-campus      B = Off-campus							

A = On-campus B = Off-campus

#### (b) Extension Education Activities

extension activities organized and number of beneficiaries are given in Table 7.2, 7.3, & 7.9.

The TOT centres have also planned and organized extension activities. The details of the

**Table 7.2: Extension Education Activities carried out by TOT Centres**

Sr. No.	Name of Activity	Name of TOT centre					
		KVKs			SSK	TRTC	TWTC
		Devataj	Dahod	Arnej	Anand	D'baria	D'baria
1	Farmers / field days	06 (239)	03 (123)	19 (522)	01 (452)	-	-
2	Agri. fairs / Exhibitions	05 (Mass)	02 (3772)	01 (189)	-	-	-
3	Khedut/Women shibir/ meetings	07 (4239)	13 (330)	02 (48)	23 (798)	-	-
4	Seminar/Work shop/ Kisangosthi	01 (131)	60 (3371)	-	-	-	-
5	Agri. tour / Field visits	-	-	07 (214)	65 (2275)	-	-
6	Film/Slide/ Video show/TV programmes	59 (1309)	17 (1153)	06 (259)	66 (Mass)	-	-
7	Radio/TV talk	-	11 (Mass)	-	01 (Mass)	01 (Mass)	01 (Mass)
8	Celebration of women's day	-	-	02 (60)	-	-	-



Sr. No.	Name of Activity	Name of TOT centre					
		KVKs			SSK	TRTC	TWTC
		Devataj	Dahod	Arnej	Anand	D'baria	D'baria
9	Guidance through letters/ personal contact/ telephone	172	176	470	01 (1083)	10	15
10	Farm literature	11	13	12	03	-	-
11	Press note	17	-	03	08	-	-
12	Krishigovidya subscription	-	13	05	565	-	-
13	Escorting the visitors	-	-	03 (65)	29486	-	-
14	Crop diagnostic services	-	82 (470)	16 (82)	-	-	-
15	Farmer scientists interactions	134 (Mass)	06 (207)	01 (9)	-	-	-
16	Distribution of farm literature	-	2578	3500	18 (9276)	-	-
17	Ext. Res. program	-	02	01	01	-	-
18	Group discussion	-	-	02 (36)	-	-	-
19	Field visit of scientists	76 (906)	90 (818)	38 (672)	-	15	-
20	Farmers visit to TOT centre	296 (347)	28 (483)	-	-	17 (254)	17 (254)
21	Diagnostic visits	29	-	-	-	-	05
22	Exposure visits	02 (43)	-	-	-	-	-
23	Cattle camp (No. of animal)	01 (70)	-	-	-	-	-
24	Guidance in farmers day/ field day	-	-	09 (317)	-	-	-
25	Interactive/Method demonstration	04(63)	08 (287)	05 (100)	-	-	64
26	Article published	03	-	15	-	02	-
27	Lectures delivered	09 (778)	68 (2413)	-	-	10	07
28	Success stories published	-	-	-	10	-	-
29	Participation in Seminar/workshop	05	18	-	-	-	03

**Note:** Figures in bracket indicate numbers of participants / beneficiaries

**Table 7.3: Extension Education Activities Carried Out by Different Centres for Certificate Courses**

Sr. No	Name of Activity	Name of the centre	
		School of Baking	Poultry
		Anand	Anand
1	Field visit	2(16)	-
2	Guidance through letters/ telephone	38	10
3	Seminar	1(240)	-
4	Press note	01	-
5	Escorting the visitors	54	13(261)
6	Demonstration	2(59)	-
7	Internship	1(16)	-
8	Educational tour	1(16)	3(39)
9	Stall exhibition	1(1000)	-
10	One week training	4(87)	-
11	Training programme	-	1(16)
12	Field day exhibition	-	2(5000)
13	Farm shibir	-	1(15)
14	Krushu goshthi	-	60(3000)

**Note:** Figures to the parenthesis indicate the no. of beneficiaries.

**(c) Agriculture Fairs**

To communicate the agricultural technology to many farmers at a time, AAU has organized/ participated in different agricultural fairs and exhibitions. The profile of AAU and the

latest technologies developed by the University were displayed. The interactions between scientists and the farmers were also organized. The literature of improved technologies were distributed during such fairs & exhibitions.

**Table 7.4: Agriculture Fair/ Exhibition 2011-2012**

Sr. No.	Agriculture Fair/ Exhibition	Place	Date	No. of Beneficiaries (Approx.)
1	Agri. Fair cum Exhibition ( <i>Krushu Mahotsv</i> )	Godhra	12-14 May 2011	1,70,000
2	Agri. Exhibition	Navli	18 May 2011	1000
3	Agri. Fair	Godhra	19 May 2011	50,000
4	Agri. Fair	Ghogamba	25 May 2011	1000
5	Agri. Exhibition	Khadol	12 January 2012	400
6	Regional Agri. Fair (WZ)	Vyara	20-22 January 2012	80,000
7	Agri. Exhibition	Gandhinagar	21-23 January 2012	90,000
8	Agri. Exhibition (GIDC)	Vidhyanagar	31 Jan. to 01 Feb. 2012	1,00,000
9	Agri. Fair	Sidsar	08-13 February 2013	4,00,000

Sr. No.	Agriculture Fair/ Exhibition	Place	Date	No. of Beneficiaries (Approx.)
10	Agri. Exhibition	Oad	13 February 2013	400
11	Agri. Exhibition	Anand	14 February 2013	30,000
12	Agri. Fair (ATMA)	Nadiad	27 February 2013	2000
13	Agri. Fair (ATMA)	Anand	27 February 2013	2500
14	Agri. Fair (ATMA)	Bavla	13 March 2012	834
15	Fruit & Flower Show	Oad	13 March 2012	200
16	Agri. Fair (Fisheries)	Mangalbharati	14-15 March 2012	150
17	Exhibition (Mahi Mhotsav)	Shili	27-28 March 2012	5000

#### (d) Frontline Demonstrations

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

organized 2117 FLDs on various crops during *kharif*, *rabi* and summer seasons as well as on farm implants, livestock and fishery. The details of these FLDs conducted during the year 2011-12 are given in Table 7.5:

**Table 7.5 Frontline Demonstrations Conducted**

Sr. No.	Crop	Technology Demon-strated	Variety	No. of Farmers	Area (ha.)	Demo. Yield Qtl/ha			Yield of local Check Qtl./ha	Increase in yield (%)	Data on parameter in relation to technology demonstrated	
						H	L	A			Demo	Local
(A) Crops												
(i) KVK, Devataj												
1	Paddy	Varital introduction	GAR-13	17	6.8	53.5	42.5	48.5	42.5	14.12	-	-
2	Wheat	INM	GW-496	12	4.8	32.6	24.2	26.2	22.6	15.92	2.6 tillers/ pl	2.2 tillers / pl
3	Paddy	INM	Gurjari	10	5.0	52.0	36.8	38.6	35.2	9.65	18 tillers/ pl	14 tillers / pl
4	Wheat	INM	GW-496	50	20.0	44.6	30.8	32.6	31.4	3.82	-	-
5	Wheat	IWM	GW-366	15	6.0	42.2	32.2	35.4	32.8	7.93	3.0 tillers/ pl	2.6 tillers / pl

Sr. No.	Crop	Technology Demon-strated	Variety	No. of Farmers	Area (ha.)	Demo. Yield Qtl/ha			Yield of local Check Qtl./ha	Increase in yield (%)	Data on parameter in relation to technology demonstrated	
						H	L	A			Demo	Local
6	Wheat	Metsulpho methyl @ 4gm/ ha POE	GW-496	03	1.2	36.0	28.5	32.5	28.25	15.04	-	-
7	Wheat	Use of certified seed	GW-496	286	114.4	40.0	24.5	31.5	26.5	18.87	-	-
8	Castor	Alternate furrow irrigation	GCH-4 GCH-5 GCH-7	18	7.2	24.8	16.8	17.6	16.4	7.31	8.4 Spikes/pl	7.2 Spikes/pl
9	Green gram (Summer)	Seed Production	Meha	50	12.5	Result awaited						
10	Chickpea	Management of Chick pea pod borer	GG-1	05	2.0	17.0	15.0	16.0	14.0	14.29	-	-
11	BT Cotton	Methyl parathion 2% dust and Profenophos 50 EC	BG-2,	10	4.0	41.85	28.0	32.0	28.5	12.28	-	-
12	Banana	Use of micron-trients in Banana	Robusta/ G-9	10	5.0	Result awaited						
13	Chilly	Use of micron-trients in chilly	GVC 111	10	5.0	111.5	99.5	105.5	87.0	21.26	-	-
14	Tomato	ICM in tomato	AT-3	02	1.0	296.5	275.0	285.8	252.0	13.39	-	-
15	Chilly	ICM in chilly	GVC-111	05	2.0	105.0	87.0	96.0	85.0	12.94	-	-
16	Okra	ICM in okra	GO-2	05	2.0	69.0	57.5	63.5	52.0	17.69	-	-
17	Annual Chrysanthemum	ICM in Annual Chrysanthemum	Local	04	1.0	225.0	175.5	200.25	165.5	20.99	-	-
18	Gaillardia	ICM in gaillardia	Lorenziana	04	1.0	155.0	139.0	147.5	122.0	20.90	-	-
19	Tomato	Leaf curl & blight control in tomato	Alankar	10	4.0	300.0	180.0	250.0	210.0	19.04	-	-



Sr. No.	Crop	Technology Demon-strated	Variety	No. of Farmers	Area (ha.)	Demo. Yield Qtl/ha			Yield of local Check Qtl./ha	Increase in yield (%)	Data on parameter in relation to technology demonstrated	
						H	L	A			Demo	Local
(ii) KVK, Arnej												
1	Bajra	Variety	GHD-744	20	8.0	32.1	26.2	29.5	26.4	11.7	4-6	3-4
2	Paddy	SRI	GR-13	20	10.0	50.2	41.7	46.4	40.4	15.71	16	25-32
3	BT Cotton	MgSO <sub>4</sub> @ 50 kg/ha	Bt	20	10.0	18.4	13.5	15.7	14.9	5.36	96	80
4	Cotton	Variety	ADC-1	20	10.0	15.9	9.1	12.8	11.4	12.3	80	56
5	Castor	Variety/INM	GCH-7	20	10.0	22.7	12.8	17.4	15.6	11.53	00	15
6	Wheat	INM	GW-1	20	10.0	17.2	9.1	12.6	11.2	12.5	4.1	3.9
7	Gram	Biofertilizer	GG-2	10	5.0	7.6	3.2	5.0	4.71	6.15	5.10	5.7
8	Paddy	SRI	GAR-13	05	2.5	48.4	41.1	45.8	38.8	18.0	16	25-32
9	Cotton	Land configuration	ADC-1	05	2.5	16.1	12.2	13.5	12.2	10.65	76	54
10	Castor	Land configuration	GCH-7	05	2.5	17.5	10.2	14.1	12.8	10.15	00	12
11	Wheat	Irrigation at critical stage	GW-1	20	10.0	16.5	28.1	21.4	18.7	14.43	4.5	4.0
12	Cumin	Land configuration	GC-4	10	5.0	10.5	5.8	7.6	7.0	8.57	-	-
13	Gram	Land configuration	GG-1 & GG-2	07	3.5	10.4	5.1	8.0	7.3	9.58	8.14	6.8
14	DWR Wheat	Varietal introduction	MP-3288	05	2.0	28.1	22.5	24.8	23.8	4.2	4.2	4.0
15	Aonla	INM	Anand-2 NA-7	10	5.0	7230	6810	7020	6240	12.50	-	-
16	Bitter gourd	Varietal	ABG-1	10	5.0	12750	11550	12150	10820	12.29	-	-
17	Ber	ICM	Punning	10	5.0	11800	10040	10920	9360	16.70	-	-
18	Cumin	Varietal	GC-4	20	10.0	8000	7000	7500	6820	9.97	-	-

Sr. No.	Crop	Technology demonstrated	Variety	No. of farm-ers	Area (ha)	Demonstration Yield q/ha			Yield of Local check q/ha	Increase In yield (%)	Data on para. (yield- q/ha) in relation to technology demonstrated	
						Highest	Lowest	Ave.			Demon.	Local
(iii) KVK, Dahod												
1	Soybean	Improved variety	JS-335	30	10.0	22.3	16.8	18.5	14.7	25.9	18.5	14.7
2	Pigeonpea	Improved variety	BDN-2	24	10.0	9.6	6.7	8.2	6.6	24.2	8.2	6.6
3	Gram	Improved variety	GG-1	12	4.8	14.4	12.55	13.45	10.3	30.58	13.45	10.30
4	Maize	Varietal Evaluation	GM-6	36	10.0	8.3	6.2	7.4	6.6	12.1	7.4	6.6
5	Maize	Varietal Evaluation	HQPM-1	14	5.0	17.8	11.3	14.6	11.8	23.7	14.6	11.8
6	Maize	Varietal Evaluation	HQPM-1	12	3.0	28.46	21.56	24.34	19.74	23.30	24.34	19.74
7	Rabi	Varietal Evaluation	Improved variety GW-366	32	10.0	29.65	25.26	27.95	22.12	22.36	27.95	22.12
8	Brinjal	Varietal	Doli-5	10	2.0	280	180	250	160	56.25	-	-
9	Marigold	Varietal	African giant	26	2.0	20.3	10.2	14.8	9.7	52.60	-	-
10	Pigeonpea ( <i>Tricho-derma</i> )	Dis. Mgt. Bioagent <i>Trichoderma</i>	Own seed	24	10.0	9.6	6.7	8.2	6.6	24.2	8.2	6.6
11	Gram (Pheromone trap)	Pest Mgt.	Own seed	12	4.8	20.7	17.3	19.9	17.0	7.05	18.2	17.0
12	Gram ( <i>Tricho-derma</i> )	<i>Dis. Mgt. Bioagent Trichoderma</i>	Own seed	12	5.0	18.4	17.35	17.88	16.66	7.32	17.88	16.66
13	Tomato (Pest management H-NPV)	Pest Mgt.	Own seed	05	1.0	112.6	109.8	111.4	102.3	8.96	111.4	102.3
14	Wheat (Termite control)	Pest Mgt.	Own seed	10	4.0	26.7	24.7	25.66	23.85	7.59	25.66	23.85

(iv) TOT - Arnej								
(a) Wheat-GW-1								
Sr. No.	Irrigation		No. of FLD		Area (ha)	Yield (kg/ha)	Increase in Yield	
1	Without Irrigation		04		1.6	1200	-	
2	One Irrigation		04		1.6	1370	14.16	
3	Tow Irrigation		12		4.8	1773	47.75	
(b) Cumin GC-4								
Sr. No	No. of FLD		Area (ha)		Yield (kg/ha)	Local check (kg/ha)	% Increase in Yield	
1	10		4.0		719	600	19.83	
(v) TRTC, Devgadbaria								
(a) Farmers participatory action Research Programme								
Sr. No.	Crop & Variety	Season	No. of FLDs	Area (ha.)	Yield kg/ha.		Increase in yield (per cent)	Districts covered
					Demons-tration	Local		
1	Wheat (GW-496)	rabi	12	3.0	2410	1834	23.90	Dahod, Panchmahals
2	Gram(GG-2)		04	1.0	1437	1042	27.40	Dahod
3	Maize(GM-1)		04	1.0	2515	1997	20.50	
4	Maize (HQPM-1)		08	2.0	4735	4260	10.30	
5	Green Gram (Meha)	Summer	12	3.0	972	825	15.20	Dahod, Panchmahals
6	Groundnut (GM-6)		16	4.0	2422	1923	21.01	
7	Maize(GM-6)	Kharif	08	2.0	2120	1420	33.01	Dahod
8	Soyabean+ Maize(NRC-37+GM-6)		04	1.0	580	402	30.68	
9	Soyabean (NRC-37)		08	2.0	1620	1080	33.33	
10	Castor(GCH-7)		04	1.0	1650	1230	25.45	Panchmahals
11	Vegetable (Brinjal+Tomato+ Chillie)		04	1.0	8500 8200 7300	6300 5600 7300	25.84 31.70 18.88	

**(a) Strengthening Adaptive Research Trial**

Sr. No.	Crop & Variety	Season	No. of FLDs	Area (ha.)	Yield kg/ha.		Increase in yield (per cent)	Districts covered
					Demonstration	Local		
1	Wheat (GW-496)	rabi	04	1.0	2047	1812	25.95	Dahod, Panchmahals
2	Gram(GG-2)		04	1.0	1550	1120	27.74	Dahod
3	Castor(GCs-7)		04	1.0	1802	1507	16.37	
4	Soyabean (NRC-37)	Kharif	12	3.0	1620	1050	35.18	

**(b) Micronutrient Project (ICAR)**

Sr. No.	Crop & Variety	Season	No. of FLDs	Area (ha.)	Yield kg/ha.		Increase in yield (per cent)	Districts covered
					Demonstration	Local		
1	Wheat (GW-496)	rabi	04	1.0	3977	3387	14.83	Vadodara
2	Gram(GG-2)		04	1.0	1227	17.65	17.65	
3	Maize(GM-6)		04	1.0	4602	3357	27.05	
4	Maize(GM-6)		04	1.0	2150	1420	33.95	
5	Soyabean (NRC-37)	Kharif	12	3.0	1620	1050	35.18	
6	Castor(GCs-7)	rabi	04	1.0	1802	1507	16.37	

**(vi) Main Rice Research Station, Nawagam**

Sr. No.	Crop & Variety	Season	No. of FLDs	Area (ha.)	Yield kg/ha.		Increase in yield (per cent)	Districts covered
					Demonstration	Local		
1	GR-12	Kharif	13	3.25	4056	3182	21.55	Ahmedabada
			15	3.75	6500	5840	10.15	Anand
			17	4.25	4574	3665	19.87	Kheda
			01	0.25	5760	4500	21.88	Panchmahals
			59	14.75	5210	3697	29.00	Vadodara
2	GAR-13	Kharif	39	11.90	5643	4300	23.80	Anand
			68	16.50	5772	4260	27.10	Kheda
			39	21.25	5668	4676	17.50	Ahmedabad
			11	2.75	5237	3819	27.10	Panchmahals
			03	0.75	5067	3867	23.70	Vadodara
			02	1.90	4681	4183	10.60	Navsari
			06	1.80	5893	4818	18.00	Tapi



Sr. No.	Crop & Variety	Season	No. of FLDs	Area (ha.)	Yield kg/ha.		Increase in yield (per cent)	Districts covered
					Demonstration	Local		
3	GAR-13 (SRI)	Kharif	01	1.00	4000	--	--	Anand
			05	2.00	5640	4875	16.60	Anand
			08	3.00	4500	--	--	Anand
4	GAR-1	Kharif	37	9.50	4556	3877	14.90	Ahmedabad
			08	2.50	4725	3788	19.80	Anand
			35	13.75	4819	3712	22.97	Kheda
			09	2.50	5266	3760	28.60	Panchmahals
			01	0.25	5200	4000	23.07	Vadodara
			03	2.10	4161	4725	-	Navsari
			02	0.50	2500	1600	36.00	Other state
5	RPBIO-226	Kharif	04	1.80	4935	3766	24.00	Kheda
			02	0.50	5750	3800	34.00	Panchamahals
6	DRRH-3	Kharif	01	0.10	4800	4000	17.00	Kheda
			01	0.30	5200	3600	31.00	Panchamahals
			01	0.60	5500	5000	9.00	Anand

**(vii) ARS, Thasra**

Sr. No.	Crop & Variety	Season	No. of FLDs	Area (ha.)	Yield kg/ha.		Increase in yield (per cent)	Districts covered
					Demonstration	Local		
1	Bajara-GHB-558	Summer	04	02	1700	1450	17.20	Kheda
2	Castor GCH-7	Kharif	15	03	1229	1033	16.00	
3	Paddy (SRI) GR- 12	Kharif	10	02	4251	3340	21.43	
4	Gram GG-1	Rabi	10	02	1225	962	21.50	
5	Mustard GM-1	Rabi	05	01	2299	1906	17.10	

**(viii) ARS, Derol**

Sr. No.	Crop & Variety	Season	No. of FLDs	Area (ha.)	Yield kg/ha.		Increase in yield (per cent)	Districts covered
					Demonstration	Local		
1	Paddy, AAUDR-1	kharif	10	4.00	2200	1700	29.40	Panchmahals, Vadoadara and Dahod
2	Mungbean, Meha	Summer	03	2.00	1200	850	41.10	Panchmahals

**(ix) Paddy Research Station, Dabhoi**

Sr. No.	Crop & Variety	Season	No. of FLDs	Area (ha.)	Yield kg/ha.		Increase in yield (per cent)	Districts covered
					Demonstration	Local		
1	SRI Paddy (GR-12)	kharif	59	14.75	4732.9	3694.9	28.09	Vadodara
2	Aerobic Rice Paddy(Sukhvel)		08	2.00	2787.0	2371.0	14.93	
3	Wheat (GW-496) (Irrigation at critical growth stages)	Rabi	12	4.86	3430.0	3006.0	12.36	
4	Wheat (GW-496) Canal & Tubewell Water		10	4.08	3589.0	3158.0	12.00	
5	Gram (GG-2) (Irrigation at critical growth stages)		11	4.45	1050.0	908.0	13.52	
6	Gram (GG-2) (Bio fertilizer Recomn.In Gram)		09	3.64	1064.0	920.0	13.53	

**(x) BTRS, Anand**

Sr. No.	Crop & Variety	Season	No. of FLDs	Area (ha.)	Yield kg/ha.		Increase in yield (per cent)	Districts covered
					Demonstration	Local		
1	Bidi Tobacco ABT 10	kharif-Rabi	04	1.0	3746	2342	60.0	Anand
				1.0	3840	3200	20.0	Kheda Vadodara
				1.0	3415	1920	78.0	
				1.0	2800	1930	45.0	

**(xi) MMRS, Godhra**

Sr. No.	Variety/ Hybrids	Season	No. of FLDs (in acre)	Districts covered
1	GM-6	Kharif	65	Panchmahal, Dahod & Vadodara
2	HQPM-1		25	
3	HQPM-1		10	Narmada
4	HQPM-1		202	Panchmahals, Dahod, Sabarkantha, Vadodara, Kheda

(B) Farm Implements								
KVK, Arnej								
Name of the implement		Crop	No.of Farmers	Area (ha)	Indicators	Parameters		Saving
						Demo.	Local check	
Twin Wheel Blade Hoe		Vegetable	25	09	Man hour/ha	95	130	35
					Cost of Operation, Rs/ha	1187.50	1625	437.50
		Gram	07	02	Man hour/ha	85	122	37
					Cost of Operation, Rs/ha	1062.50	1525	462.50
		Wheat	15	05	Man hour/ha	87	118	31
					Cost of Operation, Rs/ha	1087.50	1475	387.50
Serrated Sickle		Wheat	15	04	Man hour/ha	115	142	27
					Cost of Operation, Rs/ha	1437.50	1775	337.50
Manually Operated Double Screen Cleaner		Wheat	20	-	Man hour/q	0.7	1.8	1.1
					Cost of Operation, Rs/q	8.75	22.50	13.75
(C) Livestock								
KVK, Arnej								
Sr. No.	Type of FLD	No. of Farmers	Types of Animal	Animals No.	Performance Indicators	Performance data		Percent change
						Demon.	Local Check	
1	Bypass fat	05	Buffalo	05	Milk Production lit./day	11.1	10.0	11.0
					Fat %	7.6	7.0	8.6
		05	Cow	05	Milk Production lit./day	9.6	8.5	12.9
					Fat %	4.9	4.5	8.8
2	Mineral Mixture	20	Buffalo	20	Milk Production lit./day	8.9	8.4	6.0
					Conception rate (days after treat.)	35	60	-
					Improv. in coat colour	Shining	Dull	-
		10	Cow	10	Milk Production lit./day	6.5	6.4	1.6
					Conception rate (days after treat.)	32	60	-
					Improv. in coat colour	Shining	Dull	-
3	Deworming	07	Buffalo	07	Milk Production lit./day	8.4	8.0	5.0
					Improv. in coat colour	Shining	Dull	-
		03	Cow	03	Milk Production lit./day	7.3	7.0	4.3
					Improv. in coat colour	Shining	Dull	-

<b>(D) Fishery</b>						
<b>KVK, Devataj</b>						
<b>Technology Demonstrated</b>	<b>Variety</b>	<b>No. of Farmers</b>	<b>Area (ha.)</b>	<b>Demo. Yield Qtl/ha</b>	<b>Yield of local Check Qtl./ha</b>	<b>Increase in yield (%)</b>
Composite fish culture	Grass Carp	01	1.0	1.8	1.30	38.46
Composite fish culture (pen culture)	Catla, Rohu, Mrigal	01	1.0	1.5	0.98	53.06

#### **4 Advisory Services**

##### **(a) Farm Advisory Services (FAS), Anand**

The Farm Advisory Service Centre, Anand provides guidance and information to farmers on scientific farming. The farmers are advised through correspondence and field visit. This centre acts as a link among research scientists, extension workers and farmers.

##### **(b) Agricultural Technology Information Centre (ATIC) Anand**

The Agricultural Technology Information

Centre, a single window support system linking the various units of a research institutes with intermediary users and end users (farmers) in decision making and problem solving exercise.

The objective of this system is to supply all the information on technologies, techniques and knowledge and necessary inputs and materials including planting materials, seeds advisory services, diagnostic services from one place.

The following extension activities were carried out by the centre during the year under report.

<b>Sr. No.</b>	<b>Extension Activities</b>	<b>No. of Activity</b>	<b>No. of Participants</b>
1	Farmers day	06	338
2	Khedut shibir	02	189
3	Guidance through telephone/ letter	1500	1500
4	Agricultural literature publishes	03	3000
5	Registration of "Krushi-Govidya	200	200
6	Guidance for animal health care	25	25
7	Guidance in farmers day/ field day/ khedut shibir	25	25
8	Crop/ soil diagnostic service	20	20
9	Articles published for community	10	10
10	Guidance to visitors	500	500



### **(c) Transfer of Technology Centre, Anand and Arnej**

The Transfer of Technology Centres at Anand and Arnej (Ahmedabad district) where

demonstrations, field days, trainings, advisory activities are undertaken by the University. The following extension activities were carried out during 2011-12 by the centres (Table 7.5).

**Table 7.5 : Extension Activities Carried Out by TOT Centers**

Sr. No.	Activity	Centres	
		Anand	Arnej
1	Training program	02(60)	03(127)
2	Farmer shibirs	02(254)	15(8327)
3	Crop demonstrations(FLD)	25	24
4	Guidance through letters /telephone	23(23)	07(15)
5	Crop diagnostic services	-	03(11)
6	Field visit	03(40)	01(10)
7	Group discussion	04(123)	02(47)
8	Agri. exhibition	-	02(28295)
9	Publication(Folder)	09(18000)	06(1450)
10	Advisory to visitors	15(118)	03(143)

Note : The figures in parenthesis indicate numbers of Beneficiaries

### **(d) Centre for Communication Network (CCN), Anand**

The Govt. of Gujarat sanctioned the scheme "Centre for communication Network"

from the year 2005-2006. The details of extension education activities were carried out by the scheme are given in Table 7.6.

**Table 7.6 Extension Education Activities Carried Out by CCN**

Sr. No.	Activity	No of Activity	No. of Beneficiaries
1	Agricultural tour (Field level)	03	120
2	Slide / Video cassette shows	15	2600
3	Farm literature/distribution (Free of cost)	20	Mass
4	Trainings	08	350
5	Agri fairs	02	3000
6	Field visits	13	150
7	Crop seminars	03	900
8	T.V. program (Success story)	04	Mass
9	Escorting the visitors	30	350
10	Group discussions	20	600

Sr. No.	Activity	No of Activity	No. of Beneficiaries
11	Guidance through telephones / letters/mobile	800	800
12	Lectures for transfer of technology	20	1200
13	Press notes / success stories published	08	Mass
14	Krishi goshtis	03	180
15	Crop diagnostic services	05	75
16	Farmer – scientist interaction	02	400
17	Establishment of Gram Kisan Samitis (GKSs)	20	300

#### (e) Agri-Polyclinic (APC), Dahod

Establishment of Agri Polyclinic for Tribal Farmers was started in 2008 at Muvaliya Farm, Dahod. In Dahod area, now a days there is a facility to impart training to the tribal farmers, farm women and rural youth through various extension functionaries. but there is lack of pests/ diseases/ disorders diagnostic services in Dahod area. Due to intensive and monoculture cultivation of various crops and introduction of new varieties/ crops from other places without testing for its susceptibilities to pests and

diseases under Dahod situation, the problems of pests & diseases and unseen disorders are increasing day by day. The problem of various unseen pests/ diseases/ disorders increased due to malnutrition & monoculture cultivation of crops and introduction of new crop like soyabean in Dahod district. Under changing scenario of pests/ diseases/ disorders problems, there is a need to diagnose the same by the experts in equipped laboratory. The extension education activities carried out by APC are as under during 20011-12:

**Table 7.7: Extension Education Activities Carried Out by APC**

Sr. No.	Extension Activity	No. of Activities	No. of Participants		
			Male	Female	Total
1	Field visits	03	53	00	53
2	World Food Day	01	38	02	40
3	Telephonic guidance	18	18	00	18
4	Disease diagnostic services	11	20	03	23

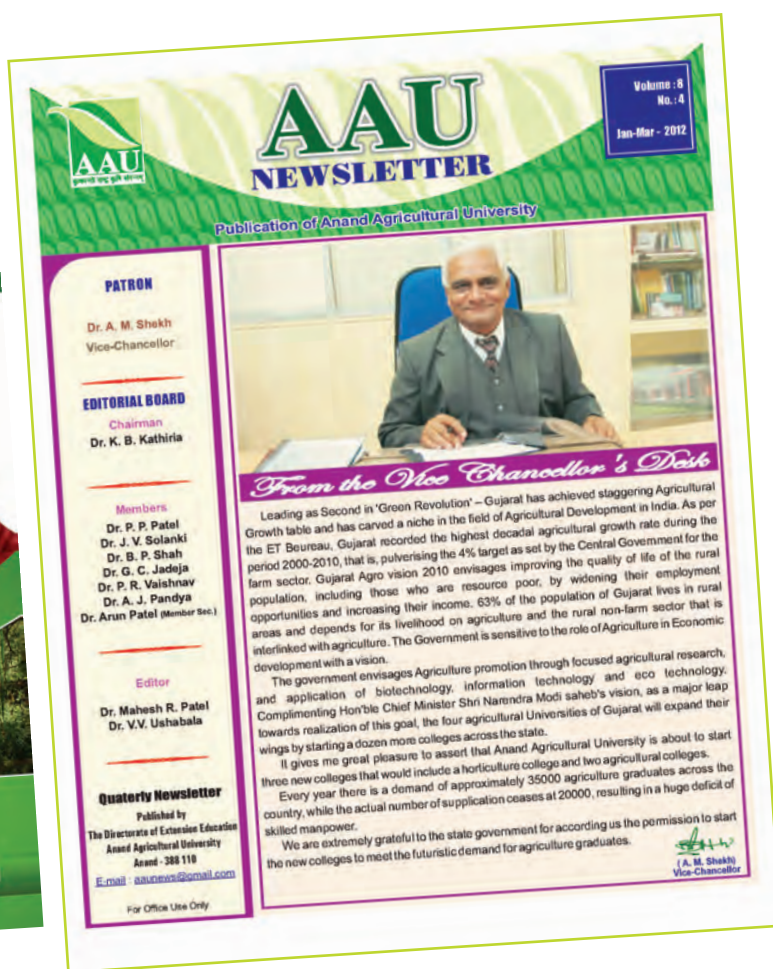
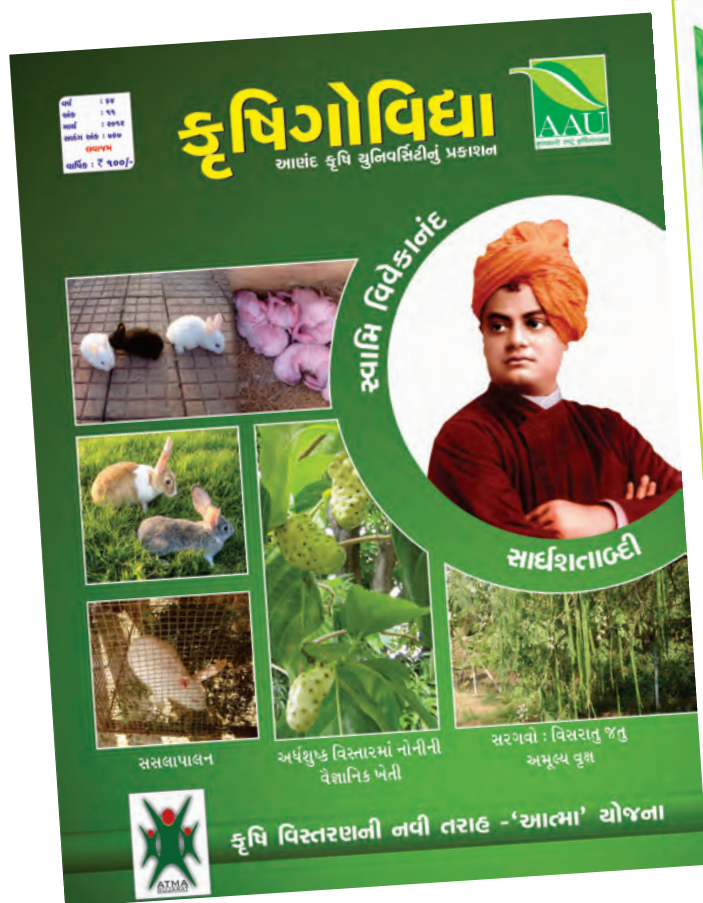
## (f) Publication

### (i) Farm magazine

The publication unit publishes the monthly farm magazine “*Krushigovidya*” regularly since May 1948. There were 18600 subscribers registered during the year under report. Moreover, *Krushigovidya* publication unit has provided guidance to farming community (about 2500 farmers) through telephone / letters.

### (ii) AAU Newsletter

The Directorate 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 agricultural scientists.

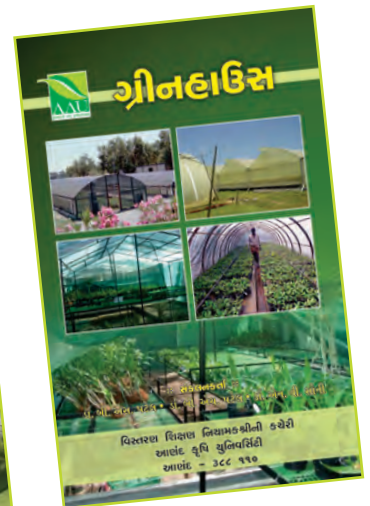
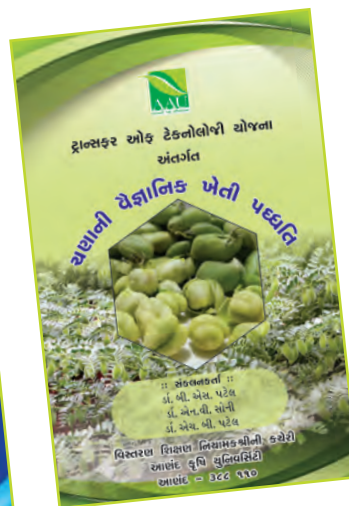
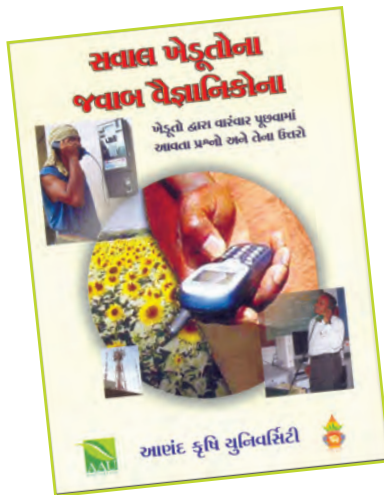


### (iii) Agricultural literature

The leaflets/ folders / books/ booklets/ reports etc. on various subjects were published by different extension education centres of AAU during the year under report (*Appendix-8*).



## Publications at a Glance





## **(g) Mass media**

### **(i) Radio talks**

The scientists of the University delivered Radio talks on agriculture and allied fields from All India Radio, Vadodara. During the year, 10 scientists have delivered talks on different topics related to agriculture, horticulture, agricultural engineering, animal husbandry etc. (Appendix-9).

### **(ii) TV talks**

In all, 18 Door Darshan programs on different aspects covering agriculture, animal science, agricultural engineering, horticulture, home science etc. were telecasted through Doordarshan Kendra, Ahmedabad in “Gram Jagat” program for the benefit of the farming community (Appendix-10).

## **(h) Coordination with development departments**

- The AAU 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 Scheme through bi-monthly workshops, pre-

seasonal trainings, diagnostic team, and state level crop seminars/workshops etc. The coordination exists in follow-up programs as well as planning of farm trials. In AGRESO, 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 were finalized by such coordinated efforts.
- For transfer of technologies to the farmers at large, farmers’ day, *krushi mela*, farmer-scientist interactions, group discussions etc. were organized through collaborative efforts.

## **(i) Others**

### **(A) Extension activities carried out under NARP project at MMRS, Godhra**

During the year under report, various extension activities and carried out under the scheme are given in Table 7.8.

**Table 7.8: Extension Activities Carried Out by NARP, MMRS, Godhra**

Sr. No.	Activity	No. of Activities	No. of farmers
1	Field days	06	1208
2	Field visits	08	243
3	Meetings/ Seminars/ Workshops attended	09	-
4	Guidance through telephone/mail/on spot	01	632
5	Agri. exhibitions	06	132700
6	Lectures delivered	16	7437
7	Visitors	20	1119
8	Articles published	02	Mass
9	Literature published (leaflet/ folder)	05	5000

### **B Celebration of *Krusha Mahotsav* - 2011**

As a measure towards enlightenment of farming community "*Krusha Mahotsav-2011*" a doorstep extension modus operandi of the State Government Visionary programme was launched from 6<sup>th</sup> May to 5<sup>th</sup> June 2011 through out the Gujarat State.

#### **Role of AAU during *krusha mahotsav***

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 scientists and Post Graduate Students in total 612 have been assigned the duties to move with 60 *Kisan Rath* in 4963 villages the scientists delivered talks and interacted with farmers. They 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.

The scientists of AAU have also participated in the 41 *Khedut Shibirs* organized at Taluka levels by the Agricultural Produce Market Committees (APMCs) of respective talukas. In addition to this, the AAU has organized orientation cum workshop during 28-04-2011 to 04-05-2011 for AOs, AEOs, Scientists, STL Officers of Deptt. of Agriculture and P.G. Students on *Krusha Mahotsava-2011* Program.

Moreover, the team of 20 women scientists have also participated and provided guidance to farm women in Farm Women Shibirs. Vibrant pashupalanshibirs financed by Animal Husbandry Department of Gujarat state were organized in 11 Talukas by AAU. The AAU scientists delivered the lectures on various topics and guided the farmers on animal husbandry practices.

For dissemination of recommended agricultural technology, six e- technology packages in two CD [(a) Drip, Bio fertilizers and Soil Health Card and (b) Paddy, Maize & Ginger] and 16 folders were published and distributed in villages of middle Gujarat.



## Krushvi Mahotsav 2011 at a Glance

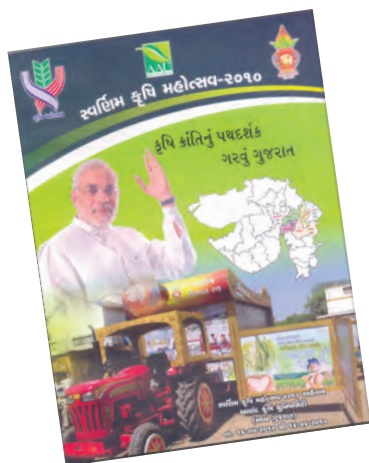








## Publications during Krushi Mahotsav 2011 at a Glance



### Feedback of the Programme

- 1 The farmers got chance to make face to face interactions with the scientists of AAU and the personnel of various line departments.
- 2 They have been well acquainted with the technical know-how of the latest scientific agricultural technologies and various development programs/schemes run by the State Government for betterment of the rural masses.
- 3 The scientists of AAU also got the unique experience to exchange their ideas and knowledge with the farmers. They have also learnt many things from the farmers and vice-versa.





# CHAPTER 8

## Student Welfare

### Beyond the Curriculum Confines

The office of Director of Students' Welfare was established with the aim to look after various students' activities / facilities viz. sports, cultural, fellowships, recreation, health, adventure, counseling, placement, career counseling, personality development, etc. Moreover, dignitaries of different fields are also invited to share their thoughts, experiences and views among the staff and students.

#### STUDENTS' REPRESENTATIVE COUNCIL

All the constituent colleges of University have Students Representative Council (SRC) formed as per University rules. The Council is formed with a view that students can represent their problems through their representatives. The SRCs organize and monitor various extracurricular activities of students. The SRCs of all the colleges organized various extracurricular activities like planning forum, sports, debate and elocution, college magazine, cultural programmes, NSS, NCC, etc. in the year that elapsed.

Apart from this, Alumni Associations in three colleges of University remained active and seminars were organized for strengthening the professional brotherhood and to create the atmosphere of oneness.

#### STUDENTS' AMENITIES

##### I Hostels

Hostel environment plays an important role in the development of personality and character of the students. As a residential University good hostel facilities are provided to almost all the Under Graduate (UG) and most of the Post Graduate (PG) students. In some of the hostels students themselves arrange for food and run the mess, while some are managed by contract system under the supervision of rector / assistant rector. Library facility is also available for the use of students. The other facilities for day to day requirements like laundry, tailor, cycle store, provision store, telephone, post office, bank etc. are also available in the University premises. The rector and assistant rectors and hostel warden are appointed in each college for maintenance of student facilities and solving the residential problems of the students.

##### II Health Facilities

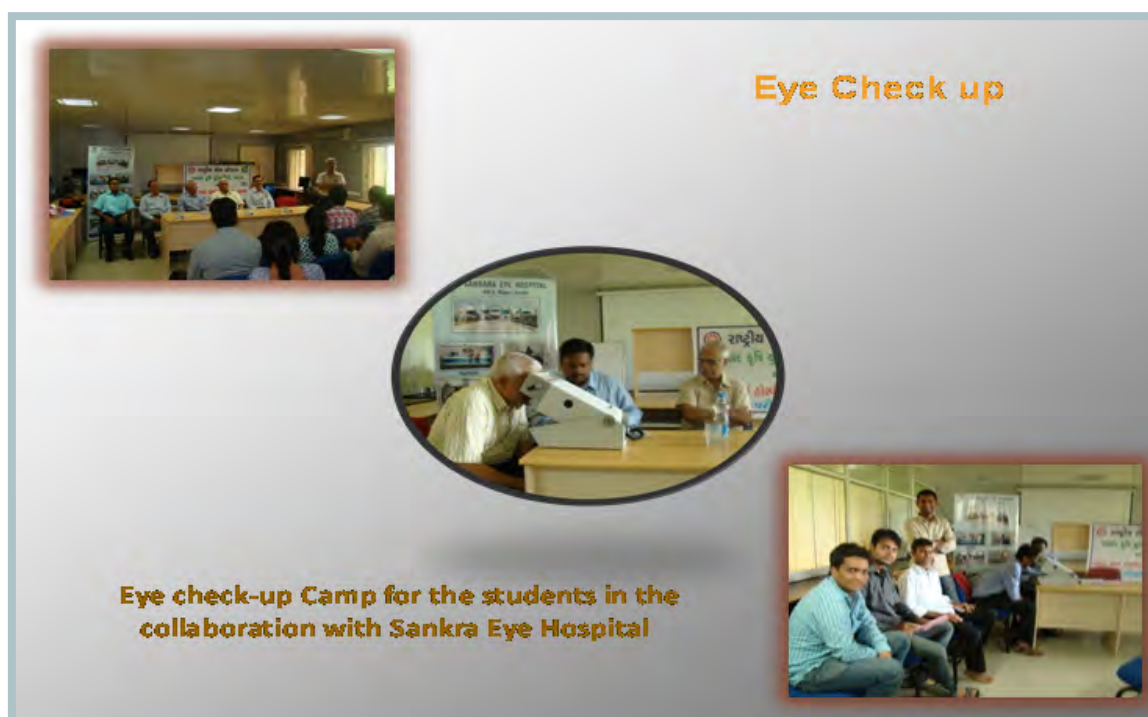
The health center of the University is run by the Charutar Arogya Mandal, Karamsad. Very good health care facilities are extended to the students and staff as well. The number of cases registered under various system of medicine of this university during the year is as under.

Sr. No	Test/Treatment	No. of cases/patients turned up
1	Allopathic	10049
2	Homeopathic	1972
3	Blood Sugar BS / FBS / PP2bBS, test	472
4	Lipid Profile	116
5	Creatinine	165
6	Jaundice / SGPT / SGOT / Albumin.	190
7	Uric Acid	41
9	Blood group	63
10	Laboratory test in Health center	1734
11	Students Health Check-up	190

### Special Eye Check up Programme

The Special eye check up programmes for the students and staff were organized in

association with the Sankara Eye Hospital, Mogar and patients were examined by expert doctors.





## PHYSICAL EDUCATION PROGRAMME

Physical education and sports play a vital role in development and maintenance of personality, physical fitness; health and body build up of the students. Along with the development of academic career of the students, this university also thrives hard to bring out the hidden personality of the students by involving them in physical education, sports cultural, adventurous activities etc. at college level under the guidance of Chairman, SRCs and Director, Students Welfare.

### Adventures Activities

With the aim of developing adventurous virtues among students and to prepare them to face adverse conditions as per convenience of students from their academic calendar, colleges of the university participate in basic mountaineering

workshop organized by Swami Vivekanand State Mountaineering Academy, Mount Abu.

### Sports Activities

The students of the university are also trained for the development of skills and excellence in various sports activities. For this reason Inter-Collegiate competitions for various games like Chess, Table-tennis, Badminton, Kabbadi, Volley ball, Basket ball, Kho-kho, Cricket, Weight lifting, Athletics, Cultural activities, Essay competition, Debate, Elocution etc. are routinely arranged at various colleges.

The selected students from Inter-Colleges competitions are nominated for Inter-University participation. During the year under the report, the following inter-collegiate competitions were held;

Sr. No.	Game	Organizing College	Date	Champion College
1	Basket ball	College of Agricultural Information Technology	09/09/2011	Dairy Science College
2	Volley ball		12/09/2011	Dairy Science College
3	Kabaddi	Dairy Science College	17/09/2011	International Agri-business Management Institute
4	Kho Kho	Veterinary Science College	30/09/2011	B.A. College of Agriculture
5	Essay, Debate, Elocution.	College of Agricultural Engineering and Technology	05/01/2012	College of Agricultural Engineering and Technology
6	Culture meet	Dairy Science College	7-8/01/2012	College of Food Processing Technology and Bio-energy / B.A. College of Agriculture
7	Chess	International Agri-business Management Institute	10/01/2012	B.A. College of Agriculture
8	Table Tennis (man)		10/01/2012	Veterinary Science College
9	Table Tennis (women)		10/01/2012	B.A. College of Agriculture

Sr. No.	Game	Organizing College	Date	Champion College
10	Badminton (men & women)	B.A. College of Agriculture	21/01/2012	Veterinary Science College (Men) B.A. College of Agriculture (Women)
11	Foot-ball	B.A. College of Agriculture	28-29/01/2012	Veterinary Science College
12	Cricket	College of Food Processing Technology and Bio-energy	3-4/02/2012	Veterinary Science College

**Inter Agricultural Universities Sports-Games were held on following dates and places :**

Sr. No.	Name of the University	Sports	Dates
1	Sardar Krushinagar Dantiwada Agricultural University, SK Nagar	Kabbadi & Kho Kho	14-15 October 2011
2	Anand Agricultural University, Anand	Table Tennis, Chess, Cultural & Literary	9-10 February 2012
3	Navsari Agricultural University, Navsari	Badminton & Cricket	2-3 March 2012
4	Junagadh Agricultural University, Junagadh	Volley ball & basket ball	9-10 March 2012

Gujarat Inter Agricultural University Table-Tennis, Chess, Cultural & Literary Events tournaments were organized by Anand Agricultural University, Anand during 9-10 February 2012. All four Agricultural Universities participated in it. The tournaments were inaugurated and declared open by Hon. Vice

Chancellor Dr. A. M. Shekh. Dr P. R. Vaishnav, Registrar, Dr. A. J. Pandya, Director, Students' Welfare, all the Chairmen, Directors of Students' Welfare, and participant students of all the four Agricultural Universities attended the inaugural function.

**Results of tournaments are as under :**

Sr. No.	Event Games	Winner	Runners - up
1	Table Tennis (Men)	Junagadh Agricultural University, Junagadh	Anand Agricultural University, Anand
2	Table Tennis (Women)	Anand Agricultural University, Anand	Junagadh Agricultural University, Junagadh
3	Chess	Navsari Agricultural University, Navsari	Anand Agricultural University, Anand
4	Drama	Anand Agricultural University, Anand	Junagadh Agricultural University, Junagadh
5	Best Actor	Anand Agricultural University, Anand	Navsari Agricultural University, Navsari

Sr. No.	Event Games	Winner	Runners - up
6	Best Actress	Junagadh Agricultural University, Junagadh	Anand Agricultural University, Anand
7	Mono Acting	Navsari Agricultural University, Navsari	Sardar Krushinagar Dantiwada Agricultural University
8	Folk Dance	Junagadh Agricultural University, Junagadh	Sardar Krushinagar Dantiwada Agricultural University, Sardar Krushinagar
9	Group Song	Anand Agricultural University, Anand	Navsari Agricultural University, Navsari
10	Debate Favour	Sardar Krushinagar Dantiwada Agricultural University, Sardar Krushinagar	Navsari Agricultural University, Navsari
11	Debate Against	Junagadh Agricultural University, Junagadh	Navsari Agricultural University, Navsari
12	Elocution	Sardar Krushinagar Dantiwada Agricultural University, Sardar Krushinagar	Navsari Agricultural University, Navsari

### NATIONAL SERVICE SCHEME (NSS)

The Department of Youth Affairs and Sports, Ministry of Human Resources Development, New Delhi started the National Service Scheme in 1969-70. The basic purpose of this scheme is to develop responsibility through social services and realization of work and discipline. National Service Scheme was functioning in all the colleges and polytechnics of Anand Agricultural University. During the year under report volunteers allocated by the government and registered for regular activity and for special camp are as under :

Sr. No.	Activity	No. of registered volunteers
1	Regular activities	600
2	Special camp activities	300

During the spare time of academic programme the students are directly involved with the activities related to the problems and requirements of the society and its development through various fields of NSS activities. They are also inspired to work with Environment, Health, Family welfare, Hospitals and other organizations during natural calamities for the benefit of society and work with people in the village and slums.

The activities carried out by NSS are divided in two groups.

#### (i) Regular activities

The regular activities carried out by of this university during the year include;

- Celebration of the Independence day
- Tree plantation



- Poster competition
- Blood donation camp
- Pulse Polio Immunization Programme
- Jan Jagruti Rally against HIV (organized in collaboration with Red Cross Society on 9<sup>th</sup> Sept. 2011 at Anand campus. Animal camp, Essay competition, Sadbhavna parve.)
- Gandhi Jayanti celebration on 2<sup>nd</sup> October 2011.
- Sardar Patel Jayanti celebration on 31<sup>st</sup> October 2011.
- Awareness of Aids through Video, CD and Quiz programme.
- World Food Day Celebration on 16<sup>th</sup> October 2011. (events like, food quiz, add making,

new product development, seminar on 15<sup>th</sup> October 2011.)

- Leadership and entrepreneur Training Programme (Organized by International School of Public Leadership. More than 230 students from all colleges & polytechnic participated in four programme of five days each.)
- B.Tech and M.Tech (FPT) Students participated in SPECTRUM-11 at ADIT, during 17-19 February 2012.
- Students participated in "AMUL Volcano" organized by Rotary Club, Anand from 31<sup>st</sup> January to 4<sup>th</sup> February 2012.
- Teacher's day celebrated on 5<sup>th</sup> September 2011.





## (ii) Special Camp activities

Three special camps under National Service Scheme (NSS) were organized.

- (1) At. Khadol Tal. Ankla & Dist. Anand during 09-12-2011 to 15-12-11 by B.A.College of Agricultural, A.A.U. Anand. Fifty volunteer have participated in this camp.
- (2) At. Kasor (Bhalej) Tal & Dist. Anand during 15-21 March 2012 by Veterinary Science and Animal Husbandry, Sheth M.C.College of Dairy Science and College of Food Processing Technology and Bio-energy 100 students participated in the camp.



- (3) At Dabhau Tal. Sojitra. Dist. Anand during 23-29 April 2012 was organized by the College of Agri. Engineering, Godhra, Agri. Polytechnic, Anand, Home Science & Home Economic Polytechnic, Agriculture Polytechnic, Vaso, Horticulture Polytechnic, Vadodara and Agriculture Engineering Polytechnic, Dahod. 125 students participated in this camp.



- (4) Several special activities were also carried out in these campus, viz.,
  - Different kinds of shram-yagnas
  - Surveillance of villagers to know their social, educational, economical and health status along with the epidemiological surveillance of important diseases in animals.
  - *Pasu nidan sarvar* (Animal Health Check up) camp,
  - Spraying of medicine for ticks control and

- Writing of slogans on walls.
- Global warming Awareness Programme.
- Treatment of dogs and other animals.
- Rangoli, Poster making, Musical chair, Quiz, Cartooning etc.
- Seminars on various topics (on the basis of information of survey) and related issues were also organized during the special camps. These includes
  - Animal husbandry and health
  - Clean milk production
  - Preparation of milk products like Gulabjamun, Paneer and Dahi.
  - Detection of adulteration in milk and ghee.
  - Preparation of Bakery products
  - Preservation of natural resources and
  - Conservation of cultural/historical heritage etc.
  - Organic farming etc.

The villagers also actively participated and benefited from these programmes. All the students participated and whole heartily gained knowledge on various aspects like health, development of spiritual and cordial relationship, preservation of natural resources and conservation of cultural / historical heritage, animal health, dairy products, etc and strengthened their creativity.

The University was also invites to



### ❖ Blood Donation Camp

Blood donation camps where organized in collaboration with Red Cross Society, Anand. Details of participated college with the donation of blood unit are as under :

- (1) B.A.College of Agriculture (21.09.2011). 132 units of blood were collected.
- (2) College of Food Processing Technology & Bio-Energy (05-12-2011). 40 blood units were collected.
- (3) Sheth M.C.College of Dairy Science (22-11-2011). 50 units of blood were collected.
- (4) College of Agricultural Information Technology (02-12-2011). Ten units of blood were collected.
- (5) College of Veterinary Science & Animal Husbandry (20-09-2011). 63 units of blood were collected.

AAU also received Trophy and Certificate from Indian Red Cross Society, Anand District Branch, Anand for the highest numbers of units for the year 2011-2012.

### NATIONAL CADET CORPS (N.C.C.)

The motto of the N.C.C. is Unity and Discipline. Different training programmes are routinely organized by the units of N.C.C. in various colleges of this university for the development of quality leadership, patriotism, brotherhood, sportsmanship and adventurous attitude and unity among the students.



The N.C.C. Unit of B.A. College of Agriculture consist 80 cadets. This year four Gujarat Battalion (boys) organized combined annual training camp at Khambhat. Twenty five cadets of B.A.C.A. participated in the camps and participated in many events and achieved first and second position in cross country. Forty five cadets attended Combined Anand Training Camp (CATC) and Anand Training Camp (ATC) camp during the year 2011-12. Fifteen cadets attended Army Attachment Camp at BHUJ from

23<sup>rd</sup> September, 2011 to 6<sup>th</sup> October, 2011.

Five cadets attended All India National Integration Camp at K.V.Pendhakar College Dumbavali, Mumbai (Maharashtra).

Twenty nine cadets passed B Certificate examination and nine cadets got A Grade in the examination. Thirty two cadets passed C certificate examination and 17 cadets got B Grade in the year 2011-12.



### STUDENT MAGAZINE

The student magazine is published by all the colleges of this university with the aim to bring out the hidden quality of writing and expression of the students. The teachers, staff members and post-graduate students of the colleges provides the crucial link for the overall development of the students through the various articles, poems, drama, interested information useful to farmers and scientific community etc. publishing in college magazine. The Director of Students Welfare provides the financial assistance.

### EDUCATIONAL TOUR

Educational tour is considered as a part of academic syllabus of the degree courses of this university. The duration of educational tour is of 2-3 weeks, which comprises the visits of reputed Institutes and Industries of Gujarat and out side Gujarat. The basic purpose of this tour is to gain knowledge and information by personal visit of the related Institutes, Industries and research centers. From the educational tour, the students have gained the important and interesting

information regarding the developments of agriculture, veterinary and industrial growth by visiting the research centers of Agricultural Universities and other places, etc.

### FINANCIAL ASSISTANCE TO THE STUDENTS

University provides scholarship/ fellowship on merit basis. Moreover, Government Scholarship Loan and freeships etc are also provided to the students of all the faculties on merit basis as under :

- 1 U. G. Fellowship Rs.6000 /- per year to student of all faculties.
- 2 For under graduate student, National Talent Scholarship (ICAR) Rs.12000/- per year to
- 3 ICAR Merit cum Means Scholarship to 7.5 % of intake capacity (Rs. 6000/- per month for all faculty)
- 4 AAU Merit fellowship for the first rank holder from each of the faculties of Agri., Vet., Dairy and FPT and IABMI for Masters; Rs.18, 000/- per year.
- 5 AAU Merit fellowship for the first rank holder from each of the faculties of Agri., Vet., Dairy and FPT and IAMBA for Ph.D studies; Rs.24, 000/- per year.

### The details & Nos. of NTS, MCM Scholarship, Fellowship to UG and PG students for the year 2011-12

Faculty	NTS Scholarship	UG Fellowship	PG Fellowship	MCM Scholarship
Agriculture	23	36	05	-
Veterinary Science & Animal Husbandary	29	40	05	24
Dairy Science	12	20	04	-
Food Processing Technology & Bio-Energy	10	04	04	-
Agricultural Information Technology	05	03	-	-
Agricultural Engineering & Technology	10	12	-	06
Agri-Business Management	-	-	06	-
<b>Total</b>	<b>89</b>	<b>115</b>	<b>24</b>	<b>30</b>



## STUDENT DISCIPLINE

The quality of discipline is being developed in students through sports, N.C.C. and N.S.S. and due to this, co-operative atmosphere is being maintained between students, teachers and staff members of this university and no serious remarkable cases of misbehavior by the students were occurred during year of report.

## OTHER ACTIVITIES

### Pushpanjali on birth ceremony of Mahatma Gandhi and Shashtriji

A “Sarva Dharma Prarthna” programme was organized on the day of “Gandhi Jayanti”. A floral tribute was paid to Poojya Gandhi Bapu and to former Prime Minister of India, Lal Bahadur Shastri by officers of this University. On this occasion Sarva Dharma Prarthna, famous bhajan of bapu ‘Vaishnavjan to tene re kahiye’ was recited by students. Students enlighten the audience by delivering Gandhian thought/ Principles of Gandhiji Truth, Non Violence, Non Co-operation and simplicity. One of the students narrated biography and simplicity of Shashtriji.

XIII ALL India Inter Agricultural University Sports 2011-12 was organized by Dr. Punjabrao Deshmukh Krishi Vishwa Vidyalaya,

AKOLA (Maharashtra) between 16-19 February, 2012. Anand Agricultural University participated in various events. Thirty eight students of Anand Agricultural University team participated in Table-Tennis, Kabbadi, Valley-ball, Basket-ball, Badminton tournament.

Parsana Jigar participated in Khel Mahakumbh 2011-12 organized by Government of Gujarat and won the 1<sup>st</sup> prize(Rs.10000/-) at Anand District Level in Disc Throw and Shot Put event.



Anand Agricultural University celebrated its 8<sup>th</sup> Annual Convocation on 14<sup>th</sup> February 2012. Forty nine medals & two cash prizes distributed to the students of all faculties.

### Placement Cell

Anand Agricultural University has an excellent placement record with top-notch organizations like Banks, Agriculture companies and various Dairy and Food Industries, Pharmaceuticals with a strong and supportive alumni network holding prime position in reputed companies. We not only ensure a job for the deserving students but also install a lifetime of confidence and growth. Our dedicated placement cell is constantly in touch with the industries. The Student Counseling & Placement Cell looks after students' well-being, placement and Campus Interview. During the year of report there was a heavy demand from different companies like GCMME, NGO, GOVT. of GUJ. (Animal Husbandry), Dena Bank, Balaji Wafers, NDDDB,

Dhanuka Agritech., Pest Control of India Pvt. Ltd., Bank of Baroda, Mother Dairy, Amul Dairy, Foreign study etc.

### Other activities

- (1) "Gujarat Establishment Day" was celebrated at AAU campus on 1<sup>st</sup> May 2011 and all the volunteers of NSS and staff of colleges of AAU attached with students' activities participated in rally.
- (2) "Thalessemia" testing of newly admitted students of all colleges were done in month of September 2011, December 2011, & March-2012 with the help of Indian Red Cross Society.
- (3) A "Jan Jagruti Rally" against HIV was organized in collaboration with Red Cross Society on 9<sup>th</sup> Sept. 2011.
- (4) "World AIDS DAY" was celebrated on 01-12-2011.



# CHAPTER 9

## Finance & Accounts

### Navigating through fiscal flow

#### The Accounts Officer-cum-Comptroller

Considering the colossal responsibility and answerability that lie with the comptroller and as reiterated in the GAU Act. Section No. 5 in charge of this office Shri M. G. Vasava was given the charge of the Accounts Officer-cum-Comptroller from 01/06/2011 to 31-12-2011. Later on to Shri K. P. Mahant held the charge from 01-01-2012.

#### 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 as shown below.

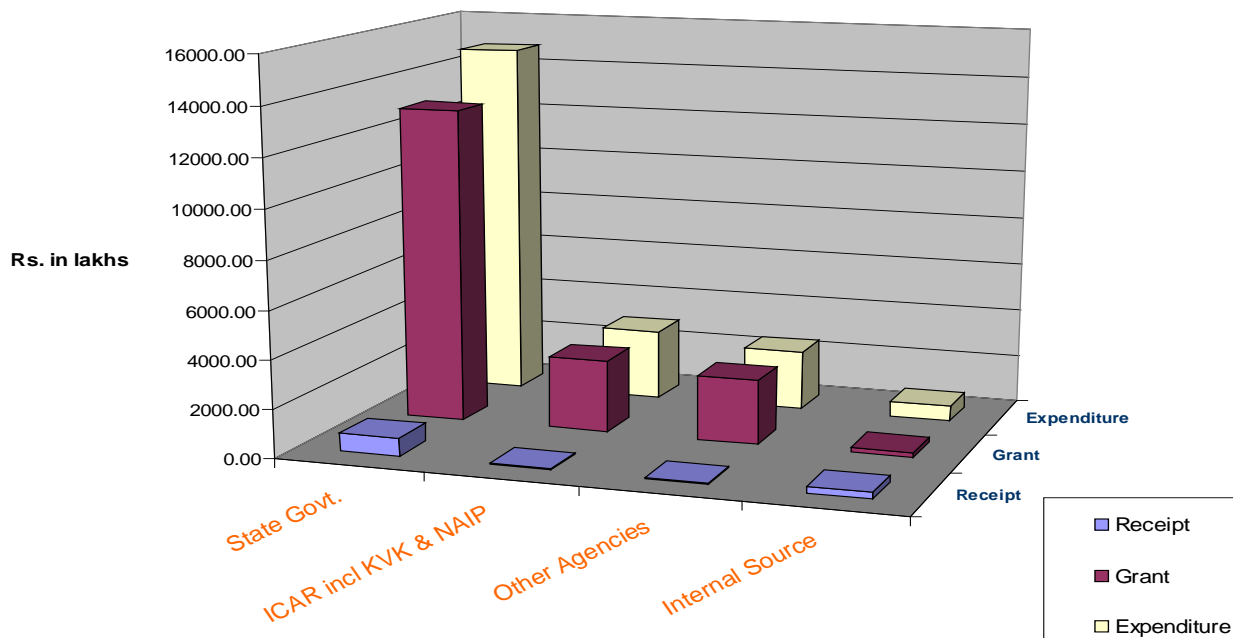
#### Grant Received / Expenditure Incurred / Income Generated (2011-12)

(Rs. in lakhs)

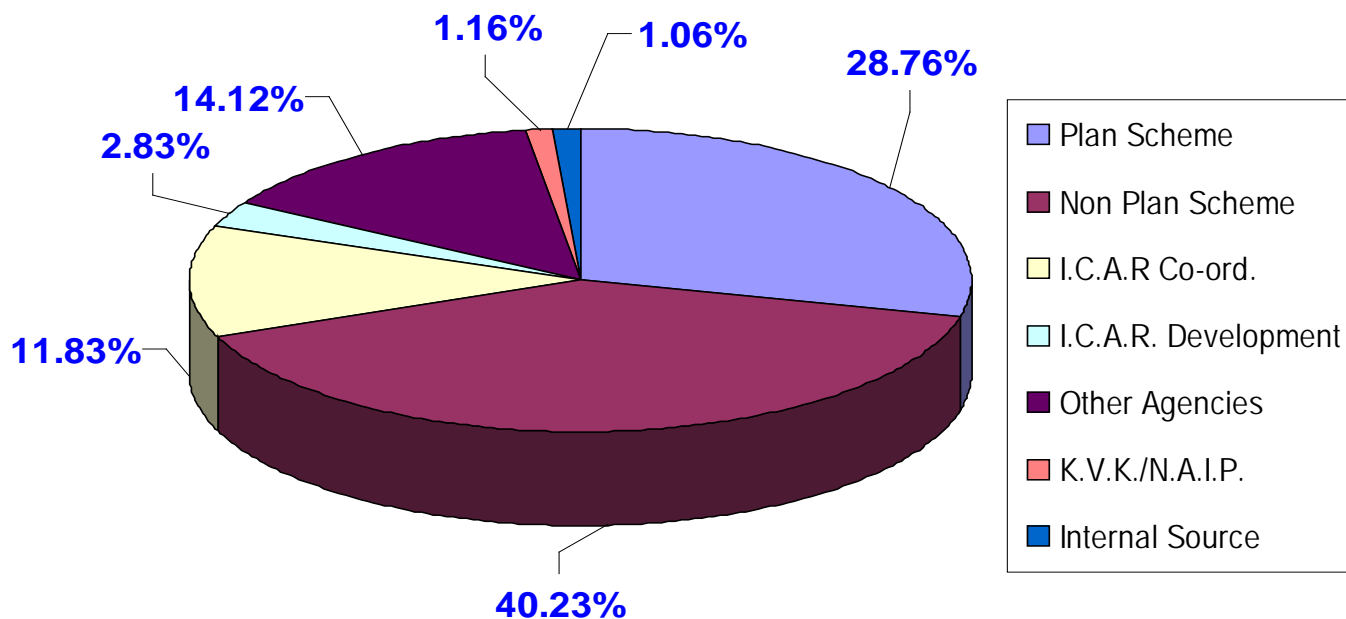
Sr. No.	Particulars	Income generated	Grant received	Expenditure incurred
<b>(A)</b>	<b>State Govt. Grant</b>			
1	Plan Scheme	143.93	5426.66	6638.73
2	Non Plan Scheme	602.27	7589.91	8192.19
	<b>TOTAL (A)</b>	<b>746.20</b>	<b>13016.57</b>	<b>14830.92</b>
<b>(B)</b>	<b>Other Source</b>			
1	ICAR Co-ordinated	42.53	2232.69	2161.52
2	ICAR Adhoc Development	0.00	532.60	534.07
3	RAWE	0.00	1.74	3.36
4	Other Agencies Scheme	37.66	2664.78	2460.09
5	K.V.K. Centre in AAU	0.00	205.10	199.10
6	N.A.I.P. Centre in AAU	0.00	14.30	15.73
	<b>TOTAL:(B)</b>	<b>80.19</b>	<b>5651.21</b>	<b>5373.87</b>
<b>(C)</b>	<b>Internal Source</b>			
1	University Development Grant (9599)	254.37	199.01	621.30
2	Capital Account	0.00	0.00	0.00
3	Leave Salary & Pension Contribution	0.00	1.60	0.00
	<b>TOTAL:(C)</b>	<b>254.37</b>	<b>200.61</b>	<b>621.30</b>
	<b>TOTAL : (A+B+C)</b>	<b>1080.76</b>	<b>18868.39</b>	<b>20826.09</b>

\* An amount of Rs.334.58 lakh transferred fund for committed expenditure

Receipt, Grant & Expenditure for the year 2011-12



Funding Agency wise Grants for the year 2011-12





## Audit

### (i) Internal Audit

The Internal Audit was conducted on the basis of quarterly based audit by the Chartered Accountant. To settle the compliance of the audit report, a meeting was arranged on 15/11/2011 with all DDOs.

### (ii) Examiner Local Fund Audit

During the year under report a selected para meeting was held on 27/06/2012 for the year 2009-10.

### (iii) A.G. Audit

The Accountant General (Civil Audit),

Rajkot team has conducted the Audit of the Account for the year 2010-11 for the period 21/02/2012 to 03/03/12.

## Resources of Income and Financial Estimates

The Revenue generated by the University is mainly through sale of farm produces, milk & milk products, poultry products & 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 2011-12, as approved by the State Government.

Sr. No.	Details of Head	Estimates for 2011-2012 (Rs.in lakhs)	
		Original	Revised
1	<b>Plan</b>		
	Education	3456.61	2858.61
	Extension Education	483.70	483.70
	Research	1486.35	2084.35
	<b>TOTAL (A)</b>	<b>5426.66</b>	<b>5426.66</b>
2	<b>Non Plan</b>		
	Non-Plan (Normal)	5964.73	7485.57
	Non-Plan (Tribal)	101.70	104.34
	<b>TOTAL (B)</b>	<b>6066.43</b>	<b>7589.91</b>

**Training being looked after by the Registrar.**

### **Pension**

Sr. No.	Details of Pension cases (2011-12)	No. of cases finalized
(1)	Final pension cases	93
(2)	Revised pension cases	115
(3)	Restoration pension cases	11

### **Provident Fund (PF)**

The details of P.F. cases disposed during the year under report :

No. of Final withdrawal cases : 100

No. of Part-final withdrawal cases : 204

In addition the monthly PF accounts

subscription, withdrawals & balancing for university employees in form of broad sheet & ledger were maintained. Initial P.L. accounts with Anand Treasury is opened & maintained. The PF account slips were issued to staff in the month of May-2012.

The work of computerization of the system has been taken up and run regularly.

# CHAPTER 10

## Estate Management

All the works related to construction and maintenance of the university falls in the purview of Executive Engineer, who supervise and executive the work with the assistance of the Deputy Engineer and Junior Engineers. Further the office is also looks after communication and security services. The University Guest Houses and housing facilities are also maintend by this office.

### 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 the following members:

Sr. No.	Name of member	Designation	
1	Dr. A.M. shekh	Vice Chancellor	Chairman
2	Dr. K.B. Kathiria	Director of Research	Member
3	Dr. P. P. Patel	Director of Extension Education	Member
4	Dr. B.P. Shah	Principal, Dairy Sci. College & board member.	Member
5	Dr. D.C. Joshi	Dean, FPT & BE	Member
6	Dr. P.R. Vaishnav	Registrar	Member
7	Shri P.S. Vyas	Account officer-cum- comptroller up to Dt. 31-05-2011 & Financial Advisor from Dt. 19-1-2012.	Member
8	Shri M. G. Vasava Shri K.P. Mahant	Account officer-cum- comptroller from Dt. 06-02-2011 to 31-12-2011 Account officer-cum- comptroller from Dt. 01-01-2012	Member
9	Dr. A.D Patel	Research Scientist, BTRS from Dt. 19-1-2012	Member
10	Er. B.N. Bhalia	Executive Engineer	Member Secretary

## MEETINGS OF COMMITTEE

Sr. No.	Meeting	Date
1	19 <sup>th</sup> Meeting	08-04-2011
2	20 <sup>th</sup> Meeting	21-02-2012



Total 108 items were presented for approval in 19<sup>th</sup> & 20<sup>th</sup> meeting. All the items were approved.

As per the provision of grant, total number of 191 Administrative approval and 290 technical/part technical sanctions were accorded.



**UNIVERSITY CONSTRUCTION COMMITTEE ON Dt. 08-04-2011**  
**Following works are completed during the period under report**

1 Construction of building for Agriculture Engineering & Technology college at AAU, Godhra



2 Construction of Hostel & Quarters for Agriculture Engineering & Technology college at AAU, Godhra.



**Quarters**



**Girls hostel**



**Boys hostel**

3 Construction of Polytechnic, department building & Girls hostel at AAU, Vaso.



**Polytechnic building**



**Girls hostel**

4 Construction of Boys hostel, quarters & Guest house at AAU, Vaso



**Boys hostel**



**Quarters**



**Guest house**

5 Construction of Training Hostel for Veterinary college at AAU, Anand.



6 Construction of E type quarter at AAU, Anand



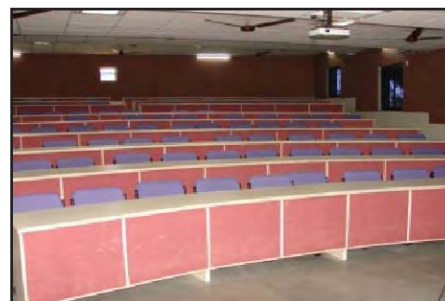
7 Construction of Multi purpose hall for Spotsr complex at AAU, Anand



8 Construction of MBA college building at AAU, Anand



9 Providing tables & Acoustical treatment to Dairy Sc. Class room at AAU, Anand



10 Construction of quarters at AAU, Nenpur



**C & D Type Quarters**



**B Type Quarters**



**Labour Quarters**

11 Construction of Quarters at AAU, Sansoli



**Boys hostel**



**Quarters**



**Guest house**



- 12 Construction of laboratory building for Mass production facilities for pathology under RKVY at AAU, Anand.



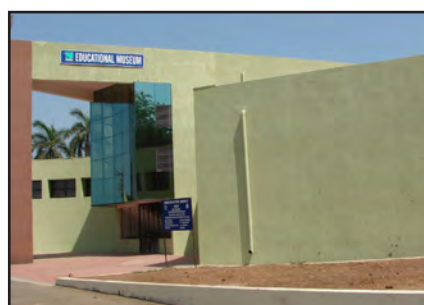
- 13 Construction of class room for Veterinary science college at AAU, Anand.



- 14 Construction of Education Museum under ICAR at AAU, Anand

- 15 Construction of Education Museum under ICAR at AAU, Anand

- 16 Construction of quarters at AAU, Jabugam



### No Other miscellaneous works

- 17 Construction of Bore well for ICAR Girls hostel at AAU, Anand.
- 18 Providing protection & furnishing to Registrar office at AAU, Anand.
- 19 Construction of farm wall at Navli Fodder Farm plot no. D-14 to D-15 at AAU, Anand.
- 20 Construction of Implement shed at AAU, Kaknpur
- 21 Construction of bore well & pump room at AAU, Kaknpur.
- 22 Construction of Maize quality laboratory at AAU, Kaknpur.
- 23 Providing Water proofing treatment on terrace of main building of BTRS at AAU, Anand.
- 24 Providing Aluco cladding to V.C. office at AAU Anand

- 25 Providing Plinth protection to VC office at AAU, Anand
- 26 Construction of Asphalt road at AAU, Arnej.
- 27 Providing & fixing granite/kotah/ vitrified in VC office at AAU, Anand
- 28 Upgrading/protection & furnishing to Principal chamber of Agri. Engg. College, Godhra
- 29 Drilling Bore well at AAU, Devgadhabaria.
- 30 Drilling bore well for Tribhuvan farmers hostel at AAU, Anand.
- 31 Drilling bore well for PG girls hostel at AAU, Anand.
- 32 Providing Aluminum partition at FF foyer of V.C office at AAU Anand
- 33 Furnishing to office cum laboratory building at AAU, Sansoli.
- 34 Construction of farm road at AAU, Dabhoi

- 35 Construction of threshing yard at AAU, Dahod.
- 36 Construction of compound wall for BTRS at Anand
- 37 Construction of calf pen at AAU, Sansoli.
- 38 Providing curbing for Agronomy farm road at AAU, Anand
- 39 Providing Protection to Polytechnic building & land scrapping at AAU, Dahod.
- 40 Construction of Implement shed at AAU Sansoli.
- 41 Construction of Parking shed for Registrar section at AAU, Anand.
- 42 Construction of Parking shed for Vice Chancellor's car
- 43 Construction of FRP dome shed for comptroller office at AAU, Anand.
- 44 Providing plinth protection & approach to M & AP at AAU, Anand.
- 45 Providing approach to new Girls hostel at AAU, Anand
- 46 Construction of protection wall to Agronomy plot no. 28 & 29 of BACA at AAU, Anand.
- 47 Construction of Fodder & Bullock shed at AAU, Nenpur.
- 48 Construction of cycle stand for new Girls hostel under ICAR at AAU, Anand.
- 49 Construction of compound wall around ICAR girls hostel at AAU, Anand.
- 50 Providing CC approach road to Health centre at AAU, Anand.
- 51 Drilling 110mm dia PVC pipe tube well for Pathology lab. At AAU, Anand.
- 52 Providing CC approach road to PG hostel at AAU, Anand.
- 53 Construction of wall foundation jointing to protection wall at Agronomy farm at AAU Anand.
- 54 Construction of Godown for M&AP at AAU, Anand
- 55 Renovation of Marketing/computer laboratory & office of staff at AAU, An and.
- 56 Construction of farm road at AAU, Sansoli.
- 57 Providing Sintex paneling in comptroller chamber at AAU Anand.
- 58 Construction of approach road at AAU, Ramnamuvada.
- 59 Construction of Fodder shed at AAU, Sansoli.
- 60 Drilling 110mm dia bore well for clinical lab. At Vetrinary college at AAU, Anand.
- 61 Construction of Godown & farm store at AAU, Devgadhbaria.
- 62 Construction of Pump room at AAU, Sansoli.
- 63 Construction of farm store at AAU, Ramnamuvada.
- 64 Construction of boundary wall at AAU, Arnej.
- 65 Construction of Implements shed at AAU, Vaso.
- 66 Providing water proofing to STD building at AAU, Anand.
- 67 Construction of Jeep/Bus garage for Garrage for Polytechnic at AAU, Vaso.
- 68 Providing water proofing on terrace of Vitthal hostel at AAU, Anand.
- 69 Drilling 110mm dia PVC pipe tube well for Office building at AAU, Nenpur.
- 70 Construction of Animal shed & farm structure at AAU, Sansoli.
- 71 Construction of Farm store at AAU, Khambholaj.
- 72 Construction of vehicle shed at AAU, Khambholaj

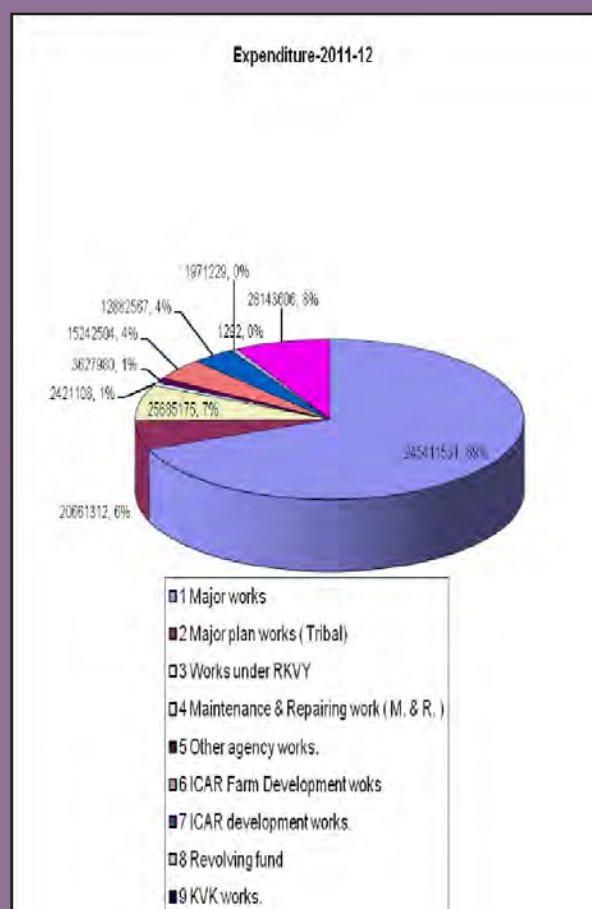


- 73 Providing CC approach & Plinth protection to T&V at AAU, Anand.
- 74 Providing footpath to entry side road of VC office at AAU, Anand.
- 75 Providing protection to foyer of third floor of V.C. office at AAU, Anand.
- 76 Construction of Parking shed at AAU, Khambholaj.
- 77 Construction of Pump room for Veterinary Sci. college at AAU, Anand.
- 78 Providing CC block in Parking of V.C. office at AAU, Anand.
- 79 Construction of Boundary wall at AAU, Thasra.

- 80 Construction of Pump/Operator room at Ramnamuvada.
- 81 Construction of farm store at AAU, Nenpur.
- 82 Construction of approach road at AAU, Nenpur.
- 83 Construction of Office cum laboratory building at AAU, Ramnamuvada.
- 84 Construction of farm protection wall at AAU, Ramnamuvada.

### Statement of Expenditure

Sr. No.	Plan/Scheme	Expenditure in (Rs.)
1	Major works	245411531
2	Major plan works (Tribal)	20661312
3	Works under RKVY	25685175
4	Maintenance & Repairing work (M.& R.)	2421108
5	Other agency works.	3627980
6	ICAR farm development woks	15242504
7	ICAR development works.	12882567
8	Revolving fund	1971229
9	KVK works.	1292
10	Contingency	28143606
	<b>TOTAL</b>	<b>356048304</b>



### MAJOR EVENTS

Sr. No.	Detail of event	Date
1	Inauguration of College of Agriculture Engineering and Technology, Godhra	20-05-2011
2	Inauguration of girls hostel "AADITI" at CAET, Godhra	
3	Inauguration of boys hostel "AARUNI" at CAET, Godhra	
4	Bhumi puja of U.G. boys hostel at AAU, Anand.	09-01-2012
5	Bhumi puja of P.G. boys hostel at AAU, Anand.	
6	Inauguration of Radiology & Emaging laboratory of Veterinary Science college at AAU, Anand.	
7	Inauguration of experimental and small ruminant animal operation theater of Veterinary Science college at AAU, Anand.	
8	Inauguration of trainees hostel of Veterinary Science college	
9	Inauguration of teaching complex "KAPILA" of Veterinary Science college at AAU, Anand.	14-2-2012
10	Inauguration of IABMI college at AAU, Anand.	
11	Inauguration of Sports complex at AAU, Anand.	
12	Inauguration of Education museum at AAU, Anand.	
13	Inauguration of Mass production laboratory of Pathology at AAU, Anand.	

## HOUSING ACCOMODATION COMMITTEE



**INAUGURATION OF COLLEGE OF AGRICULTURE ENGINEERING AND TECHNOLOGY, GODHRA**



**BHUMI PUJA OF U.G. BOYS HOSTEL**



**INAUGURATION OF GIRLS HOSTEL "AADITI"  
AT CAET, GODHRA**







**BHUMI PUJAN OF P.G. BOYS HOSTEL**



**BHUMI PUJAN OF P.G. BOYS HOSTEL**



**INAUGURATION OF RADIOLOGY & EMAGING  
LABORATORY OF VETERINARY  
SCIENCE COLLEGE**



**INAUGURATION OF EXPERIMENTAL AND  
SMALL RUMINANT ANIMAL OPERATION  
THEATER OF VETERINARY SCIENCE COLLEGE**



**INAUGURATION OF TRAINEES HOSTEL OF  
VETERINARY SCIENCE COLLEGE**



**INAUGURATION OF TEACHING COMPLEX  
"KAPILA" OF VETERINARY SCIENCE COLLEGE**



**INAUGURATION OF INTERNATIONAL AGRIBUSINESS  
MANAGEMENT INSTITUTE BUILDING**



**INAUGURATION OF MULTIPURPOSE HALL FOR  
SPORTS (UNDER ICAR) BUILDING**



**INAUGURATION OF EDUCATION MUSEUM  
(UNDER ICAR) BUILDING**



**INAUGURATION OF MASS PRODUCTION  
LABORATORY BUILDING**

Housing Accommodation committee is constituted for allotment of housing quarters to University employee staff 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. M. Shekh	Director of Research up to Dt.15-04-2011	Chairman
2	Dr. K. B. Kathiria	Director of Research from Dt.15-04-2011	Chairman
3	Dr. P.P. Patel	Director of Extension Education	Member
4	Dr. G.C. Jadeja	Principal B.A.C.A. from Dt. 15-04-2011	Member
5	Dr. J. V. Solanki	Principal, Vet. Sci. College	Invited member
6	Dr. B.P. Shah	Principal, Dairy Sci. College	Invited member
7	Dr. R.H. Patel	Asso. Director of Research	Member
8	Dr. A.A. Patel	Principal, EEL	Invited member
9	Dr. A.D. Patel	Research Scientist( Tobacco )	Invited member
10	Er. B.N. Bhalia	Executive Engineer	Member secretary



# CHAPTER 11

## Information Technology

The Information Technology Center at Anand Agricultural University provides the solutions and technical expertise and /or guidance to the requirements of the Information Technology and related applications in the field of agriculture and allied sciences for the AAU as well as State Agricultural Universities of Gujarat and Govt. of Gujarat.

### **NETWORK SERVICES**

Internet, Intranet, Improved email facilities with 10Gb of free email storage (in collaboration with Microsoft without any cost) for the employees, students and alumni of AAU, E- Library, CAB Database, J-Gate, Science Direct Personalizing 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, NKN and BSNL internet connectivity with the fiber optic back bone along with WiFi connectivity in the Anand campus of AAU.

### **BENEFICIARIES**

The internet/intranet/email services of IT center has been provided to more than 4000 beneficiaries including the university employees, research scientists, UG & PG students and the officials from various departments of the State. These services are very useful for the educational

and research activities.

For internet access, the individual login IDs have been given to the each & every beneficiaries via filling the online application form. The beneficiaries have been given intimations through Email as well as SMS for the same.

ANAND AGRICULTURAL UNIVERSITY  
ANAND - 388 110, GUJARAT  
Application form to open Email Account within AAU.IN domain

Print this form and send it to Directorate of Information Technology, AAU, duly signed in by you and your concerned Head with stamp. Form with improper information & without signature and stamp of the unit/sub unit head will not be accepted.

[Back List of Open Emails](#) [Print](#)

Date	: 22/03/2013 11:16:03
Unique ID	: 201303221141
Category	: Employee
Full Name	: Mahesh R. Prajapati
Department	: International Agri-Business Management Institute
College/Institute	: International Agri-Business Management Institute
Designation	:
Address	: International Agri-Business Management Institute, AAU, Anand, Anand, Gujarat, India - 388110
Birth Date	: 20/07/85
Phone Number	: ~
Mobile Number	: 9726869279
Username (Desired Email Address in aau.in domain)	: mrprajapati@aaui.in

### **AAU DATA CENTER**

IT Center has its own data center, with adequate level of web-security as well as physical/fire/smoke alarm security features and power/electricity features; all the live websites (like <http://aau.in>, <http://shc.aau.in>, <http://gsauca.in>) and ERP server have been hosted in the data center itself.

All the fiber optic leased lines (from BSNL & NKN) along with internal fiber optic based central distribution have been terminated and/or distributed in/from the Data Center. It has been

equipped with six servers and managed switches along with firewall and routers from ISPs'.

All the equipments are with 365x24x7 working nature in normal days without any break-up. IT Center, AAU is the pioneer among all the Educational/SAUs' universities in the Gujarat State with this kind of Data Center setup and infrastructure.

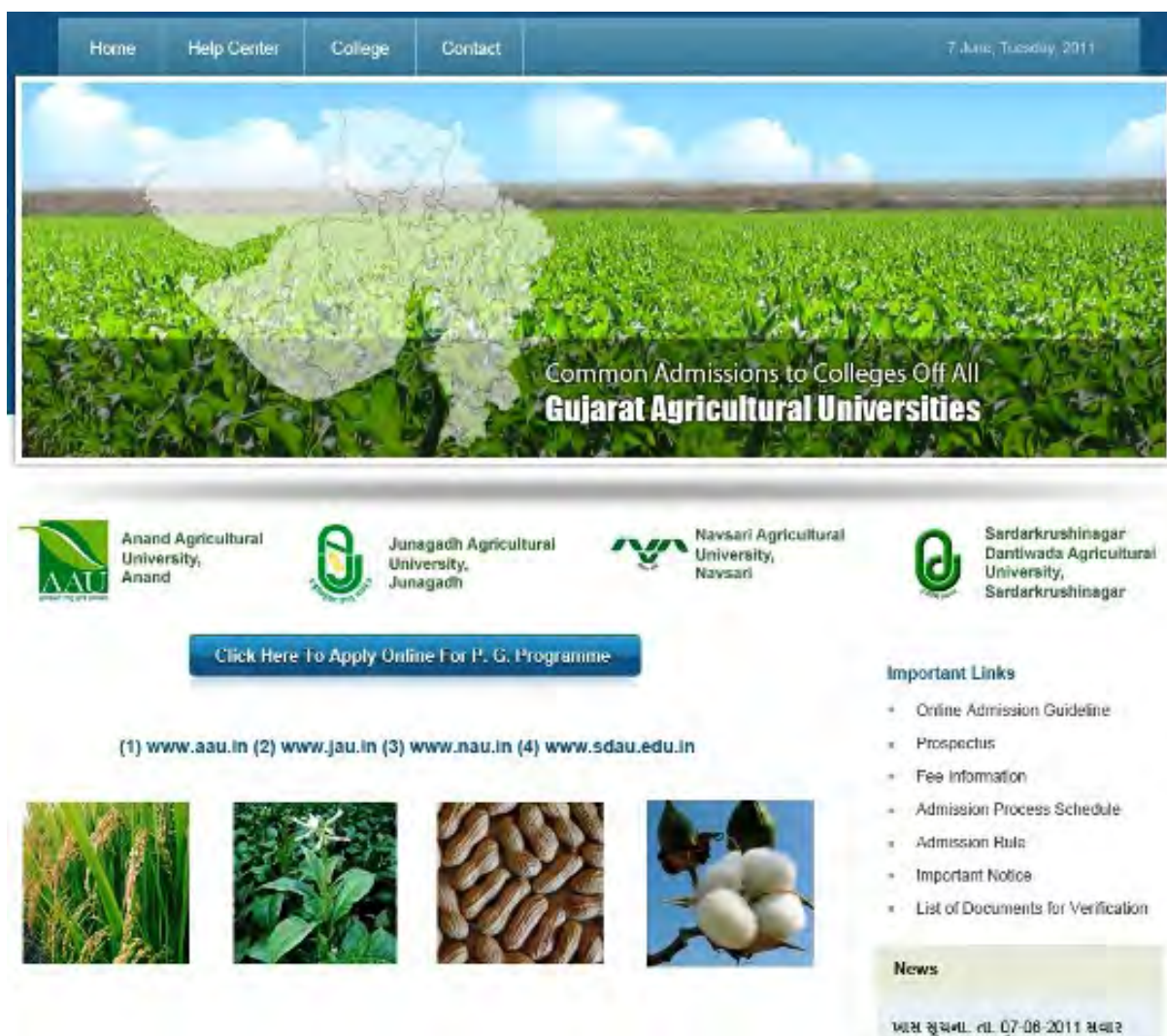
### ONLINE SERVICES/APPLICATIONS

From the year 2011, IT Center has introduced Web based application form for AAU

Convocation and Admission for PG Courses of the SAUs'. AAU website (<http://aau.in>) has been improved and made dynamic in nature so that each and every unit/sub-unit can update their information to the website at their own.

AAU has introduced the Online Application Form all the cadres (first time and become pioneer among the SAUs'.

Circulars have been made online to the AAU website to save the paper cost and timely delivery to the unit/sub-unit. Tender and career advertisements have been made online.







## PRESENTATIONS/ MODELS

IT Center 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 University Guests, Board of Management Meetings and Agriculture Fairs or at Government level Meeting.

## 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 have been placed on intranet, which enables the end users to get quick information on any reference related to Agricultural research published from 1972 to 2011 through Network. This has made the reference services very fast and has saved a lot of time.

## 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 has increased 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.





## (7) જમીનની ચકાસણીની આધારે પાકવાર ખાતરની સલામતો

(ખાતરો સલામત મુજબ પાયામાં અને પુષ્ટિખાતરના રૂપમાં ઇખ્તિયાર આપવા)

નોંધ: આ કાર્ડમાં દર્શાવેલ જમીનની તાસીર આ સર્વે નંબરને લાગુ પડે છે. જુદા જુદા સર્વેનંબરની જમીનની તાસીર અલગ હોઈ શકે છે. જમીન દરેક પોતાના ખાતરની જમીનનું પુષ્કરણ કરવા તો પેમાણે ખાતરનો ઉપયોગ કરવા વધુ કાચાકાચા છે.

ક્રમ	પાક	ખેતીવાડી ખાતરની ખાતરની સામાન્ય ના : ડી. ગા. / (કિ.ગ્રા. / હેક્ટર)	કાણિયું ખાતર (ટન/હેક્ટર)	જમીનની ચકાસણી આધારે સલામતો	નાઇટ્રોજન (કિ.ગ્રા. / હેક્ટર)	ફોસ્ફરસ (કિ.ગ્રા. / હેક્ટર)	પોટાશ (કિ.ગ્રા. / હેક્ટર)
પરીકે	કેળ	180 90 180	15	200 90 180	55	25	0
પરીકે	ડાંગર	50 25 0	10	55	25	0	0
ડાંગર(બેરણ)		100 25 0	10	110	25	0	0
મધ્યમ મોડી પાકની જાતો(રોપણ)		120 30 0	10	130	30	0	0
મોડી પાકની જાતો(રોપણ)		80 20 0	6	90	20	0	0
વહેલી પાકની જાતો(રોપણ)							
પરીકે	તમાકુ	180 0 0	13	200 0 0	0	0	0
લીડી તમાકુ (સુધારેલી જાતો)		220 0 0	13	240 0 0	0	0	0
પરીકે	દિવેલા	75 50 0	10	85 50 0	0	0	0
પરીકે	બાજરી	80 40 0	13	90 40 0	0	0	0
કાબજરી (વરસાદ આધારિત)							
પરીકે	મરચાં	100 50 50	10	110 50 50	50	50	50
પરીકે	કલકત્તી તમાકુ	150 0 0	10	165 0 0	0	0	0
ગુજરાત કલકત્તી - 1		200 0 0	10	240 0 0	0	0	0
ગુજરાત કલકત્તી - 2							
પરીકે	ઘઉં	80 40 0	13	90 40 0	0	0	0
મોડી વાવણી		120 60 0	13	130 60 0	0	0	0
સમયસર વાવણી							
પરીકે	ચણા	20 40 0	10	25 40 0	0	0	0
પરીકે	બટાટા	200 100 200	25	220 100 200	100	30	0
પરીકે	ઉનાળું ડાંગર	100 30 0	10	110 30 0	0	0	0
પરીકે	બાજરી						

## જમીનનું આરોગ્ય પત્રક

(સોઈલ હેલ્થ કાર્ડ)

ખેતીવાડી ખાતર

ગુજરાત રાજ્ય

વર્ષ : 2002

ભાગ - 1



જમીનનું આરોગ્ય પત્રક નંબર : SHC00027842

(1) ખેડૂતનું નામ : પરસોતમભાઈ હીરાભાઈ પટેલ

(2) ગામ : આરોલા તાલુકો : બોરસદ જિલ્લો : આણંદ

(3) ખાતા નંબર : 280

(4) ખાતા પ્રમાણે જમીનની વિગત :

ક્રમ	સર્વે નંબર	વિસ્તાર (હેક્ટર)	જમીનનો પ્રકાર
1	1004-2	00 : 40 : 00	ગોરાડ જમીન
2			
3			
4			
5			

(5) ગામની જમીનની ચકાસણી આધારિત કળદ્રુપતાનો વર્ગ

ક્રમ	કળદ્રુપતાનો વર્ગ	નાઇટ્રોજન	ફોસ્ફરસ	પોટાશ
1	ઓછો	✓		
2	મધ્યમ		✓	
3	વધારે			✓

(6) વ્યક્તિગત જમીનની ચકાસણીની વિગત : સર્વે નંબર : 1004-2

ક્રમ	વિગત	પરિણામ	પરિણામની સમજ
1	પી.એચ. આંક (જમીનની પ્રતિક્રિયા)	7.20	સામાન્ય
2	ઈ.સી.ફલ દ્રાવ્ય ક્ષારો : ફેસીસાયમન/મીટર	0.49	સામાન્ય
3	સેન્ટ્રલ કાર્બન (ટકા)	0.26	ઓછું
4	લઘ્ય ફોસ્ફરસ (કિ.ગ્રા./હેક્ટર)	43.00	મધ્યમ
5	લઘ્ય પોટાશ (કિ.ગ્રા./હેક્ટર)	254.00	મધ્યમ

પી.એચ. ઈ.સી. (વિપુલવાહકતા)

અમીય : 6.5 થી ઓછું  
સામાન્ય : 6.5 થી 8.2  
ભાર્ગવિક : 8.2 થી વધુ (કાપ્સમ વાપરવું)

સામાન્ય : 1.0 થી ઓછું  
મધ્યમ : 1.0 થી 3.0  
કેનિફરિક : 3.0 થી વધારે

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 Agri, Department of Animal Husbandry, Department of Horticulture and other Boards / Corporations engaged in agriculture have been established under this program, which provide information regarding different schemes, statistics, working system etc.

### **TECHNICAL HELP**

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

Because of the on-hand training given to various employees on computer applications, administrative and account activities 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 helps the other organizations to strengthen their IT activities.

Director – IT has been given state level responsibilities regarding IT work of Soil Health Card by Agriculture and Co-operation Department, Government of Gujarat.

The responsibilities to conduct/maintain the Online Admissions for UG and PG programmes of SAUs' also given to the IT Center. Trainings for the same to various officers have been given time by time in this regards also. Help centers for the students in context of the online admissions have also being facilitated by the IT Center.





# CHAPTER 12

## Dr. M.D. Patel Regional E-library

Dr. M. D. Patel Regional e-Library is functioning independently as separate unit with great pride as “University Library”. Presently the library is in possession of 19 Foreign & 74 Indian Journals, 78714 Barcoded Books & Reports, 3376 theses, and 132 digitized rare books, and several e-resources all for the utility of the users of the Institution. Moreover, e-transaction and e-circulation of books by using Web Opac and PVC Library Smart card has fortified the

Library system. Dr.M.D.Patel Regional e-Library is enriched with online access, e-journals and CD ROM database along with standard stored Premium database on AAU server. Information Technology in collaboration is maintaining and rendering services of 4 mbps connectivity as well as storage of database. This year, the infrastructure of the Library has been greatly improved with the voluminous grant given by the state government and the ICAR.

### Resources procured during the year under Report

Journals subscribed	Books purchased	Online Resources procured
1 Foreign Journals : 19 2 Indian Journals : 74	1304	1 Food Science & Technology Abstracts online (1990 to date) 2 Commonwealth Agriculture Bureau Abstracts (CABI) (1965 to date)

### CeRA online

Consortium of e-Rsources in Agriculture is a boon bestowed by the ICAR to the SAUs of the country. This archival repository of e-resources in electronic form is hugely improving the quality of scientific publications as well as teaching and research guidance. The DDS service being provided on time by Dr M.D. Patel Regional e-Library is widely appreciated by the ICAR.

### Krishiprabha e-Theses database

*KrishiPrabha* is a full-text electronic database of Indian Agricultural Doctoral Dissertations submitted by research scholars to the 45 State/Deemed Agricultural Universities. This is a sustainable database, listing about 7500 Doctoral Dissertations with a full text of about 6000 Dissertations, created by Nehru Library, CCS Haryana Agricultural University,

Hisar with financial support from Indian Council of Agricultural Research, New Delhi under National Agricultural Innovation Project. Anand Agricultural University has become an integral part of Krishiprabha project, and so far, 159 Doctoral Dissertations from Anand campus were digitized and submitted to the Lead Centre, which are available in full text on **hau.ernet.in** to the users on Krishiprabha e-theses portal.

### **J-Gate**

J-Gate is another benevolent boon bestowed by the ICAR to agriculture scientists and aspirants, providing seamless access to millions of Journals in seven different agriculture related subject groups, available on AAU Intranet.

### **Conference Attended**

Faculty has attended Association of Agricultural Librarians & Documentists of India Conference at Dr Y.S. Parmar University of Horticulture & Forestry, Solan (HP) in November, 2011, and presented a paper on **“Resource Sharing in the context of e-Resources.”**

### **Book Exhibitions**

A total of Five Book exhibitions were conducted by Dr M.D. Patel Regional e-Library during the months of August, September and October, 2011 by United Book Traders-Jodhpur,

Prashant Book Agency-New Delhi, Techno Books & Periodicals-New Delhi, Educational Book Centre-Mumbai and Atlas Book Centre-New Delhi, whereby several recommendations were received from different faculties.

### **Renovation**

This year, the entire Library is adorned with new look, with renovated flooring, main passage with flexi bond Aluminum composite panel, and with an A/c Reading Room facility for users..

### **Library Council Meeting**

A joint Sixth Library Council & Fifth Library Purchase Committee meeting was held on 14-08-2012 in Dr.M.D.Patel Regional e-Library, AAU, Anand and various library related issues were discussed at length.

### **User Statistics**

During the year of report, there were 15,516 Library transactions, and the number of users utilizing the library facilities was approximately 90 per day, showing a 5% increase since last year.

Cyberary continues to be the hub of e-content search with an average of 130-150 users per day.





Launching of PVC



Renovation of DMDPRL  
Smart Card



Cyberary



Current Periodicals

# Appendices

## **Appendix-1** **Members of the Board of Management**

### **Vice Chancellor**

Dr. A. M. Shekh

### **Secretary**

#### **Agriculture & Cooperation Department**

Shri R. K. Tripathy

### **Secretary**

#### **Finance Department**

Shri G. P. Joshi

Shri C. L. Meena

### **Secretary**

#### **Education Department**

Dr. Hasmukhbhai Adhiya

### **Director of Agriculture**

Dr. B. R. Shah

### **Director of Animal Husbandry**

Dr. A. J. Kachiapatel

### **Director of Horticulture**

Dr. S. R. Choudhary

### **Dean,**

Dr. B.P. Shah

Nominated by Vice-Chancellor

### **Director**

#### **NRC, M & AP (Boriyavi)**

Dr. S. Maiti

14-02-2009 to 26-03-2012

Dr. K.R Kranthi

Nominated by I.C.A.R.

27-03-2012 to continue

### **Registrar acted as the Member Secretary**

Dr. P.R.Vaishnav

## Appendix-2

### Members of Academic Council

<b>Vice Chancellor</b> Dr. A. M. Shekh	<b>Professor &amp; Head</b> Dairy Chemistry Dr. K. D. Aparnathi (Nominated)
<b>Director of Research &amp; Dean PG Studies</b> Dr. A. M. Shekh	<b>Director</b> <b>Ahimsa Foundation</b> Barrister Vipin Shah, Mumbai
<b>Director of Extension Education</b> Dr. P. P. Patel	<b>Librarian</b> Dr. G. B. Valand (Co-opt)
<b>Dean, Agriculture</b> Dr. A. M. Shekh	<b>Director of Student Welfare</b> Dr. A.M.Thaker (Co-opt) (Upto : 01-04-2011 to 14-04-2011) Dr. A. J. Pandya (Co-opt) (From: 15-04-2011)
<b>Dean, Veterinary Science</b> Dr. J. V. Solanki	<b>Retd. Research Scientist</b> Dr. B. S. Jadon (Co-opt)
<b>Dean, Dairy Science</b> Dr. B. P. Shah	<b>Managing Director, Vidya Dairy</b> Dr H.K. Desai (Co-Opt )
<b>Dean, Food Processing Technology &amp; Bio-energy</b> Dr. D. C. Joshi	<b>Retd. Principal &amp; Dean, Dairy</b> Dr. R.S. Sharma (Co-Opt)
<b>Dean, Agricultural Information Technology</b> Dr. P. R. Vaishnav	<b>Retd. Dean,</b> Dr. V. M. Mehta (Co-Opt)
<b>Principal</b> <b>Extension Education Institute</b> Dr. Arun A. Patel (Nominated)	<b>Vice-Chancellor</b> S. P. University, Anand Dr. B. G. Patel (Co-Opt)
<b>Professor &amp; Head</b> <b>Livestock Production Management</b> Dr. Ashok M. Patel (Nominated)	<b>Assistant Director General (EQR)</b> I.C.A.R., New Delhi, Dr. R. K. Mittal (Co-Opt)
<b>Professor &amp; Head</b> <b>Horticulture</b> Dr. H. C. Patel (Nominated)	<b>Project Director</b> S.P.U.U., Bhopal Dr. S. D. Kulkarni (Co-Opt)
<b>Prof &amp; Head</b> <b>Agricultural Meteorology</b> Dr. Vyas Pandey (Nominated)	<b>Registrar</b> Dr. A. J. Pandya (Upto :17-06-2010) Dr. P.R.Vaishnav (From: 18-06-2010 to continue)
<b>Professor &amp; Head</b> Vety. Animal Re-production Gynecology. & Obstetrics Dr. F. S. Kavani (Nominated)	<b>Member Secretary</b>



**Appendix-3**  
**Officers of the University**

<b>Hon'ble Chancellor</b> Dr. Smt. Kamla Beniwal (From 27-11-2009)	<b>Dean</b> <b>Food Processing Technology &amp; Bio-energy</b> Dr. D. C. Joshi
<b>Vice Chancellor</b> Prof. M. C. Varshenya (From: 01-04-2010 to 30-06-2010) Dr. A. M. Shekh (From: 01-07-2010 to continue)	<b>Dean</b> <b>Agril. Information Technology</b> Dr. P. R. Vaishnav
<b>Registrar</b> Dr. A. J. Pandya (Upto :17-06-2010) Dr. P.R.Vaishnav (From: 18-06-2010 to continue)	<b>Dean</b> <b>Agril. Engineering &amp; Technology</b> Dr. M. L. Gaur
<b>Director of Research &amp; Dean PG Studies</b> Dr. A. M. Shekh (From 30-01-2010)	<b>Comptroller-cum-Accounts Officer</b> Shri P. S. Vyas
<b>Director of Extension Education</b> Dr. P. P. Patel	<b>Librarian</b> Dr. G. B. Valand
<b>Dean, Agriculture</b> Dr. A. M. Shekh	<b>Director of Students' Welfare</b> Dr. A.M.Thaker (Co-opt) (Upto : 01-04-2011 to 14-04-2011) Dr. A. J. Pandya (Co-opt) (From: 15-04-2011)
<b>Dean, Dairy Science</b> Dr. B. P. Shah	<b>Director, Information Technology</b> Dr. D. R. Kathiriya (From: 01-04-2011)
<b>Dean, Veterinary Science</b> Dr. J. V. Solanki	<b>Executive Engineer</b> Shri B. N. Bhalia

#### Appendix-4

### Heads of the Department FACULTY OF AGRICULTURE

Principal & Dean : Dr. A. M. Shekh

Sr. No.	Name & Address of the Teacher	HOD Declared for the Department
1	Dr. R. N. Pandey Professor & Head Dept. of Plant Pathology B.A.C.A., A.A.U., Anand	Plant Pathology
2	Dr. G. C. Jadeja Professor & Head Dept. of Botany B.A.C.A., A.A.U., Anand	Botany
3	Dr. R. Bhatnagar Professor & Head Dept. of Biochemistry B.A.C.A., A.A.U., Anand	Biochemistry
4	Dr. H. C. Patel Professor & Head Dept. of Horticultural B.A.C.A., A.A.U., Anand	Horticultural
5	Dr. M. V. Patel Professor & Head Dept. of Agronomy B.A.C.A., A.A.U., Anand	Agronomy
6	Dr. R. C. Jhala Professor & Head Dept. of Entomology B.A.C.A., A.A.U., Anand	Agricultural Entomology
7	Dr. S. K. Dixit Professor & Head Dept. of Agri. Statistics B.A.C.A., A.A.U., Anand	Agricultural Statistics
8	Dr. Vyas Pandey Professor & Head Dept. of Agri. Meteorology & Agri Engineering B.A.C.A., A.A.U., Anand	Agricultural Meteorology & Agricultural Engineering

9	Prof. Mrs. Manisha Sikdar Asst. Professor Dept. of English Language B.A.C.A., A.A.U., Anand	Language
10	Dr. N. B. Chauhan Professor & Head Dept. of Extension Education B.A.C.A., A.A.U., Anand	Extension Education
11	Dr. B. A. Patel Professor Dept. of Nematology B.A.C.A., A.A.U., Anand	Nematology
12	Dr. R. H. Patel Professor Dept. of Agri. Economics B.A.C.A., A.A.U., Anand	Agricultural Economics
13	Dr. R. B. Patel Agronomist Dept. of Weed Control Project B.A.C.A., A.A.U., Anand	AICRP on Weed Control
14	Dr. V. R. Bhatt Professor Dept. of Agri. Chemistry & Soil Science B.A.C.A., A.A.U., Anand	Agricultural Chemistry & Soil Science
15	Dr. R. V. Vyas Professor Dept. of Microbiology B.A.C.A., A.A.U., Anand	Agricultural Microbiology
16	Dr. R. P. Vadodaria Asso. Professor Poly. in Agriculture B.A.C.A., A.A.U., Anand	Polytechnic in Agriculture
17	Shri N. C. Dodiya Asst. Ext. Edu. Agri. School B.A.C.A., A.A.U., Anand	Agricultural School
18	Dr. D. C. Patel Asst. Ext. Edu. Poly. in Agriculture, Vaso. B.A.C.A., A.A.U., Anand	Polytechnic in Agricultural, Vaso

## FACULTY OF VETERINARY SCIENCE & ANIMAL HUSBANDRY

Principal & Dean: Dr. J. V. Solanki

Sr. No.	Name & Address of the Teacher	HOD Declared for the Department
1	Dr. Y. L. Vyas Professor & Head Vety. Anatomy, Veterinary Science College, AAU, Anand	Veterinary Anatomy
2	Dr. J. S. Arya Professor & Head Vety. Physiology, Veterinary Science College AAU, Anand	Veterinary Physiology
3	Dr. A. M. Pande Professor & Head Vety. Biochemistry, Veterinary Science College AAU, Anand	Veterinary Biochemistry
4	Dr. A. M. Thakar Professor & Head Vety. Pharmacology, Veterinary Science College AAU, Anand	Veterinary Pharmacology
5	Dr. K. S. Prajapati Professor & Head Vety. Pathology, Veterinary Science College AAU, Anand	Veterinary Pathology
6	Dr. A. I. Patel Professor & Head Vety. Parasitology, Veterinary Science College AAU, Anand	Veterinary Parasitology
7	Dr. M. K. Jhala Professor, Vety. Microbiology College of Veterinary Science & Animal Husbandry, AAU, Anand	Veterinary Microbiology
8	Dr. P. R. Patel Professor, Vety. Medicine College of Veterinary Science & Animal Husbandry, AAU, Anand	Veterinary Medicine



<b>Sr. No.</b>	<b>Name &amp; Address of the Teacher</b>	<b>HOD Declared for the Department</b>
9	Dr. D. B. Patil Professor & Head Vety. Surgery, Veterinary Science & Animal Husbandry, AAU, Anand	Veterinary Surgery
10	Dr. F. S. Kavani Professor Vety. Gynecology, Veterinary Science & Animal Husbandry, AAU, Anand.	Veterinary Gynecology
11	Dr. A. M. Patel Professor & Head Livestock Production & Management Veterinary Science & Animal Husbandry, AAU, Anand	Livestock Production Management
12	Dr. D. N. Rank Professor College of Veterinary Science & Animal Husbandry AAU, Anand.	Veterinary Animal Genetic Breeding
13	Dr. C. G. Joshi Professor & Head Animal Biotechnology College of Veterinary Science & Animal Husbandry AAU, Anand	Animal Biotechnology (Animal Science)
14	Dr. M. N. Brahmbhatt Associate Professor College of Veterinary Science & Animal, Husbandry AAU, Anand.	Veterinary Livestock Production Technology / Veterinary Public Health
15	Dr. D. M. Patel Professor & Head College of Veterinary Science & Animal Husbandry AAU, Anand	Hospital
16	Dr. Subhash Parnekar Research Scientist & Head Western Regional Animal Nutrition, Station, AAU Aanand	Animal Nutrition

<b>Sr. No.</b>	<b>Name &amp; Address of the Teacher</b>	<b>HOD Declared for the Department</b>
17	Dr. K. Khanna Research Scientist & Head Animal Nutrition College of Veterinary Science & Animal Husbandry AAU, Anand.	Animal Nutrition
18	Dr. Ankita Killedar Research Scientist & Head College of Veterinary Science & Animal Husbandry AAU, Anand	Veterinary Re-productive Biological Research Unit
19	Dr. A. J. Dhami Scientist & Head College of Veterinary Science & Animal Husbandry AAU, Anand	Veterinary Livestock Research Station

### **FACULTY OF DAIRY SCIENCE**

**Principal & Dean : Dr. B. P. Shah**

<b>Sr. No.</b>	<b>Name &amp; Address of the Teacher</b>	<b>HOD Declared for the Department</b>
1	Dr. P. S. Prajapati Professor & Head, Dairy Technology Dairy Science College, Anand	Dairy Technology
2	Dr. K. D. Aparnathi Professor & Head, Dairy Chemistry Dairy Science College, AAU, Anand	Dairy Chemistry
3	Dr. A. G. Bhadania Professor & Head, Dairy Engineering Dairy Science College, Anand	Dairy Engineering
4	Dr. J. B. Prajapati Professor & Head, Dairy Microbiology Dairy Science College, Anand	Dairy Microbiology
5	Dr. A. J. Pandya Professor & Head, Dairy Processing & Operations Dairy Science College, Anand	Dairy Processing & Operations
6	Dr. A. K. Makwana Assistant Professor & Incharge Dairy Business Management Dairy Science College, AAU, Anand	Dairy Business Management

## **FACULTY OF FOOD PROCESSING TECHNOLOGY & BIO-ENERGY**

**Principal & Dean : Dr. D. C. Joshi**

<b>Sr. No.</b>	<b>Name &amp; Address of the Teacher</b>	<b>HOD Declared for the Department</b>
1	Dr. R. F. Sutar Professor and Head College of F.P.T. & B.E., AAU, Anand	Post-Harvest Engineering
2	Dr. S. S. Kapdi Professor and Head College of F.P.T. & B.E., AAU, Anand	Bio-Energy
3	Dr. R. V. Prasad Professor and Head College of F.P.T. & B.E., AAU, Anand	Food Quality Assurance
4	Er. H. Pandey Associate Professor & I/c Head College of F.P.T. & B.E., AAU, Anand	Food Processing Technology
5	Dr. P. K. Nema Associate Professor & I/c Head College of F.P.T. & B.E., AAU, Anand	Food Engineering
6	Dr. SubirKumar Chakraborty Associate Professor & I/c Head College of F.P.T. & B.E., AAU, Anand	Food Business Management

## **FACULTY OF AGRICULTURAL ENGINEERING & TECHNOLOGY**

**Principal & Dean : Dr. M. L. Gaur**

<b>Sr. No.</b>	<b>Name &amp; Address of the Teacher</b>	<b>HOD Declared for the Department</b>
1	Dr. M. L. Gaur Professor, Soil and Water Conservation Engineering (SWE) CAET, AAU, Godhra	Soil and Water Conservation Engineering
2	Dr. R. N. Swarnkar Professor, Farm Machinery and Power (FMP), CAET, AAU, Godhra	Farm Machinery and Power

### **FACULTY OF AGRICULTURAL INFORMATION TECHNOLOGY:**

**Principal Dean : Dr. P. R. Vaishnav**

<b>Sr. No.</b>	<b>Name &amp; Address of the Teacher</b>	<b>HOD Declared for the Department</b>
1	Dr. P. R. Vaishnav Head of Unit & I/c, Principal Agricultural Information Technology AAU, Anand	Agricultural Information Technology

### **FACULTY OF AGRIBUSINESS MANAGEMENT**

**Principal : Dr. G. B. Valand**

<b>Sr. No.</b>	<b>Name &amp; Address of the Teacher</b>	<b>HOD Declared for the Department</b>
1	Dr. R. S. Pundir Associate Professor International Agri. Business Management Institute AAU, Anand	Economics Finance
2	Prof. T. S. Shibin Assistant Professor International Agri. Business Management Institute AAU, Anand	Marketing Management
3	Prof. Y. A. Lad Assistant Professor International Agri. Business Management Institute AAU, Anand	HRD & Personnel Management
4	Prof. Sanjivkumar Assistant Professor International Agri. Business Management Institute AAU, Anand	Production Management



## **Appendix-5**

### **Constitution of Board of studies**

- (a) 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 member for each subject (comprised in the Board) other than Professor 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 person 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.

## Appendix-6

**8<sup>th</sup> Annual Convocation 14<sup>th</sup> February, 2012**

### List of Gold Medal/Gold Plated Silver Medals Award/Cash Prize : Post Graduate

Sr. No.	Name of Gold Medal Medal / Cash Prize	Particulars	Name of the Students	College
1	Chancellor's Gold Medal	For best Ph.d thesis from amongst all faculties	<b>Susheel Singh</b> Faculty of Agriculture, Anand	B.A. College of Agriculture, Anand
2	Chancellor's Gold Medal	For best student from amongst all faculties at Master's Degree	<b>Lekshmi S.</b>	B.A. College of Agriculture, Anand
3	Dr. C. B. Shah Medal	For the students of B.A. College of Agriculture, Anand for getting the highest OGPA including excellence in thesis in the subject of Agronomy at the M.Sc.(Agri) examination	<b>Deore Sachin Murlidhar</b>	B.A. College of Agriculture, Anand
4	Late Dr. Diwaker R Patel Medal	For best PG Research work in the subject of Plant Biotechnology in the faculty of Agriculture	<b>Kalyani Sunil Kulkarni</b>	B.A. College of Agriculture, Anand
5	Dr. D. J. Patel Medal	For securing highest OGPA in the subject of Plant Pathology for M.Sc.(Agri) degree course	<b>Singh Khushbu</b>	B.A. College of Agriculture, Anand
6	Late Shri S.V.Desai Medal	For securing highest OGPA in the subject of Plant Pathology in M.Sc.(Agri) degree course		
7	Late Shri K.K.Shukla Medal	For best PG Research work in the subject of faculty of Veterinary Science & A.H.	<b>Alase Ashwini Lamxan</b>	College of Vet. Sci & A.H., Anand
8	Late Smt. V.S.Siripurapu Memorial Gold Medal	For securing First Class with Distinction and Maximum OGPA in M.Tech(FPT) examination.	<b>Patel Divyaben Nileshbhai</b>	PG Institute of FPT & BE, Anand
9	Devidayal (Sales) Limited Gold Medal	For securing highest OGPA in MBA (IAB) at Master Level	<b>Dave Darshna Harihar</b>	Institute of International Agribusiness Management, Anand

**UNDER GRADUATE : Agriculture Faculty B.A. College of Agriculture, Anand**

1	Vice Chancellor Gold Medal.	For being adjudged the best student of faculty of Agriculture	AMIT KUMAR GUPTA
2	Dr. Ranchhodbhai M. Patel Gold Medal.	For securing highest CGPA in the related subjects of Plant Breeding & Genetics at the end of the 8 <sup>th</sup> Semester of B.Sc.(Agri) degree course examination	SUNIL KUMAR CHHIPA
3	Dr.Ramjibhai M.Patel Medal	For securing highest CGPA in the subject of Agricultural Statistics and related subjects at the end of 8 <sup>th</sup> Semester of B.Sc.(Agri) degree course examination	
4	Dr.Purachand D.Mistry Medal	For securing highest CGPA in the subject of Agricultural Meteorology and related courses at the end of 8 <sup>th</sup> Semester of B.Sc. (Agri) degree courses examination	
5	Dr.B.V.Mehta Medal	For securing highest CGPA in the subjects of Agricultural Chemistry and Soil Science up to the end of the 8 <sup>th</sup> Semester	
6	Dr.M.V.Desai Medal	For securing highest CGPA in the subjects of Plant Pathology and related courses at the end of the 8 <sup>th</sup> Semester of B.Sc.(Agri) degree course examination	
7	Dr. Mrinal Kanti Chakraborty Medal	For securing highest OGPA in the subject of Agricultural chemistry and related courses at the end of the 8 <sup>th</sup> semester of B.Sc.(Agri) degree course examination	
8	Dr.Z.B.Patel Medal	For securing highest CGPA in the subjects of Horticulture at the end of the 8 <sup>th</sup> Semester of B.Sc.(Agri) degree course examination	
9	Prof.H.N.Patel Memorial Medal	For securing highest OGPA in the subjects of Extension Education at the end of 8 <sup>th</sup> Semester of B.Sc.(Agri) examination	
10	Dr.Harikaka Medal	For securing highest GPA in the course of Fundamentals of Entomology (Ag.Ento-3.1) of B.Sc.(Agri) degree course examination	
11	Late Shri Dahyabhai Ambalal Patel Gold Medal.	For securing highest CGPA in the subjects of Horticulture at the end of the 8 <sup>th</sup> Semester of B.Sc.(Agri) degree course examination held in may 2010.	

12	Shri Babubhai Jashbhai Patel Shashtipurti	For securing highest CGPA in the subjects of Agronomy at the end of 8 <sup>th</sup> Semester of B.Sc. (Agri) examination	SUNIL KUMAR CHHIPA
13	American Spring & Pressing Works Pvt. Ltd.,	For securing highest OGPA in the subjects of Agril. Entomology and Plant Pathology at the end of 8 <sup>th</sup> Semester of B.Sc.(Agri) degree course examination	
14	Gujarat State First Batch Agricultural Graduate Golden Jubilee (1960-2010) Memorial Medal.	awarded for securing highest C.G.P.A up to the end of 8 <sup>th</sup> semester of B.Sc.(Hons.) Agri. degree course examination	
15	Dr.Ravjibhai Chhotabhai Patel Medal	For securing highest OGPA in the subject of Agricultural Entomology at the end of 8 <sup>th</sup> Semester of B.Sc.(Agri) degree examination	BHAVANI RONA KUMAR TULSIDAS
16	Dr.Sureshbhai N.Patel Memorial Medal	For securing highest OGPA in the subjects of Applied Entomology in 5 <sup>th</sup> and 6 <sup>th</sup> Semester of B.Sc.(Agri) degree course examination	
17	Late Shri Jashbhai J.Patel Medal	For securing highest GPA in the subject of Agronomy at the end of the 8 <sup>th</sup> Semester of B.Sc.(Agri) degree course examination	PATEL KETULBHAI PRAHLADBHAI

**Veterinary Faculty: College of Veterinary Science & Animal Husbandry, Anand**

1	Vice – Chancellor Gold Medal	For being adjudged the best student of Faculty Veterinary Science and Animal Husbandry	WAGHELA CHANCHAL RAGHURAJ SINGH
2	Dr. R.K. Shulka Gold Plated Silver Medal	For Securing highest OGPA at the end of 10 <sup>th</sup> Semester in B.V.Sc. & A.H. degree course examination	
3	Silver Jubilee Celebration Gold Plated Silver Medal	For securing highest OGPA in the clinical Subjects viz., Surgery, Medicine, Gynaecology and Veterinary Public Health at the end of B.V.Sc. & A.H. degree course examination	



4	Prof. M.R. Varia Medal	For Securing Highest CGPA in the subjects of Veterinary Pathology, Microbiology, Parasitology at the end of 6th Semester of B.V.Sc. & A.H. degree course examination	WAGHELA CHANCHAL RAGHURAJ SINGH
5	V.C. Desai Charities Gold Plated Medal	For securing highest OGPA at the end of the 10 <sup>th</sup> Semester of B.V.Sc. & A.H., degree course examination	
6	Dr. SMT Ramaben B. Awasthi Medal	For securing highest CGPA up to the end of 6 <sup>th</sup> Semester in the subjects of Veterinary Parasitology of B.V.Sc. & A.H., degree course examination	
7	Dr. M.N. Mannari Gold Medal	For Securing Highest CGPA up to the end of the 9 <sup>th</sup> Semester in the subject of Veterinary Surgery & Radiology of B.V.Sc. & A.H., degree course examination	
8	IXth ISVPT-Anand Medal	For securing highest C.G.P.A in the subject of Veterinary Pharmacology & Toxicology at the end of 9 <sup>th</sup> Semester of B.V.Sc. & A.H., degree course examination	
9	SJC Gold Plated Silver Medal	For securing highest .G.P.A. in the Basic subjects viz., Anatomy, Biochemistry, Physiology and Pharmacology at the end of 6 <sup>th</sup> semester of B.V.Sc. & A.H., degree course.	MAHESH KUMAR SHARMA
10	Dr. B.P. Pandya Cash Prize	For Securing highest C.G.P.A. in the subject of Animal Nutrition at the end of 9 <sup>th</sup> semester of B.V.Sc. & A.H., degree course examination	PATEL TULSIBEN DILIPKUMAR
<b>Dairy Science Faculty: (SMC College of Dairy Science, Anand)</b>			
1	Vice Chancellor Gold Medal	For being adjudged the best student of faculty of Dairy Science for the year 2009-10.	BHAVI MAYUR PATEL
2	Late Shri Kanubhai Chhotabhai Patel Gold Plated Silver Medal	For Securing highest OGPA in entire all Dairy Technology subjects of B.Tech (DT) examination	
3	Sheth Mansukhlal C. Desai Medal	For securing highest C.G.P.A. in all Dairy Chemistry subjects of B.Tech.(D.T.) degree course examination	PAL ANUBHAV VIJAY

4	Sheth Mansukhlal C. Desai Medal	For securing highest C.G.P.A. in all Dairy Technology subjects up to the end of 8 <sup>th</sup> semester of B. Tech. (D.T.) examination	PAL ANUBHAV VIJAY
5	Smt. Taraben Khatri Gold Plated Silver Medal.	For securing highest C.G.P.A. in all Dairy Technology subjects of B.Tech.(D.T.) degree course examination	
6	Late Dr. Jashbhai Ranchhodbhai Patel Gold Plated Silver Medal	For securing highest O.G.P.A. at the end of 8 <sup>th</sup> Semester of B.Tech (D.T.) degree course examination	
7	Shresth Milk Gamdivala Gold Plated Silver Medal	For securing highest C.G.P.A. in all Dairy Microbiology subjects up to the end of 8 <sup>th</sup> Semester of B.Tech (D.T.) degree course examination	
8	Sheth Mansukhlal Desai Gold Plated Silver Medal	For securing highest C.G.P.A. in all Dairy Engineering subjects of B.Tech. (D.T.) degree course examination	PANCHAL BHAVESHKUMAR RAMAJIBHAI
9	Late Indubhai R.Patel Gold Plated Silver Medal	For securing highest CGPA in all the subject offered by the Dairy Microbiology Department up to the end of 8 <sup>th</sup> Semester of B.Tech(DT) examination	
10	Sheth Mansukhlal Gold Plated Medal		
11	Late SMT Kapilaben Babubhai Patel	For securing highest CGPA in all Dairy Engineering subjects of B.Tech (DT) degree course examination	
12	Late Shri Shankarlal Ratilal Gold Plated Silver Medal	For securing highest OGPA in all Dairy Engineering subjects at the end of 4 <sup>th</sup> Semester of B.Tech(DT) examination	BORAD SANKET GIRDHARBHAI
13	Late Shri R.J.Patel Gold Plated silver Medal	For securing highest OGPA in all Dairy Business Management subjects of B.Tech(DT) examination	
14	Late Bhogilal V.Patel Medal	For securing highest GPA in all the courses of 7 <sup>th</sup> & 8 <sup>th</sup> Semester of B.Tech(DT) examination	

## Appendix-7

### Research Paper published

#### 1 FACULTY OF AGRICULTURE

- ❖ Vaidya A.C. and Chauhan N.B. (2011). Scale to measure attitude of farmers towards poultry farming. *Gujarat Journal of Extension Education* .vol.xviii-xix.
- ❖ Christian B.M. and Chauhan N.B. (2011). Scale to measure attitude of woman research scholars towards the use of computer for their empowerment. *Gujarat Journal of Extension Education*. vol.xviii-xix.
- ❖ Christian B.M. and Chauhan N.B. (2011). Factors affecting the attitude of the woman research scholars towards the use of computer for their empowerment. *Gujarat Journal of Extension Education*. vol.xviii-xx.
- ❖ Parasharya, B. M., Raju V. Vyas and B. H. Patel (2011). First authentic record of Regal Parachute Spider *Poecilotheria regalis* Pocock, 1899 and further comments on the distribution of Theraphosidae spiders from Gujarat State, India. *Journal of the British Terantula Society*, 26(2): 55-62.
- ❖ Anika Tere and B. M. Parasharya (2011). Flamingo mortality due to collision with high tension electric wires in Gujarat State, India. *J. Threatened Taxa*, 3(11): 2192-2201.
- ❖ Patel, N. N., Joshi, K. R., Patel, P. M., Patel, M. R. and Patel, R. M. (2010). Bio-efficacy of plant extracts against *Fusarium solani*. *International Journal of Plant Protection*, 3 (2): 306-308.
- ❖ Patel, N. N., Joshi, K. R., Patel, P. M., Patel, M. R. and Patel, R. M. (2010). Management of cowpea wilt by organic amendments. *International Journal of Plant Protection*, 3 (2): 350-352.
- ❖ Patel, P. M., Patel, J. J., Patel, G. G. and Gediya, K. M. (2010). Influence of irrigation schedules, mulches and antitranspirant on growth and yield of summer transplanted pearl millet (*Pennisetum glaucum* L.). *Intenat. J. Forestry and Crop Improv.*, 1(2) : 60-63.
- ❖ Patel, P.M., Patel, J.J. and Patel, M.R. (2011). Yield and water use efficiency of summer transplanted pearl millet (*Pennisetum glaucum* L.) as influenced by IW : CPE ratios, mulches and antitranspirant. *International journal of Agricultural Sciences*, 7 (1) : 119-122.
- ❖ Joshi, K. R., Patel, N. N., Patel, P. M., Patel, M. R., and Patel, R. M. (2011). Varietal screening for resistance to wilt of cowpea.. *International journal of plant protection*, 4 (1) : 14-16.
- ❖ Patel, N. N., Patel, C. C., Patel, M. R., Parmar, H. P. and Kher, H. R. (2010). Management of Root rot of Cowpea caused by *Fusarium solani*. *Forage Res.*, 35 (4): 227-230.

- ❖ Patel, M. R., Meisheri T. G., and Sadhu, A. C. (2010). Effect of irrigation, nitrogen and bio-fertilizer and forage yield and quality of Oat. (*Avena sativa* L.). *Forage Res.*, 35 (4): 231-235.
- ❖ Patel, M. R., Sadhu A. C., Patel, P. C. and Kher, H. R. (2010). Enhancing and sustaining the productivity of forage cropping systems through manure and fertilizer management. *Forage Res.*, 36 (2): 125-110.
- ❖ Patel, D. H., Panchal, D. B., and Sriram, S. (2010). Effect of different types of green manures on seed yield in (Isabgol *Plantago ovata* Forsk). *Gujarat Agricultural Universities Research Journal*, 35(2): 91-93.
- ❖ Upadhyay, N, V., Sheikh, J.A., Patel, D.H. and Patel, M. A. (2011). Physiology and biochemical study on Kalmegh (*Andrographis paniculata* Wall. Ex. Nees). *Annals of pharmacy and pharmaceutical Science*, 2( 1&2):35-36
- ❖ Upadhyay, N, V., Sheikh, J.A., Patel, D.H. and Patel, M. A. (2011). Effect of harvesting stage in growth and yield of Satavari (*Asparagus racemosus* Wild). *International Journal of plant sciences* .6 (2): 343-344.
- ❖ Mehta, K., Das, Y. B., Upadhyay, N. V. and Doshi, S. B. (2011), Studies on genetic Variations among the Azotobacter chroococcum isolate using randomly amplified polymorphic DNA (RAPD) marker. *Asian Journal of Bio Sciences* ,6(1): 51-58
- ❖ Gaikwad, V.P., Patel, R.B., Bhosale, N. D., Shinde, V.T. and Patel, D. H.. (2011). Effect of organic manures and bio-fertilizer, yield and quality of Safed musli (*Chlorophytum borivilianum*, Sant. and Fern). *An Asian Journal of Soil Science* , 6(2):111-113
- ❖ Gaikwad, V. P., Bhosale, N. D., Patel, D. H., Patel, R.B. and Chaudhari, N. J. (2011). Growth and yield of safed musli (*Chlorophytum borivilianum* Santapau and Fernandes) as influence by bulky and concentrated organic manures grown under loamy sand oil. *Advance Research Journal of Crop Improvement*, 1-2(1):135-137.
- ❖ Shoram, Parekh, N. S., Upadhyay, N.V., Karapatiya, B.A. and Patel, H. C. (2012). Effect of Nitrogen and Phosphorus on vegetative growth and flower yield of Jasmine. *The Asian Journal of Horticulture*, 7(1): 52-54.
- ❖ Diwan, K. D., Shah. P. G., Raj, M. F. and Patel, A. R. (2010). Harvest time residues of  $\alpha$ - endosulfan in cotton. *Pesticide Residue J.*, 20 (2): 184-186.
- ❖ Raj, M. F., Shah, P. G., Diwan, K. D. and Patel, A. R. (2010). Harvest time residues of endosulfan in sugarcane and soil. *Pesticide Residue J.*, 22 (2): 133-135.
- ❖ Chawla, Suchi, Patel, A. R., Patel, H. K. and Shah, P. G. (2011). Dissipation of flubendiamide in/on



brinjal (*Solanum melongena*) fruits. *Environ Monit Assess*, 183: 01-04.

- ❖ Patel, J. J., H. C. Patel, and K. B. Kathiria (2011). Bio-efficacy of fenazaquin 10 EC against red spider mite, *Tetranychus urticae* on brinjal. *Insect Environment*, 16(4): 183-185.
- ❖ Patel, P. K., P. K. Borad and J. J. Patel (2011). Bio-efficacy of some newer insecticides against shield back bug (*Scutellera noblis* Fab.) infesting Jathropa. *GAU Research Journal*, 36(1): 34-37.
- ❖ Patel, B. V., P. K. Borad and J. J. Patel (2011). Susceptibility of okra cultivars/genotypes to spider mite (*Tetranychus cinnabarinus* Boisduval). *GAU Research Journal*, 36(1): 41-43.
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## Appendix-8

### Publication of Agricultural Literature

Sr. No.	Name of publication
<b>(A) Books</b>	
1	<i>EMU PALAN</i>
2	<i>BAL AAHAR</i>
3	<i>SOYABEAN</i>
<b>(B) Booklets</b>	
4	<i>KHEDUTOPYOGI SANSODHAN BHALAMANO</i>
<b>(C) Leaflets</b>	
5	<i>SCIENTIFIC CULTIVATION OF KHARIF MAIZE</i>
6	<i>SCIENTIFIC CULTIVATION OF RABI MAIZE</i>
<b>(D) Folders</b>	
7	<i>BT KAPASAMA PAN KHANAR IYAL ANE TENU SANKLIT NIYATRAN</i>
8	<i>BT KAPASAMA PAN LAL THAVANA KARANO ANE TENE KABU MA RAKHVANA UPAYO</i>
9	<i>BT KAPASAMA GULABI IYALNU SANKALIT NIYATRAN</i>
10	<i>SARI GUNVATTA VALA KAPASNA UTPADANAMA JIVAT VYAVASTHAPAN MATENA CHAVIRUP MUDDA</i>
11	<i>PAK SANRANKSNMA VANASPATIJANAYA DAVAONO VAPARAS TATHA KETALIK VISH PRALOBHIKA NI BANAVAT</i>
12	<i>NUCLEAR POLYHEDROSIS VAYARAS (NPV) THEE JIVAT NIYATRAN</i>
13	<i>MADHMAKHI PALAN</i>
14	<i>VELAVALA SHAKBHAJIMA FALMAKHEE NU SANKLIT NIYATRAN</i>
15	<i>BT KAPASMA PAN LAL THAVA MATENA SAMBHVIT KARNANO ANE ATKAVVANA UPAYO</i>
16	<i>KAPAS PAKMA SANKLIT ROG NIYATRAN VYAVSTHAPAN</i>
17	<i>BT KAPASAMA GULABI IYALNU SANKLIT VYAVSTHAPAN</i>
18	<i>BT KAPASAMA PAN KHANAR IYALNO UPADRAV ANE TENU SANKLIT VYAVSTHAPAN</i>
19	<i>SARI GNVATTAVALA KAPAS UTPADANAMA JIVAT VYAVASTHAPAN MATENA CHAVIRUPA MUDDA</i>
20	<i>VANASPATIJANYA DAVAO TEMAJ PRALOBHIKANE BANAVAT ANE UPAYOG</i>
21	<i>DANGARNI KHETEI PADDATI</i>
22	<i>GREEN HOUSE</i>
23	<i>CHANANI VAIGYANANIC KHETI PADDATI</i>
24	<i>DIVELANI KHETI PADDATI</i>
25	<i>ADHUNIC KRUSHIMA JAIVIK KHATARNU MAHATVA</i>

<b>Sr. No.</b>	<b>Name of publication</b>
26	<i>SOYABEEN VAIGYANIC KHETI PADDATI</i>
27	<i>SUSMA TATVONU MAHATVA ANE RASAYANIC KHATARONO KARYASHM UPAYOG</i>
28	<i>SOYABEAN VAIGYNANIC KHETI PADDTI</i>
29	<i>MAGFALINI VAIGYNANIC KHETI PADDATI</i>
30	<i>TUVERNI VAIGYNANIC KHETI PADDATI</i>
31	<i>SCIENTIFIC FARMING OF MOONG</i>
32	<i>PLASTIC AACCHADAN KHEDUT MATE VARDAN</i>
33	<i>KHATARNI KARYAKSHMTA</i>
34	<i>JAIVIK KHATARONU PAK UTPADANMA MAHATAV</i>
35	<i>KRISHI EDASHONI PRAKRIYA DWARA MULYA VRIDHI AANE TENU MAHTAVA</i>
36	<i>SANKLIT NINDAN NIYANTRAN</i>
37	<i>RABI DHANYA PAKO MATE VIKSIT KRISHI SEVAYO</i>
38	<i>SOYBEAN PRAKRIYA UDOG</i>
39	<i>AADU HALDAR ANE LASANNI KHETI</i>
40	<i>VALUE ADDITION MANGO</i>
41	<i>SCIENTIFIC FARMING OF ONION</i>
42	<i>SCIENTIFIC CULTIVATION OF KHARIF MAIZE</i>
42	<i>VALUE ADDITION IN MAIZE</i>
43	<i>TAMETANI VAIGYANANIK KHETI</i>
44	<i>MARCHINI VAIGYANANIK KHETI</i>
45	<i>BHINDANI VAIGYANANIK KHETI</i>
46	<i>GALARDIA ANE SEVANTINI VAIGYANANIK KHETI</i>
47	<i>GHAU NI KHETI PADDHATI</i>
48	<i>HYBRID DIVELANI KHETI PADDHATI</i>
49	<i>NAVJAT PADA-VACHARDANE KHIRU SA MATE PAVU JOIYE ?</i>
50	<i>SVACHCHA DUDH UTPADAN KARIYE</i>
51	<i>MITHA PANI NI MACHHALINI MULYAVARDHIT VANAGIO</i>
	<i>MITHA PANI NI MACHHALIONO PARICHAY</i>
52	<i>JAMINNA PRUTHTHAKARANU MAHATVA</i>
<b>(E) Report</b>	
53	<i>KRUSHI MAHOTSAV REPORT - 2011</i>
54	<i>6<sup>th</sup> ANNUAL REPORT OF AAU</i>

## Appendix-9

### Radio Talks Delivered

Sr. No.	Scientist	Topic	Date ( Time of broadcast 6.00 to 6.30 pm)
1	Dr. H.R. Kher	<i>GHASCHARA UTPADANNI JANKARI</i>	08-04-2011
2	Dr. M. V. Patel	<i>KHARIF PAKONU AYOJAN</i>	31-05-2011
3	Dr. Mahesh V. Patel	<i>KHARIF PAKOMA VADHU UTPADAN MELAVVA CHAVIRUP MUDDA</i>	08-07-2011
4	Dr. C.C. Patel	<i>KHARIF PAKOMA JIVAT NIYANTRAN</i>	09-08-2011
5	Dr. V.R. Boghra	<i>DUDH ANE GHEEMA THATI BHELSEL ANGE VAIGYANIK JANKARI</i>	25-10-2011
6	Dr. G.C. Mandali	<i>PASUOMA AKASMATE THATI IJAO ANE TENU NIVARAN</i>	01-11-2011
7	Dr. T. M. Bharpoda	<i>SHIYALU GHAUMA PAK SANRKSHAN</i>	15-12-2011
8	Dr. P. K. Borad	<i>SHIYALU GHAUMA PAK SANRKSHAN</i>	15-12-2011
9	Dr. A.M. Mehta	<i>UNADU DANGARMA VADHU UTPADAN MELAVVANU AYOJAN</i>	20-12-2011
10	Mrs. Dipal N. Soni	<i>SOYABEANNI BANAVATO ANE TENU AHARMA MAHATVA</i>	07-02-2012

## Appendix-10

### Television programs telecasted

Sr. No	Scientist	Topic	Date (Time of broadcast 6.00 to 6.30 pm)
1	Dr. P.P. Patel	<i>GUJARATMA KRUSHINE LAGTA VISAYONU SIKSHAN</i>	06-04-2011
2	Dr. K.B. Kathiria & Dr. H.P. Patel	<i>SHAKBHAJI PAKOMA ROG JIVAT NIYANTRAN</i>	15-04-2011
3	Dr. H.R. Kher	<i>GHASCHARA UTPADAN ANGENI NAVIN TAJGYATAO</i>	26-04-2011
4	Dr. R.G. Jadav	<i>FALPAKONI MAVJAT ANGENA NAVA SANSODHANO</i>	04-05-2011
5	Dr. Atul Mehta	<i>KHARIF DANGARNI KHETIMA NAVA SANSODHANO</i>	24-05-2011
6	Dr. M. V. Patel	<i>KHARIF PAKONU AYOJAN</i>	01-06-2011
7	Dr. M. Patel & Dr. D. H. Patel	<i>AUSHADHIYA PAKONI KHETI</i>	10-06-2011
8	Dr. P. G. Shah	<i>SHAKBHAJI PAKMA JANTUNASAK AVSESO ANE TENU NIVARAN</i>	21-06-2011
9	Dr. K.P. Patel	<i>RASAYANIK KHATRONI KARYAKSHAMTA</i>	22-06-2011
10	Dr. V.V. Sonani	<i>KHARIF PAKOMA VADHU UTPADAN MELVVA MATE DHYANMA RAKHVANA MUDDA</i>	06-07-2011
11	Dr. Korat & Dr. K.S. Prajapati	<i>KHETINA PAKOMA ROG JIVAY NIYANTRAN</i>	15-07-2011
12	Dr. R.B. Patel	<i>KHARIF PAKOMA NINDAN NIYANTRAN ANGE NAVI BHALAMANO</i>	26-07-2011
13	Dr. C.C. Patel	<i>KHARIF PAKOMA SANKLIT JIVAT NIYANTRAN</i>	03-08-2011
14	Dr. J.B. Nayak	<i>PASUPALANMA NAVI VAIGYANIK BHALAMANO</i>	23-08-2011
15	Dr. K.P. Patel & Dr. M. V. Patel	<i>VADHU UTPADAN MATE KHETI PAKOMA POSAN VYAVASTHA</i>	09-09-2011
16	Dr. A.D. Patel	<i>MARCHI KHETINI SAFAL VARTA</i>	21-09-2011
17	Dr. T.M. Bharpoda	<i>RAVI PAKMA PAK SANRKSHAN</i>	23-12-2011