

CENTRE OF ADVANCED STUDIES

SEVENTH ANNUAL REPORT

(2001-2002)

Dr. (Mrs.) Vijaya Khader

DIRECTOR

DEPARTMENT OF FOODS & NUTRITION

POST GRADUATE & RESEARCH CENTRE

ACHARYA N.G. RANGA AGRICULTURAL UNIVERSITY

RAJENDRANAGAR: HYDERABAD – 500 030

**SEVENTH ANNUAL REPORT OF CENTRE OF ADVANCED STUDIES
FOR THE YEAR 2001-2002**

1. Project Title : Centre of Advanced Studies
2. Sanction No : Proc.No.37735/H.Sc/A1/94,
Dt.22-9-95 of APAU
3. Report Period : April 2001 – March 2002.
Report No. : VII
4. Date of Start : 02-11-1995
5. A) Name of Institute/Station : Acharya N.G. Ranga Agricultural
University,Rajendranagar,
Hyderabad.
- B) Division/Department/Section : Centre of Advanced Studies
Post Graduate & Research Centre,
Department of Foods & Nutrition,
Rajendranagar, Hyderabad-500030.
6. a) Technical Programme as approved for the scheme
b) Technical Programme approved for the year
c) Technical Programme approved for the next year : Appendix II
enclosed
d) Technical programme for the next plan period : Submitted
for approval
(Appendix II)
7. Technical Personnel employed(list of vacancies, if any)

Sanctioned Posts by ICAR	Posts filled	Posts to be filled
1. Steno – cum- Typist	U.D.Stenographer Filled on 2-9-1996	NIL
2. AVA Operator	Projector Operator Filled on 16-6-1997	NIL
Sanctioned posts by ANGRAU (Non-plan)		
Attender *	Attender Filled on 1-4-1999	NIL

- The post of attender was borne by the ICAR up to 31-3-1999. Since the ICAR had sanctioned only two posts from 1-4-1999, the ANGRAU has created a post of attender from the financial year 1999-2000. It is requested under the report that the post of attender may also kindly be sanctioned in the ICAR Plan Scheme during the X-Five Year Plan.

Name of the Designation	Date of Joining	Date of Leaving
R.V.N.S. Murthy U.D.Steno	02-09-1996	----
N. Yedukondalu, Project Operator	16-06-1997	----
V. Narsinga Rao, Attender	22-06-1996	----

8. Total Outlay : **Rs. 52,52,904=05**
- Rs. 4,56,219=20 (1995-96)
 - Rs. 9,61,192=90 (1996-97)
 - Rs. 12,01,649=20 (1997-98)
 - Rs. 9,10,103=40 (1998-99)
 - Rs. 4,86,691=75 (1999-2000)
 - Rs. 7,03,771=30(2000-2001)
 - Rs. 5,33,277=00 (2001-2002)
9. Total amount spent : Rs. 7,03,771=30
In Previous year (2000-2001)
10. Total amount sanctioned /spent during the year under report
- a) Sanctioned : Rs. 7,44,000/-
 - b) Spent : Rs. 5,33,777/-

No no-recurring grant was made during the year under report

11. Total No. of months : 12months (From April 2001-March
During the year 2002)
12. Summary : Report objective wise enclosed.

Signature:

Name & Designation : Dr. (Mrs.) Vijaya Khader
Professor – cum- Director

REPORT ON ACTIVITIES CARRIED OUT UNDER CENTRE OF ADVANCED STUDIES 2001-2002

I. INFRASTRUCTURE FACILITIES:

1. Staff recruitment:

The posts of Steno-cum-typist and Projector Operator have been filled up and the two posts are being continued under the ICAR plan during the IX Five Year Plan vide F.No. 1(18)/95/CAS/HRD-II, dt. 17-09-1999 and 02-07-2001 of the ICAR.

The post of attender is being borne by the University under Non-Plan scheme from the financial year 1999-2000. It is requested under the report that the Post of attender may also kindly be sanctioned in the ICAR plan Scheme during the X- Five Plan in order to avoid two establishment rolls.

2. Civil Works:

Civil works, electrical and sanitary works have been completed and handed over to this centre. Now the Centre of Advanced in Foods & Nutrition has the following facilities.

Seminar hall/Lecture hall
Conference hall
Computer room
Library room
Office rooms
Class rooms
Store room
Equipment room/Laboratory

The University has constructed another conference hall costing Rs.3.5 Lakhs for this Centre above the existing P.G. & Research Centre building.

**II EQUIPMENT PURCHASED UNDER CENTRE OF ADVANCED
STUDIES (1995-96 TO 2001-2002)**

Sl.No.	Equipment	Cost (in Rupees)
1.	Computer, pentium 100,640MB, with TVSE, MSP 155 printer and HP Deskjet Printer	1,00,000/-
2.	Modi Xerox machine	1,08,000/-
3.	Air Conditioners, Carrier Aircon	55,000/-
4.	Kirloskar 5 K V A UPS	2,10,000/-
5.	Overhead projector and Slide projector	50,000/-
6.	Microwave oven	13,000/-
7.	Samsung refrigerator 420 litres	42,000/-
8.	Gerhardt kjedatherm automatic nitrogen analyzer	3,28,000/-
9.	Community nutrition equipment : Height rods, diet Survey sets	30,000/-
10.	Electronic top loading balances	25,000/-
11.	Public address system	35,000/-
12.	Furniture for Seminar Hall and conference rooms in New building	2,50,000/-
	a) Chairs : 85	
	b) Dias table : 01	
	c) Computer tables : 02	
	d) Computer chairs : 02	
	e) Printer tables : 02	
	f) Table for Xerox Machine : 01	
	g) Rostrum	
	h) Carpets and Curtains	
	i) Bulletin boards	
13.	Water cooler cum purifier	17,000/-
14.	Portable refractometer and pH meter	10,000/-
15.	Double glass distillation unit	15,000/-

16. Exide batteries – 2 no's	12,880/-
17. V.Guard Stabilizer – 3nos	10,000/-
18. Aspirator bottle with stop cock	1,200/-
19. Magnetic letters	7,800/-
20. Essae digital weighing machine (2 no)	27,600/-
21. Executive high back chair	7,300/-
22. Prestosign letters	11,000/-
23. Hamilton HPLC syringe	2,750/-
24. Blow plast chairs (30nos)	15,660/-
25. LCD Multi-media projector (SANYO)	
26. Panaboard (PANASONIC)	
27. Metal halide spare lamp	
28. Wall mounted screen	
29. Laser pointers	
30. 2 KVA UPS system	1,25,000/-
31. U – Shaped conference table	46,000/-
32. Pentax Camera with accessories	33,000/-
33. Built – in cup – boards (20nos)	1,10,000/-
34. Black/green boards (5 nos)	16,225/-
35. Single blower	1,850/-
36. Door closures and door locks	12,000/-
37. PELICAN Soxplus solvent extraction system	1,71,970/-
38. Elico pH meter with electrodes	9,005/-

39. Sensory evaluation lab cubicles, booths, work tables	37,922/-
Stools	
40. Solar dryer	11,050/-
41. Spiral binding machine	6,380/-
42. Colour monitor	19,850/-
43. Blow Ups – 15 Nos.	12,000/-

Furniture:

The following furniture and furnishings have been purchased to furnish the seminar hall, conference hall, Computer room etc.,

List of Furniture and furnishings:

a) Seminar hall chairs	:	85
b) Dias table	:	01
c) Computer tables	:	02
d) Printer tables	:	02
e) Computer chairs	:	02
f) Table for Xerox machine	:	01
g) Rostrum	:	01
h) Carpets and curtains		
i) Bulletin Boards		

III. MAINTENANCE AND REPAIRS

The following activities were undertaken under maintenance and repairs:

Electrical wiring to UPS

Maintenance for Xerox machine

Deioniser servicing

AMC of AC machine.

All these years, for some of the equipment purchased warranty is covered. Now all the equipment purchased has to be maintained intact by entering

into AMCs with the firms for which proposals for an amount of Rs. 2,50,000/- have been submitted to the ICAR.

IV. PURCHASE OF BOOKS AND JOURNALS:

- ❖ Advances in food colloids
- ❖ Food properties hand book
- ❖ Bio-chemical aspects of nutrition
- ❖ Child growth and nutrition in developing countries
- ❖ Effective programming for developing countries
- ❖ Major issues in F & N science
- ❖ Participatory rural appraisal & quarterly survey
- ❖ Participatory rural appraisal method and applications
- ❖ Nutrition and diet therapy
- ❖ Functional properties and food components
- ❖ Handbook of cereal science and technology
- ❖ Post harvest technology of cereals, pulses & oil seeds
- ❖ Food Safety
- ❖ Diet planning through the life cycle in health & diseases
- ❖ PG diploma Home Science syllabus book
- ❖ Cooking with green leafy vegetables
- ❖ Development in milling and baking technology
- ❖ 25 years of NNMB
- ❖ Food storage and preservation
- ❖ Preservation of fruit processing
- ❖ Down to earth (Bulletins on Environment)
- ❖ Heart health at your finger tips
- ❖ The Honoured Best Citizens of India

I. ACADEMIC ACTIVITIES

Objective I:

To serve as a national resource and training centre for faculty in the field of Foods & Nutrition by conducting summer institutes, short courses and training programmes.

One training programme was conducted during the period under report.

1. A training programme entitled **Emerging Trends in Functional Foods** was conducted from 17th November to 7th December 2001.

TRAINING PROGRAMME ON EMERGING TRENDS IN FUNCTIONAL FOODS

A training Programme entitled ‘Emerging Trends in Functional Foods’ was conducted from 17th November to 7th December, 2001 at the Centre of Advanced Studies to fulfill one of the objectives of training and up gradation of faculty members of the Department of Foods & Nutrition from State Agricultural Universities. Participants were selected from SAUs., like Marthwada Agricultural University, Parbhani; University of Agricultural Sciences, Bangalore; Orissa University of Agriculture & technology, Bhubhaneshwar; SNDT University Mumbai, and Acharya N. G. Ranga Agricultural University, Hyderabad. Profile of the participants is given as below.

PROFILE OF PARTICIPANTS

SI. No	Name of the applicant	State	University/ Institute	Designation	Address
1.	Dr. Khorshed Mistry	Maharashtra	Institute	Lecturer	Dept.of Nutrition, SVT College of Home Science, SNDT University, MUMBAI-49
2.	Dr. Uma Devi S. Hiremath	Karnataka	SAU	Associate Professor	Dept. of Rural Home Science, U.A.S., HEBBAL, BANGALORE-560024

3.	Dr. Parvati Mishra	Orissa	SAU	Training Associate	College of home science, OUAT, Bhuvaneshwar - 751003
4.	Mrs. Asha Arya	Maharashtra	SAU	Associate Professor	College of Home Science, M.A.U., Parbhani
5.	Mrs. Kanwaljeet Kaur	Andhra Pradesh	SAU	Assistant Professor	Dept. of Foods & Nutrition, College of Home Science, ANGR Agril. University, Hyderabad – 500 004
6.	Mrs. A. Sarala Kumari	Andhra Pradesh	SAU	Training Associate	Krishi Vigyan Kendra, ANGR Agril. University, Malyal

Creationists and evolutionists will acknowledge that the human diet has passed at least four phases. The original diet was high in plant foods. A second phase of hunting resulted in increased meat and fish consumption. This was followed by a third phase of agricultural dependence on starchy foods. Finally, we entered the standard ‘*super market*’ phase of excess consumption of highly processed foods that are rich in salt, sugar and saturated fat, against a background of minimal energy expenditure.

For early humans, life was precarious, intense and short; for 21st century humans, life is more secure, more leisurely, more contemplative and longer, forcing us to reap the bitter experience of chronic diseases along with the sweetness of the foods and comforts that technological progress has brought. A possible answer to our present health problems may lie in examining our past and

building a future that is compatible with both human and environmental health through, what can be termed as ‘*econutrition*’.

The recent upsurge in the awareness of the important role of food and food ingredients in the maintenance of good health has resulted in highlighting the common bond that exists between the apparently diverse substances. The concept that natural components in many foods could have a beneficial effect on human health is not new. In our country, it forms the basis of the practice of Ayurveda, while Hippocrates advised almost 2500 years ago “***Let Food be your medicine and Medicine be your Food***”. Over the last 25 years, the man-food relationship is focused on the ability of foods to modulate physiology and biochemistry and thereby conferring protection against a range of human diseases, as also the aging process itself. Where traditional wisdom has demonstrated a truth about a healthful food, science has proved the basis for the identification of the active principles in foods and in defining their mechanisms of action. With an increase in the proportion of aging population world wide, and a desire for longevity without morbidity, the approach to good health through food choices is expected to gather momentum.

Functional foods are the ultimate products of an evolution in nutritional sciences. We have entered into an era of functional foods – defined simply as foods that, apart from providing sustenance, can have a positive impact on consumer’s health. The specific chemical components contained in functional foods, which are established to responsible for the beneficial impact on health, are given the term nutraceuticals.

Over the years, a large number of chemical entities widely varying in their structure and distributed in many plant products have been identified as nutraceuticals. The antioxidants from the largest single group of naturally occurring protective agents and although they are categorized as one group based on their functional ability, they are chemically diverse in structure. Specific polyunsaturated fatty acids have also received multifaceted beneficial effects in many disease conditions. It has been known since the turn of the last century that live micro-organisms. A more recent concept called ‘*Prebiotics*’ envisages the use of non-digestible nutrients which are specific to a limited number of bacterial species from the colonic microflora.

In view of the wealth of information available on the new roles of micronutrients and non-nutrients present in foods and probiotics and prebiotics in the maintenance of health, it was felt necessary to organize a training programme on ‘ ‘ *Functional Foods*’ to disseminate the knowledge to the nutrition scientists of various universities.

COURSE CONTENT

The course content was designed to cover major areas of functional foods.

1. An overview of functional foods
2. Health benefits of whole foods
3. Health benefits of Nutraceuticals
4. Dietary modulation of the disease
5. General topics

Thirty six lectures were arranged to cover the information in these areas. In addition to the class room teaching, the participants were exposed to certain field visits. Along with theory classes and field visits, the trainees were requested to develop certain products with functional qualities for use in a specific situation. An exercise on preparation of project proposals and presentation was also given to the participants.

Resource persons

Faculty members of College of Home Science, College of Agriculture of Veterinary Science of Agril. University were selected for giving lectures apart from the eminent speakers from other institutions such as National institute of Nutrition, University of Hyderabad, Nature Cure Hospital, BRKR Ayurvedic college, Hyderabad and Food World outlets.

In addition to the class room teaching, certain field visits were also organized. A visit to Health Foods Expo organized by Nutrifit, run by ANGR Agril. University alumni students was arranged. This Expo was inaugurated by the Hon,ble Chief Minister of Andhra Pradesh. Participants had a firsthand interaction with the inmates of Government Nature Cure Hospital, Ameerpet, regarding their

problems and the type of diet and treatment they are getting etc., A visit to Dr. BRKR Govt. Ayurvedic college, Hyderabad was arranged where in the trainees had intensive discussions with the staff regarding the different types of plants grown in their herbarium and their health benefits. Participants were also given an opportunity to visit the library at National Institute of Nutrition.

EVALUATION OF PARTICIPANTS

Pre and post evaluation of the participants knowledge on different aspects of functional foods was assessed using a proforma. Pre-testing of the participants shown scores ranging between 35-90%. After the exposure of the trainees to the programme, their knowledge levels showed an increase as is evident from graph (fig. 1). These ranged between 60-100%. The mean increase in awareness was by 28.3%

Course evaluation by the participants

The participants were given a detailed questionnaire to evaluate each and every topic with respect to usefulness and coverage. The response of the participants was consolidated and presented below.

- All the participants felt that 98% of the topics was very useful and presented well.

Ninety five percent of the topics was declared as fully covered and suggested some of topics to be included in the programme like.

- Role of traditional diets/foods and preventional aspects of diseases
- Food waste (from Kitchen/industry) as functional food
- Topics related to current concepts in mineral nutrition
- The participants also suggested to delete the topics like Strategieies to combat malnutrition
- Designer foods for health conscious consumer, which can be merged with the topic on transitional changes in diet & disease
- All the participants expressed that more time should be given for practicals and also for preparation of project proposals.
- Participants felt that they had sufficient time and opportunity to discuss and interact with the speakers

- All the participants were impressed by the field visits and also suggested that visits to small scale food industry units could have been arranged.
- Participants felt that the atmosphere in the PG & Research centre was congenial and enjoyed a good trainer – trainee relationship.
- The general operation of the participants about the programme was very good – in terms of information on emerging trends in functional foods.

Products developed by the participants

Each participant has been assigned to develop one product which is rich in functional components like β Carotene, fiber, phytoestrogens etc.

- Whesobe Roti mix with natural fiber & phytoestrogens
- Sosobe Roti mix with natural fiber & phytoestrogens
- Jofla Roti mix
- Sattu mix
- Curry leaves powder
- Chutney powder

Projects presented by the participants

Two participants together planned for a project proposal like

- Effect of consumption of roti blends on Hyperglycemia in non-insulin dependent diabetes mellitus (NIDDM) subjects.
- Development and acceptability of dietetic products prepared from malted pigeon pea
- Hypocholestrolemic effect of cereal and flax seed based products.

Objective II

U.G. Programme:

Four year Degree programme at UG level has been implemented from the academic year 2000-01. The second batch consisting of 67 students has been admitted in the year 2001-02. This clearly shows the significant achievement in strengthening the enrollment of the students in the course. Similarly, 12 students have been nominated by the ICAR.

P.G. Programme:

1. an inter faculty self supportive post graduate programme in Foods Science and Technology was started during the academic year 2001-02. A total number of 12 students (4boys & 8 girls) have been admitted to the programme.
2. The existing PG courses in the specific areas of Nutrition & Dietetics and community Nutrition are modified as follows.
 - a. Macro & Micro nutrients in Human Nutrition – Practical component has been deleted and included in the theory.
 - b. Practicing dietetics (0+5 credits)
(0+3 course is converted as 0+5 for dietetics students)

ALLOCATION OF SEATS UNDER P.G. PROGRAMME

M.Sc.

Over and above the sanctioned strength of 12 M.Sc. students , two more candidates who have been nominated by ICAR were admitted under Centre of Advanced Studies (one from Orissa and other from Karnataka)

Ph.D.

Two regular students have been admitted in the existing Ph.D. Programme.

DEVELOPMENT OF TEXT BOOKS

1. A book entitled *poverty, Household Food Security and Nutrition in Rural Areas* has been published during the year under report.
2. A university level text book entitled *Food Science & Technology* with the financial support of the ICAR is published and released by Shri Vadde Sobhanadreeswara Rao, Hon,ble Minister for Agriculture and Horticulture, Government of Andhra Pradesh on 11th October, 2001 at the National Seminar on WTO workshop.

3. Two CD-ROMs viz, (i) β – Carotene rich foods for preventing *vitamin A deficiency*; (ii) *iron and health* – were developed.
4. Two chapters on *Food fats and fallacies* and *Nutrition in emergencies* contributed by Dr. Vijaya Khader for the text book *Community Nutrition* is under publication by the ICAR. A chapter on Diet surveys is contributed by Dr. M. Uma Reddy, Professor, for the above text book.
5. The achievement of the CAS since the inception i.e. 1995-96 to 2001-02 is being published.

Objective III

This centre is conducting refresher courses and arranging lectures of eminent scientists for the benefit of the staff members as well as students and for the benefit of the technical staff working in the Nizam's Institute of Medical Sciences, National Institute of Nutrition, State Directorate of Women and child Welfare etc.,

Dr.(Mrs) Vijaya Khader, Director, is a member of the Council of State Food & Nutrition constituted by the Government of Andhra Pradesh. This Council periodically provides recommendations/suggestions to the Government.

Dr.P. Rajyalakshmi, Associate Professor, dept. of Foods and nutrition has been appointed as a member on the Advisory Board of new journal entitled **Natural Product Radiance (NPR)** launched in January, 2002 by the National Institute of science Communication (NISCOM, CSIR).

Objective IV

To disseminate nutrition information to personnel of different sectors.

ACTION PLAN

To bring out quarterly issue of Foods & Nutrition news letter for circulation among the lien departments and the organizations involved in nutritional related programmes.

QUARTERLY ISSUE OF FOODS & NUTRITION NEWS LETTER

Three quarterly issues of Foods & Nutrition News Letters were brought out for circulation among the lien departments and the organizations involved in nutritional related programmes to disseminate nutrition information to personnel of different sectors.

SI.No.	Title	Month	Year	Volume	Number	Issue Editor
1.	Energy Balance	April	2001	6	1	Dr. V. Vijayalakshmi
2.	Unconventional Foods	August	2001	6	2	Dr. S. Shobha
3.	Obesity: Prevention And management Approaches	December	2001	6	3	Dr. K. Uma Devi

RESEARCH PROJECTS

TITLE	Agency
All India Co-Ordinated Research Project (on going)	ICAR
Development of nectar from fruit and fruit Blends available in AP and their storage studies (Completed)	ICAR
Formulations of ready to bake cake mixes and to study the acceptability and nutrient composition (Completed)	ANGRAU
Studies on Fisher Women in Coastal Echo system Of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu. (Adhoc Research project commenced from June, 2001)	NATP

SEMINARS/SYMPOSIUM/WORKSHOPS

1. Dr. S. Shobha, Associate Professor ; Dr. N. Lakshmi Devi, Associate Professor; and Dr. K. Uma Maheshwari, Associate Professor attended the International exhibition on *Eco and Environmentally friendly technologies* held at Boy's Town, Hyderabad, from 19th to 27th April, 2001.
2. DR. Kanwaljit Kaur, Assistant Professor, attended the training programme on *Production technology for fruit based carbonated drinks and beverages* held at IARI, New Delhi, from 14th to 20th May, 2001.
3. Dr. Vijaya Khader, Director CAS & Dr. D. Sharada, Professor, attended the national workshop on *Food Security and PDS* held at NIRD, Rajendranagar held on 28th & 29th May, 2001.
4. Dr. Vijaya Khader, Director CAS, attended the interaction meeting cum workshop on Bio-Technology held at the Extension Education Institute, Hyderabad, on 19th June, 2001.
5. Dr. Vijaya Khader, Director CAS; dr. D. Sharada, Professor; Dr.S. Sumathi, Associate Professor; Dr. S. Shobha, Associate professor & Dr. N. Lakshmi Devi, Associate Professor attended the Annual meeting of IDA in *Aids and Nutrition* held at College of Home Science, Hyderabad, on 8th August, 2001.
6. Dr. Vijaya Khader, Director, CAS, Dr.D.Sharada, Dr. S. Shobha and Dr. K. Uma Maheshwari attended the Medical camp and Mothers Committee meeting on *Reduction of Anemia* held at the Medicity Hospital, Medchal, on 9th August, 2001.
7. Dr. S. Shobha, Associate Professor; Dr. N. Lakshmi Devi, associate Professor; and Dr. K. Uma Maheshwari, Associate Professor attended the one day state Level workshop on *Breaking the cycle of malnutrition and improve women's health* held at Indian Institute of Health and Family Welfare, Hyderabad, on 3rd September, 2001.

ABROAD TRAINING PROGRAMMES/SEMINARS/WORKSHOPS ATTENDED BY THE STAFF

Dr. K. Manorama, Associate Professor, had proceeded on Post doctoral Fellowship initially for two years to the Centre for Molecular Sciences, Dept. of Human Biological Chemistry & Genetics, University of Texas, USA. She was relieved from the Dept. of Foods & Nutrition on 31st December 1999 enabling her to do post-doctoral research in USA. Still, she is continuing her post-doctoral research.

POPULAR ARTICLES

About 35 popular articles on nutritional significance of various food products and importance of various foods in human nutrition, fallacies with regard to papaya consumption, methods food losses, etc., have been published in news papers and magazines such as Swathi, Vartha, Annadata, Swarna Sedyam., by the staff members of the Centre.

TV PROGRAMMES

TV Programmes on “Mushroom cultivation and spawn preparation” by the Director, CAS was telecast in “Annadata” a distant program of ETV, Hyderabad. Five phone in programmes on *Rythumitra* have been telecast during the year under report.

RADIO TALKS

Twenty radio talks on various aspects of Nutrition including deficiency diseases and their cure, nutrient composition of Food stuffs, reducing processing losses, etc were delivered by the staff.

SCIENTIFIC PAPERS

Fifteen papers have been published by the staff of Department of Foods & Nutrition on various aspects of Nutrition in various national and international journals such as *Indian journal of social work, journal of food Science and*

technology, plant foods for human nutrition and Asia Pacific Journal of clinical Nutrition etc

AWARDS RECEIVED BY THE STAFF

Dr. Vijaya Khader, Director, CAS, has received Best Citizen of India Award given by the International Publishing House, New Delhi, During the year under report.

OTHER ACTIVITIES

WORLD FOOD DAY:

The theme for World food day in 2001 was *Flight Hunger by Reducing Poverty*. Dr. Vijaya Khader, Director, CAS, Dr. K. Uma Devi and Dr. K. Uma Maheshwari, Associate Professors (Foods and Nutrition), celebrated the day along with a voluntary organization – Life Health Reinforcement Group at Cheededu village near Ibrahimpatnam. Other staff from the department participated in a seminar on small and medium food Industries – opportunities and challenges under WTO regime organized jointly by IDA and AFST Hyderabad chapter. A radio talk on the theme of world food day given by Dr. Vijaya Khader was broadcast.

INTERACTION MEETINGS

1. An interaction meeting with all the Co-Investigators of the NATP Fisher Women Project entitled Studies on Fisher Women in Coastal eco-system in Andhra Pradesh, Karnataka Tamil Nadu and Kerala, was held on 13-06-2001
2. Inter Faculty M.Sc. programme on *Food Science Technology* commenced from this academic year i.e. 2001-2002.

The three faculties viz., Agriculture, Veterinary and Home Science of this University have, for the first time come together to offer an Inter Faculty post graduate programme in Food Science and Technology. This course, which is open to graduates of agriculture, veterinary and home science, was launched on 18th January, 2002 at the post Graduate and Research Centre, Rajendranagar. Padmasri Dr. I.V. Subba Rao, Vice- Chancellor, ANGR Agril. University, had lit the lamp to mark the launching of the programme. Dr. M.V. Shantaram, dean of P.G. Studies, welcomed the gathering and explained the genesis of the new course and also expressed the hope that the students trained in this programme would find avenues

of employment in the food industry. Dr. Vijaya Khader, Programme Director and the Core committee members had enlightened about the programme contents. Dr. R. Vatsala, dean of Home Science and Dr. M.V.Subba Rao in his message said that technology could help in transforming the surplus food produced in the country to food security for the masses. A total number of 12 students have been admitted to the new course.

3. A workshop was held from 18th to 23rd March, 2002, at this Centre on *Assessment of Nutritional Status* for the field functionaries of NATP project entitled studies on Fisher Women in Coastal eco-system of Andhra Pradesh, Karnataka, Tamil Nadu and Kerala. Seven participants from the four states attended the workshop. To maintain the uniformity in methodology, they were trained in various aspects of assessments like Anthropometry, Chemical and Diet surveys.

Extension Activities

The departmental staff are involved in training the field functionaries of the World Bank assisted ICDS projects from the state department of Women Development and Child Welfare with technical guidance from NIPCCD. A nutrition and diet counseling centre is also run by the department staff to cater to the needs of general public with diet related problems. Nutrition education is being carried out through audio-visual aids, TV and radio programmes, publishing of popular articles in newspaper and magazines and celebration of important occasions like World Food Day, Diabetic Day, Diet exhibitions, Nutrition Week, etc., in rural and urban areas. Certificate and Fruit & Vegetables Preservation are being organized for income generation.

This centre has interaction meetings with the government, NGOs and other Lien Departments. This centre has also interacted with the Diabetic units of Mediciti Hospitals and planned collaborative research project on Nutritional assessment of Adolescent girls.

This centre has also interaction meetings with the IDA-AP Chapter to have continuous linkages for the future activities like counseling and consultancy programmes in the area of Dietetics and analytical work.

NUTRITION WEEK :

Nutrition week was celebrated from 1st-7th September 2001. Activities taken up included participation by the staff in a one-day State level workshop organized jointly by the State Department Of Women and Child Development and Food and Nutrition Noard. The theme was *Break the cycle of malnutrition - Improve Women's Health*. A lecture on *Food Security for all* was given by Dr. Vijaya Khader, Director, CAS.

A nutrition quiz programme conducted by Dr. Vijaya Khader and a special Radio talk given by Dr. V. Vijayalakshmi were broadcast on this occasion.

VISITORS

Dr.A.S. Bawa, Director, Defence Foods Research Laboratory, Mysore, visited this centre on 22nd March, 2002. The staff, students the Core Committee members and Coordinators of the new P.G. Programme interacted with him.

A guest lecture was arranged for the staff & students at College of Home Science, Hyderabad on 12th February, 2002. The invited speakers were Dr. Manju B. Reddy and Ms. Alekel from Dept. of Food Science and Human Nutrition, Centre for designing foods to improve Nutrition, Iowa State University, Ames, USA. The Speakers shared their views pertaining to the beneficial aspects of soyabean in mineral availability and in prevention of Osteoporosis. The need for development of region wise acceptable, traditional soya products and its popularization was stressed. Future collaborative research in these areas was suggested.

APPENDIX – I

WORKPLAN FOR CENTRE OF ADVANCEDV STUDIES

Department of Foods & Nutrition
Post Graduate & Research Centre
Andhra Pradesh Agricultural University
Rajendranagar, Hyderabad 500030

I. OBJECTIVES

1. To serve as a national resource and training centre for faculty in the field of foods & Nutrition.
2. To upgrade the curriculum and courses of Foods & Nutrition to strengthen teaching and evaluation at UG and PG level.
3. To support the government in training personnel.
4. To disseminate nutrition information to personnel of different sectors.

I. OUTPUTS / PROGRAMMES TO BE IMPLEMENTED DURING THE CURRENT PLAN PERIOD

Objective 1

To serve as a national resource and training centre for faculty in the field of Foods & Nutrition in State Agricultural Universities.

Action plan

A. Summer Institutes / Short Courses

Conducting one Summer Institute Programme or one Short Course in priority areas of Foods & Nutrition every year.

Priority areas identified for summer Institute Programme / Short Courses

1. Recent developments in therapeutic nutrition.
2. Fruit and Vegetable Processing.
3. Grain processing.
4. Nutritional assessment and methods.
5. Nutrition toxicology.

B. Allocation of seats under PG programme

Provision of seats in M.Sc. and Ph.D. in Foods & Nutrition to outside State candidates selected by ICAR through a common test would be decided (as a policy matter) under AHRD subject to the approval state Government.

Objective 2

To update the curriculum and courses of Foods & Nutrition and strengthen teaching and evaluation at UG and PG level.

Action Plan

To implement the course curriculum for UG programme keeping in view the recommendation of Deans Committes (Workshop organized on 7th-12th June, 1993 at APAU, Hyderabad – Report awaited).

To organize one working for developing PG curriculum during III year of the programme.

To organizes workshop for preparing laboratory manuals for UG and PG programmes.

Action Plan

Assessing and developing the training needs of the line departments (women's Development & Child Welfare; Social & Tribal Welfare; Panchayat Raj & Rural Development) through meetings and group discussions.

Objective 4

To dessiminate nutrition information to personnel of different sectors.

Action Plan

To bring out quarterly issue of Food & Nutrition Bulletin for circulation among the line departments and the organizations involved in nutrition related programmes.

Organizing group meetings for academicians, administrators, planners and extension workers to appraise them of nutrition situation and integrate nutrition Component in the programmes of their departments.

Foods & Nutrition information through mass media (TV, Radio and Press).

II. EXPECTED OUTCOME BY THE END OF THE PLAN PERIOD

1. Providing common resource material for teaching and evaluation of food and nutrition programmes at UG and PG level.
2. Faculty improvement in terms of teaching, research and extension.
3. Strengthening postgraduate Education and research in Foods & Nutrition in other State Agricultural Universities.
4. Conducting need based multicentric studies to provide feed back to the planners and policy matters.

APPENDIX – I

WORKPLAN FOR CENTRE OF ADVANCED STUDIES

Department of Foods & Nutrition
Post Graduate & Research Centre
Andhra Pradesh Agricultural University
Rajendranagar, Hyderabad 500030

I. OBJECTIVES

1. To serve as a national resource and training centre for faculty in the field of foods & Nutrition.
2. To upgrade the curriculum and courses of Foods & Nutrition to strengthen teaching and evaluation at UG and PG level.
3. To support the government in training personnel.
4. To disseminate nutrition information to personnel of different sectors.

II. OUTPUTS / PROGRAMMES TO BE IMPLEMENTED DURING THE IX PLAN PERIOD

Objective 1

To serve as a national resource and training centre for faculty in the field of Foods & Nutrition in State Agricultural Universities.

Action plan

A. SHORT COURSES

Conducting one Summer Institute Programme or one Short Course in priority areas of Foods & Nutrition every year.

Priority areas identified for summer Institute Programme / Short Courses

1. Programme planning and evaluation
2. Role of food additives in food processing
3. Research methods in Foods and Nutrition

B. ALLOCATION OF SEATS UNDER PG PROGRAMME

Provision of seats in M.Sc. and Ph.D. in Foods & Nutrition to outside State candidates selected by ICAR through a common test would be decided as a policy matter.

Objective 2

To update the curriculum and courses of Foods & Nutrition and strengthen teaching and evaluation at UG and PG level.

Action Plan

To implement the course curriculum for UG programme keeping in view the recommendation of Deans Committes (Workshop organized on 7th-12th June, 1993 at ANGRAU, Hyderabad) IV year degree programme will be implemented.

To organize one work shop for developing PG curriculum during III year of the programme.

Preparation of CD-ROM lesson and two video lessons.

Practical Mannuals preparation at P.G. level

Food Chemistry/ Maternal and child nutrition/ Assessment of food standards and quality control.

Objective 3

To support the Government in training personnel and in implementation and evaluation of nutrition programmes.

Action Plan

Assessing and developing the training needs of the line departments (women's Development & Child Welfare; Social & Tribal Welfare; Panchayat Raj & Rural Development) through meetings and group discussions. Food & nutrition information through mass media (TV, adio and Press).

Objective 4

To disseminate nutrition information to personnel of different sectors.

Action Plan

To bring out quarterly issue of Food & Nutrition Bulletin for circulation among the line departments and the organizations involved in nutrition related programmes.

Title of the Topic	Month of Issue	Issue Editor
1. Iodine & Nutrition	April, 2002	Dr. Anuradha
2. Development of fishery products	August, 2002	Dr. J. Lakshmi
3. Stability of β -carotene in mango powders	December, 2002	Dr. Hymavathi

III. EXPECTED OUTCOME BY THE END OF THE PLAN PERIOD
Providing common resource material for teaching and evaluation of food and nutrition programmes at UG and PG level.

Faculty improvement in terms of teaching, research and extension.

Strengthening postgraduate Education and research in Foods & Nutrition in other State Agricultural Universities.

Conducting need based multicentric studies to provide feed back to the planners and policy matters.

IV BUDGET PROPOSALS FOR THE YEAR 2002-2003

S. No.	Particulars	I Year	Remarks
1	Civil Works	8,00,000/-	Justification follows
2	Non-recurring Equipment	20,00,000/-	-do-
	-Atomic Absorption Spectrophotometer -Water Purifier -Electronic balance -Laser printer -Digital Camera, Scanner & Laminating Machine -Display Boards -Moisture meter -HPLC columns (2no) -Colour Xerox Machine -Uv- Vis Spectrophotometer -Fibretech -Personnel Computers with Printers, Table & Chairs (6no) -Staff chairs (10no) -Mini Mill - Video camera -CD Writer		
3	Training Cost/CD ROM development	3,00,000/-	-do-
4	Books & Journals	20,000/-	-do-
5	TA/DA	40,000/-	-do-
6	Staff salaries	3,00,000/-	-do-
7	Recurring Contingencies	1,50,000/-	-do-
8	Maintenance & Repairs	1,50,000/-	-do-
9	Publishing of Foods & Nutrition News letter	30,000/-	-do-
10	Vehicle Maintenance	1,00,000/-	-do-
	TOTAL	38,90,000/-	

JUSTIFICATION FOR THE BUDGET REQUIREMENT

1. Civil Works

Since the existing PG & research Centre building has not been accommodating to all the research projects of ICAR/ NATP/ state schemes, it is proposed for civil works to the extent of Rs. 15,00,000/- for placing the equipment to be purchased during the X Five Year plan. In view of the Inter Faculty P.G. Programme in Food Science Technology commenced from the academic year 2001-2002, construction of classrooms is inevitable. Hence, an amount of Rs. 15.0 lakhs is proposed under civil works (Rs. 8.0 lakhs in the first year and Rs. 7.0 lakhs during the second year).

2. Equipment

As per the mandate of the ICAR, students as well as staff are also involved into the research activities of the Centre of Advanced Studies. Micronutrients especially minerals are gaining lot of importance in the maintenance of human health. For estimating the mineral content/level of foods/biological samples, atomic absorption spectrophotometer and water purifier are needed. Since nutritional status assessment and bioavailability of minerals is planned as a thrust area for the X Five year plan, the purchase of these equipment is essential. Keeping in line with the recent developments in information and communication techniques, and the need for disseminating the research results, the purchase of other listed equipment such as colour Xerox, digital camera, laser printers, CD Writer etc., are proposed. Therefore, the above given equipment may be sanctioned during the X Plan.

3. Training Cost/ CD ROM development

In view of hike of the day-to day consumables, travelling fare for the trainees, stationery, CD ROM's development cost etc., a sum of Rs. 3.0 lakhs is proposed in lieu of Rs. 2.22 lakhs per programme.

4. Books & Journals

Due to inflation in the cost of scientific library books, a sum of Rs. 30,000/- per annum is proposed instead of Rs. 25,000/-.

5. TA/DA

Due to inflation in the fare of Rail/Road/Air, a sum of Rs. 40,000/- per annum instead of Rs. 20,000/- is proposed.

6. Staff Salaries

During the VII five year plan, the expenditure for the posts of steno-cum-typist, AVA Asst-cum-Operator and Attender were borne by the ICAR, and during the IX-plan period two post of steno-cum-typist, AVA Asst-cum-Operator were sanctioned by the ICAR whereas the Attender post was sanctioned by the state Non-Plan. Now that the University has decided to scrap the three posts by means of adjusting the persons working against the posts elsewhere in the University, Sanction for three posts of steno-cum-typist, AVA asst-cum-Operator and attender may kindly be accorded may kindly be accorded during the X five year plan so that the staff working in the CAS are not disturbed.

7. Recurring Contingencies

Due to inflation of day-to-day consumables, chemicals, stationery etc., an amount of Rs. 1.5 Lakhs per annum instead of Rs. 1.0 lakh is proposed.

8. Maintenance & Repairs

In order to maintain the equipment purchased during the VIII and IX plan period as also the equipment to be purchased during the X plan in a habitable condition, a sum of Rs. 1.5 lakh per annum is proposed.

9. Publishing of F & N News Letter

Publishing of F & N News letter is one of the main activities of this centre and a sum of Rs. 10,000/- is required for one issue. Similarly three News letters are issued in a year. Hence, a sum of Rs.30,000/- per annum is proposed is proposed under this head.

10. Vehicle Maintenance

Towards oils & lubricants, comprehensive vehicle insurance, repairs etc., a sum of Rs. 1.0 lakh is proposed.