

**CENTRE OF ADVANCED
STUDIES**

TWELVETH ANNUAL REPORT

(2006-2007)

Dr. (Mrs.) S.Sumathi

DIRECTOR

DEPARTMENT OF FOODS & NUTRITION
POST GRADUATE & RESEARCH CENTRE
ACHARYA N.G. RANGA AGRICULTURAL UNIVERSITY
RAJENDRANAGAR: HYDERABAD – 500 030

**TWELTH ANNUAL REPORT
OF CENTRE OF ADVANCED STUDIES
FOR THE YEAR 2006 - 07**

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 2006 – March 2007.
- Report No. : XII
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 – 500 030.
6. Technical Programme
- a) Technical Programme as approved for the scheme } Appendix – I
enclosed
- b) Technical Programme for the next plan period : Submitted for Approval
in the year 2007-08
(Appendix II enclosed)
7. Technical Personnel employed (list of vacancies, if any)

Sanctioned Posts by ICAR: Post particulars	Posts filled	Posts to be filled
1. Steno-cum-Typist	Senior Assistant against the post of U.D. Stenographer Filled on 19-6-2003	NIL
2. AVA Operator	Projector Operator Filled on 16-6-1997	NIL

Technical staff employed:

Name with Designation	Date of Joining	Date of leaving
K. Shakuntala Senior Assistant against the post of U.D. Steno	19-06-2003	Continuing
N. Yedukondalu Projector Operator	16-06-1997	-do-

8. Total outlay : **Rs. 75,15,615=70**

- Rs. 4,56,219=20 (1995-96)
- Rs. 9,61,192=20 (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. 5,28,023=90 (2001-2002)
- Rs. 5,14,463=75 (2002-2003)
- Rs. 6,32,489=00 (2003-2004)
- Rs. 4,75,996=00 (2004-2005)
- Rs. 6,45,016=00 (2005-2006)

Budget & Expenditure particulars for 2006 - 07:

Sl. No.	Sub head	Budget Sanctioned		Expenditure		Balance	
		Rs.	Ps.	Rs.	Ps.	Rs.	Ps.
1.	Training Programme	3,54,000-00		3,07,587-00		46,413-00	
2.	TA / DA	30,000-00		--		30,000-00	
3.	Books	30,000-00		19,964-00		10,036-00	
4.	Recurring Contingencies	1,50,000-00		74,301-00		75,699-00	
5.	Staff salaries	3,00,000-00		2,77,792-00		22,208-00	
Total Rs.		8,64,000-00		6,79,644-00		1,84,356-00	

9. Total amount spent : Rs. 6,45,016-00
in previous year (2005-06)

10. Total amount sanctioned/spent during the year under report

a) Sanctioned : Rs. 8,64,000-00

b) Spent : Rs. 6,79,644-00

11. Total No. of months : 12 months (From April 2006 – March 2007)
during the year.

12. Summary : Enclosed.

Signature :

Name & : Dr. S. Sumathi

Designation: Professor-cum-Director.

REPORT ON ACTIVITIES CARRIED OUT UNDER CENTRE OF ADVANCED STUDIES 2006 - 07

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 and the X Five Year Plan vide F. No. 1(18)/95/CAS/HRD-II, dt. 17-09-1999 and 02-07-2001 of the ICAR.

2. CIVIL WORKS

The Centre of Advanced Studies in Foods & Nutrition presently has the following facilities.

Seminar hall/Lecture hall

Conference hall

Computer room

Library room

Office rooms

Class rooms

Store room

Equipment room/Laboratory

Museum Hall

Extension Training Centre (ETC)

II EQUIPMENT PURCHASED UNDER CENTRE OF ADVANCED STUDIES

(1995-96 to 2001-2002)

EQUIPMENT :

Sl. No.	Equipment	Cost (in Rupees)	Date of purchase	Remarks
1	Overhead projector and Slide projector	50,000/-	2-2-95	
2	Air conditioners, Carrier Aircon	55,000/-	10-2-96	Not in good condition
3	Microwave oven	13,000/-	13-2-96	
4	Computer, Pentium 100,640 MB, with TVSE, MSP 155 Printer and HP Deskjet Printer	1,00,000/-	24-2-96	Not in good condition
5	Modi xerox machine	1,08,000/-	6-3-96	To be written off
6	Furniture for Seminar Hall and conference rooms in new building a) Chairs : 85 b) Dias Table : 1 c) Computer tables : 2 d) Computer chairs : 2 e) Printer tables : 2 f) Table for Xerox Machine: 1	2,50,000/-	11-3-96	
7	Public address system	35,000/-	19-3-96	
8	Kirloskar 5 K V A UPS	2,10,000/-	24-6-96	Not in good condition
9	Exide batteries – 2 no's	12,880/-	12-12-96	Not in good condition
10	Water cooler cum purifier	17,000/-	13-12-96	Not in good condition
11	V. Guard Stabilizer – 3 nos	10,000/-	20-12-96	
12	Essae digital weighing machine (2)	27,600/-	26-12-96	
13	Samsung refrigerator 420 litres	42,000/-	6-1-97	
14	Double glass distillation unit	15,000/-	15-1-97	
15	Aspirator bottle with stop cock	1,200/-	15-1-97	
16	Community nutrition equipment : Height rods, diet survey sets	30,000/-	31-1-97	
17	Magnetic letters	7,800/-	28-2-97	Not in good condition
18	Portable refractometer and pH meter	10,000/-	12-3-97	
19	Blow plast chairs (30 nos)	15,660/-	9-5-97	

20	Executive high back chair	7,300/-	15-5-97	
21	Prestosign letters	11,000/-	19-5-97	Not in good condition
22	Hamilton HPLC syringe	2,750/-	19-7-97	
23	Gerhardt Kjedadtherm automatic nitrogen analyzer	3,28,000/-	11-9-97	
24	2 KVA UPS System	1,25,000/-	26-3-98	
25	U – Shaped conference table	46,000/-	26-3-98	
26	Black/green boards (5 nos)	16,225/-	26-3-98	
27	Pentax Camera with accessories	33,000/-	30-3-98	
28	Built-in cup-boards (20 nos)	1,10,000/-	23-5-98	
29	Single blower	1,850/-	2-6-98	
30	LCD Multi-media projector (SANYO)	} 3,80,000/-	11-12-98	Not in good condition
31	Wall mounted screen			
32	Laser pointers			
33	Door closures and door locks	12,000/-	13-2-99	Not in good condition
34	Solar dryer	11,050/-	10-3-99	
35	Elico pH meter with electrodes	9,005/-	17-3-99	
36	PELICAN Soxplus solvent extraction system	1,71,970/-	23-3-99	To be written off
37	Sensory evaluation lab cubicles, booths, work tables, stools.	37,922/-	23-3-99	
38	Spiral binding machine	6,380/-	25-6-99	
39	Colour Monitor	19,850/-	8-8-2000	Needs upgradation

III. BOOKS PURCHASED :

- Essential of Functional Foods
- Herbal Foods and its Medicinal values
- Modern Technology on Food Preservation
- Nutrition and Health in developing countries
- Nutritional Health
- Diet and Human Immune Function.

IV. ACADEMIC ACTIVITIES

OBJECTIVE - I

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

The Centre of Advanced Studies, Department of Foods and Nutrition, Faculty of Home Science, Acharya N. G. Ranga Agricultural University, Hyderabad has been functioning as a resource and training centre for the faculty in the field of Foods and Nutrition for State Agricultural Universities since 1995. Organizing advanced training programmes (21 days duration) is one of the major functions of this centre. Till today 17 training programmes on different aspects of Food and Nutrition have been conducted. During the reporting year i.e. 2006 – 07, two training programmes entitled “ **Food Enterprises-Opportunities And Challenges**” (12-7-2006 to 1-8-2006) and “**Nutrition and Agriculture Interface – Newer Perspectives on Value Addition & Health**” (23-1-2007 to 12-2-2007) were organized. The details of the programmes are as follows:

XVI TRAINING PROGRAMME ON FOOD ENTERPRISES-OPPORTUNITIES AND CHALLENGES (12th July 2006 to 1st August 2006)

The food processing industry ranks fifth in size in the country and employs 19 percent of the industrial labour force. Fourteen percent of the industrial output is contributed by the food processing industries, which is 5.5 percent of the GDP of India. The estimated turnover of the food processing industry is Rs. 1, 440 billion of which about 75 percent is estimated to be in the unorganized sector and that is in the rural areas. The increase in per capita income, particularly in the middle class segment, and changing food habits of India's population as a whole, have opened up avenues for food processing industries. Ready-to-eat foods, beverages, processed and frozen fruit and vegetable products, marine, dairy and meat products among others have gained significance in the recent past. Quality and health consciousness of the consumer have forced the industry to adopt state of the art technology in the production line.

Realizing the importance of food processing sector, the Government of India formulated policies and plans for improvement of food processing infrastructure, including upgrading technology and enforcement of quality standards, activating the domestic market, with a focus on exports, during the Ninth Five-Year Plan. To achieve these, the institutions concerned with technology development should gear up to inculcate food entrepreneurship culture among the graduates of Food science, Nutrition, Food technology and general public.

There is substantial potential for growth and innovations in the food processing sector which needs to be exploited and the right technologies generated and applied. A food enterprise in addition to providing employment opportunities can make it a lucrative business. As with all other business ventures, there are some constraints and challenges for food enterprises. However, these are not insurmountable and with support from the government through introduction of favorable policies, an enterprise can be made viable. The strategy adopted to make food enterprises successful has two main thrusts — making appropriate technology available and empowering the entrepreneur by developing their skills and creating market potential for the product, quality requirements and prices for domestic and export markets etc.

The present training programme on *Food Enterprises - Opportunities and Challenges* is planned for the benefit of the Faculty members of Foods and Nutrition, Food technology, Food science and allied areas, working in State Agricultural Universities.

The training programme on *Food enterprises- opportunities & challenges* is the sixteenth programme to be conducted by the Centre of Advanced Studies, Post-graduate & Research Centre, ANGRAU from 12th July to 1st August 2006. The training programme has been planned with the following objectives

- To appraise on entrepreneurship development for food enterprises
- To review the suitable technologies for enterprise development
- To update on the supporting agencies for establishing enterprises.
- To focus on the opportunities for food enterprises

COURSE DIRECTOR : ***Dr.P. Rajyalakshmi***
Professor-cum-Director, CAS

COURSE COORDINATORS: ***Dr. T.V.Hymavathi ; Associate Professor***
Dr. Kamini Devi ; Associate Professor

LIST OF PARTICIPANTS



S.No.	Name & Designation	Address
1	Sri. M.S. Baig Asst. Professor	B.Tech (Food Science) Programme College of Home Science, Bapatla
2.	Mr. Ravindra Naik Scientist (Ag.Engg)	C.I. A.E. Regional Centre-Industrial Extension Project TNAU Campus, Coimbatore-641003.
3	Mrs. Nandana Kumari Training Associate(H.Sc)	Krishi Vigyan Kendra, Lohardaga, Jharkhand
4	Mrs. Anjali Misra Training Associate(HSc)	K.V. K, Dist. Sahibganj Birsa Agricultural University, Ranchi – 6.
5	Mrs. Kanchan Mala Training Associate (H.Sc)	Krishi Vigyan Kendra, West Singhbhum Birsa Agricultural University, Ranchi Jagannathpur, Jharkhand-833 203.
6	Dr. Y. Nagamalleswari Asst.Professor (Anatomy)	Ruska lab (EM unit) College of Veterinary Science, R'nagar.
7.	Dr. K.P. Sudheer Asst. Professor	Kerala Agril.University Post Harvest Technology Unit RARS, Ambalavayal, Wayanand dist,Kerala-673593.
8	Dr. M. Padma Assoc. Professor	Dept., of Horticulture, College of Agriculture, ANGRAU, Rajendranagar, Hyderabad.
9.	Ms. Sunita Kumari Kamal Training Associate (H.Sc)	Krishi Vigyan Kendra Chianki, Palamaau,Jharkhand.
10	Dr. Mary Swarnalatha Scientist (Extension)	AICRP-HSc, PGRC, ANGRAU, Rajendranagar, Hyderabad.

HOST FACULTY

COURSE DIRECTOR
Dr.P. Rajyalakshmi
Professor-cum-Director, CAS

COURSE COORDINATORS

Dr. T.V.Hymavathi
Associate Professor

Dr. Kamini Devi
Associate Professor

Staff-Department of Foods and Nutrition

Prof.Vijaya Khader	Dean of Home Science
Dr.P.Rajyalakshmi	Professor & Director CAS
Dr.S.Sumathi	Professor
Dr.K.Aruna	Professor & Unit Coordinator AICRP
Dr.M.Usha Rani	Professor
Dr.K.Krishna Kumari	Professor
Dr.Kamini Devi	Associate Professor
Dr.K.Uma Maheswari	Associate Professor
Dr.N.Lakshmi Devi	Associate Professor
Dr.V.Vijayalakshmi	Associate Professor
Dr.S.Shobha	Associate Professor
Dr.T.V.Hymavathi	Associate Professor
Mrs.Kanwaljit Kaur	Assistant Professor

GUEST FACULTY

ANGRAU

Dr. K. Malla Reddy	Professor, Dept of Horticulture, College of Agriculture
Dr. K. Suhasini	Associate Professor, WTO Cell
Dr .M. Pochaiah	Principal, Extension Education Institute
Dr. Vijaya Nambiar	Professor & University Head, Dept., of Resource Management and Consumer Sciences
Dr. Anurag Chaturvedi	Professor, Post Harvest Technology (Horticulture)

College of Veterinary Science, SVV University

Dr. K. Kondal Reddy	Associate Professor, Department of LPT
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ICRISAT

Dr. Kiran. K.Sharma	Officer in charge ,Agribusiness Incubator
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National Institute of Small Industry Extension Training (NISIET)

Dr. C. Kondaiah	Principal Director
Mr. V .C. Mouly	Officer In-charge
Dr. C. Rani	Director ,Women Empowerment Cell
Mr. P. Udaya Shankar	Director
Mrs. Subhasini Reddy	Consultant

ICAR Institutes

Dr. B.D.Tripathi	Principal Coordinator (PGPABM), MANAGE
Dr. G. P. Reddy	Senior Scientist (Agricultural Economics) NAARM

Food & Allied Institutes

Mr. B. K .Karna	Dy. Director, Indian Institute of Packaging, Hyderabad centre
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Mr T.Sudhakar	Manager, Agricultural and Processed Food Export Development Authority,Hyderabad
Dr K. Narasimha Reddy	Director, Swami Ramananda Tirtha Research Institute,Hyderabad
Dr S. Rajashekar Reddy	Sresta Natural Bioproducts Pvt. Ltd. Hyderabad
Mr. M V. Ramana Prasad	Manager, AP State Financial Corporation, Hyderabad

Consultants

Dr K. P. Shenoy	Agribusiness Consultant, Hyderabad
Dr S. K .Sood	Food Technologist / Scientist (Retd.)

**XVI Training Programme on
“Food Enterprises-Opportunities And Challenges”
12-7-2006 to 1-8-2006**

PROGRAMME SCHEDULE

S.no.	Date	Topic	Time	Speaker
1	12-7-06 Wednesday	Registration	9-30-11.00 AM	Co-Crdinators
		Pre-evaluation &Orientation	11-30-1.00 AM	Dr.Chandra Mouly Officer in-charge NISIET
		Micro lab	2-.00-3.30 PM	
I. ENTREPRENEURSHIP DEVELOPMENT				
2	13-7-06 Thursday	Over view of entrepreneurship development	9-30-11.00 AM	B.D.Tripathi Principal Coordinator (PGPABM), MANAGE
		Composition and process of entrepreneurship development programme	11-30-1.00 AM	Dr.Vijaya nambiar Associate Dean, CHSC
		Capacity building for entrepreneurship	2-.00-3.30 PM	Dr.Kamini Devi Coordinator
3	14-7-06 Friday	Role of marketing in Food enterprises	9-30-11.00 AM	Mr.K.P.Shenoy Agribusiness and Financial Consultant
		Financial management of food enterprise	11-30-1.00 AM	Mr.P.Uday shankar Director, NISIET
		Designing food enterprises	2-00-3.30 PM	Mr. Chandra Mouly Officer -in charge NISIET
4	15-7-06 Saturday	Business planning and management	9-30-11.00 AM	Dr.S.Rajashekar Reddy Managing director SRESTA Natural Bioproducts Pvt Limited
		Role of women in food enterprises	2-00-3.30 PM	Dr.M.Usha Rani

II INTERFACE BETWEEN AGRICULTURE AND FOOD ENTERPRISES				
5	17-7-06 Monday	Enhancing agricultural productivity through food enterprises	9-30-11.00 AM	Dr.Suhasini Dept of Economics (WTO cell) ANGRAU
		Scope and present status of Aagro based food industries in India	11-30-1.00 AM	Dr.T.V.Hymavathi Coordinator
		Fish based technologies for economic empowerment of fisherwomen	2-00-3.30 PM	Dr.Vijaya khader, Dean ,Faculty of Home science
6	18-7-06 Tuesday	Visit to Agri-Business Incubator ICRISAT	9.30A.M--4.30 PM	Dr.T.V.Hymavathi Coordinator
7	19-7-06 Wednesday	Development of dairy enterprises	9-30-11.00 AM	Dr. Kondal Reddy, Associate Professor, S.V.Veterinary College
		Visit to Nanda foods	11-30-5.00 PM	Mrs.Kanwaljit Kaur Assistant professor ANGRAU
8	20-7-06 Thursday	Role of food enterprises in raising horticultural production	9-30-11.00 AM	Dr. Malla Reddy Professor Dept.of horticulture ANGRAU
		Visit to Premier Mushroom farms	11-30-5.00 AM	Dr.Kamini Devi Coordinator
III.	RELEVANT TECHNOLOGIES FOR FOOD BASED ENTERPRISES			
9	21-7-06 Friday	Innovative horticulture based Technologies relevant to food enterprises	9-30-11.00 AM	Dr.K. Aruna, Professor & Unit Coordinator, AICRP
		By-product utilization and food enterprises	11-30-1.00 AM	Dr.V.Vijayalakshmi Associate Professor ANGARU
		Extrusion technology for food enterprises	2.00-.00-3.30 PM	Dr. Rajyalakshmi Professor & Course Director CAS,ANGRAU

10	22-7-06 Saturday	Opportunities for Soya based food enterprises	9-30-11.00 AM	Dr.K.Krishnakumari Professor, ANGRAU
		New commercial products from cereals	11-30-1.00 PM	Mr.S.K.Sood Food Technologist
		Visit to canning Unit	2.00-5-00 PM	Coordinators
11	24-7-06 Monday	Visit to Allana's integrated food processing unit, Zaheerabad	9.30-5.00 PM	Course Coordinators
IV	FUTURE OPPORTUNITIES AND CHALLENGES			
12	25-7-06 Tuesday	WTO implications on export of agri based food products	9.30-11.00 AM	G.P.Reddy NAARM
		Food enterprises -meeting consumer needs	11.30-1.00 AM	Dr.Anurag Chaturvedi Professor, PHT(Hort)
		Food safety and standards relevant to food enterprises	2.00-3.30 PM	Dr.S.Shobha Associate Professor ANGRAU
13	26-7-06 Wednesday	Women empowerment through food entrepreneurship adoption – case studies	9.30-11.00 AM	Dr. Rani, Director , Women Empowerment Cell, NISIET
		Personalized nutrition- challenge for food industries	11.30-1.00 AM	Dr.S.Sumathi Pofessor, ANGRAU
		Scope of herbal products for food enterprises	2.00-3.30 PM	Mr.K.Narasimha Reddy Director, Swami Ramananda Tirtha Res.Institute, Begumpet, Hyd
V	RELATED TOPICS			
14	27-7-06 Thursday	Role of packaging in food enterprises	9-30-11.00 AM	Mr. B.K. Karna Indian packaging Institute, Hyderabad
		Poverty alleviation through rural enterprises	11-30-1.00 AM	Dr.K.Umamaheswari Associate professor ANGRAU

		Usefulness of communication channels in transfer of technologies	2-.00-3.00 PM	Dr.Pochhaiah , Principal EEI
15	28-7-06 Friday	Schemes of APEDA	9-30-11.00 AM	Mr. T.Sudhakar, AGM,APEDA
		Schemes of State Finance Corporation	11-30-1.00 AM	Mr.M.V.Ramana Prasad AFSFC,Hyderabad
		Role of NISIET in entrepreneurship development	2-.00-3.30 PM	Mrs.Subhasini Reddy, NISIET
16	29-7-06 Saturday	Project profiles for food enterprises	9-30-1.00 PM	Mr.Chandra Mouly, NISIET
		Visit to AP Foods, Nacharam	2-5.00 PM	Dr.N.Lakshmi Devi Associate professor ANGRAU
VI	PROJECT PROFILES & PRESENTATION			
17	31-7-06	Preparation of project profiles by the participants	9-30-1.00 AM	Participants
18	1.8.06 Tuesday	Post evaluation	9-30-11.00 AM	Coordinators
		Valedictory function	11-30-1.00 AM	

List of Projects:

- Project Profile on Spice Processing
- Project profile on Basmati Rice Milling Industry

IMPLEMENTATION OF THE PROGRAMME

The training programme commenced on 12th July 2006 with registration followed by pre-evaluation of knowledge of participants. The first session after registration was micro lab where in the participants were given an opportunity to de-freeze and get acquainted with each other. The technical sessions in the first theme of entrepreneurship development commenced with an overview of entrepreneurship development followed by composition and process of EDP. Several other topics such as capacity building and qualities of entrepreneurs were dealt under this theme. Each session was followed by active interaction by the participants.

Other themes such as Interface between agriculture and food enterprises, relevant technologies for food enterprises, future opportunities and challenges for the food industry etc were handled by eminent scientists and people proficient in their field. Many consultants were also included as resource persons in the programme.

Several field visits were included in the schedule to give first hand information to the participants regarding establishment, management, marketing and other relevant information on successful food enterprises such as bread industry, mushroom industry, extrusion unit, canning unit, integrated food processing unit etc. The selection of industries for the field visits were very much appreciated by the participants.

Session on planning and presentation of project proposals for setting up of all/ medium Food enterprise was also included. Each session was evaluated by the participants for its relevance, adequacy of content, interaction etc.

KNOWLEDGE PROFILE OF PARTICIPANTS

Participants knowledge regarding various concepts of entrepreneurship development and food enterprises was evaluated using a schedule to test their initial knowledge and knowledge gained during the programme. The results of the tests are given in Table 1 and Fig. 1.

Table 1 : Percentage gain in knowledge of participants before and after training(n = 10)

Scores	< 20	20-40	40-60	60-80	> 80
Before	20	45	35	-	-
After	-	-	15	25	60

COURSE EVALUATION BY PARTICIPANTS

The training input was evaluated by the participants through a structured proforma (Appendix III). Each session / topic was assessed in terms of :

- Relevancy for application.
- Adequacy of the information.
- Use of appropriate AV aids
- Information transfer

In addition to this, participants were asked to give overall rating of the lectures as Fair, Good and Excellent. Analysis of data revealed that participants felt that a majority (95 %) of the sessions were relevant for application, had vast content coverage and delivery of the content was good. Among the sessions, 41% were rated as excellent, 54 % as good and only 5 % as fair. Group discussions and interactions after each session were felt to be satisfactory and fruitful.

VALEDICTORY FUNCTION

Valedictory function of the training programme was arranged on 1st August 2006 with Prof. R.Bhasker Rao, Chairman, Uttam Biscuits Pvt. Ltd as the chief guest he has a distinguished career and is specialized in baking technology in U.K and Westren Europe and recipient of several awards in food and allied areas.

Dr.Vijaya khader , Dean faculty of Home Science has presided over the function .Initially Dr.P.Rajylakshmi Prof & Head and Director, Centre of Advanced Studies welcomed the gathering and presented the report on the activities of the centre.

Dr.T.V.Hymavathi, Course Coordinator presented a brief report of the training programme on 'Food Enterprises - opportunities and challenges.' The participants expressed their views about the content and conduct of the programme.

The chief guest of the function, in his message highlighted the importance of this type of training, as food enterprises have great potential in the present day context. The demand for processed foods is increasing and there are vast opportunities for export of agro based processed foods and India is a major player in this field. He emphasized that the participants of the programme should act as catalysts in helping the community in setting up viable food enterprises as income generating units and contribute to the nation's GDP.

On this occasion a book let on Farm & Home Technologies for quality level was released by the chief guest. He also distributed course completion certificates, training manuals and CDs of resource material to the participants.

Dr.Vijaya khader, in her presidential address, appreciated the coordinators in selecting the theme of the training programme and said that the participants should in turn serve the community by motivating and guiding future entrepreneurs in establishment of need based enterprises.

Dr. Kamini Devi, Course Coordinator of the programme proposed the vote of thanks.



REGISTRATION



PRE-EVALUATION



Release of Farm and Home Technologies



Distribution of Certificates, Training manual and CDs

**XVII TRAINING PROGRAMME ON
“NUTRITION AND AGRICULTURE INTERFACE – NEWER
PERSPECTIVES ON VALUE ADDITION AND HEALTH”
23-01-2007 TO 12-02-2007.**

Agriculture has always been a core sector of Indian economy and about 30 percent of our country's GDP is contributed by this sector. 20 percent of total exports earning of the country are also accounted for by agricultural commodities. Two-thirds of our workforce is employed in agriculture and 70 percent of the population is dependent on agriculture for their livelihood.

Thanks to the green revolution, per capita availability of food grains has increased and with more than 200 million tonnes of food grains, the country has achieved basic food security. However, from the point of view of human nutrition, particularly in rural areas where production and consumption are directly linked, some disturbances are observed in the current Agricultural Production Scenario. The production of coarse grains (millets) and pulses declined or remained stagnant. The decline in production of coarse grains and pulses has affected food security of the poor qualitatively as these grains have relatively higher nutritive value compared to rice. Nutritional security thus goes beyond food security. To ensure nutritional security, increased availability of diverse types of foods is very much essential. Therefore, the ultimate role of the agricultural sector should be seen as producing livelihood and improving nutrition, by combined processes of production, processing and marketing of agricultural products but not simply by producing crops alone.

Nutrition concerns in agriculture also include promotion of production, distribution and consumption of traditional or under utilized food crops. This requires selection and breeding of improved plant varieties that are high yielding, pest and disease resistant and nutritious. In addition, supportive research and technological innovations in the areas of processing and preparation requires to be emphasized. Currently Bio-technology has become a powerful tool for improving the yields & nutritional quality of crops. Nutritional research should also emphasize on indigenous food, nutraceuticals, diet formulations, new product development, food safety, quality standards, etc., Prevention of post harvest losses has emerged as a critical element in this context and hence nutrition and agricultural scientists should focus on value-addition and processing which will benefit small scale producers and entrepreneurs.

In recent years, dietary supplements, and healthier food alternatives including functional foods have been promoted to improve health and nutritional well-being and are also beneficial against diet related chronic diseases. Hence, investing in nutrition makes good economic sense because it reduces health care cost, and the burden of non communicable diseases, improves productivity and economic growth; which promote education, intellectual capacity, and social development.

In view of the above, it is the need the of the day to appraise the teachers of SAUs on importance of Nutrition and Agriculture Interface and its relevance on value addition and health. A comprehensive training programme therefore was planned with the following objectives.

- ☞ To appraise the teachers of newer dimensions emerging in the areas of value addition in relation to health.
- ☞ To enlighten the importance of emerging food processing technologies with special emphasis on micronutrients.
- ☞ To emphasize the strategies on diversification of agriculture for human nutrition.
- ☞ Role of SAUs in R&D activities for promotion of quantitative and qualitative production of food crops.

Training Course Content

The course content was planned and dealt under the five main headings as mentioned below :

- I. Food and Agriculture Scenario
- II. Overview of Nutrition
- III. Interface between Agriculture and Nutrition
- IV. Technological approaches for Food and Nutrition security.
- V. Capacity building in the area of Nutrition and Agriculture.

Course Director : **Dr. P. Rajyalakshmi**, Professor & Head

Course Coordinators: **Dr. M. Usha Rani**, Professor
Dr. N. Lakshmi Devi, Associate Professor
Dr. K. Uma Devi, Associate Professor

LIST OF PARTICIPANTS & STAFF



S. No.	Name & Designation	Address
1.	Dr. I.N. Patel Asst. Professor	Aspee College of Home Science S.D. Agricultural University Saradarkrushinagar – 385 506 North Gujarat
2.	Dr. Vinetha Singh Asst. Professor	C.S.A. Agricultural University Kanpur
3.	Ms. Rashmi Singh Asst. Professor	C.S.A. Agricultural University Kanpur
4.	Dr. Mamoni Das Extension Specialist	Directorate of Extension Education Assam Agricultural University Jorhat – 785 013
5.	Dr. M.B. Kapopara Asst. Extn. Educationist	Junagadh Agricultural University Junagadh – 362 001 (Gujarath)
6.	Dr. K. Uma Maheswari Associate Professor	Department of Foods and Nutrition Post Graduate and Research Centre ANGR Agricultural University Rajendranagar, Hyderabad – 500 030
7.	Dr. M.C. Patnaik Sr.Scientist	Agricultural Research Institute ANGR Agricultural University
8.	Dr. M.S. Chaitanya Kumari Assistant Professor	Department of Extension College of Home Science ANGR Agricultural University Saifabad, Hyderabad.

9.	Dr. M. Prasuna SMS (HSc.)	Krishi Vigyan Kendra Rasthakuntabai ANGR Agricultural University Vijayanagaram district
10.	Dr. Bhagyalakshmi SMS (H.Sc.)	Krishi Vigyan Kendra Rasthakuntabai ANGR Agricultural University Vijayanagaram district
11.	Dr. S. Suchiritha Devi Scientist (HSc.)	DAATT Centre Chittoor ANGR Agricultural University
12.	Miss. T. Supraja Scientist	DAATT Centre Guntur ANGR Agricultural University

HOST FACULTY

Course Director

Dr. P. Rajyalakshmi
Professor – cum – Director
Centre of Advanced Studies

Course Coordinators

Dr. M. Usha Rani
Professor

Dr. N. Lakshmi Devi
Associate Professor

Dr. K. Uma Devi
Associate Professor

Staff – Department of Foods and Nutrition

Dr. P. Rajyalakshmi	Professor
Dr. S. Sumathi	Professor
Dr. K. Aruna	Professor
Dr. M. Usha Rani	Professor
Dr. Anurag Chaturvedi	Professor
Dr. K. Krishna Kumari	Professor
Dr. Kamini Devi	Associate Professor
Dr. P. Yashoda Devi	Associate Professor
Dr. K. Umamaheswari	Associate Professor
Dr. M. Manorama	Associate Professor
Dr. V. Vijaya Lakshmi	Associate Professor
Dr. N. Lakshmi Devi	Associate Professor
Dr. S. Shobha	Associate Professor
Dr. K. Uma Devi	Associate Professor
Dr. T.V. Hymavathi	Associate Professor

GUEST FACULTY

Faculty of Agriculture & Home Science, ANGRAU

Dr. M.V. Shanta Ram	Dean P.G. Studies (Retd.)
Dr. A. Padma Raju	Director of Research (Retd.)
Dr. Vijaya Khader	Dean, Faculty of Home Science (Retd.)
Dr. G. Sarojini	Professor, Food and Nutrition (Retd.)
Dr. M. Devender Reddy	Professor and Head, Water Technology Centre
Dr. Subash Reddy	Professor & Head, Agricultural Microbiology
Dr. Vishnuvardhan Reddy	Sr. Scientist, Herbal Garden

Faculty of Veterinary Sciences, SVVU

Dr. M.V. Subba Rao	Dean, Faculty of Veterinary Science (Retd.)
Dr. K. Kondal Reddy	Associate Professor, Department of LPT

National Academy of Agricultural Research Management

Dr. S.K. Samantha	Joint Director (Trg.)
Dr. Bala Guru	Head, ARSMP Division
Dr. Hanumantha Rao	Principal Scientist
Dr. Rama Rao	Head, Information and Communication Management Division
Dr. Kalpana Sastry	Principal Scientist

National Institute of Nutrition

Dr. B. Sasikaran	Director
Dr. B. Sivakumar	Director (Retd.)
G.N.V. Brahmam	Dy. Director
Dr. A. Lakshmaiah	Assistant Director
Dr. Mallikarjuna Rao	Research Officer
Dr. Amulya	Senior Research Officer

Central Research Institute for Dryland Agriculture

Dr. Sushil Kumar Yadav	Senior Scientist
Ms. A. Samrajyam	Subject Matter Specialist

CFTRI (Regional Centre)

Dr. Sood	Food Technologist (Retd.)
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Indian Institute of Packaging

Dr. B.K. Karna	Dy. Director
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Directorate of Oilseeds Research

Dr. Nagaraj	Principal Scientist (Retd.)
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**XVII Training Programme of CAS in Foods and Nutrition on
“Nutrition and Agriculture Interface – Newer Perspectives on
Value Addition & Health”
23-01-2007 to 12-02-2007**

PROGRAMME SCHEDULE

S. No.	Date	Time	Topic	Resource Person
1.	23-1-2007 Tuesday	10.00 am – 11.00 am	Registration	Co-ordinators & Mrs. Shakuntala
		11.30 pm – 12.30 pm	Pre-evaluation	Dr. M. Usha Rani Dr. N. Lakshmi Devi Dr. K. Uma Devi (Co-ordinators)
		2.00 pm – 3.30 pm	Orientation to the Centre of Advanced Studies and campus visit	Co-ordinators)
2.	24-1-2007 Wednesday	9-45 am – 11.00 am	Overview of Nutrition and Agriculture Interface to Value Addition & Health – A new perspective	Dr. R.K. Samantha NAARM
		11.30 am – 1.00 pm	Advances in Farming Systems for Increased crop Production Water Management for Increased Crop Production	Dr. M. Devender Reddy WTC, ANGRAU -do-
		2.00 pm – 3.30 pm	Trends in Food Production, availability and food balance in India and in the world.	Dr. Bala Guru NAARM
3.	25-1-07 Thursday	9.30 am – 11.00 am	Post harvest technologies for commercialization of Horticultural Crops	Dr. Anurag chaturvedi
		11.30 am – 1.00 pm	Role of small scale enterprises in Value Addition for Agro – Horticultural Produce	Dr. G. Sarojini
		2.00 pm – 3.30 pm	Foods of future	Prof. Surendra Kumar Sood
4	27-1-07 Saturday	Visit to Deccan Developmental Society, Zaheerabad		(Co-ordinators)

S. No.	Date	Time	Topic	Resource Person
5	29-1-2007 Monday	9.30 am – 11.00 am	Nutritional status of the communities in the Rural Areas-Current Scenario	Dr, G.N.V .Bramham, NIN
		11.30 am – 1.00 pm	National Nutrition Monitoring Bureau (NNMB)	Dr.Laxmaiah, NIN
		2.00 pm – 3.30 pm	Nutritional Nutrition policy – Nutrition Surveillance System	Dr. Mallikarjuna Rao,NIN
6	31-1-07 Wednesday	9.30 am – 11.00 am	Recent advances in food packaging and health concerns	Mr. Karna, NIP
		11.30 am – 1.00 pm	Nutritional quality of crops in relation to soil composition	Dr. S. Sumathi, ANGRAU
		2.00 pm – 3.30 pm	National Agricultural Policy	Dr. Hanumanth Rao , NAARM
7	1-2-07 Thursday	9.30 am – 11.00 am	Challenges in micronutrient deficiency	Dr. Shiva Kumar Former Director, NIN
		11.30 am – 1.00 pm	Visit to NIN	
		2.00 pm – 3.30 pm	G.M. foods and Health implications	Dr. Sasikaran, Director, NIN
8	2-2-07 Friday	9.30 am – 11.00 am	Promotion & value addition of herbs & medicinal plants	Dr. Vishnuvardhan Reddy, ANGRAU
		11.30 am – 1.00 pm	Intellectual property rights in Indian Agriculture	Dr. Kalpana Sastry NAARM
		2.00 am – 3.30 pm	Value Chains in Food and Nutrition	Dr. Rama Rao NAARM
9	3-2-07 Saturday	9.30 am – 11.00 am	Developments in processing of foods for value addition	Dr. Vijaya khader Former Dean of Home Science, ANGRAU
		11.30 am – 1.00 pm	Technology Intervention to value added products with minor millets.	Dr. Kamini devi Associate Professor College of Home Science , Hyderabad
		1.30 pm – 2.30 pm	Role of need based research and developments in Agricultural Institutes	Dr. Padma Raju Former Director of Research
10	5-2-07 Monday			
		9.30 am – 1.00 am	Visit to CRIDA	Coordinators

S. No.	Date	Time	Topic	Resource Person
		2.00 pm – 4-30 pm	Technology interventions for value addition of millets and legumes	Dr. S. Shoba, ANGRAU
11	6-2-07 Tuesday	9.30 am – 11.00 am	Phytochemicals in Health & Disease	Dr. T.V. Hymavathi PGRC
		11.30 am – 1.00 pm	Risk Analysis: A decision support tool in food safety	Dr. M.V. Subba Rao Former PG Dean, ANGRAU
		2.00 pm – 3.30 pm	Horticultural interventions in prevention of micro-nutrient deficiencies	Dr. Aruna, Unit Coordinator AICRP-HSc
12	7-2-07 Wednesday	9.30 am – 11.00 am	Value Addition to unconventional foods & their promotion	Dr. P. Rajyalakshmi Director, CAS
		11.30 am – 1.00 pm	Value addition to perishables with reference to fruits & vegetables	Dr. V. Vijayalakshmi ANGRAU
		2.00 pm – 3.30 pm	Oil seeds - Quality and utility	Dr. Nagaraj D.O.R
13	8-2-07 Thursday	9.30 am – 11.00 am	Bio-Technology – a boon to improve Nutrition	Dr. Manorama Dept., of Biotechnology
		11.30 am – 1.00 pm	Microbial bioremediation and food safety	Dr. Subash Reddy, Department of Agri. Microbiology, ANGRAU
		2.00 pm – 3.00 pm	Pro and prebiotics in Human Health	Dr. Kondal Reddy, Assoc.Prof., Dept of LPT
		3.00 pm 4-00 pm	Functional foods in Health promotion	Dr. N. Lakshmi Devi PGRC
14	9-2-07 Friday	9.30 am – 11.00 am	Utilization of agro by products for value addition	Dr. K. Uma Maheswari ANGRAU
		11.30 am – 1.00 pm	Food and Nutrition security at House hold and National level	Dr. P. Yashoda Devi ANGRAU
		2.00 pm – 3.30 pm	Agriculture Research & Extension & Food and Nutrition security – An Indian Perspective	Dr. Shanta Ram Former Dean of P.G. Studies ANGRAU
15	10-2-07 Saturday	9.30 am – 11.00 am	Training needs of Women Entrepreneurs in Food based enterprises	Dr M. Usha Rani ,PGRC
		11.30 a m – 1.00 pm	Research Projects – Group work – proposals .	Participants
		2.00 pm – 4.30 pm	Group presentations-Research proposals as worked in Groups .	Participants
16	12-2-07 Monday	9.30 am – 1.00 pm	Valedictory	

Note: Tea break – 11.00 am – 11-30 am

Lunch break – 1.00 pm – 2.00 pm

Implementation of the Programme

The program was commenced on 23rd January 2007. The first agenda was registration of participants followed by introduction of staff, coordinators and participants.

Informal and ice breaking session was arranged followed by introduction to build up rapport. The coordinators oriented the participants about the genesis of the programme, objectives and expectations or outcome of the programme. The content, resource persons and the purpose behind choosing each topic and the sequence was also explained for better understanding of the subject by the participants.

On day 1 after the orientation, campus visit was organized and they were taken to Central Library, Computer Centre, Agricultural College, Ruska Lab in the Acharya N.G. Ranga Agricultural University campus.

On 26th January, all participants attended the flag hoisting function at College of Home Science and also visited the 'Horticulture Show' organized by the A.P. State Government at Necklace Road, Hyderabad.

The regular classroom sessions were scheduled from 9.00 A.M. to 4.00 P.M. every day and field visits were scheduled from 8.00 A.M. to 6.00 P.M.

The teaching methodologies were mainly lecture cum discussions and the resource persons handled the sessions with support of LCD projector and other A.V. equipment.

Research Projects planned (as group assignment) : Participants in three groups were assigned to plan Research projects based on what they have learnt starting from day 1 onwards. These projects were presented at the end of the training programme and are fine tuned by the staff, coordinators and participants which are given below.

- Development of value added bakery products.
- Standardization of traditional foods using soyabean.
- Improvement in micronutrient (zinc and iron) content of selected vegetables.

Pre and Post Evaluation

As per the ICAR guide lines, participants were evaluated on the subject related to the course before and after the training programme. For this purpose a questionnaire with objective type of questions was used and it was assessed that the knowledge level was 45 % initially & increased 85 % by the end of the programme (Table 1 and Fig. 1).

Table 1 : Pre and post test scores in percentages

Scores	< 20	20-40	40-60	60-80	> 80
Initial	-	-	50	42	8
Final	-	-	-	25	75

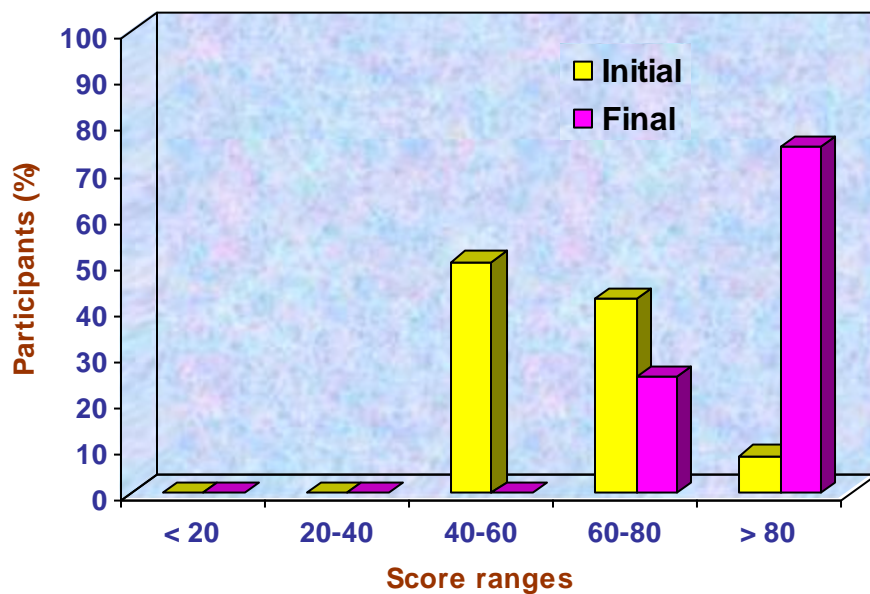


Fig. 1 : Pre and post Evaluation results of participants

Evaluation of Sessions

Each session was evaluated by the participants in terms of the relevancy, clarity, adequacy of information, whether new information was given, scope for discussions etc. In this context, participants were asked to give overall rating of the lecture ranging from poor to excellent. The overall rating of the lectures based on the scores received ranged between 6-10.

VALEDICTORY FUNCTION

The valedictory function of the 21 days training programme on “**Nutrition and Agriculture Interface – Newer Perspectives on Value Addition and Health**” was organized on 12th February 2007. Dr. Mahadev, Director, FAPSIA, Hyderabad was the chief guest of the occasion. In the valedictory address, he emphasized the importance of net working and cluster approach for agricultural management system at the gross root level for upliftment of farmers. Dr. P. Rajyalakshmi, Professor and Director, Centre of Advanced Studies welcomed the gathering and presented the report on activities of the centre. Dr. M. Pochaiiah, Principal, Extension Education Institute, presided over the function. In his presidential remarks he emphasized the need for awareness creation to the rural masses especially by Home Science faculty. Dr. M. Usha Rani, Course – Coordinator, presented the detailed report of the programme. Dr. K. Uma Devi course co-ordinator briefed about the evaluation of the program by the participants and Dr. N. Lakshmi Devi, course coordinator proposed vote of thanks.



REGISTRATION



PRE-EVALUATION



Participants receiving certificates and course manuals from the Chief Guest

OBJECTIVE II

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

UG PROGRAMME: Rural Home Science Work Experience Programme:

RHWEP was conducted from January 4th 2007 to February 14th 2007 at Pedda Ummenathae village, Pudur mandal, Rangareddy district. A total of 16 students were placed in the village. They were divided into five groups for working on the following projects.

1. Assessment of Nutritional status of vulnerable groups
2. Nutrition education for women.
3. Preservation methods using locally available foods
4. Morbidity and mortality pattern of selected villages
5. Establishment of Diet and Nutrition counseling centre

Assessment of nutritional status by anthropometry for school children showed that 90% of children were underweight with BMI between 11 – 17. Only 5 – 10% were normal. Diet survey revealed that the diets of pregnant, lactating and adolescent girls were deficient in iron, folic acid, energy & fats. There was almost no consumption of fruits & vegetables.

The students educated the villagers on healthy diets for various age groups, health and sanitation, management of underweight and also demonstrated the preparation of nutritious recipes like chikki, missi roti etc., Diets for various groups were prepared and displayed for the benefit of villagers.

The morbidity and mortality pattern for the last five years was collected and it was found that most of the villagers suffered from ulcer which is because of their irregular dietary habits and consumption of more chillies.

The students established a Diet and Nutrition counseling center in the village and also educated the villagers by conducting exhibitions on diet preparation for management of fever, underweight, cancer, diabetes, Diarrhea & constipation & kidney disorders etc., In the diet counseling center, the students assessed the nutritional status of patients visiting the center and counseled them for management of hypertension, ulcer, diarrhea, constipation etc.,

The women in the village were given demonstrations on preservation of vegetables in the form of pickles like red chilli, brinjal, ginger and drumstick, preparation of dehydrated products using sago, watermelon rind, powders like garam masala powder, rasam powder, sambar powder etc and chillie sauce, guava cheese, & lemon squash etc.,

The impact of RHWEP on villagers was excellent as they have expressed during the valedictory session about the benefits of learning various preservation methods, acquiring knowledge on basics of nutrition and the preparation of various nutritious recipes helped them & improve their health to nutritional status.



Nutrition education to School children



Diet Exhibition

UG ACADEMIC:

As part of curriculum revision, both theory & practical component of few courses namely

FDNT 211 - Fundamentals of Normal & Therapeutic Nutrition 3 (2+1) was modified and renamed as “Nutrition through life cycle”. **FDNT 221** –“Principles of food preservation (1+2) was modified and renamed as “Food storage & preservation” 3(2+1). **FDNT 321** – Food chemistry (2+1) was replaced with **FDNT 321** Nutrition for High risk mothers and children. **FDNT 412** – Clinical Nutrition (2+2) was revised to 2+1 & **FDNT 325** (1+2) - Diet Therapy I has been modified & revised as 2 +1 and got the approval in the academic council through Proc.No. 1584/Acad/A1/2005 dated 12-9-2005. These revised courses are now being offered to the third year students of Nutrition & Dietetics specialization. 100% placement has been achieved to all the students of 4 years Home Science UG Programme with Nutrition & Dietetics as specialization.

PRACTICAL MANUALS DEVELOPED - UG PROGRAMME

Name	UG / PG	Course No.	Title
Dr. V. Vijayalakshmi	UG	FDNT 311	Human Physiology

PG ACADEMIC:

Initiation of a one year PG Diploma programme in Food analysis & quality control was approved by the Academic council through Proc.No. 2070/PG/2006; dt. 14-11-2006.

ALLOCATION OF SEATS UNDER PG PROGRAMME FOR H.Sc 2006 - 07.

Name of the Programme	Seats allotted	No. of admissions	
		Open	ICAR
Food Science & Technology	20	1	--
PG Diploma in Nutritional Therapy	10	3	--
Ph.D	2	1	--

OBJECTIVE III

To support the Government in training the personnel by disseminating nutrition information to personnel of different sectors.

TRAINING PROGRAMME AND CERTIFICATE COURSES CONDUCTED

To encourage self employment and income generating activities among grass root level workers, farm women and house wives, training programmes on Foods and Nutrition and skill oriented certificate courses were organized by Centre of Advanced Studies in Foods and Nutrition

Table:- 1. Training Programmes organized :

S. No.	Coordinators	Name of the programme	Duration		No. of participants
			From	To	
1	Dr. Kamini devi Ms. Kanwaljit Kaur Dr. S. Shobha	1. Sorghum Dehulling technology 2. Sorghum snack preparation	15-5-2006	27-5-2006	22
2	Dr. S. Shobha Dr. V. Vijayalakshmi	Dietary Management of Diabetes	6-6-2006	10-6-2006	4
3	Dr. K. Uma maheshwari Dr. M. Usha Rani Dr. K.Uma Devi	Training programme on low cost nutritious recipes to the functionaries of B.C. hostels.	8-6-2006	9-6-2006	120
4	Dr. Kamini devi	Food Enterprise-challenges and opportunities	12-7-2006	1-8-2006	11
5	Dr. V. Vijayalakshmi	Preparation of Tomato products Training to women of Srirangapur	27-10-2006	28-10-2006	20
6	Dr. V. Vijayalakshmi	Training to women of Parathapur	7-11-2006	8-11-2006	20
7	Dr. M. Usha Rani	Workshop on Women Entrepreneurship		17-11-2006	200
8	Dr. V. Vijayalakshmi	Preparation of Tomato products Training to women of Chinnaelikacharla	21-11-2006	22-11-2006	20
9	Dr. V. Vijayalakshmi	Training to women of Ramachandrapur	19-12-2006	20-12-2006	20
10	Dr. V. Vijayalakshmi	Training to women of Wanaparthi	6-1-2007	7-1-2007	20
11	Dr. M. Usha Rani	Nutrition and Agricultural	23-1-2007	12-2-2007	12

	Dr. N. Lakshmi devi Dr. K. Uma Devi	Interface-Newer Perspectives on Value addition and Health			
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Staff as Resource Persons:

Staff are involved as resource persons in various training programmes / workshops organized by line departments and academic institutions located at off campus .

Table:- 2. Staff as Resource persons: (outside orgnisation):

Name	Title of the programme	Topic	Date	Organisa-tion /venue
Dr. K. Uma devi	Training to hostel cooks and welfare officers from all districts of A.P.	Good cooking practices. Importance of hygiene in food handling	9-6-2006	Model BC Hostel, Mahendra Hills
Dr. K. Uma devi	- do -	Cooking methods to prevent nutrient losses	25-9-2006	Model BC Hostel, Mahedra Hills
Dr. V.Vijayalakshmi Dr. S. Shobha	- do -	Clean and hygienic methods of handling food. Food and nutrient requirements of school children	26-9-2006	Model BC Hostel, Mahendra Hills
Dr. Kamini devi Dr. V.Vijayalakshmi	Training to hostel cooks and welfare officers	Clean and hygienic methods of handling food. Food and nutrient requirements of school children	28-9-2006	Model BC Hostel, Mahendra Hills
Dr. K. Uma devi	Training to Upper Primary School cooks in mid day meal programme	Use of jowar rawa in preparing three recipes suitable for mid day meals programme	18, 9-10-06	Sommladoddi Ananthapur
Ms. Kanwaljit Kaur	Training programme on kitchen gardening	Talk on Nutritive Value of Fruits & Vegetables	27-1-2007	Agri-horticultural Society, Public Garden
Dr. M. Usha Rani	OT Course on "Suchi-Ruchi"	Balanced Diets – Preparation of tasty foods	28-2-2007 14-3-2007 23-3-2007	Dr. MCR. HRD Institute of A.P

Table:- 3. Scientific articles published:

S. No.	Name	Title	Journal Name	Volume No.P.P.	Year
1	Kantha Kumari N Uma maheshwari K	Physiochemical and sensory quality of raisins prepared from two varieties of grapes by different drying methods	Jr. of Food Science and Technology	Vol. 4 No. 11 P.No. 177-181	2006
2	K.Uma maheshwari & Vijaya Khader	Adequacy of calorie intake in women and preschool children between 'Peak' and lean seasons in drought prone areas of Ananthapur district A.P.	Jr. of Food nutrition and dietetics	Vol. 3 No. 1 P.No. 18-22	2006
3	Hima Bindu T Jaganmohan Reddy K & Umamaheswari K	Impact Assessment of paper board effluent irrigation on quality of rice grain	Indian Jr. of Food nutrition and dietetics	Vol. 3 No. 1 P.No. 18-22	2006
4	K. Rajeshwari V.Vijayalakshmi	Body composition assessment by body stat analyzer (BSA) in subjects aged 9-12 years	Indian Pediatrics	Vol 433 Pp 1091-92	2006
5	P. Haritha and K. Uma Maheswari	Analysis of selected nutrients, anti nutritional microbial activity of Sicklenna seeds (cassia Tora. L)	Jr. of Food nutrition and dietetics	Vol. 4 No. 1 P.No. 20 -24	2007

OBJECTIVE IV:

To disseminate the nutrition information to personnel of line departments, research institutes, State Agricultural Universities etc.

To disseminate research highlights of various aspects of Nutrition to different sectors and its personnel, a quarterly issue of Foods and Nutrition News letter is brought out by Centre of Advanced Studies. During the report period three quarterly issues of Foods & Nutrition News Letters were brought out for circulation among the line departments and the organizations involved in nutrition related programmes and to disseminate nutrition information to personnel of different sectors.

Table :- 4. News Letters released during the year 2006 - 07

S.No.	Title	Month	Year	Volume	Number	Issue Editor
1	Nutrition Intervention Programmes		2006	2	2	Dr. P. Yashoda Devi
2	Sports Nutrition	September	2006	3	3	Dr. Kamini Devi
3	Processing of Fruits for value addition	Jan-Feb	2007	4	4	Dr. K. Uma Maheswari

Table:- 5. Training programmes/ seminars / workshops attended by staff:

S. No.	Name / Designation	Training programme/ seminar/workshop attended	Organisation/ venue	Period
1	Dr. S. Shobha Dr. Kamini devi	State coalition on sustained adequate intake of iodine	Govt. of A.P. & INICEF Jubilee Hall	29 th May 2006
2	Dr. K.Umamaheswari	Workshop on implementation of millets in BC Hostels	O/o. Commissioner of BC Welfare and Joint Director, BCW, Hyderabad	5 th & 6 th June, 2006
3	Dr. T.V. hymavathi	National workshop on Training needs Assessment for Learning and Capacity building under NAIP	NAARM, Rajendranagar	June 20-21 2006
4	Dr. V. Vijayalakshmi	Workshop on Adulteration Kit	Commn. Of Civil Supplies, Govt of A.P. at Jubilee hall	30 th June 2006
5	Dr. S. Shobha	Extrusion Technology	ASSOCOM at Hotel Taj Banjara	19 th & 20 th July 2006
6	Dr. K.Umamaheswari	National symposium on conservation of bio-diversity and application of biotechnology & presented paper on "Amylase rich malted foods" (ARMMS)	Layola College, Andhra University Vijayawada	11 th to 12 th August, 2006.
7	Dr. T.V. hymavathi	Training on Extrusion technology for food and feed	ASSOCHEM	19 – 20 August 2006
8	Dr. K.Umamaheswari	Attended guest lecture on "Functional Foods in clinical practice" by Dr. Ravinder Reddy, Care Hospital, Hyderabad	IDA A.P. Chapter	14th September 2006
9	Dr. V. Vijayalakshmi	Enzymes in Biscuit production	ASSOCOM IIHM, Hyd	22 nd & 23 rd Sept, 2006
10	Dr. M. Usha Rani	Seminar (1 day) on "Investing in Agriculture for Food Security	College of Home Science	16 th October 2006
11	Dr. K. Uma devi	Patent Procedures	WTO Cell,	6 – 9 Nov

			ANGRAU	2006
12	Dr. K.Umamaheswari	International seminar on Nutritional Evaluation of Foods	IDA A.P. Chapter Hyderabad at NIN	9 th November 2006
13	Dr. S. Shobha Dr. Kamini devi Dr. V. Vijayalakshmi	Heritage Foods: Opportunities and challenges Presented a Poster Presented a Poster	ICFOST at ANGRAU -do- -do-	16 – 17 th Nov 2006
14	Dr. K.Umamaheswari	International conference on Healthy childhood role of nutrition	Hyderabad	15 th December 2006
15	Dr. K. Uma devi	Conference on Healthy childhood for healthy adulthood	ILSI – India at Hotel Golconda	15 th December 2006
16	Dr. K.Umamaheswari	Scientific programme on Agricultural biotechnology-Food & Nutrition Security	NIN Scientists Association at NIN, Hyd	22 nd December 2006
17	Dr. K.Umamaheswari	Nutrition and Agricultural Interface- Newer Perspectives on Value addition and – Interface- Newer Perspectives	CAS, PGRC, Hyderabad	23 rd January 2007 to 12 th February 2007
18	Dr. S. Sumathi & Dr. Kamini devi	1.CME Programme on Food & Nutrition & Health – The frontier areas 2. 46 th Annual meeting of NAMS	NIN, Hyderabad	27 th to 29 th October, 2006.
19	Dr. T.V. hymavathi	Review meeting and planning for the project on Capacity building for risk analysis and modeling to promote trade	Jointly organized by Tuskegee university (USA) & ANGRAU Under AKI	1 st February 2007
20	Dr. K.Umamaheswari	National workshop on Micro level experiments in 'Food Security and presented a paper on Food security Vs insecurity indicators'	NIRD, Hyderabad	19 th to 20 th February 2007
21	Dr. T.V. hymavathi	Seminar on Advancing LC and LCMS technologies	Agilent Technologies	

Table:- 6. Popular articles published by staff:

S. No.	Name	Title	Magazine/ News paper/ News letter	Month / Year
1	Dr. Kamini devi Dr. K. Rajeshwari	Jonna Aadharitha parishramalu	Annadata	May, 2006
2	Dr. Kamini devi Dr. K. Rajeshwari	Dehuller may bring sorghum on to super market shelves	Hindu	May, 2006
3	Dr. K. Rajeshwari & Dr. V. Vijayalakshmi	Get a grasp of body composition	Hindu	July, 2006
4	Dr. V. Vijayalakshmi Dr. D. Sharada	Anemia vs athletic performance	Food and Nutrition News Vol. II, no.3	Sept, 2006
5	Dr. V. Vijayalakshmi Dr. M. Nagalakshmi	Iron supplementation vs athletic performance	Food and Nutrition News Vol. II, no.3	Sept, 2006
6	Dr. K. Umamaheswari	A miracle bean	Health Action	Oct, 2006
7	Dr. K. Umamaheswari	Eat Ragi-keep diseases away	Rythunestham	Nov, 2006
8	Dr. K. Umamaheswari	Nutritional tips during cancer treatment	Amrutham	Dec, 2006
9	Dr. K. Umamaheswari	Dietary Regimen for phynylketonuria	Health Action	Dec, 2006
10	Dr. K. Umamaheswari	Natural colours in Food	Rythunestham	2006
11	Dr. K. Umamaheswari	Rural Enterprises	Smruthi-CHSc magazine	2006
12	Dr. K. Umamaheswari	Six tips for health	Smruthi-CHSc magazine	2006
13	Dr. K. Umamaheswari	Utilization of byproducts from food industries	Rythunestham	2006
14	Dr. N. Lakshmi devi	Figs. As a functional food	College magazine	2006
15	Dr. N. Lakshmi devi	Nutrition facts for teens	College magazine	2006
16	Dr. K. Uma devi	Nutritious diet in summer season	Sukheebhava, Eenadu	
17	Dr. K. Umamaheswari	A disease of intelligence-Gout	Health Action	Jan, 2007
18	Dr. S. Shobha	Viluvaina poshakala cabbage	Rythunestham page 66	March, 2007
19	Dr. V. Vijayalakshmi	Draksha	Rythunestham page 55	March, 2007
20	Dr. V. Vijayalakshmi	Tomato utpathula tayari labhadayakame	Rythunestham page 55	March, 2007
21	Dr. V. Vijayalakshmi	Lycopene gurinchi telusukondi	Rythunestham	March,

Table:- 7. Radio talks broad casted in All India Radio, Hyderabad :

S. No.	Name/ Designation	Title	Date of Broadcast	Place / Venue
1	Dr. S. Shobha	Aarogya rakshanalo vruksha sambandhita padarthalu	6-4-2006	AIR, Hyderabad
2	Dr. K.Umamaheswari Professor	Rogalanu dari cherani raagalu	1-6-2006	AIR, Hyderabad
3	Dr. V. Vijayalakshmi	Importance of breast milk in infant nutrition	2-8-2006	AIR, Hyderabad
	Dr. S. Sumathi Professor	Thalli palu Pillalaku varam	3-8-2006	AIR, Hyderabad
4	Dr. V. Vijayalakshmi	Balinalaku Yetuvanti aaharam ivvali	28-11-2006	AIR, Hyderabad

Table:- 8. T.V. Programmes telecasted:

S.No.	Name/ Designation	Title	Date of Broadcast	Place / Venue
1	Dr. V. Vijayalakshmi	Child obesity and consequences	27-5-2006	E TV 2 Hyderabad
2	Dr. V. Vijayalakshmi	Water conservation techniques	10-3-2007	E TV 2 Hyderabad

Table:- 9. Extension activities:

Name	RAWEP	World Food Day	Village Adoption	Diabetes Day
Dr. V. Vijayalakshmi Dr. Kamini devi Dr. K. Uma devi Ms. Kanwaljit kaur Dr. S. Shobha	Pedda Ummatyhal, Podu mandal, Vikarabad dt. From Jan, 2007 to Feb, 2007	16th October 2006 Lecture and poster competition Participation by all staff	At Reddypalli village, RR district. Nutrition education programmes for rural women	14 th , November 2006 Exhibition, sale of diabetic foods, diet counseling Participation by all staff and

				students.
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Table:- 10. Visitors: to the centre:

S.No.	Name/Address of the visitor	Purpose	Date
1	Dr. Wendy Graham, Professor & Chair Dept., of Biological Engineering University of Florida, Gainesville.	To interact with staff on Research activities in the department	August,06
2	Dr. K. Ramesh Reddy, Graduate Research Professor & Chair, Soil and Water Science Dept, University of Florida, Gainesville	-do-	August,06
3	Dr. Sabine Grunwald, Asst.Prof, Soil and Water Science, University of Florida, Gainesville	-do-	August,06
4	Ms. Smith Natalia from IFPRI.	Interactions with staff of Foods & Nutrition on PDS	30-8-2006
5	Dr. Rani, Programme Coordinator of Women Studies Centre & A team of NISIET, Hyderabad	Exposure visit to interact with staff of PGRC	8-9-2006
6	Dr. S. Kanchana, Assoc.Professor, Dept of FN along with students of FN from CHSc & Res,Inst., Madurai.	Study visit	25-9-2006
7	Dr. Sajjid Alani, Asst.Professor, Dept of Grain Science and Industry visited along with Dr. Barry Michie (Kansas State University), Wenger Manufacturing representative	For establishing pilot extrusion center for Industrial Training Research Development & Commercialization	25-9-2006
8	8 th member delegation from Tuskegee University, USA	Reviewing and planning for the project on "Capacity Building for Risk Analysis and Modeling to Trade" which was proposed jointly under U.S India Agricultural Knowledge Initiative (AKI)	Feb, 2007

RESEARCH ACTIVITIES

Table :- 11. Research Projects in operation in the department:

S.No.	Project title	Investigators	Funding agency	Period / duration	Budget Sanctioned
1.	Promotion of perennial GLVs through peoples intervention	P. Rajyalakshmi (Principal Investigator) Ch. V.G. Reddy (Co-Investigator)	ICAR, New Delhi.	Mar, 2003 to May, 2006	11.97,504-00
2.	Effect of feeding malted food on the nutritional status of vulnerable groups	Dr. Vijaya Khader Principal Investigator Dr. K. Uma maheswari	DBT, New Delhi	Sept, 2004 to Oct, 2006	10,01,420-00
3.	"Biotechnology for Nutritional Improvement - Popularization of Sorghum Enterprises for Income Generation and Nutrition"	Dr. Kamini Devi, Assoc. Professor Dr. Shobha, Assoc. Professor. Ms. Kanwaljit Kaur, Asst Professor.	APNL Biotechno- logy Programme	Jan, 2005 to Dec, 2007	Rs. 36 lakhs.
4	Establishment of Quality Control lab for analysis and certification of products for export and domestic market	Dr. Anurag Chaturvedi Principal Investigator	MOPFI G.O.I	Nov. 2005 to Mar, 2010	3.78 crores
5	Studies on the use of Radiation Technology for Improving Shelf life of Commercially Grown Mango varieties and its Pulp in A.P	Dr. Anurag Chaturvedi Co-Principal Investigator	BRNS, DAE, G.O.I.	Feb, 2006 to Mar,2008	12.00 lakhs
6	Development of post harvest protocols for inland transport, quarantine treatment and cold storage for mango, banana and papaya	Dr. Anurag Chaturvedi Co-Principal Investigator	BRNS, DAE, G.O.I.	Feb, 2006 to Mar, 2008	15.00 lakhs

	using radiation technology.				
7	Establishment of Rural Enterprises for Tomato Products for Food & Nutritional security	Dr. V. Vijayalakshmi Principal Investigator	Dept of Biotechnology Delhi	July, 2006 to July, 2008	13.19 lakhs
8	“Feasibility of Introducing Jowar in MDM Programme” in three regions of Andhra Pradesh	Dr. N. Lakshmi devi Dr. M. Usha Rani Dr. K. Uma devi	Civil Supplies	Oct, 2006 to Jan, 2007	2,75,000-00

12. Awards / Achievements :

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13. No.of Ph.D completed

M.Sc (F & N) completed	-	Nil
M.Sc (FST) completed	-	1 No.
PG Diploma in Nutrition Therapy	-	4 Nos.
B.Sc (with Nutrition & Dietetics specialization completed	-	2 Nos.
	-	13 Nos.

14. Significant events taken place in the department:

- **World Food day** was organized (on 16th October, 2006) by Foods and Nutrition department at College of Home Science. Dr. Samantha, Director, NAARM was the chief guest who delivered lecture on “ Investing in Agriculture for Food Security”
- **Diabetic Day:** An exhibition on Diabetic Diets and diet counseling was arranged at College of Home Science on 14th November, 2006 which was visited by 150 people.
- **Exhibition :** Highlighting the technologies developed by Foods and Nutrition department, an exhibition was arranged at Auditorium, ANGRAU campus on 15th November, 2006 in connection with the visit of parliament standing committee members.
- **ICFOST 2006:** 18th Indian Convention of Food Scientists and Technologists was held on 16th – 17th November, 2006 in ANGRAU campus. Staff of Foods and Nutrition department were actively participated.

IV. BUDGET PROPOSALS FOR THE YEAR 2007 - 08.

S. No.	Particulars	Amount	Remarks
1.	Non-recurring Equipment		Justification follows
i.	Fax machine	20,000-00	Listed in separate sheet
ii.	LCD Multi - media projector (SANYO)	1,30,000-00	
iii.	Computer with accessories and printer	60,000-00	
iv.	Colour copier	2,75,000-00	
	Total Rs.	4,85,000-00	
2.	Training Programmes cost (2)	3,54,000-00	- do -
3.	Books & Journals	30,000-00	- do -
4.	TA / DA	30,000-00	- do -
5.	Staff salaries	4,00,000-00	- do -
6.	Recurring contingencies	1,50,000-00	- do -
7.	Maintenance & Repairs (including vehicle maintenance)	75,000-00	- do -
	GRAND TOTAL Rs.	15,24,000-00	

(Rupees Fifteen lakhs twenty four thousands only)

JUSTIFICATION FOR THE BUDGET REQUIREMENT

1. Equipment

- i. Fax machine:** It's requirement is necessary to communicate with the participants in urgency.
- ii. LCD Multi-media projector (SANYO):** LCD Projector was bought in 1998 and it has been extensively used for the training programmes. Presently it is not in good condition and requires replacement.
- iii. Computer with accessories and printer:** It has been extensively used & quite often, we are facing problems. Purchase of another computer with accessories and printer is required. An alternate piece will facilitate for smooth functioning of training programmes.
- iv. Colour copier:** The plane paper copier Modi Xerox 5216 is unserviceable & has to be condemned under buy back offer. Latest digital colour copier is required for the training programmes.

2. Training programmes Cost :

An amount of Rs. 3,54,000/- is proposed for two training programmes to be conducted during the year 2007-08

3. Books & Journals:

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

4. TA / DA

Due to inflation in the fare of Rail / Road / Air, a sum of Rs. 30,000/- per annum is proposed.

5. Staff salaries:

During the VIII 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 posts of Steno-cum-typist, AVA Asst- cum-Operator were sanctioned by the ICAR whereas the Attender post was sanctioned by the State Non-Plan. In view of considerable increase in Dearness Allowance, House Rent Allowance and other allowances of the staff Rs. 4,00,000/- is proposed.

6. Recurring contingencies:

Due to inflation of day-to-day consumables, chemicals, stationery, etc., an amount of Rs. 1.50 lakhs per annum is proposed.

7. Maintenance & Repairs:

In order to maintain the equipment purchased during the VIII and IX plan period and also the equipment to be purchased during the XI plan in a habitable condition, a sum of Rs. 75,000/- per annum is proposed. This includes vehicle maintenance also.

PROPOSALS FOR THE YEAR 2007 - 08
APPENDIX – II

WORK PLAN FOR CENTRE OF ADVANCED STUDIES
FOR THE YEAR 2007 - 08 FOR APPROVAL

Department of Foods & Nutrition
Post Graduate & Research Centre
Rajendranagar, Hyderabad - 500 030.

I. OBJECTIVES

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

II. OUTPUTS/PROGRAMMES TO BE IMPLEMENTED DURING THE XI 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 two Short Courses/Training programmes in priority areas of Foods & Nutrition as per the need.

Priority areas identified for Summer Institute Programme/Short Courses

- Sports Nutrition
- Food & Agribusiness Management
- New trends in Nutrition Research
- Food Economics – Newer Perspectives for sustainable Food & Nutrition security
- IEP Technologies for Food & Nutrition Security

B. ALLOCATION OF SEATS UNDER PG PROGRAMME

Provision of seats in M. Sc. and Ph. D. in Foods & Nutrition and Foods Science & Technology to outside State candidates selected through a common test conducted by ICAR.

C. RESEARCH

Research proposals for XI Five year plan

- i. Micronutrient (Iron, Zinc, Iodine, Vitamin A) mapping of the Population of Andhra Pradesh.
- ii. Assessment of micronutrient status of Andhra Pradesh population in relation to soil micronutrient levels.
- iii. Development of effective information, education and communication material to promote food based micronutrient interventions.
- iv. Documentation of results and enhancing dissemination of these results to other potential users (farmers, communities and policy makers).

Objective 2

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

Action Plan

M.Sc Programme curriculum was changed to suit the requirements of B.H.Sc 4 year degree programme students with 2 year specialization in Nutrition & Dietetics & the programme is named as M.Sc Nutrition & Dietetics. This revised programme is being offered from the academic year 2005 – 2006 onwards.

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, Radio and Press) for awareness creation.

Objective 4

To disseminate nutrition information to personnel of different sectors.

Action Plan

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

FORTH COMING FOODS & NUTRITION NEWS LETTERS

Title of the topic	Month of issue	Issue Editor
Fruits & vegetables – By product utilization	May, 2007	Mrs. Kanwaljit kaur Assoc. Professor
Nutritional status in relation to body composition	September, 2007	Dr. Vijayalakshmi Assoc. Professor
Nutritional status of women at different stages of life cycle	January, 2008	Dr. K. Uma devi Associate Professor

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 Post Graduate Education and Research in Foods & Nutrition in other State Agricultural Universities.

Conducting need based multi centric studies to provide feed back to the planners and policy makers.
