



# CAFT - H.Sc. NEWS LETTER

April 2017 - September 2017

## CENTER FOR ADVANCED FACULTY TRAINING (CAFT) HOME SCIENCE

In view of outstanding quality of work being carried out by the department of Foods & Nutrition, it was elevated to the status of Centre of Advanced Studies (CAS) by ICAR in 1994. It is first of its kind in Home Science in all the State Agricultural Universities (SAU) in India. The CAS headed by Professor-cum-Director was established to serve as a National Resource and Advanced Training Centre for faculty and staff of other SAUs in the field of Foods & Nutrition. ICAR elevated the status of Centre of Advanced Studies–Foods & Nutrition to Centre of Advanced Faculty Training in Home Science (CAFT-H.Sc) in May, 2010.



The CAFT–H.Sc Center started in 2010 in Hyderabad with the following objectives.

### Objectives

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

### TRAINING PROGRAMMES

To serve as a national resource and Advanced training center for faculty in the field of Home Science in State Agricultural Universities every year 21 day training programmes are being conducted under the Centre. So far 29 training programmes were conducted.

### CAFT – H. Sc News Letters

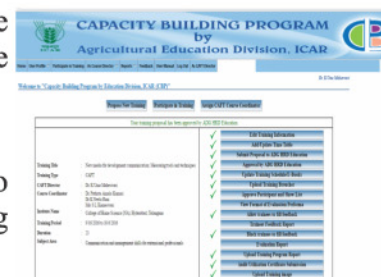
To disseminate highlights of various activities of CAFT- Home Science centers activities, two CAFT – H.Sc News letters are published every year A total of 52 news letters are published so far.

### CBPICAR - HOME PAGE

CAFT-H.Sc Web page is regularly updated from time to time to disseminate new and arising events and outcome of the training events.

### Web portal ([www.cafthsc.com](http://www.cafthsc.com))

Web portal is a new doorway to disseminate CAFT-H.Sc. activities from inception to till date. It provides an opportunity to create awareness on current events, significant events, new training programmes and activities. This is linked to PJTSAU portal for public access . CAFT –H.Sc data from inception to till date is generated in soft copy for building the portal.



**Issue No. 13**  
**April - September, 2017**  
**News in Brief**

#### RESEARCH

- Faculty Research
- PG Student Research
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#### MEMORABLE EVENTS

- Exhibition on biodegradable eco paints for idols
- Inauguration of indoor auditorium of College of Home Science, Hyderabad
- College day celebrations
- World photography day celebrations
- Foundation day celebrations of PJTSAU
- QRT monitoring team visit to AICRP-H.Sc
- Academic assessment for Registered Dietician Interns
- Teacher’s Day Celebrations
- National Nutritional week (1st - 7th Sept 2017) celebrations

#### AWARDS AND ACHIEVEMENTS

- Students’ Achievements
- National Public Relations award
- Best College and best Researcher awards

#### On going Activity

**Training programme on Student READY programme in Home Science - Modalities and Guidelines for Programme implementations from 1st to 21st November 2017**

## RESEARCH - FACULTY RESEARCH

### Large scale production of bio degradable eco paints for idol painting

**Principal Investigator: Dr. R. Geetha Reddy, Professor, HECM department, C.H.Sc, Hyderabad**

**Co- Principal Investigator: Ms. S. Sirisha Deepthi, Assistant Professor, APTX department C.H.Sc, Hyderabad.**

The project was sponsored by Telangana State Pollution Control Board (TSPCB) with a budget outlay of Rs. 57.75 lakhs. Nine shades of paints i.e. yellow, pink, orange, blue, grey, violet, green, brown and black were produced. Five students of B.Sc. (Hons) Home Science from the department of APTX were placed in the production unit as part of skill training in the Experiential Learning Programme for enterprise development and were involved in all stages of production.



Hon'ble Vice Chancellor Dr. V Praveen Rao offering Eco- Ganesh to the Governor Hon'ble Sri E.S. L.Narsimhan



Painting of Lord Ganesh Idols with Eco-dyes

### Parenting Experience: A life cycle analysis of rural and urban families

**Principal Investigator: Dr. K. Mayuri, Emeritus Scientist, Department of HDFS, C H Sc, Hyderabad**

The project had a sample of 680 parents, and 300 children of 9 age groups. The tools included independent variables such as parenting style, self efficacy, sense of personal control, social approval motive, sense of wellbeing, spousal support, grand parent support and family values. The data was gathered from Hyderabad-Secunderabad for urban sample and from 23 villages in 3 mandals from Chittoor district, AP for rural sample. The major findings indicated the following trends a) There were age differences in mean values of independent variables, self efficacy, sense of personal control, social approval motive and sense of well being with older age group parents and urban parents indicating higher means b) Frequency percentage differences indicate that there were clear gender of parent differences and age of parent differences in parenting practices in aspirations, conflicts with children, disciplining children, and anxieties about child outcomes. Most troubled parents were those of teenagers and adolescent children c) Discrimination between boys and girls were observed in terms of gender specific socialization practices, expectations from and aspirations on children d) Marital prospects, educational, professional pursuits of child had the highest priority in the parenting practices e) Grand parent support system was present but ridden with conflicts.

### PG STUDENT RESEARCH

#### Quality assessment and value addition to newly released rice (oryza sativa L.) varieties of central Telangana zone

**T. Kamalaja**

**Dr. K. Uma Maheswari**

A study was conducted to study the cultivation, consumption practices of farmers, milling, physical, chemical, nutritional, functional and organoleptic properties of two newly released rice varieties (WGL44-Siddi and WGL283-Sheetal) in comparison with BPT5204(popular-control) and processing of the same for value addition. Value added products i.e., instant upma mixes, rice vermicelli and extruded rice balls/snacks were formulated and evaluated for quality, storage stability, microbial load and consumer acceptability. The physico-chemical, nutritional and organoleptic quality characteristics of both the experimental varieties were on par with the BPT5204, which is a popular rice variety. The GI of both the varieties was categorized under low GI foods. The study signifies the feasibility of utilizing NRRVs in to three value added products (ready-to-cook and ready-to-eat) i.e. instant upma mix, rice vermicelli and extruded rice snacks.



Vermicelli

Instant Upma Mix

Extruded Snacks

## Screening of selected rice varieties for extrusion process

**G. Deepa**

**Dr. K. Uma Maheswari**

Six selected rice varieties i.e., WGL-44, WGL-283, RNR-2458, and MTU-1010. MTU1001, JGL-11118 were subjected for extrusion process. The extruded products prepared with WGL-44, WGL-283, and RNR-2458 were selected for further processing of extruded products and analysis based on their overall acceptability scores. All the three selected rice varieties were suitable for extrusion process. Rice variety WGL-283 had maximum functional properties compared to other two extruded rice products. WGL-44 rice extruded products had highest nutritional quality (protein content, In-vitro protein digestibility and dietary fiber) compared to other two extruded products. The extruded samples prepared with RNR-2458 had maximum resistant starch compared to the other two extruded products and suitable for patients with diabetes mellitus as may help in controlling the blood sugar levels.



**Extruded products**

## Resistant starch and glycemic index profiling of rice cooked by adding selected ingredients

**M. Jyothirmayi**

**Dr. K. Uma Maheswari**

Sampada rice variety cooked by different ingredients such as salt (2.5%, 5.0% and 7.5%, oil (1.0%, 2.0% and 3.0%) and vinegar (sunflower oil, groundnut oil and rice brown oil: 2.5% and 7.5%) was studied. Highest resistant starch (mg) content was found in rice cooked with RBO (0.144) and control (0.018). Amylose content (%) in rice cooked by adding selected ingredients ranged from 21.12 to 26.65. Rice cooked by adding RBO (48.16) followed by GNO (40.43) showed highest  $\alpha$ -glucosidase inhibitory activity (mg/ml), whereas rice cooked with VIN (31.66) had lowest inhibitory value. The inhibitory activity of  $\square$ -

amylase was highest in rice cooked with RBO (25.43) and lowest in VIN (15.11 mg/ml). Glycemic index (GI) of rice cooked with RBO (having equivalent 50g carbohydrate) ranged from 40.80 to 55.69 with an average of 48.00. Results showed that rice cooked with RBO can be classified as low GI food. Glycemic Load (GL) of rice cooked with RBO ranged from 20.40 to 27.84 with an average GL of 24.00. This falls into the category of high GL foods. The Sampada rice variety cooked by adding RBO at 5.0% and stored at 4°C resulted in significant increase in RS content and low GI which may be helpful in managing blood glucose levels in diabetic patients.



**Estimation of Resistant Starch**

## Influence of hydrocolloids on rheological properties and sensory quality of gluten free biscuits from foxtail millet and quinoa

**Thejasri**

**Dr. T.V. Hymavathi**

The higher dietary fiber and lower carbohydrate content together with good amount of protein in gluten free biscuits makes the biscuits ideal for celiacs and non-celiacs. Thus, the study demonstrated that hydrocolloids in a specific combination is specific to grains and is beneficial in the development of gluten free biscuits from quinoa and foxtail millet which are closer to wheat in sensory and physical characteristics and superior in nutritional quality.

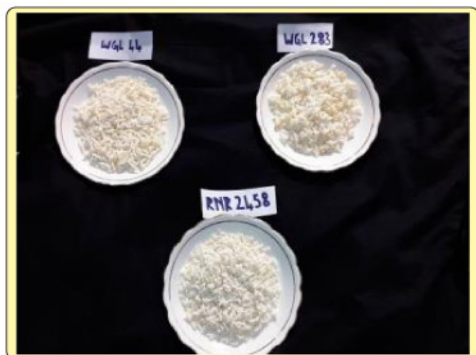


## Screening of selected rice varieties for puffing process

**Hajerah Khan**

**Dr. S. Suchiritha Devi**

Nutritional quality and digestibility of puffed rice with six rice varieties of Telangana state was studied. The variety that was most suitable for puffing was WGL283, as it showed good texture, expansion ratio than others in its physical property. The carbohydrate, protein and in-vitro digestibility content was better for WGL 283 than others. Due to less moisture content, it had better shelf life and acceptability for the sensory attributes.



## Development and evaluation of fresh and dried ripe papaya peel incorporated chapathis

**Pavithra C.S**

**Dr. S. Suchiritha Devi**

Consumption of natural bioactive compounds such as carotenoids and dietary fiber offers health benefits including protection against cardiovascular diseases, cancer and other degenerative diseases. Colour of papaya peel powder (PPP) added chapathi was more compared to papaya peel paste incorporated (PSP) chapathi. The addition of papaya peel to the chapathis decreased the total carbohydrate, protein and energy content and increased the moisture, ash, fat and fiber content. The in-vitro protein digestibility content of papaya peel powder incorporated chapathi (PPP) was 44.45% and PSP was 48.69%. The increase in  $\beta$ -carotene content in the chapathis by enrichment with PPP was 21-folds and PSP was 3-folds.



## Evaluation of Indiramma Amrutha Hastham (IAH) Programme and it's impact on Pregnant and Lactating women in Karimnagar District, Telangana.

**E. Tejaswini**

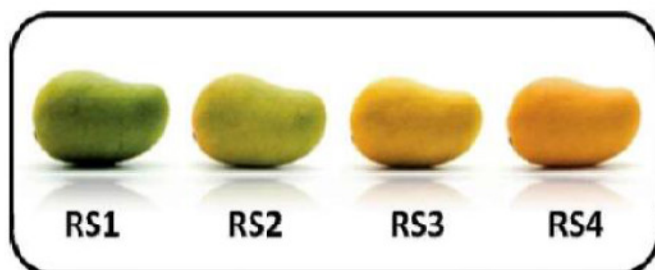
**Dr. S. Suchiritha Devi**

The acceptability of 'one full meal' was more among rural than tribal beneficiaries of IAH. The nutrient intake of one full meal was calculated by using previous day intake of the meal by the beneficiaries. The energy intake by rural and tribal pregnant women was lower compared with RDA. This might be due to difference in culture, food habits, sharing of the meal among the family members and inability of the women to attend personally to the centres.

## Effect of maturity stages and ripening process on the nutrient and bioactive composition of Mango (*Mangifera indica L.*) varieties Manjeera & Banganapalli

**Metra Naga Lakshmi & Himani Joshi** **Dr. K. Aparna**

Manjeera and Banganapalli mango cultivars were harvested at two maturity stages (7-9°brix and 9-11°brix) and two ethylene ripening treatments (100ppm & 150 ppm ethylene doses) were given as per approved protocols. Physico chemical properties, nutritive composition and bioactive composition were estimated. Manjeera variety of mangoes harvested at 7-9° brix TSS (Totally Soluble Solids) without any ethylene treatment had highest antioxidant, bioactive and nutrient composition, suggesting that artificial ripening is not suitable for the variety. Banganapalli variety of mangoes harvested at 9-11°brix TSS along with 150ppm ethylene treatment was found to contain highest bioactive and antioxidant composition. It was also found that accelerated artificial ripening with 150ppm ethylene reduced the keeping quality of the fruits after 12 days of storage at ambient temperature.





### AICRP-Home Science Research

The major theme of AICRP-Home Science Research under XIII plan (201-20) is Women Empowerment. Under the theme 12 projects were sanctioned meeting the following thematic areas. The selected five operational villages (adopted) for implementation of XIII plan projects are Pendyala, Dubbacherla, Kalwakol, Ramachandraguda, Lillipur of Mahewaram Block, Ranga Reddy District.

S.No.	Component	Thematic areas
1	<b>Foods and Nutrition</b>	<ul style="list-style-type: none"> <li>• Food and nutritional security in farm families.</li> <li>• Nutrition education to farm families.</li> <li>• Development of region specific therapeutic foods for prevention of diabetes</li> </ul>
2	<b>Child Development</b>	<ul style="list-style-type: none"> <li>• Maternal and peri-natal health</li> <li>• Sexually transmitted and reproductive tract infections</li> <li>• Family Planning - Improving the Lives of Women</li> <li>• Adolescent Sexual and Reproductive health</li> <li>• Healthy pregnancy and safe delivery</li> <li>• Sexual and Reproductive Health</li> <li>• Reproductive rights</li> <li>• Antenatal care and newborn health</li> </ul>
3	<b>Resource Management</b>	<ul style="list-style-type: none"> <li>• Drudgery reduction</li> <li>• Energy conservation</li> <li>• Farm mechanization</li> <li>• Entrepreneurship</li> </ul>
4	<b>Textiles and clothing</b>	<ul style="list-style-type: none"> <li>• To explore new non conventional fiber and study the properties</li> <li>• Identification &amp; methodology framing-plant sources suitable for mosquito repellent finish/product development</li> <li>• Collection of Puttapaka traditional designs, development of contemporary design catalogue &amp; product diversification of ethnic crafts on textiles.</li> </ul>
5	<b>Extension Education</b>	<ul style="list-style-type: none"> <li>• Gender Impacts of Climate Change</li> <li>• Gender Friendly Farm Enterprises</li> <li>• E -extension: Promoting ICT Applications through Farm Women Knowledge Groups.</li> <li>• Doubling Farmers Income through Integrated Farming Systems</li> </ul>

## MEMORABLE EVENTS

### Exhibition on 'Biodegradable eco-paint for idols'

The Project team of 'Large scale production of biodegradable eco-paint for idol painting with natural dyes' participated in Organic Mela at People's Plaza on 6.05.2017 & 7.05.2017. They exhibited products and processes using eco paints. State Seed & Organic Certification Authority, Government of Telangana organized the Organic mela, in collaboration with Govt. Of India, as a part of Indo German Project. Eco-Ganesh, Eco-Holi and natural dyed textiles were put on display for the general public by the APTX department.



### Inauguration of indoor auditorium of College of Home Science, Hyderabad

Indoor auditorium of College of Home Science, Saifabad, Hyderabad was inaugurated on 13<sup>th</sup> April, 2017 by Mrs. V. Madhavi, w/o Dr. V Praveen Rao, Hon'ble Vice Chancellor PJTSAU during college day celebrations.



### College day celebrations

College day was celebrated on 13th April, 2017 with lot of zeal and fervour. The Dean of Student Affairs Dr. Kuldeep Singh Dangi and Dean of Home Science Dr. A. Mrunalini graced the occasion and delivered valuable and inspirational messages. Mrs. Iravathi Reddy who has instituted several cash prizes for meritorious students was also among luminary guests of the function. Prizes were distributed to the students and a memorable cultural programme was presented on the occasion



### World photography day celebrations

The "World Photography day" was celebrated on 18th and 19th August 2017 by the Department of EECM as part of the course HECM 313: Photo Journalism. On this occasion, photography competition in five

categories namely, food photography, street photography, child emotions, interior decoration and traditional clothing were held. Total 40 entries were received and the photographs by the contestants were displayed. The photography exhibition was inaugurated by Mr. G. Madhukar, Head of the Dept. of Photography, College of Fine Arts, Jawaharlal Nehru Architecture and fine Arts University, Hyderabad.



Photo Exhibition



Best photograph Winner

### Foundation day celebrations of PJTSAU

The third foundation day of PJTSAU was celebrated at College of Home Science Hyderabad on 3-9-2017. A grand programme marking this occasion was arranged in the Indoor Auditorium of the college. The students, teaching and non-teaching staff attended the programme with lot of excitement and enthusiasm. A colourful cultural programme was arranged on the occasion.



### QRT monitoring team visit to AICRP-H Sc

The QRT team members, Dr. Mahtab S. Bamji, former Director NIN and Dr. S. Vinita Sharma Ex Chairman, DST, delegate by ICAR, New Delhi, visited AICRP-H.Sc, on 21st April 2017, to review the progress of work of the unit for XII plan period. During the occasion the Home Science team showcased the technologies generated, activities carried out in adopted villages, technical bulletins and documents of ICT developed.



### Academic assessment for Registered Dietician Interns

Indian Dietetic Association, Telangana and A.P. chapter has conducted academic assessment of case



study evaluation for Registered Dietician Interns on 5-7-2017 by. Dr. Ravindra Reddy, MS, FRCS (Edin.), FRCS (Glasgow) Surgical Gastro-enterologist at CARE Hospitals Banjara, Hyderabad, Dr. K Uma Maheswari, Prof. and Head (FN), PGRC, PJTSAU, Hyderabad, Dr. Janaki Srinath, IDA , National Member and Mr. Venkateswarlu, President AP & TS Chapters are external evaluators for the academic assessment.



### Teacher's Day Celebrations

Students of B.Sc (Hons) Food Science and Nutrition celebrated teacher's day at Post graduate and research center, PJTSAU, Rajendranagar, Hyderabad. The celebrations were started with lightening of lamp ceremony & followed by speeches by **Dr. D. Vishnuvardhan Reddy**, Dean of Students Affairs, **Dr. A. Mrunalini**, Dean of Home Science , Dr. V.Vijayalakshmi, Associate Dean, College of Home science, Dr. K. Uma Maheswari, Professor and University Head, Department of Foods and Nutrition, Dr. Md. Azeezuddin, OSA, other teaching & non-teaching staff of PGRC, College of Home science and ACRIIP. On teachers day students have selected a



theme ( Each one plant one – making India go Green) by presenting a flower plant to teaching & non teaching staff as teacher's nature is similar to that of plants that gives many things & expects nothing in return.

### National Nutritional week (1st - 7th Sept 2017) celebrations

Students of B.Sc (Hons) Food Science and Nutrition celebrated National Nutritional week (1st -7th Sept 2017) at Post graduate and research center, PJTSAU, Rajendranagar, Hyderabad. Dr. K. Uma Maheswari, Professor and University Head, Department of Foods

and Nutrition spoke on and showed the importance on the theme "Optimal infant & young child feeding practices: better child health" as a video . The video was recorded as a part of National Nutrition Week Celebrations, 2017 ( from 1-9-2017 to 7-9-2017) on the theme by Indian Dietetic Association Telangana and A.P. Chapter which is kept in social media for vide publicity. Dr. K. Uma Maheswari, Professor & University Head, Department of Foods & Nutrition, PGRC, PJTSAU, Hyderabad has given a nutrition education message on the theme as Vice President of IDA, Telangana & A.P. Chapter through the video. The video has got 1.6 thousands viewers as on 15-9-2017.



### Student's Achievements

#### Participation in National Conclave on "Promoting Zero Waste Communities in Rural India"

Students of IV year B.Sc. (Hons) Food Science and Nutrition T. Meghana, B. Anusha, Krina Patel, N. Mamatha, K. Nikhitha and M. Ramya participated in National Conclave on "Promoting Zero Waste Communities in Rural India" during 2nd & 3rd August, 2017 at National Institute of Rural Development. They worked on promoting idea of using grey water generated from bathroom and kitchen in developing nutritional kitchen garden, thus meeting nutritional requirements of family and promoting idea of using grey water and developing Aquaponics model.



**Students explaining to visitors about Nutri- kitchen garden model using grey water**



Students and staff with certificates of Sankalp-NAARM



Awardees with organizers ( PGDMA, NAARM ) of Sankalp -B-fest - Marketing catapult

## AWARDS

### National Prize at Sankalp – a National Event B-fest event: Marketing catapult

Students of Bsc (Hons.) Food Science & Nutrition, PGRC, College of Home science, PJTSAU participated in Sankalp – a National Event B-fest event named **Marketing catapult** conducted by ICAR – NAARM, Hyderabad on 28th, 29th August, 2017. It was conducted at National level where the main theme was buying & selling of the products. Food science & Nutrition students, PGRC, CHSC, PJTSAU received the National prize in marketing catapult where 25 colleges participated (Colleges of Agriculture, Horticulture, SABM etc). The winners team of the event are MD.Rafiuddin; FSN/2015-025, M. Saiprakash; FSN/2015-023, M. Durga devi; FSN/2015-039, D.Ashfaq; FSN/2015-024 and SK. Rahima; FSN/2015-019 .

### National Public Relations Award for Corporate video on "Status of Women"

AICRP-Home Science, PJTSAU received the award for the video on “Srama Nundi Sowkaryam Vaipu Mahila Raithulaku Melurakam Panimutlu” under the category of CD focusing on status of women as Special Jury Prize by Public Relations Society of India, Hyderabad chapter, Telangana State on 6th August 2017.



### College of Home Science bags best college award

College of Home Science, Saifabad Hyderabad received the most sought after and coveted best college award out of all the colleges of the University for the First Time after the award was introduced on the eve of PJTSAU formation day celebrations. Besides obtaining the best college award, Dr. K Aparna (Scientist), Quality Control lab also received the best researcher award and Mr.Venkatesh, Driver, AICRP got the best office subordinate award.



### Chief Editor

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