



# MEAT NEWS

National Research Centre on Meat, Chengicherla, Hyderabad

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## FROM THE DIRECTOR'S DESK



In the year 2013-14, India has exported 1.45 million tones of buffalo meat worth Rs. 26,458 crores (APEDA) making it the second largest agricultural commodity exported from India next to basmati rice. Domestic meat sector is also witnessing rapid changes with more than 10% growth in quick service restaurant category in the last year. Realizing the Indian quick service restaurant market which is worth \$ 13 billion, Kentucky Fried Chicken (KFC) which currently operate 625 stores in the country is aiming to open 1000 stores in about 100 cities by 2015. Suguna Daily Fresh is currently having 150 stores and planning to open 500 retail outlets in the next 3 years. Suguna Foods, which currently runs one “Suguna Crisp & Crunch” outlet, plans to open 2000 quick service restaurants across India in the next 5 years. Recently we have also witnessed up-gradation or modernization of few service abattoirs in selected cities with efforts from Ministry of Food Processing Industries, Government of India. These developments indicate the changing face of meat sector in the country towards organized development to ensure sustainable animal production and nutritional security.

Considering the changing needs of the meat sector, NRC on Meat, Hyderabad has undertaken several research, extension and consultancy activities which can contribute to positive growth of the sector. I am glad to mention that, during the period from January-June 2014, NRC on Meat has undertaken several experiments for improving the safety, quality and shelf-life of meat and meat products, production of organic meat, value added meat products development etc. Recently, the Institute has initiated two externally funded research projects from Department Biotechnology (DBT) and RashtriyaKrishiVikasYojana (RKVY). NRC on Meat collaborated with National Meat and Poultry Processing Board (NMPPB), MoFPI and successfully organized the 7th Mayor's conference at Hyderabad. The Institute has also partnered with Tamil Nadu Technology Development Board, Confederation of Indian Industry (CII) in conducting 2nd edition of Meat Tech-2014 at Chennai in June, 2014. The Institute has celebrated its 7th foundation day in which Dr. M. Vijay Gupta, World food prize laureate delivered a foundation day lecture. The centre has conducted two hands-on training programmes to veterinarians from export meat plant and state animal husbandry department; one entrepreneurial training programme; one workshop and one awareness programme.

I am elated to inform that, the Institute has signed MoU with NMPPB, New Delhi and 3 other entrepreneurs of Pune and Hyderabad. During the period the centre has published a “Technology Inventory” and a book on “Research Highlights” besides publishing several other posters, brochures and training manuals. The Institute has organized wide range of activities like plantation to ensure greening of campus and Republic day celebration. I am sure in the coming months the Institute will come out with many more innovative technologies and events to ensure positive contribution for the growth of meat sector. I welcome all the stakeholders, exporters, meat processors and academicians to “National workshop on implementation of livestock/meat traceability system in India” to be held at NRC on Meat, Hyderabad on 4th August, 2014.

(V.V. Kulkarni)

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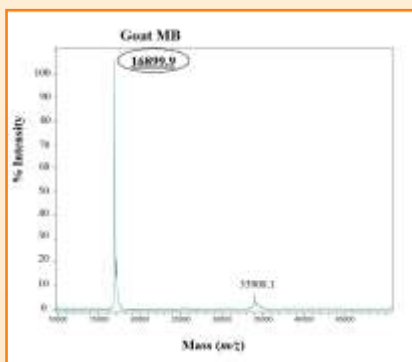
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**MEAT FACTS**

- India is a second largest bovine meat exporter in the world (worth USD 4.4 billion) with a 20% market share after Brazil (USDA).
- Indian buffalo meat has become important foreign exchange earner with a 31% increase in quantity and 52% rise in value terms in 2013-14.
- Kentucky Fried Chicken (KFC) to open 1000 stores in about 100 cities by 2015, whereas Suguna Daily Fresh is planning to open 500 retail outlets in the next 3 years.
- 60th International Congress of Meat Science & Technology (ICOMST) is going to be held in Punta Del Este, Uruguay from August 17-22, 2014.
- 6th Conference of Indian Meat Science Association (IMSACON-VI) will be held in DUVASU, Mathura from 15-17 October, 2014.

**RESEARCH HIGHLIGHTS**

- Department of Biotechnology (DBT), Govt. India funded project on “Identification of species-specific peptide biomarkers using high-throughput proteomic approaches” with a budget outlay of Rs. 34.07 lakhs has been initiated at National Research Centre on Meat. The project envisages to develop simple, robust and reproducible techniques for detecting adulteration of a particular type of meat with another undeclared species using proteomic tools as an alternative to DNA based methods.
- Molecular mass of purified goat myoglobin (16,899.9 kDa) was determined using matrix assisted laser desorption ionisation time-of-flight mass spectrometer (MALDI-TOF MS) and the protein was identified using peptide mass fingerprinting (PMF).



*MALDI TOF-MS spectra of purified goat myoglobin (16,899.9 Daltons)*

- A base-line data of pesticide residues of cultured fish species viz., Labeorohita (rohu) Catlacatla (Catla), Pangasinodonhypothalamus (Pangas) and an exotic shrimp (prawn) species, Litopenaeusvannamei and pond environment of Kolleru region, A.P has been developed at the Centre. The study revealed that 30% catla and 11% rohu samples contained

organochlorine (OC) compound residues above MRL(FSSAI, 2006). Similarly OC residues were also recorded above MRL in fish feeds 30%; pond water 11%; and pond soils 21% of samples.

- The contract research project sponsored by M/s Praras Biosciences, Bangalore revealed that incorporation of soy-hydrocolloid mix (0.5%) enable to reduce the proportion of meat in the chicken nuggets without adversely affecting the quality and sensory attributes of chicken nuggets.



*Scanning electron microscope of chicken emulsion incorporated with modified soy protein*

- NRCM has analysed five samples of forensic meat samples submitted by the Police Department, Government of Madhya Pradesh for confirmation of species through molecular techniques. The institute has also received biological samples including meat, bristles, nails etc. of wild animals for species identification.
- Chicken nuggets enriched with omega-3 fatty acids were developed through replacement of 25% of sunflower oil with flax seed oil. Phenols from pomegranate rind powder (30 ppm) and purified carnosic acid (150 ppm) are effective in inhibiting lipid oxidation of chicken patties during storage.

## **WORKSHOPS/TRAININGS/AWARENESS PROGRAMMES CONDUCTED**

### **I. Veterinarians from export meat plant trained at NRC on Meat**

Two veterinary doctors from Allanasons Exports, Hyderabad were trained at NRC on Meat from 4-8th February 2014 on "Meat Inspection and quality assurance".



*Veterinary doctors from export meat plant trained at NRC on Meat*

### **II. Women entrepreneurs trained at NRC on Meat**

Two women from "Meenakshi Foods", Hyderabad and four women from "Hipro Fresh Chicken" Pune, Maharashtra have undergone three day hands-on training program from 11-13, February 2014 in "Value added meat products development for small and medium scale entrepreneurs".



*Women entrepreneurs trained at NRC on Meat*

### **III. One day workshop was organised at NRC on Meat**

NRC on Meat has organised one day workshop in collaboration with Gubba Cold Storage, Hyderabad on "Meat, Slaughtering, Hygiene and Value Addition for Maximum Productivity" in the seminar hall of NRC on Meat on 13th March, 2014.

### **IV. Veterinarians from Dept. Animal Husbandry trained at NRC on Meat**

Seven veterinary doctors from Department of Animal Husbandry, Government of Andhra Pradesh have undergone 3 days training program on "Management of Modern abattoir" from 19-21 May, 2014 at NRC on Meat.



*Practical demonstration on meat inspection and hygienic meat production*

### **V. One day awareness programme was held at NRC on Meat**

An awareness programme on "Nutritional interventions for augmenting meat production in sheep" was conducted on 4th June 2014 at National Research Centre on Meat, Hyderabad. A total of 35 participants comprising of farmers, entrepreneurs and officials of Government departments covering Adilabad, Nizamabad, Medak, Warangal, Nalgonda, Mahaboobnagar, Khammam, Hyderabad and Ranga Reddy districts of Telangana have participated in the programme.



*Director NRC on Meat addressing the participants*

## **MEETINGS/EVENTS ORGANIZED**

### **I. NRC on Meat celebrated Republic day**

Director NRC on Meat unfurled the National flag on the eve of 65th Republic day at NRC on Meat, Hyderabad in the forenoon of 26th January, 2014. Staff of NRC Meat and their family members have participated in the celebration.



*Republic day celebration at NRC on Meat*

### **II. NRC on Meat celebrated its 7th foundation day**

National Research Centre on Meat, Hyderabad celebrated its VII Foundation day on 22nd February, 2014. Dr.M. Vijay Gupta, World Food Prize laureate, Dr. Padma Raju, Hon'ble, Vice-Chancellor, ANGRAU, Hyderabad, Mr. Subash Chandra, Deputy General Manager, NABARD, Hyderabad and several other dignitaries have blessed the occasion. On this occasion, chief-guest Dr. M. Vijay Gupta, World Food Prize laureate launched the e-portal from e-fresh, Hyderabad and released other NRC on Meat publications. Dr. Vijay Gupta also delivered the Foundation day lecture.



*Dr. Padma Raju, Hon'ble, Vice-Chancellor, ANGRAU, Hyderabad released the NRCMeat Trademark*



*Dr.M. Vijay Gupta, World Food Prize laureate-2005 delivering a foundation day lecture*

### **III. 7th Mayor's conference**

NRC on Meat collaborated with National Meat & Poultry Processing Board, MoFPI, New Delhi and Greater Hyderabad Municipal Corporation (GHMC) for organizing 7th Mayors Conference held at Hotel Green Park, Hyderabad from 28th Feb-1st March, 2014. Shri. Siraj Hussain Secretary, MoFPI, Govt. India, Shri. Mohammad Majid Hussain, Hon'ble Mayor, GHMC, Hyderabad, Shri. Somesh Kumar, GHMC Commissioner, Dr. Manmohan Singh, Secretary, Dept. A.H., A.P., Dr. V.V. Kulkarni, Director, NRC on Meat and Smt. Anuradha Prasad, CEO, NMPPB addressed the participants during inauguration. NRC on Meat conducted the technical session which was attended by large number of participants from different municipalities, civic bodies, scientists and faculty members, veterinarians from state Animal Husbandry Depts., Meat Industry representatives etc.



*Inaugural session of 7th Mayors conference*

#### IV. Institute Research Council (IRC) meeting

The 9th Institute Research Council (IRC) meeting of NRC on Meat was held on 5th May, 2014 under the chairmanship of Dr. V.V. Kulkarni, Director, NRC on Meat in the committee room. Dr. U.K. Pal, Professor & Head, Dept. Livestock Products Technology, Rajiv Gandhi College of Veterinary Sciences, Puducherry acted as external expert.



*9th IRC meeting held at NRC on Meat*

#### V. Workshop on sexual harassment at work place was organised at NRC on Meat

Half day work-shop on “Sexual Harrassment at Workplace” was organized at NRC on Meat on 6th May, 2014. Smt. M. Vijayadevi, Advocate, Vinisha Associates, Hyderabad delivered the lecture and interacted with all the staff of the Institute.



*Staff of NRC on Meat participated in workshop*

#### VI. Research Advisory Committee meeting

The NRC on Meat conducted the 7th Research Advisory Committee meeting on 9th May 2014 under the chairmanship of Dr. A.S. Bawa, Former Director, Defence Food Research Laboratory, Mysore. Dr. V.V. Kulkarni, Director, NRC on Meat; Dr. B.S. Prakash, ADG (ANP), ICAR; Dr. Lal Krishna, Former ADG, ICAR;

Dr. J. Sahoo, Former Professor, Veterinary College, Ludhiana; Dr. S. Biswas, Professor & Head, Veterinary College, Kolkata; Dr. V. Kesava Rao, Professor & Head (Retd.), Rajiv Gandhi College of Veterinary Sciences, Puducherry; Shri Kuppa Ranganayakulu and Shri Dirisala Rajagopala Reddy (Farmer representatives) and Dr. S. Vaithyanathan, Principal Scientist and member secretary of RAC attended the meeting.



*Chairman and members of RAC committee with NRC on Meat scientists*

#### VII. Review meeting

Final review meeting of Ministry of Statistics & Program Implementation funded research project “A Study on State wise Yield of Meat & Byproducts of Cattle, Buffalo, Sheep, Goat, Pig & Poultry” was held on 10th May 2014 in the seminar hall of NRC on Meat. Shri. Kumar Sundaram, Deputy Director, Central statistical organization, MoSPI, New Delhi and Ms. V. Prathima, JD, Directorate of Economics & Statistics, Govt. of AP, Hyderabad, and associated scientists from collaborative centres have attended and reviewed work.



*Participants of review meeting*

**VIII. Meat Tech-2014**

National Research Centre on Meat, Hyderabad collaborated with Tamil Nadu Technology Development and Promotion Centre (TNDPC) of Confederation of Indian Industry (CII) as knowledge partner for organizing Meat Tech-2014 at Hotel Hilton, Chennai on 27th June, 2014. The event was attended by several meat processors, entrepreneurs, industrialists, academicians, students, equipment manufacturers and suppliers etc.



*Sponsors of Meat Tech-2014*

**TRANSFER OF TECHNOLOGY/CONSULTANCY/ EXHIBITIONS**

1. SEANA Products Pvt. Ltd., Hyderabad has signed MoU with NRC on Meat on 9th January, 2014 for development of emu meat products, packaging and storage.



*Representative from SEANA exchanging MoU document with Director, NRC on Meat*

2. MoU was signed with M/s. Meenakshi Foods, Balanagar, Hyderabad on 30/1/2014 for "Technology for shelf stable meat products".



*Meenakshi Foods, Hyderabad exchanging MoU document with Director, NRC on Meat*

3. NRC on Meat participated in Sheep and Goat Expo: Stakeholders meet which is presided over by Director, Animal Husbandry to discuss about organising Dairy show and Sheep & Goat Expo. During Sheep and Goat Expo-2014 held at HITEX Exhibition Centre, Hyderabad on 3rd February, 2014, NRC on Meat participated in the interactive session cum workshop between scientists and sheep & goat industry personnel.



*Stakeholders meeting of Sheep & Goat Expo-2014*

4. Women entrepreneur from "Hipro Fresh Chicken" Pune, Maharashtra has signed MoU with NRC on Meat on 11th February, 2014 for technical know-how on "Emulsion meat products".



*Hipro Foods, Pune exchanging MoU document with Director, NRC on Meat*

5. Dr. V.V. Kulkarni, Director, NRC on Meat signed MoU with Shri. K.B. Subramanian, Deputy Secretary, MoFPI and CEO, National Meat and Poultry Processing Board on 28th February, 2014 during 7th Mayor's Conference held at Hyderabad.



*Dr. V.V. Kulkarni, Director, NRC on Meat signed MoU with Mr. K. B. Subramanian, Deputy Secretary, MoFPI-cum- CEO, NMPPB*

6. Mr. Vivekanandan, Laxmi Engineering Works, Chennai signed MoU with NRC on Meat on 16th May, 2014 seeking consultancy for establishment of slaughterhouses for small and large animals.



*Dr. V.V. Kulkarni, Director, NRC on Meat signed MoU with Mr. K. B. Subramanian, Deputy Secretary, MoFPI-cum- CEO, NMPPB*

### **AWARDS & RECOGNITIONS**

Dr.Naveena, B.M., Senior Scientist, NRC on Meat has been awarded with Associateship of the National Academy of Agricultural Sciences (NAAS), New Delhi from 1st January, 2014.



*Dr.Naveena, B.M. receiving the NAAS Associate certificate from President, NAAS and DG, ICAR*

### **PARTICIPATION IN SYMPOSIA / CONFERENCES / SEMINARS / WORKSHOPS**

Sl. No.	Particulars of Training	Official(s)	Duration	Venue
1.	National Conference on Consumer Packaging	Dr. B.M. Naveena	18th January 2014	New Delhi
2.	Global Animal Nutrition Conference-2014	Dr. P. Baswa Reddy	20-22nd April 2014	Bengaluru
3.	Workshop on Priority Setting, Monitoring and Evaluation in National Agricultural Research System: Status, Experiences and Way forward.	Dr. L.R. Chatlod	27th May 2014	NASC, New Delhi
4.	National Conference on "Recent Trends in Processing, Quality and Safety of Ethnic and Organic Foods".	Dr. V.V. Kulkarni	26th June, 2014	Kuduvalli, TANUVAS, Chennai
5.	Conference on Emerging Trends & Technologies for Meat & Poultry Processing Industries	Dr. M. Muthukumar Dr. B.M. Naveena	27th June 2014	Chennai
6.	22nd ICAR Regional Committee Zone-II Meeting	Dr. V.V. Kulkarni	27-28th June, 2014	CIFRI, Kolkata

## **NEW ENTRANTS/RETIREMENTS/TRANSFER/PROMOTION**

- ▲ Shri. M.N.V. Rao, JAO at NRC on Meat was promoted to AFAO w.e.f. 04/12/2013
- ▲ Dr. L.R. Chatlod, Scientist (VPH) has joined at NRC on Meat on 3/2/2014 on transfer from ICAR, NEHR, Gangtok, Sikkim.

## **IMPORTANT VISITORS**

- ▲ Thirteen members including faculty and students of Cornell University, USA visited NRC on Meat, Hyderabad on 10th January, 2014.



*Students and faculty members from Cornell University, USA visited NRC on Meat*

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### **BOOK-POST**

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