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## 'Kerala Needs a Second Green Revolution'



Smt. K. R. Gouri Amma, Minister for Agriculture inaugurates the Regional Workshop on the Impact of Applications of Radiation on Food and Agriculture. Dr. Anil Kakodkar, Chairman, Atomic Energy Commission can also be seen.

said Smt. K. R. Gouri Amma, Minister for Agriculture and ProChancellor of Kerala Agricultural University (KAU). The Minister was inaugurating the Regional Workshop on the Impact of Applications of Radiation on Food and Agriculture jointly organized by Bhabha Atomic Research Centre (BARC) and KAU on December 27.

The Minister said that the area of paddy in Kerala has declined from about 9 lakh hectares to about 3.5 lakh hectares over a period of three decades. The statistics also show that paddy land is diminishing at a rate of three hectares per hour, especially due to conversion for other uses. At the same time the state requires 47 tonnes of rice against the present production of 8 lakh tonnes.

To face the grave situation of mis match between supply and

demand, a second green revolution is necessary that too at the earliest,

She emphasised that the exploitation of the latest (contd...page 2)

## Radiation in food is safe, enhances shelf life

The Chairman of the Atomic Energy Commission Dr. Anil Kakodkar, said the radiation in food ensure hygiene and enhancement of shelf life. About 25 countries across the world, including the US, China and most of the European countries were using this technology. He was interacting with the media persons at the Kerala Agricultural University, Vellanikkara, after the inaugural function of the Regional Workshop on the Impact of

Application of Radiation on Food and Agriculture jointly organized by BARC & KAU at Vellanikkara.

Dr. Kakodkar said, the BARC has made a beginning in collaborative research activity with Agricultural Universities in Agriculture and food preservation through application of radiation.

"The prices of crops fall down inspite of higher out put because of lack of opportunity for enhancement of shelf life. Hence, this

process also contributes to the price stability and larger production. We can also get into the value addition activities. The advantage lies in the fact that there is no residue in this process. There is chance of better packing and there is no contamination due to the process as it is applied after packing. The technology is well accepted the world over and the application of radiation does not pose any health hazard." The Chairman stated.



## CEMT to Improve Quality of Meat and Products

Smt. K. R. Gouri Amma, Minister for Agriculture and the Pro-Chancellor of the University inaugurated the Centre of Excellence in Meat Science and Technology (CEMT) on December 27.

Smt. Gouri Amma said that Kerala is the most ideal state in India for development of meat sector. More than 95% of population in Kerala consume meat and they do not have any taboos or sentiments regarding the consumption of meat. The per capita consumption of meat is also higher in Kerala. The prospects of export of meat and meat products is also bright in view of the outbreak of mad cow disease in Europe. However, the present situation of the production of meat is deplorable since we do not have modern scientific slaughter houses in Kerala. The hygienic standards of production of meat have to be improved for ensuring safety of the consumers. It is also necessary to utilize the byproducts of the slaughter houses effectively. Besides increasing the trained man power in the sector, the quality of meat and meat products has to be improved.

The Centre of Excellence in Meat Science and Technology (CEMT) is established with the financial support of the ICAR under the NATP at a total outlay of 214.62



*Smt. K.R. Gouri Amma, Minister for Agriculture inaugurates the Centre of Excellence in Meat Science & Technology (CEMT) at Mannuthy.*

lakhs. The project envisages to offer HRD Training Programmes, Research Project on quality improvement of meat, development of adaptable technologies and formularies for value addition, improvement of organoleptic quality of meat and products, recovery of proteins from byproducts of slaughter houses and carcass utilization, development of procedures for ensuring safety and hygiene of meat and survey to assess the consumption pattern and production of meat and meat production in Kerala. Hazards such as presence of agents causing food poisoning, spoilage causing microorganisms, residues of

pesticides, antibiotics, anabolics etc. in meat will be identified and remedial measures will be suggested.

The establishment of the centre will go a long way in improving the quality of meat and meat products suggesting procedures for ensuring safety and hygiene of meat, employment generation, evolving new technologies for production, processing and quality control of meat and products, eco-friendly utilization of byproducts of slaughter houses, better returns to the farmer and developing a stable meat industry in India especially in Kerala.

## Kerala Needs a Second Green Revolution

*(contd...from page 1)*

technology is a must for food sufficiency and security. The common man, especially the farmers, are looking towards KAU with great expectation.

The Minister stressed that in the present scenario of globalisation and WTO, target must be for high production of quality products at the minimum cost, which must be sustainable also. Product diversifi-

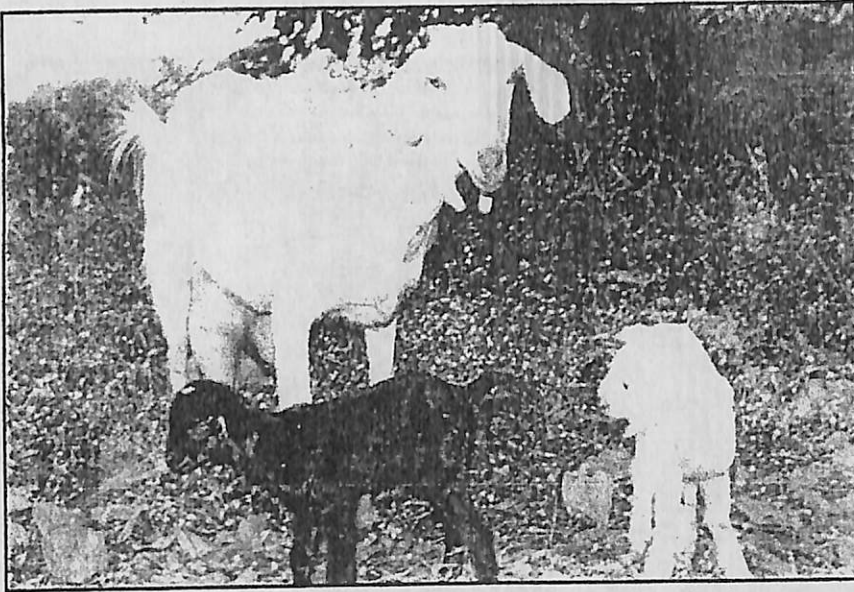
cation and value addition should be viewed in this context.

Dr. Anil Kakodkar, Chairman, Atomic Energy Commission and Secretary to Govt. of India was the Chief guest. Dr. (Mrs) A Samuel, Director, Bio Medical Group, BARC was the guest of honour. Shri. P.P. George, MLA, presided. Dr. K.V. Peter, Vice-Chancellor, KAU welcomed the gathering. Dr. K.K. Surendranathan, Conve-

nor of the Organising Committee elaborated on the importance of the workshop. Dr. N. Saifudeen proposed vote of thanks.

Scientists from the BARC, KAU and other research institutions in the state attended the two day workshop which was the first step towards a collaborative research programme between BARC and KAU in the areas related to uses of atomic energy for societal benefits.

# Embryo Transfer Successful in Malabari Goats



*Kids with the mother goat in which embryo transfer was done*

Birth of kids by Embryo Transfer in goats is reported for the first time in Kerala in the ICAR Network Project on Embryo Transfer, Department of Animal Reproduction, College of Veterinary and Animal Sciences, Mannuthy, Kerala Agricultural University. The embryos were collected surgically from the uterus of the superovulated Malabari goats (donor) on day 6 of the pregnancy and two good quality embryos were deposited in the uterus of a recipient goat.

There is another speciality to this

technique of embryo transfer. Premature regression of *corpus luteum* is a major problem affecting embryo yield on uterine collection of embryos in Malabari goats. Because of this problem embryos suitable for freezing could not be collected from around 50% of the superovulated Malabari goats. These embryos escape from the uterus and get degenerated due to the deficiency of progesterone secreted by the *corpus luteum*. This particular donor goat also showed premature regression of *corpus luteum*, but good

quality embryos could be collected from this animal successfully under progesterone support. This is the first report of this nature in India.

In the scenario of globalization of economy, the success of this technique draws much attention as export and import of goat embryos can be undertaken for transfer purpose. In the state new breeds like Boer goats can be introduced by import of embryos which will be much economical than importing animals.

In the ICAR Network Project on Embryo Transfer research work on freezing of goats embryos, *in vitro* maturation and fertilization of cattle oocytes, *in vitro* culture of embryos and superovulation of young animals etc are also in progress. It is also envisaged to undertake research on non surgical collection of goat embryos, simplification of freezing procedures of cattle and goat embryos, and micromanipulation of embryos in future.

This work was carried out by Dr. Metilda Joseph, the Principal Investigator of the Network Project on Embryo Transfer under the guidance of Dr. T. Sreekumaran, Associate Professor & Head and Dr. V. Vijayakumar, Dept. of Animal Reproduction.

## KAU Scientists secure award

K.C. Manorama Thampatti, Asst. Professor, Dr. M. Subramonia Iyer, Assoc. Professor, Department of Soil Science and Agricultural Chemistry, College of Agriculture, Vellayani and Dr. Sosamma Cherian, Assoc. Professor, Sugarcane Research Station, Thiruvalla have been awarded the best second poster award for the joint research paper entitled Management of Iron Toxicity by Potassic Fertilizer and Lime in the Acid Sulphate Soils of Kuttanad, Kerala, presented in the international symposium on the Importance of Potassium on



*Dr. M. Subramonia Iyer, receives the award from Dr. Panjab Singh, Director General, ICAR*

Nutrient Management for Sustainable Crop Production in India.

The award was presented by Dr. Panjab Singh, Director General, ICAR in the valedictory function held at New Delhi on December 5.

## JSP Yadav Best Paper Award

Dr. K. C. Manorama Thampatti, Asst. Professor, Department of Soil Science and Agricultural Chemistry, College of Agriculture Vellayani and Dr. A. I. Jose, Director of Extension, KAU have been awarded JSP Yadav Best Paper Award for the years 1998 and 1999 for the Joint Research paper entitled Evaluation on Accumulation of pesticide residues in an Acid Sulphate wet land agro system of South India published in the Journal of The Indian Society of Coastal Agricultural Research. (Vol. 16, No. 2).



## Training Programmes

● A training programme on Crop Estimation Techniques for Spices with particular reference to Cardamom and Pepper for Field Officers of the Spices Board was conducted at the Central Training Institute (CTI) Mannuthy from December 11-13.

● Training Programme on Crop Nursery and its Management for Unemployed women was conducted at the CTI from December 17 - 19. This training programme was sponsored by the Kudumbasree, Kalamassery.

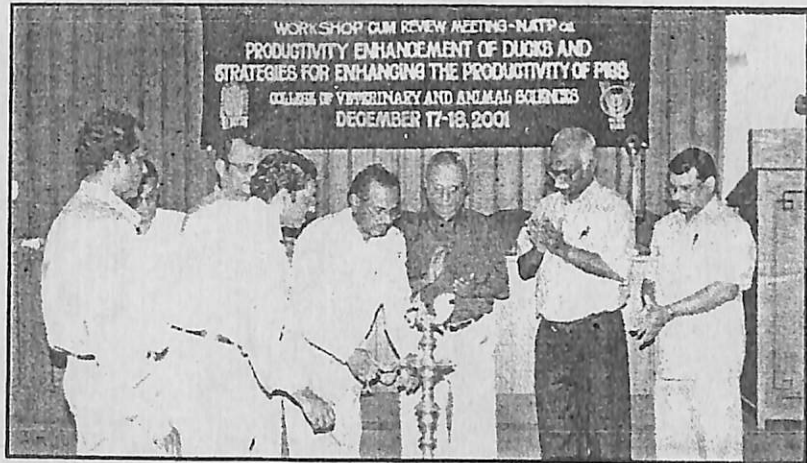
● An induction training programme for IAS probationer was conducted from December 13 -19. Shri Anand Singh, IAS, Assistant Collector underwent the training programme.

● The National Training Course on coconut production technology was held at the CTI from December 3 -10. Extension functionaries and Scientists from various states of the country participated in the training course. This was sponsored by the Directorate of Extension, Ministry of Agriculture, Govt. of India.

## Training on Environmental Management and Carcass Utilization

HRD Training programme on Environmental Management and Carcass Utilization was organized at the Centre of Excellence in Meat Science & Technology from December 3-5. Dr. K.V. Peter Vice-Chancellor inaugurated the programme. Dr. A.I. Jose, Director of Extension presided. Dr. K.V. Valsala, Director, Centre of Excellence in Pathology felicitated. Dr. J. Abraham, Director of the Centre welcomed the gathering. Dr. P. Kutty Narayanan proposed vote of thanks.

## Workshop-cum-Review Meeting of NATP Projects



*Dr. P. Das, Deputy Director General (Extension), ICAR inaugurates the Workshop-cum-Review meeting.*

The Workshop-cum-Review meeting of NATP on Productivity enhancement of ducks and Strategies for enhancing productivity of pigs for the farming community was held at College of Veterinary and Animal Sciences from 17 to 18 December 2001. Dr. P. Das, Deputy Director General (Extension), ICAR, inaugurated the meeting. In his inaugural address, Dr. P. Das stressed the importance of duck research in Kerala due to its vast stretch of coastal areas and high demand for duck eggs and meat. He emphasised the relevance of research work on two neglected species viz., ducks and pigs which will positively have an impact on the livelihood of small and marginal farmers and agricultural labourers. Dr. A. Jalaludeen and Dr. T.V. Viswanathan, the respective Principal Investigators presented the report of NATP on Ducks and Pigs. Dr. T.V.R.S. Sharma, Principal Production System Scientist, NATP (Coastal) gave a brief introduction about NATP. Dr. K.V. Peter, Vice-Chancellor, KAU in his presidential address applauded the scientists of KAU in making headway in the area of duck research in India. He also emphasised the importance of establishing AICRP on duck improvement at the national level for intensifying need based research on ducks. A video film on

duck farming in Malayalam produced by the scientists of Centre for Advanced Studies in Poultry Science was released by Dr. E.G. Silas, former Vice-Chancellor, KAU & Co-chairman, SAP, NATP (PSR). Dr. K.Kumaran, Director of Research, KAU and Dr. A.I. Jose, Director of Extension, KAU felicitated the function. Dr. P.P. Balakrishnan, Dean, College of Veterinary and Animal Sciences, Mannuthy welcomed the gathering. Dr. Leo Joseph, Associate Professor, Centre for Advanced Studies in Poultry Science proposed vote of thanks. Dr. E. G. Silas also inaugurated a solar drier at the Centre for Pig Production and Research, Mannuthy on the same day. Scientists from the Co-operating centres of both the projects attended the meeting.

## Women Individual Champion

Kum. Mini T. Jose, BFSc. student, College of Fisheries, Panangad secured the Individual Championship (women) in the All India Inter - Agricultural University Sports Meet held at the Rajasthan Agricultural University, Bikanir during November 2001.

## Portrait of Dr. E. Madhavan Unveiled



Dr. C. Veerapandian, Prof. & Head, Department of Obstetrics and Gynaecology, Vet. College, Chennai and Vice President of the Indian Society for the Study of Animal Reproduction (ISSAR) (Kerala Chapter) has unveiled the portrait of Dr. E. Madhavan (Late), Prof. of Animal Reproduction, College of Veterinary & Animal Sciences Mannuthy on December 19. Dr. T. Sreekumaran welcomed the gathering. Dr. K. Prabhakaran Nair,

President (ISSAR) presided over the function. He declared the institution of an endowment award for the best outgoing MVSc. Student in Animal Reproduction in memory of late Prof. Madhavan. The Corpus for the award, Rs. 25000/- was donated by Mrs. Geetha Madhavan. Dr. P.P. Balakrishnan, Dean, College of Vety. & Ani. Sciences, Mannuthy and Joint Secretary, ISSAR delivered commemoration lecture.

establishment of bio-valleys. She emphasised the importance of coordinated effort by scientists and farmers to improve the animal husbandry sector in the state.

Presiding over the inaugural function, Dr. Panjab Singh, Director General, ICAR stated that steps have been taken to strengthen the research infrastructure under National Agricultural Technology Project (NATP).

Dr. Panjab Singh stressed the need to shift the focus from commodity centric approach to a farming system-centric approach based on a resource management strategy.

He said that there is need for an aggressive, export growth-oriented policy to raise the share of the agricultural sector in exports to 25 per cent. This should come through diversification of agriculture by upgrading labour skills and training, quality promotion and establishment of effective communication infrastructure.

Dr. Singh called for increased investment in agricultural research by the government, private sector non-governmental organizations and other agencies.

## 'Reorient Agricultural Education'

The educational and research institutions should be equipped to meet the challenges ahead that transforms agriculture sector into the engine of growth of Kerala's economy by providing the human resources, skills and technology for the sustainable development of state's agriculture, said Smt. Gouri Amma, Minister for Agriculture.

She was inaugurating the VIII ICAR Regional Committee meeting at Central Tuber Crops Research Institute, Thiruvananthapuram on December 13.

The Minister called for reorienting agricultural education by strengthening professionalism along with entrepreneurship. She stressed that at the post graduate level training should be imparted in emerging areas integrating relevant disciplines such as biotechnology, natural resource management,

environment, IPR and biodiversity, WTO and global trade.

She urged to reorient research to pursue a system approach to technology generation systems rather than specific commodities and focussed on integrated agro-silvi-pastoral-aqua production systems and resource based livestock production.

Smt. Gouri Amma highlighted the imperative of biotechnological interventions for tackling serious agricultural problems of the state, like foot rot of pepper, soft rot of ginger, root (wilt) of coconut and various diseases of banana and molecular characterization and improvement of beneficial microorganisms. She also urged the scientific community to focus on creating community biodiversity registers to document biodiversity and traditional knowledge and

## Farm Day Celebration

The Regional Research Station, Pattambi celebrated the Farm Day on December 27. Shri. C.P. Muhammed MLA inaugurated the celebrations. Dr. A.I. Jose, Director of Extension delivered the E.P. Gopalan commemoration lecture. Dr. K. Kumaran, Director of Research welcomed the gathering. The office bearers of the panchayat level institutions felicitated the function. A discussion was also arranged on the problems and solutions of rice cultivation in Kerala. Dr. P. Karunakaran, the former scientist of KAU lead the discussion. A seminar was also arranged on the prospects of establishing small scale agrobased industrial units for the utilization of agricultural produces.



## MSS Activities

### Rural Animal Husbandry camp at Choodal



*Smt. K.R. Gouri Amma, Minister for Agriculture participates in the valedictory function of the Integrated Animal Husbandry camp at Choodal.*

An Integrated Animal Husbandry Camp envisaged to collect information and study obtained data on the status of animal husbandry activities was conducted in the Choodal Grama Panchayat, with the participation of the National Service Scheme, College of Veterinary and Animal Sciences, Communication Centre, KAU, the state department of Animal Husbandry and the Grama Panchayat.

The programme launched as a developmental project of the Grama Panchayat for the financial year 2001-02 was formally inaugurated by Sri. T.V. Chadramohanam, MLA. Sixty Senior Students of the Veterinary College, 25 senior faculty members and 20 Veterinary Surgeons from the state department participated in the camp which extended for one month. The programme consisted of house visits, information collection through survey, clinical examination of the presented cases, vaccination against diseases like foot and mouth disease, rabies and ranikhet. Over one thousand cattle, 1500 poultry and 200 dogs were vaccinated.

Every day evening, farmers, technical experts and students were given opportunity to sit together and discuss on problems facing

animal husbandry activities. Over one thousand farmers participated in these interface programmes, which were followed by cultural programmes. The participating students were taken for village stay which provided them opportunity to understand the problems of animal domestication directly.

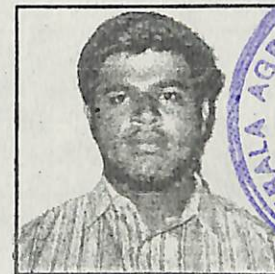
The programme was evaluated in a final seminar held on December 27 which was attended by the dignitaries from the KAU, State Animal Husbandry Department and peoples' representatives from the panchayat.

Smt. K.R. Gouri Amma Minister for Agriculture inaugurated the Valedictory function of the programme on December 27. Shri. T.V. Chandramohanam, MLA presided over the function. Dr. A.I. Jose, Director of Extension, KAU briefed about the camp. Shri. P.A. Madhavan, Member, District Panchayat, Shri. K.P. Aravindakshan, Ex. MLA, Dr. P.P. Balakrishnan,

Dean, Dr. K.G. Suma, District Animal Husbandry Officer and other Peoples' representatives graced occasion with felicitations. A report on the camp activities was presented by Dr. C.B. Manomohanam, the camp Co-ordinator. Shri. M.A. Subramanian, President of the Grama Panchayat welcomed the gathering and Shri K. Ramakrishnan proposed vote of thanks.

## Achievement

### Shri. R. Delto. L. Marokey



Shri. R. Delto. L. Marokey, Second year BSc. (Forestry) student, College of Forestry, Vellanikkara, represented the state junior team and won the third prize in the 125 kg. category in the Junior National Powerlifting Championship-2002 held at Bhopal from Dec. 19-22.

### Kum. Misha H. Bose

Kum. Misha H. Bose, Student of the College of Co-operation, Banking and Management, Vellanikkara secured second prize in the Inter University National Debating Contest on Co-operation held on Dec. 28. The contest was organized by the National Council for Co-operative Training of National Co-operative Union of India and was attended by students from 45 Universities in the country.

### Weather at Vellanikkara

Weather parameters	December 2001	Normal (1980-1981)	Deviation from normal
Max. temperature (°C)	29.5	31.9	(-) 24
Min. temperature (°C)	22.2	22.6	(-) 0.4
Rainfall (mm)	0.0	19.9	(-) 19.9
Rainy day (No. of days)	0	1	(-) 1
Evaporation (mm)	181.7	183.1	(-) 1.4
Sunshine (hours/day)	8.1	8.4	(-) 0.3