

DOPR NEWS

DIRECTORATE OF OIL PALM RESEARCH

(Formerly National Research Centre for Oil Palm)

(Indian Council of Agricultural Research)

Pedavegi - 534 450, West Godavari District, Andhra Pradesh.



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Issuc. 1&2



Directorate of Oil Palm Research welcomes Dr. S. Ayyappan, DG, ICAR

Director and staff of DOPR heartily congratulate our new Director General Dr. S. Ayyappan, an eminent scientist in fisheries sciences. He has been the fellow of NAAS and received many awards including ICAR team research award and special ICAR award. His contributions to marine and fresh water fisheries as well as aquaculture research and development are phenomenal. Prior to the present assignment, he was DDG (Fisheries), ICAR, New Delhi.

We, oil palm fraternity extend him a warm welcome and wish that under his dynamic leadership, ICAR will reach new heights, and achieve fame & glory. We look forward to his valuable guidance and support in the research and development activities of Directorate of Oil Palm Research.

CAMPUS NEWS

NRCOP upgraded to DOPR

National Research Centre for Oil Palm has been upgraded to Directorate of Oil Palm Research during February 2009.

RESEARCH ACHIEVEMENTS / NEW FINDINGS

Embryogenesis in Oil Palm

In oil palm though regeneration has been reported from several explants, the pathway of regeneration has been through callus. Direct embryogenesis without callus phase was obtained from cotyledonary nodes of germinated immature zygotic embryos of oil palm (*Elaeis guineensis*) hybrids viz. DG1 and DG21. Direct embryogenesis was achieved when the cotyledonary nodes of germinated immature zygotic embryos were cultured in dark for 8 weeks.



Fig. 1: Globular embryos

The globular embryos (Fig. 1) with clear suspensor region appeared and multiplied. On subculture to fresh media, the other stages such as torpedo and heart shaped embryos were seen. (Fig. 2) On transfer to light in Y3 media containing BA (2 μ M) and ABA (1 μ M) they matured into complete plantlets. In 2% of the cultures, secondary embryogenesis was also seen.



Fig. 2: Torpedo and heart shaped embryos

Carbon sequestration in Oil Palm under irrigated conditions

Eleven mature oil palm hybrids belonging to four different sources viz., ASD Costa Rica, Ivory Coast, Papua New Guinea and Palode were taken up for the study. Results revealed that the standing above ground biomass in the different hybrids ranged from 55.08 to 91.58 T.ha⁻¹. The highest biomass was recorded in ASD Costa Rica

hybrid (Deli XLame), while the lowest was in ASD Costa Rica hybrid (Deli X Avros). The amount of carbon sequestered by the hybrids ranged between 17.98 and 35.44 T.C.ha⁻¹ with Papua New Guinea and Ivory Coast hybrids sequestering the highest and lowest carbon contents respectively. Standing crops like oil palm serve as net accumulators of carbon, thereby offsetting carbon emissions, arising from the consumption of fossil fuels and also help in financial gains through carbon trading under the Kyoto Protocol. The present investigation would be useful for developing a comprehensive and accurate database regarding the carbon storage in an eleven year old oil palm tree under irrigated condition.

Rat control in oil palm plantations:

Application of zinc phosphide by following all the precautions like using gloves and putting the bait in banana leaves was found effective in bringing down more than 50% rat incidence as compared to used news paper bags and handling with bare hands. Two applications of Zinc phosphide and Bromodione against rats were found reducing more than 80% rat incidence in the 4 years old oil palm gardens.

New pest in oil palm: A new pest of coleopteran order, *Sylvanus* sp. (Sylvanidae, Coleoptera) was observed on the young plants of 4-5 years old, found in the dried unopened spindle leaves. Both the grubs and adults were found feeding on the leaf lamina.

Effect of neem cake application on Microorganisms: Application of neem cake to the growing media recorded differently for different microorganisms. For the microorganisms, *Metarhizium anisopliae* has enhanced the spore production while for *Trichoderma viride* has reduced both the spore as well as viable count numbers. Hence it can be concluded that application of neem cake in the growth media need to be done using precautions.

Growth of *Trichoderma viride*: Oil palm and cocoa ecosystem enhanced the number of *Trichoderma viride* spores compared to coconut and cocoa ecosystems. Presence of more functional roots at low depths of soil in oil palm plantations compared to coconut might be the reason.

Genetic variability in *oleifera* palms
Genetic variability of 23 *oleifera* palms available at DOPR, RS, Palode were assessed. Random Amplified Polymorphic DNA (RAPD) analysis was carried out for 23 *oleifera* palms along with 2 *guineensis* palms using 54 random primers. Total 238 locus (bands) were scored of which 173 were found polymorphic (72.69%). (Fig.3).

The *oleifera* palms formed 5 clusters and four palms were standing apart without forming any group (Fig.4). Similarity was found maximum (0.895) between three pairs of palms (palm No. *Eo-07* & *Eo-09*, *Eo-10* & *Eo-11* and *Eo-20* & *Eo-21*), whereas similarity was least between palm nos. *Eo-16* & *Eo-01*. *E. guineensis* palms

formed distinct separate group. There were quite a few primers which could differentiate *E. guineensis* from *E. oleifera*. This result combining with fatty acids composition would be useful for *oleifera* improvement programme.

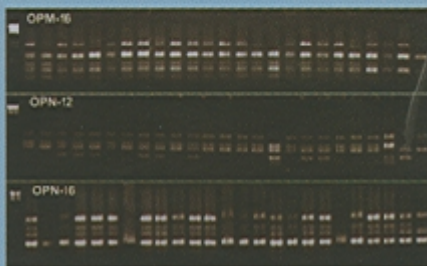


Fig. 3. Representative RAPD patterns of 23 *E. oleifera* and 2 *E. guineensis* palms

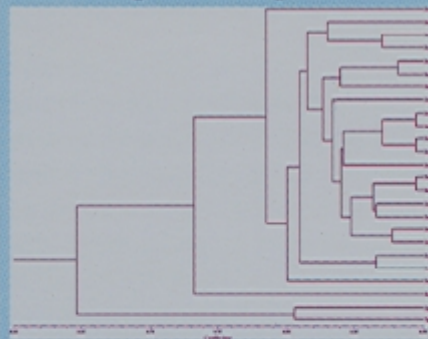


Fig. 4. Dendrogram derived from RAPD analysis of 23 *E. oleifera* and 2 *E. guineensis* palms

Diurnal and seasonal variations in sap flow in oil palm

Diurnal variations in sap flux indicated that the sap flux increased gradually from 9.00 AM reaching a peak during 1.00 to 2.00 PM and then decreased thereafter as the day progressed. Evapotranspiration and vapor pressure deficit also showed the same trend as that of the sap flux. This shows that the sap fluxes in oil palm plantations are closely associated with environmental variables like evapotranspiration and vapor pressure deficit. Seasonal variations in the sap flux indicated increased sap flux in the months of February and March. The decrease in sap flux during the dry months of May and June could be due

to the closure of stomata after mid day as the atmospheric vapor pressure deficit increased. Sap flux measurements could give vital leads in developing an approach for monitoring the environmental responses in oil palm.

Biomass, Carbon and Nitrogen Distribution with leaf age in Oil Palm

The total leaf biomass in the fronds belonging to six year old palm ranged from 1.65 to 2.74 kg. Similar pattern was seen in the leaf biomass distribution as that of leaf area. Specific leaf weight in different fronds ranged between 0.24 and 0.45. There was no definite trend in the specific leaf weight of different fronds. Carbon contents in different fronds ranged from 0.413 to 1.314 kg. Carbon contents were low in younger leaves and did not show any pattern among the middle and lower whorls. Nitrogen contents in the fronds ranged between 11.5 and 26.3 g. In general, younger fronds contained lower nitrogen contents and a definite trend was not seen in the later whorls. Correlation studies have indicated a positive relationship between leaf carbon and leaf nitrogen contents. Leaf carbon content was also positively correlated with specific leaf weight.

Screening of exotic duras to drought based on physiological markers

Based on stomatal and physiological observations, rankings were given to different duras grown under stress and irrigated conditions. The following criteria were adopted for giving the rankings for better drought tolerance: "Duras having lower stomatal frequency, stomatal index, guard cell length, stomatal pore area, transpiration rate, leaf temperature and higher plastid number, photosynthetic rate, photosynthetic water use efficiency, leaf water potential was ranked lower i.e., superior drought tolerant duras". The ranking of duras

grown under stress indicated that ZS-1 recorded the lowest rank compared to that of other duras. Highest rank was recorded by TS-9. Among the Guinea Bissau duras, GB-25 recorded the lowest rank and GB-21 recorded the highest rank. In Zambian duras, ZS-1 recorded the lowest rank than that of other duras. Highest rank was noted by ZS-2.

TRANSFER OF TECHNOLOGY

Officers Trained: Organised officers training on "Oil Palm Production Technology" to 23 officers, "Oil Palm Cultivation" to 22 officers, "Oil Palm Hybrid Seed Production" to 7 officers, "Nursery Management in Oil Palm" to 14 officers and "Plant Protection in Oil Palm" to 8 officers. Lectures delivered on Subject matter topics, Demonstrations, Visits to oil palm plantations and Processing units were arranged and literature was distributed. Pre and post evaluation was conducted.

Officers of state department of Agriculture/Horticulture and Entrepreneurs belonging to Andhra Pradesh, Gujarat, Karnataka, Kerala, Mizoram, Tamil Nadu, Chhattisgarh and Orissa participated. Two orientation trainings on "Oil Palm Production technology" were conducted to 3 scientists of AICRP (Palms) from Madhopur, Bihar, Passighat and Arunachal Pradesh.



Farmers trained:

Organised seven one day training programmes at DOPR, Pedavegi on "Oil Palm Cultivation" to 195 farmers from Andhra Pradesh, Goa, Gujarat, Mizoram and Tamil Nadu.

Organized one day on farm training on "Nutrient and water management in Oil Palm" to 60 farmers. Two one day on farm trainings on "Plant protection in oil palm" were organized to 139 farmers. Nine one day training programmes on "Oil Palm cultivation" were conducted to 471 farmers.



Students visited DOPR: Organized exposure visit at DOPR, Pedavegi to the students of different colleges and universities of the Andhra Pradesh. A total of 57 students visited this centre. In all the above programmes, they were taught about cultivation of oil palm, explained about the research programmes of the centre and visited the laboratories.

At DOPR, RS, Palode One day training program on 'Oil Palm Production Technology' was conducted to 811 students and 83 farmers.

Extension activities

Trainings/awareness campaigns organised

• Growers' awareness campaign on Management of Basal Stem Rot (*Ganoderma*) in Oil Palm on 7 November 2009 at Anantapalli, Nallajerla Mandal, A. P. Lectures were delivered on management of Basal stem rot in coconut and Oil Palm in the fore noon and a field visit was organised in the afternoon. A total of 190 farmers attended the campaign.



• Brainstorming session was conducted on "Harvesting of oil palm in India - Status and strategies" on 22.7.2009. Technical session was held on methods of harvesting and tools used for harvesting in different crops. Demonstrated the method of harvesting with different mechanized harvesting tools. DVD film on "Golden Palm" in Gujarati and Mizo languages were released.

• Diagnostic field visit was organised with the scientists team to the farmers' oil palm plantations in West Godavari Dist. on 19.2.2009 and necessary suggestions were given.

• Field day was conducted on cocoa in oil palm at Visakhapatnam on 3rd February, 2009.

• Awareness programme was conducted on "Intellectual Property Rights" to the NSS unit students of Iqbal College, Peringamala on 21, December 2009 at Govt.LPS Pacha, Nanniyode, Kerala.

DOPR Regional Station, Palode, Kerala participated in

• Agri Fair held at Nanniyode from January 26- 31, 2009.

• 'Karshika Mela' held at Palode from February 7- 14, 2009 and bagged second prize among the government category.

• Exhibition held at Trichi on 21st August, 2009 in connection with celebrations of Foundation Day of NRC Banana.

• Exhibition held at Tanjavore in connection with Farmers Meeting on 'Demonstration of harvesting tools' during September, 2009.

Meetings conducted

- Twelfth Institute Research Council meeting was conducted at the Regional Station, Palode from 21 to 22 May, 2009.
- Twentieth Institute Management Committee (IMC) meeting was held at DOPR, Pedavegi on 4 July, 2009.
- Tenth Research Advisory Committee (RAC) meeting was held at DOPR, Pedavegi on 22 October, 2009.
- Review Meeting of Oil Palm Planting Materials was conducted by DOPR on 18 August, 2009 at Commissionerate of Horticulture, Hyderabad (A.P.). It was attended by Scientists, Research Scholars, Seed garden officials, Development officials of State departments of Horticulture/ Agriculture and Entrepreneurs. There were presentations/discussions on production and supply of oil palm sprouts from different seed gardens, problems being faced by the seed gardens, quality control of sprouts, enhancement of production of sprouts etc.
- Group Meeting on 'Quarantine regulations of oil palm in India' was organized by Director, DOPR on 19 December at NBPGR, New Delhi. About 40 members including scientists and officials participated in the meeting.
- **Hindi day celebrations: Competitions in connect on with Hindi day celebrations were conducted on 27, October at DOPR, Pedavegi.**
- **Anti terrorism day was observed on 21.05.2009 and Vigilance awareness week was observed during 03.11.2009 to 07.11.2009.**

PUBLICATIONS

Research papers published

Jayanthi, M, Sujatha G and Mandal P.K. 2009. Optimization of PCR Reagents for amplification of micro-satellites in oil palm. *Indian Journal of Horticulture*, **66(1)**: 147-148.

Jayanthi, M., Mandal, P.K., Suresh, K. and Sunitha, B. 2009. Preliminary Observations on Tissue Culture of Oil Palm. *International Journal of Oil Palm*, **6(1)**: 67-68.

Kalidas, P. and Vidyasagar, P. 2009. Impact of conventional pesticides and their methods of application on the management of rat menace in young oil palm orchards. *Journal of Oilseeds Research*, **26(special issue)**: 246-248

Mandal, P.K. and Sujatha, G. 2009. Gas Chromatograph Mass Spectroscopy Method for Analysis of Fatty Acid Composition of Palm Oil Using BPX-70 Capillary Column. *International Journal of Oil Palm*, **6(1)**: 49-52.

Mandal, P.K., Sujatha, G and Krishna Kumar, T. 2009. Qualitative analysis of interspecific hybrid of oil palm for bunch component analysis. *Journal of Plantation Crops*, **37(2)**: 117-122.

Mandal, P.K., Kochu Babu, M. and Satyavani, V. 2009. Characterization of oil extracted from bunch end rot disease affected oil palm (*Elaeis guineensis* Jacq.) *Journal of Plantation Crops*, **37(1)**: 60-63.

Mandal, P.K., Satyavani, V. and Kochu Babu, M. 2009. Studies on Colony Morphology and Sporulation of Ganoderma isolates, causing Basal Stem Rot Disease of Oil Palm. *International Journal of Oil Palm*, **6(1)**: 43-48.

Murugesan, P and Bijimol, G. 2009. Effect of soil-pit pre-treatment on germination and seedling quality of oil palm (*Elaeis guineensis*, Jacq). *International Journal of Oil Palm*, **6(1)**: 27-30

Murugesan, P., Bijimol, G. and Gopakumar, S. 2009. Nut component analysis of exotic and indigenous sources of oil palm (*Elaeis guineensis*, Jacq) planting materials. *International Journal of Oil Palm*, **6(1)**: 19-21

Rajasekhar Pinnamaneni and Kalidas, P. 2009. Compatibility of *Beauveria bassiana* with certain Agro-chemicals. *Journal of Applied Bioscience*, **35 (2)**: 155-158

Sarkar, A., Mathur, R.K., Reddy, V.M., Kochu Babu, M. and Raghu, K. 2009. Application of statistical models in selection of promising Oil Palm hybrids. *International Journal of Oil Palm*, **6(1)**: 53-59.

Sunitha, S and Varghese, P.T. 2009. Biomass production and potential nutrient contribution from oil palm plantation annually and at felling. *International Journal of Oil Palm*, **6(1)**: 39-41.

Suritha, S and Varghese, P.T. 2009. A multi-tier cropping for oil palm under rainfed conditions. *International Journal of Oil Palm*, **6(1)**: 69-70.

Sunitha, S and Varghese, P.T. 2009. Economics of nutrient recycling in oil palm plantations. *International Journal of Oil Palm*, **6(1)**: 71-72.

Popular articles

Kochu Babu, M. 2009. Economics of oil palm cultivation. *Plant Horti Tech* Vol. 8 No. 6 March-April 2009, pp 23-24

Kochu Babu, M. 2009. Oil palm processing technology. *Plant Horti Tech* Vol. 9 No.1 May-June 2009, pp 29-32

Kochubabu, M. Prasad, M.V. and Jameema, J. Oil Palm lo kadam modalu kullu tegulu yajamanyam (Telugu) (Management of basal stem rot disease in oil palm) Annadatha, Telugu Agriculture News Magazine. January 2009, p42.

Contributions in books

Jayanthi, M. and Mandal, P.K. (2009) Application of Biotechnology in conservation of rare plants. In: *Diversity of plant - A molecular approach* (Ed. S. John Britto, S.J.). Published by The Rapinat Herbarium and Centre for

Molecular Systematics. St Joseph's College (Autonomous), Tiruchirapalli. pp. 163-178.

Jayanthi, M. and Mandal, P.K. 2009. Biotechnological tools to detect somaclonal variation in Oil Palm. In: Oil Palm for Farmers' Prosperity and Edible Oil Security. Eds : Rethinam, P., Reddy, V.M., Mandal, P.K., Suresh, K. and Prasad, M.V., SOPOPRAD, Pedavegi, A.P., India pp. 67-73.

Kalidas, P., 2009. Pests of Irrigated Oil Palm and their Management. In sustainable crop protection strategies (ed. H.R. Sardana, O.M. Bambawale and D. Prasad). Daya Publishers, Ansari Road, Delhi 6. pp. 799-806.

Mandal, P.K. and Jayanthi, M. 2009. Strategic application of biotechnology for improvement, management and exploitation of oil palm in India. In: *Diversity of plant – A molecular approach* (Ed. S. John Britto, S.J.). Published by The Rapinat Herbarium and Centre for Molecular Systematics. St Joseph's College (Autonomous), Tiruchirapalli. pp. 146-162.

Mandal, P. K. and Jayanthi, M. 2009. Oil Palm Biotechnology in India- Past Present and Future. In: Oil Palm for Farmers' Prosperity and Edible Oil Security. Eds : Rethinam, P., Reddy, V.M., Mandal, P.K., Suresh, K. and Prasad, M.V., SOPOPRAD, Pedavegi, A.P., India pp. 61 – 66.

Murugesan, P. 2009. Status of indigenous oil palm hybrid seed production. In: Oil palm for farmers prosperity and edible oil security Eds : Rethinam, P., Reddy, V.M., Mandal, P.K., Suresh, K. and Prasad, M.V. SOPOPRAD, Pedavegi, A.P India pp 94-106

Technical publications

Rethinam, P., Reddy, V.M., Mandal, P.K., Suresh, K and Prasad, M.V. 2009. Oil Palm for Farmers' Prosperity and Edible Oil Security (Proceedings of National Conference on Oil Palm). Published by Dr. P. Rethinam, President, SOPOPRAD, Pedavegi, West Godavari Dt., Andhra Pradesh, India 222p.

Kochu Babu, M., Prasad, M.V. and Jameema J 2009. Folder on Management of Basal Stem Rot in Oil Palm (in Telugu), DOPR, Pedavegi.

Prasad, M.V. and Jameema, J. 2009. Folder on Importance of leaf nutrient analysis in Oil Palm and method of leaf sampling. (in English & Telugu), DOPR, Pedavegi.

Electronic publications:

Prasad, M.V., Mandal, P.K. and Suresh, K. 2009 "Golden Palm" - DVD film in Gujarati, Hindi and Mizo languages.

PRESENTATION IN SEMINAR/ SYMPOSIA/ WORK SHOPS / CONFERENCES etc.

Jayanthi, M. and Mandal, P.K. 2009. Bioprospecting oil palm for useful genes. Poster presented in the World Congress on Conservation Agriculture held at NASC, New Delhi during February 3-6, 2009.

Mandal, P.K., Jayanthi, M. and Sujatha, G. 2009. Designing of oil palm microsatellite primers and their potential use as marker for other economically important palm species. Poster presented in the World Congress on Conservation Agriculture held at NASC New Delhi during February 3-6, 2009.

Satisha, G.C., Swarna Latha, K. Manoja and M. Kochu Babu. 2009.

Soil Biological Productivity: A vital approach for nutrient building, soil quality and sustained oil palm productivity in warm sub-tropical climate of Andhra Pradesh. Presented in 9th Agricultural Science Congress, June 22-24, 2009, Srinagar, Jammu and Kashmir, India: Abstracts, pp. 145-146

Murugesan, P. 2009. Necessity of registration of oil palm varieties under Plant variety protection system: In National debate on DUS test procedures and national test guidelines for tropical and sub tropical plantation crops July 10, 2009. CPCRI, Kasaragod .

Kalidas, P. 2009. Biopesticides and environment protection. Paper presented in the National seminar on "Role of Biotechnology in alleviating environmental pollution" held at Vijayawada on October 23, 2009.

Mathur, R.K., Raghu, K., Praveen Kumar, B and Kochu Babu, M. 2009. Evaluation of African oil palm germplasm for yield and bunch quality parameters under simulated water stress conditions. Souvenir and Abstracts. National symposium on Recent global developments in the management of plant genetic resources. December 17-18, 2009, NBPGR, New Delhi.

Begum, A., Raghava Rao, E., Kochu Babu, M. and Venkata Seshiah, Ch. 2009. Effect of feeding dried palm oil mill effluent on dry matter intake, nutrient utilization and growth rate in buffalo calves. Abstract papers Vol. II. Proceedings of the 13th ANSI Biennial Conference "Diversification of Animal Nutrition Research in the Changing Scenario" held at National Institute of Animal Nutrition and Physiology, Bangalore during December 17-19, 2009.

Prasad, M.V., Sunitha, S. and Kochu Babu, M. 2009. Adoption of oil palm in Karilands of Kerala-A case study. Poster presented in National seminar -2009 on Enhancing efficiency of extension for sustainable agriculture and livestock production. December 29-30, 2009, IVRI, Izatnagar. - **second best poster award**

Kalidas, P. and Kochu Babu, M. 2009. Oil palm clinic. Information technology applications in horticultural crops. Editors: PM Govindakrishana, JP Singh, SS Lal, VK Dua, Shashi Rawat and SK Pandey. CPRI, Shimla. Pp 261.-262

Dr. M. Kochu Babu, Director International Conference on "Emerging trends in production, Processing and Utilization of Natural Fibres" at Mumbai during April 16-18, 2009 and delivered Invited talk on "Oil palm fibre"

Interface Meet on Oil Palm at Trichy, Tamilnadu on 29 April, 2009.

National Seminar on "Enhancing Productivity and Profitability" at CMFRI, Cochin during August 29-30, 2009.

Special Interactive Workshop on "Administrative and Financial Matters" at NAARM during September 10-11, 2009.

National seminar on 'Natural fibres of India' at ANGRAU, Hyderabad organized by Directorate of Cotton Development, Mumbai during 28 October 2009 and presented a Lead paper on "Scope of oil palm fibre utilization"

Workshop on oilseeds at Agri Biotech Foundation, Rajendra Nagar, Hyderabad on 9 November 2009.

Dr. M. Kochu Babu and Dr. P. Kalidas

National symposium on vegetable oil scenario: Approaches to meet the growing demands held at DOR, Hyderabad during January 28 - 31, 2009.

National Conference on "Technology led development of horticulture for economic upliftment of rural area" at Pusa, Bihar during May 28-31, 2009 (Swadesh Prem Jagriti Sangasthi-2009)

Dr. M. Kochu Babu and Dr. R. K. Mathur

Brainstorming session on "Plant Genetic Resources Management in Horticultural Crops" at NBPGR, New Delhi on April 21, 2009.

Dr. M. Kochu Babu, Dr. R. K. Mathur, Dr. K. Suresh and Dr. S. Sunitha

XIX Biennial Group Meeting of AICRP(palms) at Navsari, Gujarat and chaired Technical Session 'Review of research projects on disease management in coconut' during October 12-14, 2009.

Dr. M. Kochu Babu, Dr. P. Kalidas, Dr. B. Narsimha Rao, Dr. R. K. Mathur, and Dr. S. Sunitha

International seminar on "Present Status of Oil Palm Development in India and Strategies for High Production" at IIBM, Bangalore. Dr. M. Kochu Babu delivered Keynote address on "Oil palm cultivation in India in the light of global scenario". Dr. P. Kalidas, Dr. R. K. Mathur and Dr. S. Sunitha delivered guest lectures.

Dr. P. Kalidas

State level seminar on cocoa held at CTRI, Rajahmundry on July 17, 2009. and delivered lecture on 'Pests of cocoa in oil palm'.

National Seminar on Role of biotechnology in alleviating the Environmental pollution held at Vijayawada on October 23, 2009.

Dr. P. Murugesan

National debate on DUS Test procedure and National test guidelines for tropical and sub-tropical plantation crops on July 10, 2009 at CPCRI, Kasragod.

Workshop on Leadership for transition to NAIS held at NAARM, Hyderabad from November 17-21, 2009.

National Workshop on "Intellectual Property Rights and Economic Development in the Knowledge era" at Cochin University of Science & Technology on December 11, 2009.

Dr. R. K. Mathur

IT workshop on Horticultural Crops at CPRI, Shimla during August 24-25, 2009.

Dr. M. V. Prasad

National seminar on "Enhancing efficiency of Extension for sustainable agriculture and livestock production" held at IVRI, Izatnagar, U.P. during December 29-30, 2009.

Dr. P. K. Mandal and Dr. M. Jayanthi

World Congress on Conservation Agriculture held at NASC, New Delhi during February 3-6, 2009.

National Seminar on Horticultural Biotechnology at IIHR, Bangalore during October 28-29, 2009

Dr. P. K. Mandal

Workshop on "Dimension of Nanotechnology: Science, Technology, Business and Society" at National Institute of Advanced Studies, Bangalore from February 09 -13, 2009.

Fifth International Conference on Plant Pathology in the Globalized Era, November 10-13, 2009, New Delhi, India.

MEMBERSHIPS IN COMMITTEES / EXPERT TEAMS

Dr. M.Kochu Babu

Member of Project evaluation and sanctioning committee for approval of Annual Action Plans under ISOPOM (Ministry of Agriculture, GOI)

Dr. P. Kalidas

Appointed as member secretary, RAC of DOPR for a period of three years from November, 2009.

Dr. P. K. Mandal

Member of Institute Technology Management Committee (ITMC) of Central Tobacco Research Institute, Rajahmundry.

Member Secretary of a team headed by Dr. P. Rethinam for "Additional potential areas for growing oil palm in Orissa".

AWARDS/RECOGNITIONS

Dr. M. V. Prasad, Sr. Scientist received **young scientist award** from Indian Society of Extension Education in recognition of outstanding work done in the field of extension research and field extension services. Award was presented to him during the ISEE National seminar held at IVRI, Izatnagar, U.P. during December 29-30, 2009.

Research article entitled "Adoption of oil palm in karilands of Kerala under rainfed conditions a case study" authored by Prasad M V, Sunitha S and Kochu Babu M received **second best poster award** in the ISEE National seminar "Enhancing efficiency of Extension for sustainable agriculture and livestock production" held during December 29-30, 2009 at IVRI, Izatnagar, U.P.

Dr. B. Narsimha Rao was recognized as

- External paper setter and external examiner for thesis evaluation of post graduate students of Assam Agricultural University, Jorhat, Assam and Central Agricultural University, Imphal.
- External examiner for conducting practical examination and evaluation of theory papers by the Central Agricultural University, Imphal.

Dr. R. K. Mathur delivered lecture on Oil Palm Research and Development in India- Past, Present and Fu-

ture to the trainees from African countries at National Academy of Agricultural Research Management, Hyderabad on 29.04.2009

TRAINING, WINTER / SUMMER SCHOOLS COURSES ATTENDED

Dr. M. Jayanthi

Short course on "In vitro Techniques in Plantation Crops" held from January 15-24, 2009 at CPCRI, Kasaragod.

Dr. Ananta Sarkar.

Winter school on "Decision making in Agriculture using Data Mining" at National Centre for Agricultural Economics and Policy Research (NCAP), New Delhi during 27th Oct - 16th Nov, 2009.

Training programme on 'Web Design Methodologies and Protocols' at National Academy of Agricultural Research Management (NAARM), Hyderabad during September 08-18, 2009.

Dr. P. K. Mandal

Two-week Training Programme on Technology Commercialization for Senior Scientists from June 1-12, 2009, Sponsored by Department of Science & Technology, Government of India.

Dr. M. V. Prasad

Training on "Agricultural Policy analysis" during December 7-11, 2009 at New Delhi.

Dr. G. C. Satisha

Training programme on "Multidisciplinary Perspectives on Science, Technology and Society" during the period from August 10-22, 2009 at National Institute of Advanced Studies, IISc campus, Bangalore

Meetings attended

Dr. M. Kochu Babu

Project Evaluation and Sanctioning Committee (PSC) meeting at DAC, New Delhi on 22 June, 2009.

Meeting with Hon'ble Minister for Agriculture, Govt. of Kerala (discussion on prospects of oil palm cultivation in Kerala) at Trivandrum on 5 July, 2009.

Directors' Conference of the ICAR institutes at New Delhi during July 16-17, 2009.

Inauguration of Model Training Course on "Integrated Production and Processing Management for Tropical Tuber Crops Programme" at CTCRI, Trivandrum on 5 October, 2009.

Meeting of the Mega project "Comprehensive Utilisation of Natural Fibres: Production, Processing and By-Product Utilisation" (where DOPR is one of the participating centres) at New Delhi on 31 October, 2009.

Guest of honour during Inaugural session of the National Symposium on Tobacco-2009 at CTRI, Rajahmundry on 24 November, 2009.

XVIII Project Management Committee (PMC) meeting of A.P at Hyderabad on 16 December, 2009

Meeting on 'Strategies for Oilseeds and Oil Palm Development programme' at DAC, New Delhi on 17 December, 2009.

Dr. M. Kochu Babu, Dr. P. Murugesan and Dr. S. Sunitha

16th Foundation day of NRC for Banana, Trichy on 21, August, 2009 and participated in Post harvest handling, storage and ripening of Banana and interactive session.

Dr. M. Kochu Babu and Dr. R. K. Mathur

Oil Palm awareness campaign at Theni, Tamil Nadu on 1 May, 2009.

Dr. M. Kochu Babu and Dr. K. Suresh

Panel meeting on carbon sequestration in plantation crops and trading under clean development mechanism at CPCRI, Kasaragod on 4 August, 2009.

Dr. P. Kalidas

Chief Guest of the function at HRS, Vijayarai and delivered a talk on pests of cocoa in oil palm and their management.

Interaction meet of entomologists working in horticultural institutes of ICAR held at Lucknow during June 10-11, 2009 and presented the work done on oil palm pest management.

IMC meeting of CPCRI, Kasargod on 18th September, 2009.

Special meeting on Coconut leaf beetle, *Brontispa sp* held at NBAII, Bangalore on 21st November, 2009.

Meeting on management of mealy bugs on agri / horti. crops held in IIHR, Bangalore during December 5-6, 2009.

Dr. P. Murugesan

Indian Society for Plantation Crops Executive committee meet on 07 May, 2009 and 17, December, 2009.

Dr. P. Murugesan, Dr. R. K. Mathur, Dr. P. K. Mandal and Dr. M. Jayanthi

Meeting for review of crop improvement projects of DOPR by DDG (Hort.) at CPCRI Kasaragod during December 17-18, 2009.

Dr. M. V. Prasad

Academic Council meeting of Ch. S. D. St. Theresa's College for Women, Eluru, W.G. Dist, A.P. during March 2009.

PERSONALIA**Newly appointed**

Dr. B. Narsihma Rao, joined as Principal Scientist (Hort.) at DOPR, Pedavegi.

Retired

Dr. V. M. Reddy, Principal Scientist, DOPR, Pedavegi.

Sri. K. V. V. Satyanarayana, Private Secretary, DOPR, Pedavegi.

Sri. H. Dasan, Skilled Supporting Staff, DOPR, RS, Palode, Kerala.

Promoted

Dr. K. Sunil Kumar, Scientist to Scientist (Senior Scale), DOPR, Pedavegi.

Dr. P. Murugesan, selected as Pr. Scientist (Horticulture), DOPR, RS, Palode, Kerala.

Mr. B. Pardhasaradhi, T-5 to T-6 (Technical Officer).

Training to Group 'D' employees for non-matric/ ITI was conducted (for merging them under Group 'C' category) at DOPR, Pedavegi and Regional Station, Palode, Kerala.

Obituary

We deeply condole the death of two of our staff members Mr. P.S. Ravindran (Retd. Senior Scientist) and Mr. Dasan (Retd. Supporting Staff).

Students guided

Dr. P. Kalidas guided six M.Sc students of Microbiology and Biotechnology, one M. Phil student and one Ph. D student.

Dr. P. K. Mandal guided 5 M. Sc students and one Ph.D student.

Dr. M. Jayanthi guided 8 M. Sc. students.

Lectures delivered**Dr. P. Kalidas**

- Gave a radio talk on oil palm plant protection (interview) in All India Radio, Vijayawada on 29th April, 2009, broadcasted on 2nd May, 2009.

- Delivered lecture on oil palm cultivation and answered the queries of the oil palm growers of Visakhapatnam district on 8th October, 2009.

Dr. P. Murugesan

- "Best management practices for oil palm" in interface meet held at NRC Banana, Trichy on 29th April, 2009

- "Impact of Climate change on Agriculture" to school students & participated in Science Exhibition day as Chief Guest at Crescent Central School, Peringamala, Palode on 06.11.2009

Dr. M. V. Prasad

- "Transfer of Technology and public private partnership in oil palm" in a winter school on

"Alternate land use options for resource conservation, emerging market needs and mitigation of climate change in rainfed regions" held at CRIDA during January 16 - 5 February, 2009.

- Oil palm cultivation in Hindi in the seminar on "Technologies for production of Oil Palm in South Gujarat" to 150 farmers at Navsari, Gujarat on 3.6.2009.

- Oil palm cultivation at Kamavarapukota, W.G. Dist, A.P. on 29.1.2009 organised by Coromandel Fertilizers Ltd.,

- Oil palm cultivation in Rytu Avagahana Sadassu (Growers awareness campaign) at AMC Wyra, Khammam Dist. A.P. on 14.2.2009.

Dr. P.K. Mandal,

Role of DOPR for the benefit of Oil Palm farmers (in Oriya), at denkanal during farmer's meet organised by Dept. of Horticulture, Govt. of Orissa on 23-7-09.

Dr. M. Jayanthi,

Biotechnology of oil palm to M. Tech biotech students of VSR & NVR college, Tenali on 26th November 2009.

Edited by

Dr. M.V. Prasad, Dr. P.K. Mandal, Mrs. A. Bhanusri and Mrs. J. Jameema

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