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From the Director's Desk

Dear Readers,

BEST WISHES FOR A HAPPY & PROSPEROUS NEW YEAR.

Apart from innovations and package of practices developed and transferred from R&D Institutions, innovations in the form of grass-root level technologies and methodologies developed by some of the innovative farmers and rural youth are benefitting widely the farmers and have also been accepted across the system. Such innovative technologies and methodologies are largely confined to some specific locations. Benefits accrued from such innovative ideas need to be widely shared across the country, and the scientific talents behind such grass-root level innovations need to be encouraged and recognized. An initial attempt in this direction has been made by Directorate of Oil Palm Research in the recent months.

Realising the importance of farmer innovations and as per the guidance provided by Director General, ICAR, Directorate of Oil Palm Research is proposing to organize "Farm Innovators' Day" at the Institute Campus on January 6, 2012. In line with the research needs of oil palm sector, the theme for the programme was chosen as "Tools and machineries for harvesting oil palm bunches". During the preliminary contacts with various stakeholders of oil palm sector for this programme, DOPR Scientists could locate an impressive tool developed by an oil palm grower. The details of the farmer and his innovation are as follows:

Shri Simhadri Ramakrishna is a 55 years old oil palm grower in Korumamidi village in Nidadavolu Mandal of West Godavari District, Andhra Pradesh. His family cultivates oil palm in an area of 14.00 ha - planted in a phased manner during 1995, 2000, 2005 and 2008. Average yield of Fresh Fruit Bunches in his garden is 22.5 tonnes / ha. As the 1995 planted oil palm trees have reached a height of more than 11.00 meters, he was finding it difficult to get labour for harvesting (using 7 meters length pole) at reasonable wages. As the yield level was good, he

did not want to remove the trees at this age itself. Hence, he started thinking about measures for overcoming this problem of harvesting bunches at greater heights. Based on his own idea and further discussions with friends and relatives and help from local Tools Engineering Workshop, he could develop a "Bullock cart mounted platform" for oil palm harvest. The unit is made of G.I. pipes with a total weight of 1070 kg. The ground level dimension is 3 x 1 meters and the unit requires a turning radius of 2.50 meters. At present, the platform (of 5.1 meter height) along with appropriate pole attached with a sickle is used for harvesting bunches comfortably. Three persons could harvest 2.00 to 3.50 tonnes in half a day. He observed that the unit is less expensive (Rs.50,000/- for cart + Rs.50,000 for the fabrication of platform).



Cost involved in oil palm harvest operation in his farm has come down appreciably.

We wish that we would be able to see many more such farm innovations during the "Farm Innovators' Day" programme and during the subsequent months to come for further validation, modification (if required) and large-scale adoption.

S. Arulraj
Director

Sectoral News

Commission for Agricultural Costs and Prices (CACP) studies cost of cultivation and adoption of oil palm

Dr. Ashok Gulati, Chairman and Dr. Ashok Vishandass, Member, CACP visited oil palm plantations in West Godavari District of Andhra Pradesh during October 18-19, 2011. Committee visited oil palm plantations and interacted with the farmers regarding input costs, labour costs, adoption of cultivation practices and returns from oil palm cultivation. They attended the oil palm growers' meet organised at Gangannagudem. Committee met the officials of State Department of Agriculture / Horticulture, Govt. of Andhra Pradesh, Oil Palm Processors and Scientists of DOPR and discussed various issues relating to providing sustenance to oil palm cultivation for marching towards achieving self sufficiency in vegetable oil production in the country.



RESEARCH ACHIEVEMENTS

Isolation of causal agent of bud rot disease in oil palm

Bud rot is one of the major diseases of oil palm resulting in quantitative yield loss due to palm death. The etiology (cause) of the disease is not known till date. Studies were initiated at the Directorate of Oil Palm Research to identify the causal organism for this dreaded disease. Recent results recorded at DOPR could provisionally confirm the etiology of the disease. Five isolates of bacteria were isolated from bud rot affected palm, namely BRI-1, BRI-2, BRI-3, BRI-4 and BRI-5. Among these, BRI-5 has developed the bud rot symptoms on challenge inoculated oil palm seedlings under both *in vitro* and *in vivo* conditions, while proving the pathogenicity through Koch's postulates. The BRI-5 could be re-isolated successfully from the seedlings. Thus the bacterial isolate BRI-5 is proved as causal agent of bud rot disease. Further confirmation and identification of the organism through molecular studies are in progress.

Collection of oil palm germplasm

As a part of germplasm exploration programme, Dr. Goutam Mandal, Dr. K. Sunil Kumar and Dr. P. Murugesan, Scientists from DOPR surveyed the oil palm plantations established in A&N Islands Forest and Plantation Development Corporation Limited at Little Andaman Islands. The gardens established during 1972-77 were surveyed for the availability of genetic variability especially with high production potential. The Team could collect nine germplasm accessions planted from five different sources (IRHO, Dami, FELDA, NIFOR & Zaire).



From a similar expedition in Andhra Pradesh, two elite germplasm accessions could be collected from commercial oil palm plantations.

Oil palm sprouts production

DOPR has produced and supplied 2,60,300 oil palm hybrid sprouts to twelve oil palm processors in Andhra Pradesh, Orissa, Karnataka and Nagaland during 2011.

PUBLICATIONS

Research articles published

- Murugesan, P and Goutham Mandal, 2011. Identification and characterization of three *pisifera* palms. Proceedings of Agriculture, Biotechnology & Sustainability Conference, PIPOC 2011, Malaysian Palm Oil Board, Malaysia, p.84-88

Technical publications

Vijayabhaskar. V. and B.Narsimha Rao. 2011. Cocoa as intercrop in Coconut. Annadata. Oct.,2011 p58-60.

Participation in Symposia / Seminars / Workshops / Conferences etc.,

Dr. S. Arulraj, Director, DOPR attended

- National Dialogue for "Application of Nanotechnology in Agriculture" at Central Institute of Fisheries Education, Mumbai during October 8-9, 2011.
- XX Biennial Group Meeting of AICRP on Palms held at CPCRI, Kasaragod along with four scientists from DOPR during October 15-17, 2011.
- Interaction meeting on 'Network Project on PGR Management and Use' held at NBPGR on November 19, 2011.
- Meeting on "Oil palm FFB price fixation" held at ICAR Committee Room No.1, Krishi Bhavan, New Delhi on November 25, 2011 - convened by Dr.Ashok Gulati, Chairman, CACP.
- Regional Workshop on "Enhancing Oilseeds Production through Improved Technology in SAARC Countries" held at Directorate of Oilseeds Research, Hyderabad during December 20-21, 2011.

Dr. B. N. Rao, Principal Scientist attended

- National Dialogue (second) on "Application of Nano Technology in Agriculture" at TNAU, Coimbatore and presented a concept note on "Nano based Potassium and Boron Particles in Oil Palm" during November 11-12,2011.
- Meeting on "Water platform" at NBFGR, Lucknow and presented the concept note on "Water Management in Oil Palm" on October 18, 2011.

Dr. P. Murugesan, Principal Scientist participated

- Agriculture, Biotechnology and sustainability conference - PIPOC-2011, Jointly organized by the Malaysian Palm Oil Board (MPOB) and International

CAMPUS NEWS

Stakeholders' Meeting on Oil Palm Research

In order to prioritise the research needs in oil palm, a stake holders' meeting was organized at Directorate of Oil Palm Research, Pedavegi on November 6, 2011 under the Chairmanship of Dr. H. P. Singh, Deputy Director General, ICAR, New Delhi. Dr. Purushotham, Former Director of Research, Andhra Pradesh Horticultural University served as the Co-Chairman. Oil palm farmers, oil palm FFB processors, officers of State Department of Horticulture and Scientists of DOPR participated in the meeting. The Programme included a visit to Experimental Fields and Laboratories followed by an Interaction Meeting at DOPR Auditorium.

In his opening remarks, Dr. H. P. Singh, Deputy Director General (Hort.), ICAR, narrated the horticulture scenario in India and stressed the objective of the stakeholders' meet. He requested all the participants for active participation and to offer constructive technical suggestions for prioritizing oil palm research programmes to be taken up during XII plan.

Dr. S.Arulraj, Director, DOPR made a presentation on mandate and achievements of DOPR and oil palm Centres of AICRP on Palms. Following this, a detailed review was undertaken on the "Action Taken Report on the recommendations of the previous Stakeholders' Meet on oil palm" convened by Director General, ICAR at NASC, New Delhi on June 7, 2010 under the title "National Consultation on Oil palm" and the follow-up actions taken so far by DOPR were appreciated. A few points that need re-orientation/ more intensive efforts were highlighted. Research areas to be initiated/strengthened at DOPR were highlighted by the participants.



Based on the Stake-holders' Meeting, the following thrust areas were identified for inclusion in the DOPR XII Plan Proposal:

- Effective management, enhancement, evaluation and valuation of genetic resources
- Development of improved hybrids with high quality characteristics, productivity, compactness and resistance to biotic and abiotic stresses
- Strengthening of oil palm hybrid seed production with advanced generation materials to achieve self sufficiency in domestic planting material requirement
- Develop system for productive use of water to get 'more crop per drop' by increasing the water and nutrient use efficiency
- Develop suitable harvesting tools for oil palm production
- Develop Integrated Pest Management schedule for leaf eating caterpillar in oil palm
- Development of new innovative diagnostic techniques for rapid, accurate and cost effective detection of high impact diseases

Society for Oil Palm Breeders at KLCC, Kuala Lumpur, Malaysia and presented papers entitled

1. Identification and characterization of three *pisifera* palms
2. Seed physical characteristics and germination of different hybrid combinations of Oil Palm (*Elaeis guineensis*, Jacq.) developed from African germplasm in the session Breeding for sustainability of oil palm.

Dr. Goutam Mandal, Sr. Scientist attended

- "National Stakeholder Consultation Meeting on Seed Platform" held on December 17, 2011 at ANGRAU, Hyderabad - organised by Directorate of Seed Research, Mau (U.P.).

Centres visited

Dr. S. Arulraj, Director, DOPR visited

- AICRP on Palms Centre, Aduthurai, Tamil Nadu State on October 31, 2011.
- DOPR Research Centre, Palode on December 15, 2011

Training programmes attended

- Dr. K. L. Mary Rani, Scientist (SS) (Comp. Applications) attended Installation Training Programme/Workshop on SAS 9.3 during November 15-16, 2011 at NAARM, Hyderabad
- Dr. P. Murugesan, Principal Scientist(Hort) attended Sixteenth Management Development Programme for Agricultural Research Management during October 20-25, 2011 at NAARM, Hyderabad, A. P.

TRANSFER OF TECHNOLOGY

Officers trained:

A Model Training course on "Advanced Technology for Resource Management for Sustainable Oil Palm Production" sponsored by Department of Agriculture & Cooperation, Ministry of Agriculture, Govt. of India was organised to officers of state department of Agriculture / Horticulture. Middle level Officers from five States attended the programme.

Training programmes on "Plant Protection in Oil Palm", "Nursery Management in Oil Palm" and "Oil Palm Production" were organised to officers of state departments of Agriculture / Horticulture, SAUs, ICAR and oil palm processors. Details of the training programmes organised are as follows.



DDG (Hort), ICAR visits DOPR

Dr. H. P. Singh, Deputy Director General (Hort.) visited DOPR, Pedavegi during November 5-6, 2011. His programme included field visit, laboratory visit, Interaction meeting with scientists and to conduct the Stakeholders' Meeting.

In the Scientists Meeting, Thematic-wise plan of work for the next five years were presented by the Thematic Leaders covering Genetic Resources Management, Production System Management, Plant Health Management and Human Resources Management. Suggestions were offered to improve the Action Plan.



Programme	Venue and Date	Officers represented from	No. of participants
Plant Protection in Oil Palm	DOPR, Pedavegi October 19-21, 2011	Kerala, Gujarat, Andhra Pradesh	11
Nursery Management in Oil Palm	DOPR, Pedavegi November 23 – 25, 2011	Kerala, Orissa, Andaman & Nicobar Islands, Andhra Pradesh	8
Oil Palm Production	DOPR, RC, Palode November 25, 2011	Tamil Nadu	30
Model Training Course on "Advanced technology for resource management for oil palm production"	DOPR, Pedavegi December 13-20, 2011	Andaman & Nicobar Islands, Maharashtra, Karnataka, Andhra Pradesh, Jammu & Kashmir	14

Series of lectures were delivered on different aspects of oil palm production. Visits to oil palm nursery, seed garden, processing unit and farmers' oil palm plantations were arranged. Control measures for diseases were demonstrated. Lecture notes and publications on subject matter were also provided to the participants.

Farmers trained

Farmers from Karnataka and Odisha were trained on "Oil Palm Cultivation" in one day training programmes organised at Pedavegi, Andhra Pradesh and Palode, Kerala.

Date	Venue	Farmers represented from	No. of participants
October 13, 2011	DOPR, Pedavegi	Karnataka	19
December 23, 2011	DOPR, Pedavegi	Karnataka	36
December 29, 2011	DOPR, Pedavegi	Odisha	20
November 25, 2011	DOPR, RC, Palode	Tamil Nadu	30

Dr. B. N. Rao, Principal Scientist attended Farmers' Training programme organised by Horticultural Research Station, Dr YSR Horticultural University, Vijayara, West Godavari and delivered a lecture on "Scientific cultivation of cocoa in oil palm plantations" on October 29, 2011.

Dr. M. V. Prasad, Sr. Scientist attended Farmers' Training programme organised by M/s. Coastal Local Area Bank Ltd. at Devarapalli, West Godavari District, A. P. and delivered a lecture on "Management of juvenile and adult oil palm plantations" on November 29, 2011.

Participation in Exhibitions:

DOPR, RC, Palode participated in the

- Exhibition at Govt. L.P.S. Pacha, Nanyode for Sub. District Sasthra Mela at Kallara during November 3-4, 2011.
- Exhibition conducted by Tropical Botanical Research Institute, Palode, Trivandrum under the 'Open House Programme' conducted during December 6-10, 2011.

Exposure visit of students

Three one day exposure visits were organised to 106 school students from Trivandrum during November 17, 18 and 21, 2011 at DOPR, RC, Palode, Kerala.

Higher studies / Degrees awarded

Dr. A. Gopala Krishna Reddy, Scientist was awarded with Ph. D. from Acharya N. G. Ranga Agricultural University, Hyderabad.

PERSONALIA

New appointments

Mr. M. Naga Sreenivasa Rao has joined in the post of Lower Division Clerk on November 23, 2011.

Transfers

- Dr. S. Sunitha, Senior Scientist (Agronomy) was transferred to CTCRI, Trivandrum on October 31, 2011.
- Dr. A. Gopala Krishna Reddy, Scientist (Horticulture) was transferred to CRIDA, Hyderabad, on December 27, 2011.

Promotion

Mr. K. V. Rao, Technical Assistant (T-4), promoted to the cadre of Technical Officer (T-5) w.e.f. 1.1.2011.

Forth Coming Events at DOPR, Pedavegi

1. Farm Innovators Day	06-01-2012
2. Agricultural Education Day	24-01-2012
3. Institute Annual Day - Kisan Mela	15-02-2012
4. ICAR-Industry Day	16-10-2012

Edited by :
Dr. M. V. Prasad and Mrs. A. Bhanusri
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Dr. S. Arulraj

Director, Directorate of Oil Palm Research,
Pedavegi - 534 450, West Godavari District., A. P.
Phone: 08812 259532/259524; Fax: 08812 259531.
e-mail: dopr2009@gmail.com ; Web site: http://dopr.gov.in

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