

DOPR News

DIRECTORATE OF OIL PALM RESEARCH
(Indian Council of Agricultural Research)

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From the Director's Desk

Dear Readers,

A Workshop on "Oil Palm - An Option for Oil Security" was held on May 30, 2012 at Orissa University of Agriculture and Technology, Bhubaneswar as a part of Global Conference on "Horticulture for Food, Nutrition and Livelihood Options". Prof. D. P. Ray, Vice Chancellor, OUAT, Bhubaneswar, Orissa was the chairman and Dr. George V. Thomas, Director, Central Plantation Crops Research Institute, Kasaragod, Kerala and Mr R. R. Govindan, Executive Vice President, M/s Godrej Agrovet Ltd., Mumbai served as co-chairmen. Dr. P. Rethinam, President, Society for Promotion of Oil Palm Research and Development (SOPOPRAD) served as session convener. Oil palm farmers, entrepreneurs, officers of State Department of Horticulture/Agriculture from Orissa, Tamil Nadu, Karnataka and Andhra Pradesh and Scientists of DOPR participated in the workshop. Two special invitees from Malaysia participated in the workshop and presented details about Malaysian experience in oil palm research and development, especially with reference to by-product utilization. A Key Note presentation was made by Dr. S. Arulraj, Director, Directorate of Oil Palm Research on "Research strategies for oil palm and future needs". The house discussed various issues relating to oil palm research and development in India and suggested the following recommendations for implementation in the country.

Oil palm, a crop which has emerged as the largest oil yielding crop over a period of five decades has become the most economic crop in the global vegetable oil sector for food, industrial purpose as well as bio diesel. Through implementation of appropriate research and development strategies, India too could emerge as one of the major producers of palm oil by cultivating oil palm as irrigated crop in 2.00 million ha identified as potential area and there by producing 7.00 to 8.00 million tonnes of palm oil and 0.7 to 0.8 million tonnes of palm kernel oil.

- ❖ As oil palm would be able to help India in marching towards attaining vegetable oil security in the years ahead, more emphasis is needed for strengthening both research and development in oil palm.
- ❖ A team may visit various countries like Malaysia, Indonesia and Costa Rica to identify the suppliers of oil palm sprouts, which could be imported to meet the requirement of planting material, in addition to the domestic availability at present. With increasing demand, new seed gardens with new cultivars would be needed.
- ❖ Target for area expansion is to be decided at least two years ahead by Government of India as well as by the respective State Governments, so that planting material could be made available either from domestic source or by import.
- ❖ Breeding programme has to be planned towards development of improved varieties for enhancement of productivity. Molecular techniques like marker assisted selection, QTL mapping for desirable traits and DNA fingerprinting should be combined in the breeding programme. A proper strategy may be devised by the Scientists of DOPR.
- ❖ Survey on the large population of oil palm imported from other countries and at present available in the country, is to be completed at the earliest and selection may be done for high yield, dwarf / compact palms as well as other desirable characters, which can be incorporated in the subsequent breeding programmes.
- ❖ Under the biotechnology programme, commercial scale tenera clone production may not be feasible in near future. Hence, emphasis may be given on clonal seed production through tissue culture of elite parents.
- ❖ Spacing experiment may be taken up by increasing the spacing from 9m x 9m to 10m x 10m, which may facilitate intercropping. Available gardens with

different spacing may be surveyed with regard to its performance in economic terms to derive better knowledge for future research and development.

- ❖ Research on the development of harvesting tools and other mechanized farm implements is to be strengthened and the new tools fabricated recently could be taken up for up-scaling and commercialisation.
- ❖ Detailed information may be collected from the farmers, who are getting high yield. Good management practices which contribute to high yield may be identified, which should be supported by soil and leaf analysis data. This would help to understand the nutrition requirements.
- ❖ Replanting/ under-planting strategies are to be developed soon, because some of the plantations are more than 25 years old and reached the height of 10 to 12 metres which will require replanting after a few years.
- ❖ Strengthening of oil palm hybrid seed production for achieving self sufficiency in domestic planting material by selection of more parental palms from existing seed gardens, establishment of new seed gardens with advanced materials and conducting progeny evaluation trials.
- ❖ Studies to understand biochemical and physiological basis for growth and yield of oil palm under irrigated conditions.
- ❖ Studies on impact of climate change on growth and metabolism of the crop and its productivity. Climate resilient technologies to be developed for sustained oil palm productivity.
- ❖ Development of suitable post-harvest technologies to improve quality and minimize environmental impact.
- ❖ Oil Palm development should be brought under a Mission mode approach to address all the links in the chain of production and consumption.
- ❖ Assistance being provided should be revised looking into the cost escalation. Assistance for drip irrigation requires revision, commensurating with other schemes.
- ❖ Processing units are to be established immediately in the recently allotted areas to avoid hardship to farmers.
- ❖ Oil palm cultivation is to be promoted in potential areas only, especially with reference to the availability of adequate irrigation facilities.
- ❖ More number of interface meets/demonstrations/ state level conferences may be conducted to create awareness about oil palm and for bringing farmers and oil palm processors and department officials closer.
- ❖ Training of extension workers from State Departments, Krishi Vigyan Kendras and Processing sector shall receive priority attention. Information and Communication Technology tools could be effectively used for hastening the process of transfer of technology in oil palm sector.
- ❖ Linkage between farmers and entrepreneurs has to be enhanced for sorting out issues arising between them.
- ❖ Since farmers are at high risk due to various factors, the benefit of crop insurance need to be extended to oil palm to cover the risk. A separate scheme could be devised which is farmer friendly and workable to ensure the risk of weather, price and natural calamities.

S. ARULRAJ
DIRECTOR

Sectoral News

Marching towards self sufficiency in planting material requirement

Monitoring of oil palm hybrid seed production is an important activity undertaken by Directorate of Oil Palm Research. Strict quality control measures for production of quality sprouts through maintaining physical and genetic purity of the hybridized seeds in oil palm seed gardens is being monitored and ensured. Regular annual and refresher training courses are being conducted on “Oil Palm Hybrid Seed Production” to the staff involved in seed production in respective oil palm seed gardens. At present, there are six oil palm seed gardens in India

having potential for production of 48.50 lakhs sprouts annually. The demand for oil palm sprouts was assessed as 29.77 lakhs during 2012-13 against the targeted production of 29.75 lakhs. Four more new seed gardens are being established, two each in the states of Karnataka and Andhra Pradesh by the respective State Department of Horticulture. DOPR plays a proactive role in providing advanced generation parental material to these new oil palm seed gardens. Efforts are being made to increase present level of seed production from different seed gardens to meet the future demand for oil palm seed sprouts and there by meeting the future planting material needs for Oil Palm Area Expansion in the country.

RESEARCH HIGHLIGHTS

Survey of commercial plantations of oil palm was taken up in Kerala, Andhra Pradesh, Goa, Maharashtra and Andaman and Nicobar Islands. In Kerala, 15 palms were identified with dwarf and high yield characters for further screening. One dwarf dura was selected at Thodupuzha seed garden and seed sample was collected. In Andhra Pradesh, 60 palms were identified for further evaluation and selection. Seed samples were collected from two dura and three tenera palms. One promising tenera palm was identified from Goa and seeds were collected.

PUBLICATIONS

Presentations in conferences/seminars

Mary Rani, K. L., Prasad, M. V., Krishna Hemanth, G. and Srinu, B. 2012. Dissemination of oil palm technology through information and communication technology. In: Abstracts of Global Conference on "Horticulture for Food, Nutrition and Livelihood Options" held during May 28-31, 2012 at OUAT, Bhubaneswar Pp 329

Narsimha Rao, B., Suresh, K., Ramachandrudu, K. and Mary Rani, K. L. 2012. Influence of fertigation on growth and yield of oil palm. In: Abstracts of Global Conference on "Horticulture for Food, Nutrition and Livelihood Options" held during May 28-31, 2012 at OUAT, Bhubaneswar Pp 200

Prasad, M. V., Arulraj, S., Maheswar, D. L. and Sunil Kumar, K. 2012. Highest oil palm yield obtained by progressive oil palm growers – A success story. In: Abstracts of Global Conference on "Horticulture for Food, Nutrition and Livelihood Options" held during May 28-31, 2012 at OUAT, Bhubaneswar Pp 328

Ramachandrudu, K., Suneetha, V., Rao, B. N. and Sekhar, G. 2012. Effect of POME sludge on growth and vigour of oil palm seedlings. In: Abstracts of Global Conference on "Horticulture for Food, Nutrition and Livelihood Options" held during May 28-31, 2012 at OUAT, Bhubaneswar Pp 194

Technical publications

Mathur, R. K., Murugesan, P., Prasad, M. V., Srinu, B., Praveen Kumar, B. and Ravi Kumar, K. 2012. Do's and Don'ts in Oil Palm Hybrid Seed Production. Directorate of Oil Palm Research, Pedavegi. pp-8.

Mathur, R.K., Murugesan, P. and Arulraj, S. 2012. Proceedings of Oil Palm Seed Meet-2012. Directorate of Oil Palm Research, Pedavegi. pp-24.

Random survey was conducted in the ANIFPDCL plantation, Little Andaman and nine promising and high yielding individual palms representing various sources were collected.

Under Multi location evaluation of African germplasm, four high yielding dura palms have been identified for improvement and seed production. Four dura palms identified in African germplasm are being evaluated at Pedavegi which had FFB yield of more than 200 kg per palm per year. The selected palms are being used in crossing programme for developing high yielding dura populations.

Best Research Paper Award :

Research paper entitled "Dissemination of oil palm technology through information and communication technology" authored by K. L. Mary Rani, M. V. Prasad, G. Krishna Hemanth and B. Srinu presented in Global conference on "Horticulture for food, nutrition and livelihood options" held during May 28-31, 2012 at OUAT, Bhubaneswar, was adjudged the best research paper.



Dr.M.V. Prasad, Sr.Scientist receiving best research paper award from Prof.D.P.Ray, Vice-chancellor, OUAT, Bhubaneswar.

PERSONALIA

Training Programmes attended

Dr. S. Arulraj, Director attended an Executive Development Programme on "Leadership Development" at NAARM, Hyderabad during June 4-8, 2012.

Dr. B. N. Rao, Principal Scientist attended the "Refresher Course on Agriculture Research Management" at NAARM, Hyderabad during June 5-18, 2012.

Smt. B. Swarna Kumari, Administrative Officer, attended training programme for Administrative Officers and Finance & Accounts Officers on Module I at NAARM, Hyderabad and Module II at NASC complex, New Delhi during 12.3.2012 to 1.6.2012.

Dr. K. L. Mary Rani, Scientist (SS), attended 3rd installation training cum workshop for Nodal officers of SSCNARS at NAARM, Hyderabad on June 27, 2012.

Transfers/New appointments

Dr. Sanjib Kumar Behera, Scientist (Soil Science), IISS, Bhopal on selection joined as Senior Scientist at DOPR, Pedavegi on May 2, 2012.

Mr. H. Pavan Kumar has joined in the post of Assistant at DOPR, Pedavegi on May 25, 2012.

Mr. Md. Sajid Mustaq has joined in the post of Assistant at DOPR, RC, Palode on May 28, 2012.

Mr. Nassir Hussain has joined in the post of Assistant at DOPR, Pedavegi on May 29, 2012.

Ms. Ramya Menon has joined in the post of Assistant at DOPR, Pedavegi on June 11, 2012.

Promotions

Mr. M. Ananda Rao, Lab Technician (T-3) was promoted to the post of Lab Technician (T-4) with effect from July 1, 2011.

TRANSFER OF TECHNOLOGY

Officers' Trained

Organized training on "Oil palm hybrid seed production" to 13 personnel involved in oil palm hybrid seed production at oil palm seed garden, Taraka, Mysore, Karnataka during June 6-7, 2012. Lectures were delivered and demonstrated the process of selection of parent palms, pollination, hybridization, depericarping, culling etc. Literature was provided to the participants.



Farmers' Trained

Organized training on "Oil palm cultivation" to 8 farmers from Mizoram. Lectures on oil palm cultivation were delivered. Visit to oil palm plantations and processing unit was organized. Literature on oil palm cultivation was provided.



At DOPR, RC, Palode, one day training programme on 'Oil palm production technology' was conducted to 3 officers and 5 farmers from Mizoram and 90 students from Trivandrum.

Participation in Exhibitions

Participated in an exhibition organized during the Global Conference on "Horticulture for food, nutrition and livelihood options" at Bhubaneswar, Orissa, during May 28-31, 2012. Farmers from Orissa, Andhra Pradesh, Bihar, Uttar Pradesh, Maharashtra, Madhya Pradesh and Gujarat visited the stall. Queries on oil palm cultivation were clarified and literature on oil palm cultivation was provided to the visitors.



Radio Talk

Dr. B. N. Rao, Principal Scientist presented a radio talk on "oilpalm thotala yajamanyam" (Telugu) broadcasted from AIR, Vijayawada on June 5, 2012.

QRT VISIT

The members of the Quinquennial Review Team (2006-11) of DOPR visited DOPR, Research Centre, Palode, OPIL-Oil Palm Estate and FFB Processing Industry at Yeroor, Thodupuzha Seed Garden and Seed Processing Laboratory and Oil Palm Germplasm Block at Athirapalli during April, 2012.

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