

DOPR News

DIRECTORATE OF OIL PALM RESEARCH

(Indian Council of Agricultural Research)

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From the Director's Desk

Dear Readers,

In India, the North East Region has immense potential for the development of oil palm. The crop could play a significant role in improving the income of farming community and thus could help in raising the standard of living of a large number of people to be engaged in various activities related to oil palm sector. It is estimated that North East Region has a potential for developing oil palm plantations in an area of about 2.00 lakh ha. At present, Mizoram State alone is promoting oil palm on a large scale (about 14,000 ha already covered) and three processing units are being established at Mizoram that would ensure intensive development of oil palm in the State.

Directorate of Oil Palm Research is organising a series of "Capacity Building Programmes" to farmers, farm leaders and development personnel from North East Region, primarily to convince them about the potential for oil palm cultivation and the returns that could be obtained by implementing Oil Palm Development Programme in their respective States. Under this programme, a series of batches of farmers, farm leaders and development officials from North East Region are to be invited to DOPR and tailor-made orientation training programmes are to be organized for each region. As a first step in this direction, an Orientation Training Programme on "Oil Palm Cultivation and Prospects of Oil Palm Industry" was organized at DOPR during August 12-14, 2013 for a group of Officers from Meghalaya. Similar programmes are proposed to be organized to farmers and officers from Arunachal Pradesh, Meghalaya and Nagaland during the next three months.

It is also proposed to establish an oil palm seed garden in North East Region in an area of 50.00 ha with the recently identified potential palms from DOPR and AICRP centres. About two million planting materials could be produced from the seed garden every year (from 2022 onwards) to cater to the planting material requirements of North East and Eastern Region of the country. The programme would also help DOPR in the selection of specific cross combinations for the region. The seed garden could also serve as a Research and Development Centre for oil palm in the region.

S. ARULRAJ
DIRECTOR

Sectoral News

Price fixing formula for Oil Palm announced

Department of Agriculture & Cooperation, Ministry of Agriculture, Government of India has recommended a revised formula for pricing Oil Palm Fresh Fruit Bunches (FFB).

The formula for pricing of Fresh Fruit Bunches of Oil Palm is recommended at 13.54 percent of net Crude Palm Oil (CPO) weighted average price, based upon 18 % Oil Extraction Ratio (OER), plus 75.25 percent on 9% recovery of palm kernel nuts weighted average price. Any variation in OER would result in change in the pricing formula in respect of percent of net CPO weighted average price to be paid to the oil palm growers. The Oil Extraction Ratio (OER) would be determined as per actual oil content extracted in the past by the processing industry, as established by the State Governments concerned.

Management of oil palm plantation during heavy rains

Due to continuous rains in different parts of oil palm growing areas, the farmers are reporting submerged conditions for a prolonged period in juvenile oil palm plantations. Under these circumstances, it is advised to provide trenches (30 cm width, 90 cm depth and to a required length to drain the excess water) across the slope for every three or four rows of oil palm.

A few farmers are also reporting the incidence of bud rot in juvenile oil palm plantations after the floods. The disease incidence would easily be identified by presence of slanted or bent yellow spear leaf. Rotting starts at the basal portion of the spear, hence it needs to be removed from the base. Rotten tissues are to be removed, the affected area around spear leaf is to be cleaned and the crown region is to be drenched with 0.1% carbendazim to control the disease.

RESEARCH ACHIEVEMENTS / NEW FINDINGS

Somatic embryogenesis in oil palm

Somatic embryogenesis from spear leaf explants of mature pisifera was observed. Spear leaf explants from a mature (12 years old) pisifera palm was inoculated on modified Y3 media, which showed callus induction after 45 days of inoculation. Somatic embryos were observed after three sub-cultures and the fully developed somatic embryos were separated and cultured on fresh media after 6-7 months of initial inoculation.

Oil palm based cropping system

A cropping system with adult oil palm plantations, red ginger (fig. 1) and heliconia (fig. 2), could give higher returns under irrigated conditions. Red ginger and heliconia are shade tolerant cut flower plants which could come up under dense shade



Fig. 1. Intercropping Red ginger in oil palm plantations

of oil palm plantations. Both the crops are perennial in nature and could be successfully cultivated as inter crops in adult oil palm plantations for 4-5 years and could be replanted again.



Fig 2. Intercropping Heliconia in oil palm plantations

Scanning Electron Microscopic studies in oil palm seed germination

Seeds of freshly harvested selfed *oleifera* were subjected to different mechanical scarification treatments. One successful treatment which showed maximum germination and speed of germination with uniform growth was 'Chipping and de-operculum,' The treatment effect was confirmed through SEM studies (fig 3).

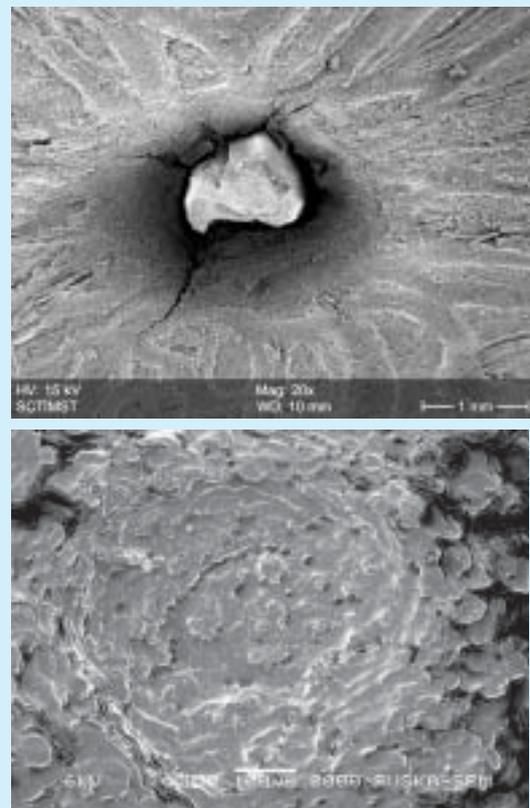


Fig 3. View of treated and control seed

TRANSFER OF TECHNOLOGY

Officers training programmes organised:

Title of the training	Date	Number of officers trained	Officers represented from
Orientation training on Oil palm cultivation and prospects of oil palm industry	August 12-14, 2013	5	Officers of Department of Agriculture, Meghalaya
Oil palm production technology	August 22-29, 2013	33	Goa, Karnataka, Bihar, Odisha Andhra Pradesh, Mizoram and
Oil palm hybrid seed production	August 4-5, 2013	9	Andhra Pradesh, Kerala, Mizoram and Odisha
Hybridization in oil palm seed production	August 27-28, 2013		Staff involved in oil palm hybrid
Oil palm hybrid seed production	September 4-5, 2013	7	Staff involved in oil palm hybrid seed production
Oil palm hybrid seed production	September 18-20, 2013	6	Odisha, Mizoram and Andhra Pradesh.

Farmers training programmes organised

One day training programmes on 'Oil Palm Production Technology' were organized to 40 farmers at DOPR, RC, Palode during July-September, 2013.

One day duration training programmes on oil palm cultivation practices were conducted at DOPR, Pedavegi to 33 farmers from Gujarat.

Exhibition stall organized

'Oil palm' exhibition stall was organized by DOPR, RC, Palode in connection with International Conference on "Tropical roots and tubers for sustainable livelihood under changing Agro-climate" at Trivandrum during July 9-12 2013.

Oil Palm technology disseminated through Mobile Message Services: Fifteen contents on oil palm cultivation were developed and delivered as Voice messages to 13,902 mobile / land phone number of oil palm growers of Andhra Pradesh through Oil Palm Kisan Mobile Message Services.

Research articles

B. N. Rao, A. K. Jha, C. Deo, S. Kumar, S.S.Roy and S.V.Ngachan. 2013. Effect of irrigation and mulching on growth, yield and quality of passion fruit (*Passiflora edulis* Sims.). *Journal of Crop and Weed*. 9(1): 94-98

Murugesan, P., Shareef, M., Haseela, H. and Mathur, R.K. 2013. Seed quality and germination in selected hybrids of oil palm (*Elaeis guineensis*, Jacq.). *Journal of Plantation Crops*. 41(2): 172-176.

Popular articles

B.Narsimha Rao and Anjani Kumar Jha. 2013. Maroi Napakpi (*Allium hookeri* Thw.): a wonder herb in Manipur. *Plant Horti Tech*. 13(1):40.

P. Naveen Kumar. 2012. Potted plants for aesthetics and higher income, *The Botanica*, 62: 32-44 (published in August 2013).

Ramachandrudu, K., Suresh, K., Suneetha, V. and Sekhar, G. 2013. Red Ginger-An inter crop in grown up oil palm gardens (Telugu). *Annadata*, 45(7):58-60.

Technical publications

Mathur, R. K. , Murugesan, P. , Prasad, M.V., Naveen kumar, P., Praveena Deepti, K, Shrinu, B., Praveen kumar, B. and Ravikumar, K. 2013. Do's and Don'ts in oil palm hybrid seed production (Telugu). Directorate of Oil Palm Research, Pedavegi, Andhra Pradesh. Pp 12.

K. Sunilkumar, R. K. Mathur, P. Naveen Kumar, S. Arulraj and K U K Nampoothiri. 2013. Methodologies for crop improvement trials in oil palm. *Technical Bulletin*, DOPR, Pedavegi, Andhra Pradesh. pp.12.

Book chapters

P. Murugesan and P. Rethinam. 2013. Seed dormancy and its relevance to quality planting material in oil palm (*Elaeis guineensis*, Jacq.). *In: Quality Seeds and Planting Material in Horticultural Crops* (Eds H.P.Singh et al), Society for Promotion of Horticulture, Indian Institute of Horticultural Research and National Horticulture Board, Bengaluru, pp 564-573.

Rethinam, P., P.K. Mandal, R.K. Mathur and P. Murugesan. 2013. Oil Palm. *In: Palms* (Eds. H.P. Singh *et al*). Westville publishing house, New Delhi, pp 353.

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

Agreement signing ceremony for commercialization of Tissue culture

An Agreement Signing Ceremony was organized for the technology transfer on "Tissue Culture of Oil Palm" at Krishi Bhavan, New Delhi on July 12, 2013. Chairman of M/s Bijo Sheetal Bio-Science, Jalna, Maharashtra State and the Representative of AgrInnovate India Limited signed the Agreement in the presence of Director General, ICAR and Deputy Director General (Hort.), ICAR.

Dr. S. Arulraj, Director participated in the panel discussions on "Indian Oilseeds Scenario and Challenges" held at Directorate of Oilseeds Research, Hyderabad on August 24, 2013.

Dr. S. Arulraj, Dr. R. K. Mathur and Dr. B. N. Rao attended the annual group meeting of AICRP on Palms held at IGKV, Raipur during July 22-25, 2013.

Dr. S. Arulraj and Dr. B. N. Rao attended the workshop on "Oil Palm Cultivation in North East Region" at Shillong on July 10, 2013.

Dr. S. Arulraj and Dr. K. Suresh attended meetings on the "Performance Indicators" and "Strengthening of Inter-Institutional Linkages for IFS Research" at ICAR, New Delhi on July 15, 2013.

Dr. M. V. Prasad participated in the workshop on "Oil Palm" at Kolhapur, Maharashtra on

August 6, 2013. He made powerpoint presentation on recommended practices of Oil Palm Cultivation to 300 participants consisting of farmers from Sindhudurg, Kolhapur and Sattari; officials from state department of Horticulture and Oil Palm processing units.

Dr. B. N. Rao attended the meeting to discuss Annual Action Plan of Meghalaya and Arunachal Pradesh at Department of Agriculture & Cooperation, Krishi Bhawan, New Delhi on August 20, 2013.

Dr. P. Murugesan participated in the in International Conference on "Tropical roots and tubers for sustainable livelihood under changing Agro-climate (ICTRT-2013) at Trivandrum during July 9-12, 2013.

Feasibility study conducted

Dr. R. K. Mathur, Dr. P. Naveen Kumar, Dr. K. Sunil Kumar, Dr. G. Ravichandran and Dr. Sanjib Kumar Behera submitted a feasibility report for establishment of oil palm seed garden at Horticultural Farm, Gopannapalem, Denduluru Mandal, West Godavari dist., Andhra Pradesh.

Transfers/New appointments

Dr. K. Sunilkumar, Senior Scientist (Horticulture) was transferred to DOPR, Research Centre, Palode from Head Quarter on July 9, 2013.

Mr. Sajid Mushtaque, Assistant was transferred to Head Quarter from DOPR, Research Centre, Palode on August 26, 2013



Edited by :

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and Mrs. A. Bhanusri**

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