

# भातेताअनुसं समाचार



# IIOPR

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# News



ICAR- Indian Institute of Oil Palm Research, Pedavegi - 534 450, Andhra Pradesh; Web site: <http://dopr.gov.in>

## Sectoral News

### Fertigation in oil palm

ICAR-IIOPR has developed Fertigation technology for oil palm which can save up to 50% of fertilizer requirement. Farmers can utilize this technology to save on fertilizer costs and to maintain soil health from excessive use of fertilizers. Interested farmers can consult scientists of ICAR-IIOPR for expert advice while establishing the fertigation unit in their respective fields.

### Farmers' Corner

For better income, oil palm needs to be irrigated through micro irrigation techniques, which saves nearly 50% of water requirement by arresting losses.

Fertigation i.e., application of fertilizers along with micro irrigation helps in 50% saving of fertilizer requirement which accounts for both cost reduction and improved soil condition.

Growing intercrops in oil palm is a viable option for enhanced income, with cocoa, bush pepper, red ginger, heliconia depending upon crop's age and market availability.

### Upcoming Events

Brainstorming session on "Seed standards for oil palm seed gardens in India" – January, 2018.

Interface meet on Doubling Farmers Income in oil palm - February' 2018.

## From Director's Desk



### Contribution of ICAR-IIOPR in the development of Oil Palm in North-East India

In India the potential area for oil palm cultivation has been identified as 1.93 million hectares and out of which 0.218 million hectares is identified in North Eastern states. ICAR-Indian Institute of Oil palm Research established in 1995 besides working towards goal oriented research for enhancing oil palm production has also been working hard to solve problems faced by farmer friends at various stages of oil palm production in North-Eastern part of India. In general, oil palm is cultivated under irrigated conditions in India

except in North East and some pockets of Kerala and A&N islands. Developing North-Eastern states is always a priority for the Governments in centre. As part of this major objective, ICAR-IIOPR has been contributing enormously in its own ambit to extend help for oil palm production in these unexploited areas. With a view to produce location specific planting material for oil palm a seed garden has been established at Mizoram with a production capacity of 10 lakh sprouts annually which will cater the needs of NE region. Under NEH programme, we organized block demonstration of 100 ha in Mizoram involving 60 farmers with recommended package of practices especially nutrient management through fertilizer application which had resulted in substantial improvement in the yield from mere 2.5 t to 12 t per hectare per year with in a short span of three years. A Regional Workshop was organized at Aizawl, Mizoram on "Technological strategies for enhancing oil palm production in North Eastern Region of India" in which officers of State department of agriculture/ horticulture, staff of oil palm processing units, scientific staff of ICAR, SAU and KVKs from Mizoram, Arunachal Pradesh, Nagaland, Meghalaya, Assam and West Bengal participated. Besides, officers of State Department of Agriculture/Horticulture, Arunachal Pradesh were trained in State Level Training Programme on "Oil Palm production technology" at Pasighat, Arunachal Pradesh. On-farm training programmes were also conducted to farmers of Mizoram on "Recommended practices for improving productivity". Feasibility study on oil palm cultivation in Bodoland of Assam was conducted by a group of scientists from ICAR-IIOPR. Videoconferencing facilities are also being extended for contacting officials and farmers from North-East to give training on various aspects of oil palm cultivation and to resolve some of the problems expressed by farmers.

Diagnostic field visits are commonly conducted for pests, diseases and nutrient disorders in northeastern states. Our scientists do visit the plantations and suggest curative/ improvement measures. Under Tribal Sub-Plan for Northeast region, state level training programmes on oil palm production technology were organized for all the seven states of N-E.

Mobile apps have been developed for oil palm cultivation, nutrient management, pest management and disease management which are very handy in retrieving desired information as per the need. Further, short message services and voice calls are also being a part of serving the farmers' needs.

  
R.K.Mathur

## RESEARCH UPDATES

### Oil palm + Cocoa intercropping is profitable (Rao B N)

In a study on "Oil Palm-Cocoa based Cropping System for Sustainable Productivity"; it was found that unutilized soil mass (inter space) of 77.6% could be utilized effectively by intercrop in oil palm. Higher employment generation (431 mandays/year), IRR (32%), BCR (1.56) and NPV (₹160237) were recorded in oil palm + cocoa cropping system compared to 93 mandays, 28% IRR, 1.51 BCR and ₹121873 NPV recorded in monocrop of oil palm. Intercropping system also showed increasing trend of economic yields, soil organic carbon and no significant difference in payback period indicating that oil palm intercropped with cocoa is sustainable and profitable.



### Oil palm nursery planted in July performs better (Manorama K)

Time taken to reach different growth stages was compared in nursery for 21 crosses of D x P by planting them in July and December. Results indicated that the crosses planted in July reached all the growth stages earlier than the crosses planted in December. Further, the growth parameters which included plant height, leaf number, stem girth, dry matter production, leaf area also recorded higher values for July planted crosses in comparison with December planted ones at ICAR-IIOPR. Planting of nursery in July coincides with South West

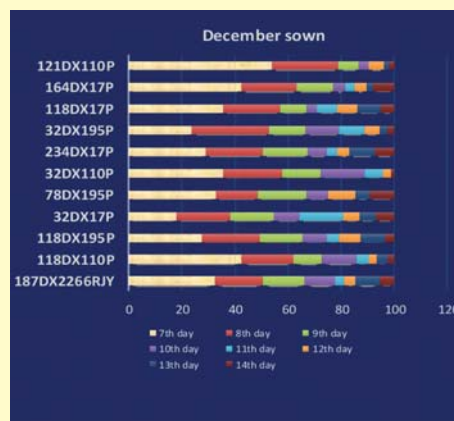
Monsoon rains favouring the better growth and development of oil palm hybrids

### Composting of trunk logs and Co-Composting of Sap Squeezed Residues (Manorama K)

Logs of 30 cm could be composted within a period of 9 to 12 months where as 60 cm pieces took 18 months and 1 metre pieces were not composted even after 18 months. Co-composting of sap squeezed trunk residues (45 kg) with poultry manure (5 kg) + lime (0.5 kg) + SSP (0.5 kg) resulted in faster decomposition (in 3 months) with better nutritive value than other treatments.



July nursery



December nursery

### Distribution of chaff cutters under farmer FIRST programme

Two villages (Challachintalapudi and Makkinavarigudem) adopted under farmers' first programme were distributed with two chaff cutters in each village for proper utilization of plantation waste generated in oil palm gardens. The QRT team also visited those villages to witness the utilization of these machines.



### Organization of 12<sup>th</sup> National Oil palm Seed Meet

Twelfth National Oil Palm Seed Meet 2017 was organized at ICAR-IIOPR, Pedavagi on 19-07-2017. In this, processors and department officials from different state governments participated and the purpose was to assess the demand of oil palm germinated seeds from indigenous sources by the Oil Palm Processors from different States of India, the production capacity of different seed gardens in India and preparation of supply schedule of germinated seeds during 2017-18 and 2018-19.



## TRANSFER OF TECHNOLOGY

### Mera Gaon Mera Gaurav programme

Activities viz., diagnostic field visits, skill demonstrations, interaction meeting were organised under Mera Gaon Mera Gaurav programme at ICAR-IIOPR. Details are as follows.

S. No	Item	No./Area (ha) / Quantity	Total beneficiaries covered
1	No. of villages covered	19	20
2	No. of visits made	31	117
3	No. of Demonstrations	10	236
4	No. of farmers' meeting	10	128



*Skill demonstration on Soil and Leaf sample collection organised at Challachintalapudi*

### Training programmes organised on oil palm production for farmers and officers

#### Farmers trained

Ten training programmes were conducted to 429 oil palm growers belong to states viz., Assam, Chhattisgarh, Andhra Pradesh, Gujarat and Telangana. Package of practices on oil palm were explained through power point presentation, visit to oil palm plantations were made and provided literature on oil palm cultivation practices.

#### Officers trained

Following training programmes were organised to officers, details are as follows.

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S. No	Date	Name of the programme	No. of participants	Participants from
1	22&23-08-2017	Officers training programme on oil palm production technologies	72	Eluru, West Godavari Dt., Andhra Pradesh.
2	11-09-2017 to 16-09-2017	Officers training programme on oil palm production technologies	17	Andhra Pradesh, Chhattisgarh, Tamilnadu, Kerala and Karnataka
Total			89	



*Officers training programme at ICAR-IIOPR*

### Diagnostic field visits conducted in Assam and Mizoram

Scientists from ICAR-IIOPR conducted diagnostic field visits in GREEN OIL PALM FARMERS GROUP, Mouman, Boko sub Division, Kamrup Dist.,; JAIKHLONG OIL PALM SOCIETY – NGO, Deulgury, Goalpara, Dist., Dudhnoi - Sub Division and SRAMIK JYOTI GOT oil Palm society, Shalpara, Goalpara, Dist., Dudhoni - Sub. Division in Assam. Oil palm plantations taken up on barren lands, are in juvenile period. Intercrops viz., strawberry, ginger, chilli, papaya, pumpkin, colacasia, tapioca, turmeric, potato, black gram and mestha were grown in oil palm. Suggestions given to farmers on various aspects viz., weed management, mulching, staking, rodent control, fertilizer management, water harvesting, ablation, oil palm processing etc.



Diagnostic field visits were made by our scientists in Lawngtlai, Mizoram. Observed following problems viz., rodent attack, wild boar attack, crow damage, marketing and male flowers on crown during lean season. Necessary technical suggestions were given to overcome the problems. Visited oil palm nursery located in Lawngtlai. Visited Block demonstration on fertilizer management in oil palm at Khamarang, Kolasib, Mizoram. Suggestions given to farmers to manage the crop on seedling age, right stage of harvesting, weed management, fertilizer management, ablation etc.

### Farmers FIRST Programme

Implemented the modules on "Mechanization of harvesting of bunches in oil palm" and "Organic recycling from the waste obtained from oil palm plantation" in FFP villages. Demonstration on collection of soil and leaf sample was organised. Soil and leaf samples were collected from oil palm growers plantations. Chaff cutters were distributed to farmers to chaff oil palm and coconut fronds, to make them smaller pieces and use it as mulch. Field day was organised on use of organic manure in coconut and oil palm plantations at Makkinavarigudem. Soil health cards were distributed to the farmers of FFP village.



Dr. Wasaka Singh Dhillon, ADG (Hort.), ICAR visited Farmers first project village - Challachintalapudi and monitored the implementation of various modules under the project.

### Visits

Rao BN visited Vempadu village, Dwaraka Tirumala Mandal and Tadikalapudi village, Kamavarapukota Mandal, West

Godavari and advised on irrigation and fertilizer management in oil palm.

Manorama K and Anitha P visited G Kothapalli village of Dwaraka Tirumala Mandal on 21<sup>st</sup> September, 2017 and educated the farmers on waste management on oil palm plantations

Kalyana Babu B conducted diagnostic field visit in kuchumpudi village and identified basal stem rot incidence in oil palm garden and recommended trichoderma application to the soil.



### New Projects

1. Development of Seed Standards for existing oil palm seed gardens. (Pedavegi, Palode, Rajahmahendravaram).
2. Development of elite planting materials for next generation oil palm seed gardens.
3. Production of quality oil palm hybrid seeds and management of seed garden at Rajahmahendravaram (A.P.).
4. Utilization of oil palm biomass - as a source for various by products.
5. Dissemination of oil palm production technology through digital video films.
6. Design and development of oil palm crop doctor for dissemination of technology.
7. Strengthening of training on oil palm production technologies for stakeholders.

### Publications

#### Research articles

Kalayana Babu B and Mathur R K. 2017. Molecular breeding in oil palm (*Elaeis guineensis*): Status and Future perspectives. *Progressive Horticulture*, 48 (2), 123-131.

Naveen kumar P, Mathur R K, Murugesan P, Reddy A G K, Sunilkumar K, Ramajayam D and Ravichandran G. 2017. Seasonal variation in fresh fruit bunch production in dura oil palm, *Indian Journal of Agricultural Sciences* 87 (9): 1184-9.

Sunilkumar K, Mathur R K and Sparjan Babu D. S. 2017. Differential pollen longevity in Dura and Pisifera oil palm fruit types (*Elaeis guineensis* Jacq.) at storage temperatures, *Ind. J. Agric. Sci.* 87 (7): 893-8

#### Popular articles

Preethi P, Ramajayam D, Ravichandran G, Saravanan L. 2017. Panai Marathin Pazhakulai Aruvadai Sarntha Thozilnudpa Muraigal. *Naveena Velanmai*. April. Pp.44-45.

Preethi P, Ravichandran G and Saravanan L. 2017. Enaipanail Perazhullum Kalanilai Mattathinal Etta Melanmai Muraigal. August. Pp 48-50.

#### E-Publications

Mary Rani K L, Kalyana Babu B, Mathur R K, Naveen Kumar P, Suresh K, Ravichandran G and Bhagya H P. 2017. Web Application on Oil Palm Microsatellite Database (OPSatDB ver 1.0). ICAR-Indian Institute of Oil Palm Research, Pedavegi (<http://dopr.gov.in/Databases Software.htm>).

#### Technical bulletin

Narsimha Rao B, Suresh K, Behera S K, Ramachandrudu K and Manorama K. 2017. Nutrient Management in Oil Palm. ICAR-IIOPR, Pedavegi, Pp-28.

### Membership in committees / expert teams

Kalidas P attended the Academic council meeting of Dr YSR Hort. University, Venkatramannagudem as a member on 12<sup>th</sup> June, 2017.

Rao BN acted as Member- District Purchase Committee for Custom Hiring Centre, West Godavari District.

Sunil Kumar K acted as Member, *Expert committee to study market expansion of oil palm* formed by Agriculture Department - Govt of Kerala attended the meeting at Kerala Secretariat on 29.7.2017

### Trainings attended

Mary Rani K L participated in 5 day National Workshop on Mobile Application Development in Indian languages during November 15-19, 2016 at C-DAC, Hyderabad.

Asif Mohammed, AF & AO attended Orientation Training Programme on GST on 18.08.2017 and Organization specific training program for ICAR on GFR-2017 during 21.08.2017 to 23.08.17 conducted by ISTM, New Delhi.

Nasir Hussain, AAO (S) attended Workshop on "e-Procurement" conducted by ISTM, New Delhi during 21.08.17 to 22.08.17.

Gowri Shankar P, AAO, Sai Kishore P, PA and Sivarama Krishna S, PA attended a Training programme on PFMS at NAARM, Hyderabad on 13.09.2017.

### Meetings attended

Mathur R K

Attended the meeting convened by the Cabinet Secretary in Rasrapati Bhavan and gave a detailed presentation on present status and prospects of oil palm in India and various issues in oil palm with special reference to pricing during 19-20<sup>th</sup> July, 2017 at New Delhi.

Attended Kisan Mela at Indian Institute of Oilseeds Research, Hyderabad during 9-11<sup>th</sup> September, 2017 in Hyderabad.

Attended first meeting of cost of cultivation of oil palm convened by CACP in Krishi Bhavan; the meeting was

attended by Joint Secretary (Oilseeds), DAC, officials from DAC and CACP, Commissioner of Horticulture, Govt. of A.P. and representatives of oil palm processors, farmers etc during 15-16<sup>th</sup> September, 2017 at New Delhi.

Attended Brainstorm session cum Workshop on "Strategies for area expansion....in oil palm". The issues on oil palm area expansion programme, doubling farmers income, enhancing oil palm productivity etc were discussed during 25-26<sup>th</sup> September, 2017 at Hyderabad.

Rao BN Participated in a Workshop on Scope exploration for Indian Institute of Plantation Management in Vijayawada organized by Indian Institute of Management, Bangalore held at Hotel DV Manor, Vijayawada on 23<sup>rd</sup> May, 2017.

Rao BN Participated in the 2<sup>nd</sup> Regional Committee Meeting of Zone III held at Imphal, Manipur on 30<sup>th</sup> and 31<sup>st</sup> May, 2017.

Mathur RK, Rao BN and Manorama K participated in the 26<sup>th</sup> Annual Group meeting of AICRP on Palms held at UHS, Bagalkot, Karnataka from 26-29 July, 2017.



Manorama K participated in DST sponsored Stake holders consultation workshop of GTWG (Global Technology Watch Group) on Sustainable agriculture held on 13.7.2017 at ICAR-NAARM, Hyderabad

Sunilkumar K Participated in 'Indian Palm Oil Sustainability (IPOS) Framework' meeting organized by Solidaridad in association with SEA, IOPR and SOPOPRAD during 20-22 July 2017 at Pachmarhi, Bhopal, Madhya Pradesh.

Gowri Shankar P and Asif Mohammed attended Vigilance Review Meeting on 24.08.2017 at NIANP, Bangalore.

### Participation in Seminars/ Symposia

Following scientists participated in International Symposium on Horticulture: Priorities & Emerging Trends during 4-8<sup>th</sup> September, 2017 at IISc campus, Bengaluru and presented papers as given below.

Name	Paper presented
Manorama K	Efficient plot size for oil palm field experiments
Sunil Kumar K	Breeding for high yield in oil palm: Early performance of advance breeding lines
Ravichandran G	A method to protect the plumule and radical of oil palm germinated seeds during transport
Mary Rani K L	ICT – A way forward to disseminate oil palm technology
Kalyana Babu B	Genome wide association study (GWAS) of oil yield related traits in oil palm using SNPs and SSR markers
Bhagya H P	Identification of polymorphic SSR markers for genetic diversity and mapping studies in oil palm ( <i>Elaeis guineensis</i> Jacq.)

### Recognition/ Awards received

Best poster award was presented for "Chipping bucket - A feasible approach for oil palm trunk disposal" (by Preethi P, Vidhan Singh T V, Prasad M V, Ramajayam and Mathur R K) in International Symposium on Horticulture: Priorities & emerging trends, held during 4-8 September 2017 at ICAR-IHR, Bengaluru, Karnataka.

Bhagya HP, received second prize in long jump event held at Inter-zonal sports meet, 2016 at IARI, New Delhi

## HAPPENINGS AT ICAR-IIOPR

### International Day of Yoga

ICAR-IIOPR celebrated 3<sup>rd</sup> International Day of Yoga at its campus in the forenoon of 21.6.2017 by organizing yoga and meditation sessions by experts in those fields. All the staff practised meditation for about 20 minutes.



### Quinquennial Review Team visits ICAR-IIOPR

QRT consisting of Dr.BMC Reddy as Chairman, Drs S.Arulraj, A S Dhatt, R Vikraman Nair, S K Sharma and N Subhash evaluated the progress of the Institute for the period 2011 to 2016 and the meeting was conducted from 21.07.2017 to 23.07.2017 at ICAR-IIOPR. The performance of the Institute has been rated as **Outstanding** for the above period.



### Research Advisory Committee meeting held

RAC Meeting was held on 17.08.2017 at IIOPR, Pedavegi. Chairman RAC Dr D P Ray, and members appreciated the work done in the institute and suggested some changes in the programmes for their improvement.



### Hindi Pakhwara celebrated



Hindi Pakhwara has been celebrated from 14.09.2017 to 28.09.2017 both at main campus and regional centre. Different competitions were conducted for the staff and students in Hindi language implementation and prizes were distributed.



### Swachhta Hi Sewa Pakhwara at ICAR-IIOPR

During the Swachhta Hi Sewa Pakhwara (17.9.2017 to 2.10.2017), following activities were undertaken at ICAR-IIOPR. 1.Cleanliness drive in the old campus, 2.Administering Swachhta pledge, 3.Organized an awareness campaign on climate smart waste management in oil



palm plantations, 4.Undertook a massive tree planting, 5.Campaigned against open defecation on samagra sewa diwas in MRC colony, 6.Undertook cleaning of Science park in Eluru, 7.Organized essay writing, drawing, debate and rangoli competitions for staff members.



### Personalia (Transfers/ New appointments/ superannuation)

Ravichandran G and Mary Rani K L have been promoted from Senior Scientist to the next higher grade of Principal Scientist with effect from 13.08.2015 and 28.9.2015 respectively.

Naveen Kumar P, Principal Scientist, Saravanan L and Preethi P, Scientists have been transferred to DFR, Pune, SBI, Coimbatore and DCR, Puttur respectively, on 31.05.2017.

Behera S K, Senior Scientist and Murugesan P, Principal Scientist have been transferred to IISS, Bhopal and CTCRI, Thiruvananthapuram on 24.6.2017 and 30.6.2017 respectively.

Anitha P, Scientist joined IIOPR, Pedavegi in the forenoon of 03.07.2017.

Somasundaram G, Scientist joined at IIOPR, RC, Palode in the forenoon of 12.07.2017.

Sri J.Mohan Rao, Technical Officer has attained superannuation on 31.05.2017.