



काजू समाचार CASHEW NEWS



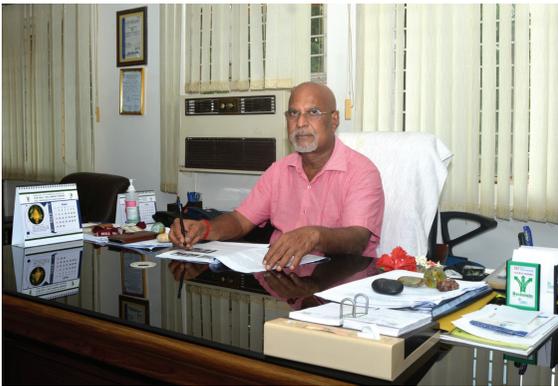
भा.क.अनु.प.-काजू अनुसंधान निदेशालय, पुत्तूर के अर्धवार्षिक वार्तापत्र
HALF YEARLY NEWSLETTER OF ICAR-DIRECTORATE OF CASHEW RESEARCH, PUTTUR

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FROM THE DIRECTOR'S DESK

COVID CRISIS, CASHEW AND THE DIRECTORATE

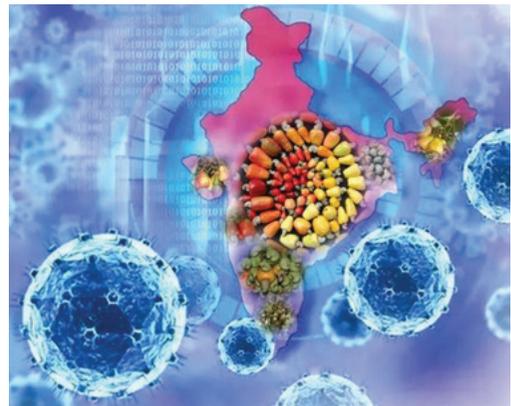


The unprecedented Corona crisis has hit the country during March 2020 and currently the viral disease is spreading rapidly in metros and urban areas. In fact, it has now started spreading into rural areas mainly due to migration of people from cities to villages. The migration is mainly to avoid complications arising out of spread of the disease, lockdown effects and reduction in livelihood opportunities.

Agriculture is hit badly due to COVID-19 especially, the marketing of agricultural produce, though the sowing and cultivation of many crops continues uninterrupted. Many perishable crops such as fruits, flowers and vegetables could not find transportation and market facilities

during lockdown and hence, farmers incurred considerable loss. However, it is trudging back to normal with the measures of social distancing and such other precautionary steps.

The cashew farmers are also substantially impacted by COVID-19 crisis especially due to labour shortage. It was the peak harvesting season when the disease started spreading. Due to lack of awareness about the novel disease, there was unparalleled fear among the workers and lockdown restricted the movement of labourers. Because of this, farmers could not easily complete the harvesting and transport of cashewnuts. The market price of cashewnuts



was also not encouraging during the lockdown period and it is still hovering around Rs. 75-80 per kilogram of raw cashewnuts. This is not only due to reduced exports, but also due to decreased consumption levels in the country as the disease spread coincided with the season of marriages and other festivals across the country. Importantly, the cashew processing units were shut down during the period. However, All India Cashew Growers Association (AICGA) negotiated to some extent with the processors and through cooperatives, farmers could sell their produce at a reasonably good price. The price of raw cashew nuts is expected to increase in the days to come and many cashew growers have stored their produce in anticipation of better returns.

During the lockdown period, the Directorate functioned with limited workforce as per the guidelines of Government of India and local administration. However, the institute has taken proactive steps to extend help to the needy persons in and around the directorate. It has distributed

food kits along with masks and sanitizers in addition to creating awareness among the poor about the disease. COVID advisories for cashew farmers were issued during May and June both in English and the local language of the state i.e. Kannada. Information about seasonal works to be carried out in cashew plantations was also provided in the institute's website and social media.

The Directorate is committed to serve the cashew farmers of the country by means of development of improved technologies, distribution of quality planting material, giving out benefits to SC/ST communities and technology transfer amidst COVID crisis. It is fervently hoped that cashew cultivation, marketing and trade will be re-energized in the post corona period and unabated development continues in the frontiers of cashew.



(M.G. NAYAK)
Director (Acting)

FOCUS ON RESEARCH

Inflorescence pests of cashew, their damage and seasonality

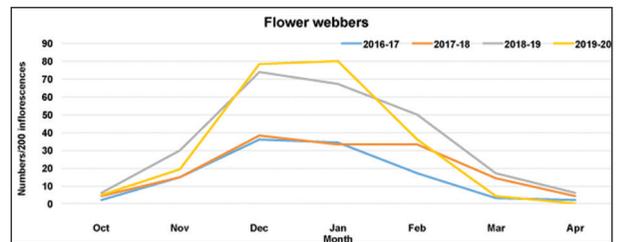
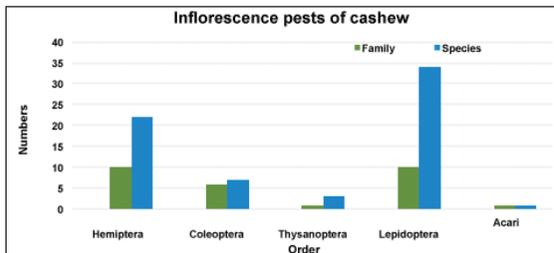
K. Vanitha and T.N. Raviprasad

During the flowering season of cashew, besides tea mosquito bug (TMB), several insects damage the flowers causing substantial yield loss. Information on the pest species complex occurring on cashew flowers, their relative abundance and damage potential is important in the changing pest scenario. Surveys conducted in the cashew plantations of ICAR-Directorate of Cashew Research

(DCR), Puttur during the flowering period from 2016-2020, led to documentation of 66 insect pests belonging to different groups viz., Hemipterans (22), Coleopterans (7), Lepidopterans (34), Thysanopterans (3) and Acari (1) (Fig.1). Among these, Lepidopterans were dominant followed by Coleopterans.

The important and abundant inflorescence pests recorded include, TMB (*Helopeltis antonii* Signoret.), thrips (*Scirtothrips dorsalis* Hood), mirids (*Campylomma livida* Reuter), webbers (*Lamida moncusalis* W., *Archips* sp., *Nanaguna* sp., *Dudua aprobola* M.), Geometrids (*Perixera* sp., *Hyposidra* spp.), shoot tip caterpillar (*Hypatima haligramma* M.), hairy caterpillar (*Euproctis* sp.), apple and nut borer (*Thylacoptila paurosema*

M.) and Silvanid flower beetles. Besides, mealy bugs, aphids and several other defoliators also cause damage to cashew flowers. In some years, leaf feeding insects like *Bombotelia jocosatrix* Guen., *Oenospila flavifusata* W., *Pingasa ruginaria* Guen., *Aetholix flavibasalis* Guen., *Orthaga* sp. and *Hyposidra* sp. also fed on the developing inflorescences.



The occurrence of TMB, shoot tip caterpillars, leaf and blossom webbers and geometrids can be noticed on the new flushes of cashew after the monsoon *i.e.*, October-November. With the initiation of flowering, these pests start damaging the flowers as well. Higher incidence of inflorescence pests especially caterpillars can be noticed from second week of December to January end or up to first fortnight of February, which decreases drastically during March. While, high incidence of thrips, flower mirids and silvanids occur during February and March. The apple and nut borers damage the flowers, developing nuts, apples and ripe apples from January to May.

The damage by the flower webbers can be easily identified by the drying of flowers in clumps with webbings. The cut portions on the inflorescences and the feeding damage on buds and petals indicate the damage by Geometrids. Severe feeding by thrips may result in drying of inflorescences, corky growth on developing nuts and apples leading to malformation. The nature of damage by flower mirids and silvanids is not clearly understood in the present investigation, but there is a possibility of pollen damage by the flower beetles, but to confirm this further studies are required.



A. flavibasalis



E. scintillans



B. jocosatrix



Nanaguna sp.

Natural enemies play a major role in managing the population of several minor pests. General predators recorded in the inflorescences include, several species of spiders, ants, mantids, reduviids, lace wing bugs, coccinellids, geocorid bugs, anthocorid bugs, pentatomid bug, wasps, syrphids, mantispids and pentatomid bug (*Eocanthecona furcellata*). Among them, spiders are the predominant predators found in more numbers. Besides, there are several parasitoids

managing these pests to the tune of 5-30 %. In general, insecticidal sprays taken up against TMB during flowering season, aid in effectively managing most of these inflorescence pests. However, when the damage by inflorescence pests especially caterpillars is prominent, timely spraying is essential. Because significant yield loss of 30-40 % has been recorded in unsprayed plants compared to insecticide sprayed ones.

PROGRAMMES ORGANIZED

Celebration of Constitution Day – Activities

As per the directives of ICAR, New Delhi, ICAR-DCR, Puttur has taken up different activities to honour the 70th year of the adoption of Constitution of India from 26th November, 2019 to 14th April, 2020. Initially, the brochures, standees and banners of Constitution Day were uploaded in ICAR-DCR website along with the reports on monthly activities taken up under this programme. During the period of report, singing competition on patriotic songs was organized on 10th January, 2020 for the ICAR-DCR staff. On 31st January, 2020, a meeting was organized at ICAR-DCR along with the youth club, Shantigodu. During the meeting, constitution day brochure was distributed to the members of youth club and a talk on 'Indian constitution and Fundamental Duties' was delivered by Sri. Rajesh, Head Master, Priyadharshini English Medium School, Bettampady.

A detailed talk on 'Land Legislations and Reforms' by Dr. M. Dattathreya Rao, Former

Head, Department of Sociology, St. Philomena College, Puttur was arranged on 4th March, 2020 at ICAR-DCR, Puttur. Later on 13th March, 2020, a meeting was convened with farmers and Dr. R. Selvamani, IAS, Chief Executive Officer (CEO), Dakshina Kannada Zilla Panchayat was the chief guest. The CEO explained the fundamental duties of Indian citizens and emphasized on Article 3 of the Constitution. He gave information on different Government schemes for the benefit of farmers and interacted with the farmers. A total of 177 participants including farmers, President and members of All India Cashew Growers Association (AICGA), staff of DCR and public were present during the programme. On 14th April, 2020, as there was lockdown due to COVID-19, 'Reading of Preamble of Indian Constitution and fundamental duties of Indian Citizens was taken up by the staff at home with their family members as per the directives of the Council.



Dr. R. Selvamani, CEO, DK Zilla Panchayat addressing the gathering



Meeting on Land Legislations and Reforms

Cashew Day

The ‘Cashew day’ was celebrated on 13th March, 2020 at ICAR-DCR, Puttur with the theme of “Empowerment of Scheduled Caste Community through SCSP programs”. Mrs. Sindhu Rupesh, IAS, Deputy Commissioner, Dakshina Kannada District was the chief guest of the programme. Dr. Yathish Ullal, Assistant Commissioner, Puttur Division and Sri. T. Ramesh Babu, Tahsildar, Puttur were also present on the occasion. The Deputy Commissioner distributed agricultural implements to the selected farmers of Scheduled Castes. She said that DK district is known for cashew and farmers can earn good income by following modern practices. She expressed her appreciation for the benefits given to Scheduled Caste community under the Government Scheme.

Many farmers and the Office bearers of AICGA, DCR staff, family members and public participated in the occasion. AICGA President, Sri. N. Achutha Moodithaya gave a memorandum to Deputy Commissioner for inclusion of the association in the ensuing farmer related meetings. Four publications related to cashew crop management, intercropping and fruit processing were released during the occasion.

ICAR-DCR Foundation Day and SCSP Farmers’ Meet

ICAR-DCR, Puttur celebrated its 35th foundation day on 18th June, 2020 along with SCSP (Schedule Caste Sub Plan) farmers meet. The function was inaugurated by the Chief Guest Sri. Chaniya Kalthadka, President, Sullia taluk Panchayat who also belongs to SC community. Agricultural implements like chain saw for cutting tree branches, weed cutters, sewing machine etc. were distributed to the selected farmers of SC community from Puttur, Belthangady, Sullia and Kadaba taluks. Around Rs. 85 lakhs has been spent under the Central Government sponsored SCSP project to make poor and marginal scheduled caste farmers self-reliant during the year 2019-2020. The Guest of Honour, Sri Radhakrishna Borker, President, Puttur Taluk Panchayat spoke on the occasion and requested



the farmers to make proper use of the facilities given by the government to make a self-reliant living. Sri. Saja Radhakrishna Alva, President, Committee for Social Justice, Puttur Panchayat and Sri. Boodiyar Radhakrishna Rai, former President of APMC, Puttur were also present during the occasion. Three extension folders and the Annual Report of the Directorate were released on the occasion. Precautionary measures for COVID-19 were strictly followed during the programme according to the guidelines.

Programmes under SCSP Scheme

During January - June 2020, under SCSP Programme, ICAR-DCR, Puttur has taken up many activities for the welfare of members of scheduled caste community. Under this programme, selected farmers from Dakshina Kannada, Kodagu and Chitradurga districts were provided with cashew grafts and the financial support to meet the initial cost of cultivation. Poultry units and apiculture

units were also supplied to the interested and selected farmers for improving their livelihood, and the required trainings and exposure visits were provided. Besides, agricultural machineries and other important items including weed cutters, chain saw, sprayers, aluminium tree climbing ladders, areca plate making machines, sewing machines, water storage tanks and solar lights for houses were distributed to the needy beneficiaries. Two exposure tours to 54 interested SCSP farmers in two batches were taken up in collaboration with KVK, Mangalore during 26-29th February, 2020 and 10-13th March 2020. The team visited KVK, Gonikoppal, Kodagu; KVK, Suttur, Nanjanagudu, Mysuru; University of Agricultural Sciences, Bengaluru; Fisheries Research and Information Centre, Hebbal and Hesarghatta; Indian Institute of Horticultural Research, Bengaluru and Biotechnology Park, Hassan.



Distribution of apiary units

राजभाषा कार्यान्वयन-2020

दिनांक 29.01.2020 को पुत्तूर नगर राजभाषा कार्यान्वयन समिति की अर्ध वार्षिक बैठक आयोजन किया गया। बैठक में पुत्तूर और विट्टल में स्थित सदस्य कार्यालयों के अधिकारी शामिल थे। बैठक में अर्धवार्षिक रिपोर्ट का समीक्षा किया गया और हिन्दी कार्यान्वयन को सुचरू रूप से आगे बढ़ाने के बारे में चर्चा किया गया।

इस छः माही में कोविड-19 के भीमारी के कारण मार्च और जून में जो तिमाही बैठकें आयोजन होनी थी उन्हें समूह रूप में आयोजन नहीं किया गया। बल्की इस संबंध में जरूरी विचारों की आदान-प्रदान व्यक्तिगत रूप से किया गया। हिन्दी की कामकाज यथा रूप में आगे बढ़ाया गया।



Distribution of sewing machines to SCSP beneficiaries



TRAININGS ORGANIZED

In-house training on usage of Krishi portal

An in-house training on ‘Usage of Krishi Portal’ was held at Audio-Visual Lab, ICAR-DCR, Puttur on 25th January, 2020 for the DCR scientists and technical staff. Sequential steps involved in uploading the publications in krishi portal website were demonstrated.



Training Programme on “Cashew Production and Post Harvest Technologies”

ICAR-DCR, Puttur has organised a five-days training programme on “Cashew Production and Post-Harvest Technologies” during 10-14th February, 2020 for the farmers and officials from Meghalaya, sponsored by the Meghalaya Basin Management Agency. Dr. M.G. Nayak, Director (Acting) inaugurated the programme and spoke about the immense scope of cashew cultivation in Meghalaya with respect to the climate and land availability. He stressed on the need for suitable varieties of cashew for the



Meghalaya region. He further emphasized on the scope of cashew apple utilization.

Mr. Saurabh Bose, Senior Manager, Meghalaya Livelihood Access to Market Project (Megha LAMP), Meghalaya explained the activities of Megha LAMP funded by International Fund for Agricultural Development and Govt. of Meghalaya, being implemented by the Meghalaya Basin Management Agency (MBMA). Mr. Zacharius Marak, District Programme Manager, MBMA highlighted the lack of scientific ways of managing cashew plantations in Meghalaya. The training programme consisted of lectures, demonstrations, field and laboratory visits in addition to visit to cashew plantations of progressive farmers and to the cashew plantations processing industries. The programme was attended by 20 farmers and officials from Meghalaya.

Training programme on Cashew Apple Processing

ICAR-DCR, Puttur has organized a two-days training programme on “Recent cashew cultivation practices and homestead valorization of cashew apple in the hill zone of Karnataka” during 6-7th March, 2020 at Neechadi village, Sagar Taluk, Shivamogga. The training programme was funded by Directorate of Cashewnut and Cocoa Development (DCCD), Kochi.



Mr. Chandrasekhar, President, Cashew Growers Association, Tumari, Shivamogga inaugurated the programme and spoke about the importance of cashew in livelihood security of people in the hill zone of Karnataka. Dr. M.G. Nayak, Director (Acting) highlighted the importance of ultra-high density planting and the specific pruning responsive varieties to increase the yield and productivity of cashew in the country. He stressed

the need for proper utilization of cashew apples for improving the farm income. The training programme consisted of lectures on different cashew cultivation aspects, field visits and hands on training on value addition and post harvest handling of cashew apple. A total of 152 farmers from the Sagar, Soraba and Hosanagar taluks of Shivamogga district in Karnataka participated in the training.

MEETINGS CONDUCTED

Institute Technology Management Committee (ITMC)

At ICAR-DCR, Puttur, 15th ITMC meeting was held on 29th January, 2020. The committee reviewed Technology Disclosure Forms (TDF) of six different technologies viz. cashew hybrid i.e., H-130 and five cashew apple products (RTS, jam, jelly, cider and crisp) recognized for commercialization. The committee also discussed about the registration of Cashew hybrid H-130 under PPV&FR Act, 2002.



Technology meet on commercialization of Cashewnut Hybrid, H-130

ICAR-DCR, Puttur organized a technology meet for commercialization of cashewnut hybrid, H-130 on 25th February, 2020. Nursery owners from Tamil Nadu, Maharashtra, Karnataka and KCDC officials from Mangalore attended the technology meet. Emerging opportunities in cashewnut production and importance of new cashew hybrid H-130 were discussed during the technology meet.



Technology commercialization

“Cashlime” - an antioxidants rich RTS nectar developed by ICAR-DCR, Puttur was commercialized on nonexclusive license basis to Tamin Foods Goa Ltd on 8th March, 2020 and MoU was signed.



Exhibition

ICAR-DCR, Puttur participated in National Horticulture Fair - 2020 held at IIHR, Hesarghatta, Bengaluru from 5-8th February, 2020 and put up an exhibition stall. On an average, 15 thousand farmers and others visited the stalls in the fair every day. During this fair, many farmers showed interest in cashew cultivation and value-added cashew products.

Field days

Field days on ‘soil and plant health management in cashew’ was organised at Ankola (on 06th



January, 2020), Mundgod (on 07th January, 2020), Kundapura (on 31st January, 2020) and Alankar (on 07th February, 2020) under the project funded by RKVY-RAFTAAR.

Exposure visits to farmers



Exposure visits were organised for the farmers from Uttara Kannada, Dakshina Kannada and Udupi under the project funded by RKVY-RAFTAAR. The farmers were taken to different experimental fields and demonstration plots at ICAR-DCR, Puttur. Besides, visits were also to ICAR-CPCRI, Regional Station, Vittal.

Advisory Visits / Consultancies/ talks delivered

Dr. M.G. Nayak	Lead the team of committee comprising of Officials of UAHS, Shimoga and KCDC, Mangalore to survey and assess the extent of damage by TMB, reasons for yield loss and to suggest management measures in KCDC plantations of Dakshina Kannada, Udupi and Uttara Kannada districts as per the suggestions of MD, KCDC, Mangalore and Director, DCCD, Cochin.	1 st week of January, 2020
Dr. Shamsudheen Mangalassery	On-site evaluation of innovative cashewnut propagation techniques at Kannur, Kerala upon the request of National Innovation Foundation (NIF), India, Dept. of Science and Technology, Govt. of India.	20 th February, 2020
Dr. Mohana, G. S.	Presentation on “Trends in cashew breeding – Problems and Prospects” in Botany department, Alvas college, Mudubidare.	24 th February, 2020
	Presentation on “Advances in Cashew breeding” in the Webinar organised by the Department of Botany, St. Aloysius College, Mangalore through Google Meet.	16 th June, 2020

Technical publications/ extension literature

Technical Bulletin

- Mangalassery, S., Nayak, M.G., Preethi, P. and Muralidhara, B.M. 2020. Soil and water conservation and irrigation management in cashew. Technical Bulletin No. 31. ICAR-Directorate of Cashew Research, Puttur, Karnataka, India, p. 34.
- Nayak, M.G., Muralidhara, B.M., Mangalassery, S. and Preethi, P. 2020. Geru belayalli poshakamshagala nirvahane. Technical Bulletin No. 32. ICAR-Directorate of Cashew Research, Puttur, Karnataka, India, p. 30.

Customised instruction materials

- Mangalassery, S., Preethi, P., Savadi, S. and Muralidhara, B.M. 2019. The use of software on nutrient management in cashew, Customised instruction material No. 1/2019 (15 August 2019). ICAR-Directorate of Cashew Research, Puttur, Karnataka, India, pp. 10.
- Mangalassery, S., Preethi, P., Savadi, S. and Muralidhara, B.M., 2019. The use of mobile App “Cashew nutrient manager”, Customised instruction material No.2/2019 (15 August 2019). ICAR-DCR, Puttur, Karnataka, India, pp. 10.
- Sandesh, M.S., Savadi, S., Muralidhara, B.M., Mangalassery, S. and Preethi, P. 2020. Geru krishiyalli poshakamsha nirvahane tantramsha balakeya mahithi [Customised instruction material on the use of software on nutrient management in cashew] (01 February 2020). ICAR-DCR, Puttur, Karnataka, India, pp. 8.
- Sandesh, M.S., Savadi, S., Muralidhara, B.M., Mangalassery, S. and Preethi, P. 2020. Geru krishiyalli poshakamsha nirvahane mobile apina balakeya mahithi [Customised instruction material on the use of mobile App “Cashew Nutrient Manager”] (01 February 2020). ICAR-DCR, Puttur, Karnataka, India, pp. 8.

Extension folders

- Nayak, M.G., Shamsudheen. M., Preethi, P., Muralidhara, B.M. and Babli Mog. 2020. Cashew cultivation guidelines for drought prone areas. ICAR-DCR, India [Extension leaflet-English]. 01, February 2020.
- Nayak, M.G., S. Mangalassery., Preethi, P., Muralidhara, B.M. and Babli Mog. 2020. Intercropping and cashew-based cropping/farming system. ICAR-DCR, Puttur, Karnataka, India [Extension leaflet-English]. 01, February 2020.
- Sandesh, M.S. and Savadi, S. 2020. Geru Samshodhana Nirdeshanalaya Abhivrdhipadisiruva Tantrajnalgalu [Commercialization brochure - Kannada]. ICAR-DCR, Karnataka, India pp 1-6. March, 2020.
- Rajkumar A.D. and Preethi, P., 2020. Brochure on cashew apple processing in Kannada – ‘Geru Hannina Samskarane’. Kannada translation by Dr. Mohana, G.S.
- Mangalassery, S., Nayak, M.G., Preethi, P. and Muralidhara, B.M. 2020. Soil and water conservation, and irrigation management in cashew. ICAR-DCR, Puttur, Karnataka, India, [Extension leaflet-English]. 13 March 2020.
- Nayak, M.G., Muralidhara, B.M., Sandesh, M.S., Savadi, S., Preethi. P. and Mangalassery, S. 2020. Geru gidagaligakara needuvike mathu savaruvike pramukyathe. ICAR-DCR, Puttur, Karnataka, India, [Extension leaflet-Kannada]. 30 March 2020.
- K. Vanitha and T.N. Raviprasad. 2020. Tea mosquito bug and its management in cashew. ICAR-DCR, India (Extension folder – English), March 2020.

Training manual

- Eradasappa, E., Mog, B., Savadi, S. and Mangalassery, S (Eds). 2020. Training manual on cashew production and post harvest technologies. ICAR-DCR, Puttur, Karnataka, India. 132 p.

Activities taken up during COVID-19 crisis

- COVID-19 advisories were provided in the website of the institute and social media for May and June, 2020.
- The Directorate has taken up distribution of food kits for the few needy local people and tender coconuts to the traffic police personals on duty.
- Dr. M.G. Nayak had participated in a 'Phone in Programme' of All India Radio, Mangalore on 15th April, 2020 and delivered a talk on 'Handling of cashew activities during COVID-19 scenario', which was telecasted on 19th April, 2020.

VISIT OF DIGNITARIES

Name	Address	Date of visit
Dr. M. Dattathreya Rao	Former Head, Department of Sociology, St. Philomena College, Puttur.	31.01.2020
Sri. Rajesh	Headmaster, Priyadharshini English Medium School, Bettampady.	04.03.2020
Dr. R. Selvamani, IAS	Chief Executive Officer, Dakshina Kannada Zilla Panchayat.	13.03.2020
Mrs. Sindhu B. Rupesh, IAS	Deputy Commissioner and District Magistrate, Dakshina Kannada.	
Dr. Yathish Ullal	Assistant Commissioner, Puttur Division.	
Sri. T. Ramesh Babu	Tahsildar, Puttur.	
Sri B. Ramanath Rai	Former Minister of Environment and Forests of the State of Karnataka.	06.06.2020
Sri. Chaniya Kalthadka	President, Sullia Taluk Panchayat.	17.06.2020
Sri. Radhakrishna Borker	President, Puttur Taluk Panchayat.	
Sri. Saja Radhakrishna Alva	President, Committee for Social Justice, Puttur Taluk Panchayat.	
Sri. Boodiyar Radhakrishna Rai	Former President of APMC, Puttur.	
Sri. Prakash S. Netalkar, IFS	Managing Director, Karnataka Cashew Development Corporation Ltd, Mangalore.	29.06.2020

SUPPLY OF PLANTING MATERIAL

The grafts of recommended high yielding cashew varieties are regularly produced at this Directorate under institute revenue generation programme, and a total of 98, 801 grafts were supplied to the farmers and developmental agencies from this Directorate during January-June, 2020.

STAFF NEWS

Appointment

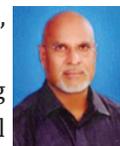
- Dr. Manjunatha K, Scientist (Farm Machinery and Power) joined this Directorate on 4th April, 2020.



Honours/Recognitions/Awards

Dr. M.G. Nayak, Director (Acting)

- He has been selected for the award of World Noni Research Foundation Fellowship-2020, and the award ceremony is delayed due to COVID-19 issue.
- He has been nominated as a member of National Advisory Board of forthcoming International Symposium on Coastal Agriculture (ISCA 2020): Transforming Coastal Zone for Sustainable Food and Income Security to be held in Kolkata during 5-8th November, 2020.
- He has also been nominated as Official member of Board of Directors (GOI representative) in KCDC, Mangalore by Horticulture Commissioner, Ministry of Agriculture and Farmers Welfare, GOI, New Delhi.



Dr. K. Vanitha, Scientist (Agricultural Entomology)

- She bagged 'Best poster presentation award (I prize)' for the paper 'Bee visits play a vital role in pollination of cashew' by K. Vanitha and T.N. Raviprasad during the XVII AZRA International Conference on 'Frontier research in applied zoology and insect pest management strategies: a way forward for food and nutritional security' held on 12-14, February, 2020 at University of Agricultural Sciences, Raichur, Karnataka.
- She also bagged 'Kanwar Virender Singh Memorial All India Best publication award 2019' for the publication 'K. Vanitha, P.S. Bhat, T.N. Raviprasad & K.K. Srikumar (2016). Biology and behaviour of *Ephestiasula pictipes* (Wood-Mason) (Hymenopodidae: Mantodea) under captive breeding, *International Journal of Pest Management*, 62 : 4, 308-318' by Society for Advancement of Human and Nature (SADHNA), Dr. Y S Parmar University of Horticulture and Forestry, Nauni, Solan, Himachal Pradesh, India.



Retirement

Mr. R. Arulmony

Chief Technical Officer
(Librarian) superannuated
on 31st May, 2020



Mr. K. Shiva

Skilled Support Staff
superannuated on
30th June, 2020



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