

## INAUGURAL SESSION

October 20, 2016, Time: 03:30 pm  
Venue: Millennium Hall, ICAR-CTCRI, Thiruvananthapuram

ICAR theme song

Welcome : **Dr. James George**  
Director, ICAR-Central Tuber Crops Research Institute

Presidential address : **Adv. V.S. Sunil Kumar**  
Hon'ble Minister of Agriculture and  
Farmers Welfare, Government of Kerala

Address by : **Dr. A.K. Singh**  
Guests of honour DDG (HS), Indian Council of Agricultural Research  
New Delhi

**Dr. Shashi Tharoor**  
Hon'ble Member of Parliament

**Shri. Kadakampalli Surendran**  
Hon'ble Minister of Electricity and Devaswom,  
Government of Kerala

### **Release of Publications and Launching of Starch indicator**

Inaugural address : **Shri. Pinarayi Vijayan**  
Hon'ble Chief Minister, Government of Kerala

Keynote address : **Dr. T. Mohapatra**  
Secretary, DARE & Director General  
Indian Council of Agricultural Research, New Delhi

Vote of thanks : **Dr. C.A. Jayaprakas**  
President, Indian Society for Root Crops

National Anthem

High Tea



## SESSION I

### TUBER CROPS: THE LIFELINE OF TRIBAL COMMUNITIES

**October 20, 2016**

**10 am to 2 pm**

**Chairman**                      **Dr. T.V. Kattimani**  
Vice-Chancellor, Indira Gandhi National Tribal University,  
Amarkantak, 484886, Madhya Pradesh

**Co-Chairman**                **Dr. Raghavan Payyanad**  
Rtd. Professor of Folklore Univeristy of Calicut,  
Malappuram, Kerala:673 635

**Rapporteurs**                **Dr. S. Sunitha and Dr. Deo Sankar**

Theme Lecture TC-L1        Using tuber crops for improved livelihood of tribal  
communities  
Dr. T.V. Kattimani

Theme Lecture TC-L2        Tribal Communities-Traditional custodian of tuber crop  
resources in india  
Dr. James George

Theme Lecture TC-L3        Tuber crops: The life line of tribal communities  
Dr. R. Payyanad

Theme Lecture TC-L4        NABARD and Tribal Development  
Shri. Mohammed Riyaz

Invited Lecture TC-I1        Sweet potato utilisation for tribal community in Eastern  
India  
Dr. Sreekanth Attaluri  
Programme Manager, International Potato Centre,  
Bhuvaneswar, Odisha

Invited Lecture TC-I2        Dr. Bindu. S  
Director, KIRTADS, Chevayur, Kozhikode- 673 017

Invited Lecture TC-I3        Dr. P. Subramanian  
Director, Tribal Research Centre, M. Palada,  
Udhagamandalam, Tamil Nadu

Invited Lecture TC-I4	Smt. P.E. Usha State Programme Director, Kerala Mahila Samakhya Society, Thiruvananthapuram
<b>ORAL PRESENTATIONS</b>	
<b>Session Code</b>	<b>Title and Authors</b>
TC-O1	Farming system models involving tuber crops for livelihood improvement of tribal farmers M. Nedunchezhiyan, J. George, A. Mukherjee, R.C. Ray, K. Laxminarayana, K.R. Rao, K. Pati, K.H. Gowda, V. B.S. Chauhan, V. Bansode, B. Pandey and A.K. Singh
TC-O2	Tuber crops based farming system – a way forward for livelihood options of Nicobari Tribes in Andaman & Nicobar Islands V. Damodaran, M. Sankaran, L.B. Singh, T.Subramani, I. Jaisankar, James George and S.D. Roy
TC-O3	Potential of tuber crops in achieving food security and improving the economy of tribal peoples in Manipur A.K. Bijaya Devi and K. James Singh
TC-O4	Empowerment of tribal farmers of Salem district on the value addition in cassava S. Manickam, M. Velmurugan, S. Suganya and P.S. Kavitha
TC-O5	Wild tubers consumed by the indigenous communities of Parambikulam and Vazhachal region, Kerala V.V. Rajasree
<b>POSTER PRESENTATIONS</b>	
TC-P1	Household food and Nutrition security through tuber crop interventions in tribal region of Maharashtra M. Maske, R.V.Bhavani, M. Sayre and M.Sadatpure
TC-P2	Promotion of root and tuber crops for food and nutrition security and livelihood management in tribal community in West Bengal J. Tarafdar and S. Mitra

TC-P3	<p>Tuber crops for combating malnutrition and ensuring food availability in the Zero district - Nabrangpur, Odisha</p> <p>R.R. Korada, A. Mukherjee, S.K. Srivastava and J. Kistwaria</p>
TC-P4	<p>Ensuring food and nutritional security through tuber crops in tribal areas</p> <p>V. V. Bansode, A. Mukherjee, V.B.S. Chauhan, H. Gowda and R.C. Ray</p>
TC-P5	<p>Resource integration and sustainable tuber production in an agroforestry homegarden of Southern Kerala</p> <p>Sheeba Rebecca Isaac, Shalini Pillai P and J. Varghese</p>
TC-P6	<p>Can tuber crops address food and nutritional security of tribal poor?</p> <p>A. Pradhan, A.K. Panda, M. Maske and R.V. Bhavani</p>
TC-P7	<p>Enhancing the livelihood of tapioca growing tribal farmers in Salem District</p> <p>S. Manickam, S. Suganya, M. Velmurugan and P.S. Kavitha</p>
TC-P8	<p>Impact of improved varieties of cassava on the socio- economic status of tribal farmers of Attapady and Wayanad of Kerala</p> <p>R. Muthuraj, James George, S. Sunitha, M.N. Sheela and T. Makesh Kumar</p>
TC-P9	<p>Impact of elephant foot yam variety - Gajendra on the socio-economic upliftment of tribal farmers of Kerala</p> <p>S. Sunitha, James George, R.Muthuraj, M.N. Sheela and T. Makesh Kumar</p>



**SESSION II**  
**GENETIC RESOURCES OF TUBER CROPS**

**October 20, 2016**

**5 pm to 7.30 pm**

**Chairman**                      **Dr. P.N. Jagadev**  
Dean of Research, Directorate of Research Orissa University  
of Agriculture & Technology Bhubaneswar, Odisha

**Co-Chairman**                **Dr. K. Joseph John**  
Principal Scientist ICAR-National Bureau of Plant Genetic  
Resources Regional Station, Vellanikkara, KAU PO,  
Thrissur-680656

**Rapporteurs**                **Dr. Shiry Raichal Anil and Dr. K. Ramachandra Naik**

Lead Lecture GR-LI            Conventional and non-conventional breeding  
approaches for improvement of tuber crops  
Dr. P.N. Jagadev

Invited Lecture GR-I1        Diversity of wild yams (*Dioscorea*) in Kerala, part of  
Western Ghats of India  
Dr. N. Anil Kumar

Invited Lecture GR-I2        Genetic resources conservation of tropical tuber crops  
– Future perspectives  
Dr. K. Joseph John

**ORAL PRESENTATIONS**

GR-O1                      Breeding for varieties resistant to cassava mosaic disease using  
different sources of resistance  
M.N. Sheela, P.V. Abhilash, S. Darshan, B.S. Prakash Krishnan,  
P. Arun, T. Makesh Kumar, K.I. Asha, C. Mohan, S. Sunitha,  
N. Krishna Radhika, A. Asha Devi and James George

GR-O2                      Principal component analysis of agro morphological and yield  
attributes among cassava (*Manihot esculenta* Crantz) genotypes  
B. Babu Rao, P. Ashok, G. Ramanandam and K. Sasikala

GR-O3                      Molecular characterization of sweetpotato (*Ipomoea batatas* L. Lam)  
cultivars using simple sequence repeats and screening of markers  
linked to agronomic traits to genes  
J. Tarafdar, P. Pratim Sur and N. Chowdhury

GR-O4	Genetic diversity analysis in <i>Ipomoea</i> using morphological and ISSR markers Shirly Raichal Anil, N. Krishna Radhika, C. Vinaya, V. Lija and B.S. Prakash Krishnan
GR-O5	Development of nutritionally rich orange flesh sweet potato lines-A way to increase consumer acceptance in Andhra Pradesh P. Ashok, James George and A. Pavani Priyanka
GR-O6	Genetic variability and character associations in sweet potato ( <i>Ipomoea batatas</i> (L.) Lam) V.Tripathi, Chandra Deo, V.P. Pandey and C.N. Ram
GR-O7	Genetic variability of <i>Nalkachu</i> ( <i>Colocasia esculenta</i> var. <i>Stolonifera</i> L.) genotypes R. Mekapotula, S. Alam, Akashi Sarma and P.K. Kalita
GR-O8	Usefulness of Inter Simple Sequence Repeat markers in differentiating species of important aroids A. Asha Devi, Ann. P. George, N. Krishna Radhika and B.S. Prakash Krishnan
GR-O9	Genetic variability, heritability, genetic advance and genetic divergence studies in taro ( <i>Colocasia esculenta</i> var. <i>Antiquorum</i> (L.) Schott.) germplasm Chandra Deo, D. L. Hauhna, C.N. Ram and D. Kumar
GR-O10	Evaluation of traditional genotype diversity of taro ( <i>Colocasia esculenta</i> (L.) Schott) and its ethnobotanical uses in Manipur, Northeast India Kh. Swarnalata Devi, K. James Singh and A.K. Bijaya Devi
GR-O11	Genetic resources of tuber crops in Tripura and tuber crop based tribal foods Biswajit Das and H. Lembisana Devi
<b>POSTER PRESENTATIONS</b>	
GR-P1	Collection, conservation and evaluation of cassava germplasm accessions for high tuber yield and starch content for industrial exploitations M. Velmurugan, L. Pugalendhi and S. Manickam



GR-P2	Genetic diversity among released varieties of cassava in India P.V. Abhilash, A.S. Shersha, S. Athulya Dev, and M.N. Sheela
GR-P3	Classification and selection of edible cassava lines based on cyanide levels P. Ashok, James George, A. Pavani Priyanka and M. Rajasekhar
GR-P4	Molecular genetic diversity analysis of cassava chips line CMR-100 and its open pollinated progenies P. V. Keerthana, J. Sreekumar, A. Deepthy Chandran, P. Vidya, Aswathy G. H. Nair, C. Mohan
GR-P5	Identification of markers linked to post-harvest physiological deterioration (PPD) resistance in cassava lines A. Deepthy Chandran, M.N. Sheela, J. Sreekumar, P. Vidya, Aswathy G.H. Nair, V. Ambu, P.V. Keerthana and C. Mohan
GR-P6	Identification and validation of SSR and SNP markers related to mosaic disease resistance in cassava ( <i>Manihot esculenta</i> Crantz.) V. Ambu, C. Mohan and J. Sreekumar
GR-P7	Computational prediction of novel microRNA in cassava ( <i>Manihot esculenta</i> Crantz.) B.S. Reshmi, C. Mohan and J. Sreekumar
GR-P8	Screening of newly identified sweet potato genotypes for processing and post harvest qualities K. Ramachandra Naik, Prathikha, K. Samreen and D. Shreedhara
GR-P9	Performance of sweet potato entries under MLT in Mewar region of Rajasthan R.S. Rathore, Sunil Pareek, S.K. Sharma and James George
GR-P10	Diversity, distribution and management of yam landraces ( <i>Dioscorea</i> spp.) in India M.N. Sheela, Athira Jyothy, A. Irfa, N. Krishna Radhika, K.I. Asha, C. Visalakshi Chandra, S. Natarajan, B.S. Prakash Krishnan and P.V. Abhilash
GR-P11	Morphological characterization of greater yam ( <i>Dioscorea alata</i> L.) landraces in Kerala Athira Jyothy, M.N. Sheela, N. Krishna Radhika., A. Irfa, B.S. Prakash Krishnan and P.V. Abhilash

GR-P12	Evaluation of greater yam ( <i>Dioscorea alata</i> L) germplasm using multivariate analysis K. Mamatha, R. Naga Lakshmi and B.V.K. Bhagavan
GR-P13	Morpho-genetic diversity in taro ( <i>Colocasia esculenta</i> var <i>antiquorum</i> L. Schott) and development of blight resistant markers R. Mandal, J. Tarafdar, S. Mitra, A. Mukherjee, N. Mandal and A. Mazumder
GR-P14	Standardization of <i>in vitro</i> and <i>in vivo</i> seed germination of true taro seeds M.R. Sahoo, M. Dasgupta, T.R. Devi, Y.I. Devi, N. Prakash and S.V. Ngachan
GR-P16	Morphological characterization of some swamp taro ( <i>Colocasia esculenta</i> var. <i>Stolonifera</i> L) genotypes R. Mekapotula, S. Alam, A. Sarma and P.K. Kalita
GR-P16	Genetic diversity analysis in elephant foot yam accessions using morphological traits S. Krishnaraj, A. Asha Devi and Shirly Raichal Anil
GR-P17	Computational prediction of novel microRNA in <i>Amorphophallus paeoniifolius</i> using RNA sequence data. G.J. Rekha, T. Makesh Kumar and J. Sreekumar
GR-P18	Understanding early defense mechanisms for genetic improvement of chinese potato ( <i>Solenostemon rotundifolius</i> Poir., Morton) to osmotic stress M.R. Sahoo, T. Roshni Devi, M. Dasgupta, N. Prakash and S.V. Ngachan
GR-P19	Yield performance of tikhur ( <i>Curcuma angustifolia</i> Roxb.) genotypes under multilocational trial in Narayanpur district of Chhattisgarh M.K. Sahu, D. Shankar, R.R. Kanwar, P.K. Salam and B. Singh
GR-P20	Performance of <i>Costus Speciosus</i> Entries under different agroclimatic zones of Chhattisgarh R.R. Kanwar, D. Shankar, D.P. Singh, M.K. Sahu, K. Narayan and D. Mukherjee
GR-P21	Desert Maerua-medicinal root tuber J. Phani Kumar and S.Vaishnavi

GR-P22	Survey and collection from Joida Thaluk of Uttara Kannada – an unexplored hot spot of biodiversity of tuber crops K.I. Asha, M.N. Sheela, A. Asha Devi, Shirly Raichal Anil, N. Krishna Radhika and Vivek Hegde
GR-P23	Richness of genetic resources of tuber crops under Konkan region N.V. Mhaskar, P.S. Gudadhe, R.P. Goriwale, B.R. Salvi and U.V. Mahadkar
GR-P24	Conservation of genetic resources of tuber crops for prosperity N.V. Mhaskar, James George and M.N. Sheela
GR-P25	Varietal improvement in tropical tuber crops at Dapoli (Maharashtra) S. Pradnya, R.P. Gudadhe, Goriwale, N.V. Mhaskar, R.G. Khandekar, B.R. Salvi, D.M. Mahale, U.V. Mahadka and James George
GR-P26	Novel technologies for mining resistance in tropical tuber crops Vishnu S. Nath, B. Shyni, M.L. Jeeva and S.S. Veena
GR-P27	Gene prospecting in tuber crops for angiogenic effects N. Krishna Radhika, M.N. Sheela, K.I. Asha, A. Shirly Raichal and A. Asha Devi
GR-P28	Exploration and popularization of under-exploited minor tuber crops for food and nutritional security in Karnataka D.L. Maheswar, V. Nachegouda, K. Ramchandra Naik, Pushpa Bharathi, M. Divya and D. Sridhar



**SESSION III**  
**YOUNG SCIENTIST AWARD PRESENTATIONS**

**October 21, 2016**

**8.30 am to 11.30 am**

Session Code	Title and Authors
YS-1	Collection, conservation and evaluation of sweet potato germplasm accessions for high tuber yield and carotene content P.R. Kamalkumaran
YS-2	Genetic variability and inheritance studies in cassava $f_1$ seedlings for cassava mosaic disease resistance S. Darshan, M.N. Sheela, K. Arya, Visalakshi Chandra, Vivek Hegde and P.V. Abhilash
YS-3	Mining of resistance genes associated with anthracnose infection in greater yam ( <i>Dioscorea alata</i> L.) G. Saranya, S. Vishnu Nath, M.L. Jeeva and T. Makesh Kumar
YS-4	Site specific nutrient management practices for balanced fertilization in cassava on Red non Calcareous soil (Typic Rhodustalf soil) M. Velmurugan, L. Pugalendhi and S. Manickam
YS-5	Soil test crop response based ipns on cassava in red sandy loam soil (typic rhodustalf) of yethapur under irrigated condition for technological empowerment and sustainable livelihood of cassava grower S. Suganya and S. Manickam
YS-6	Strategies to optimise the tuber crops based cropping patterns in tribal areas to ensure livelihood security M.R. Indu
YS-7	Piriformospora indica-A cultivable endophyte for growth promotion and disease management in taro P. Lakshmipriya, Vishnu S. Nath, S.S.Veena, K.N. Anith, J Sreekumar and M.L. Jeeva

YS-8	<p>Characterization of <i>Bemisia tabaci</i> (Gennadius) (Hemiptera: Aleyrodidae) for genetic variability in cassava</p> <p>E.R. Harish, Mani Chellappan, T. Makesh Kumar and M.T. Ranjith</p>
YS-9	<p>Characterization and identification of genotypes for tolerance to post harvest physiological deterioration in cassava</p> <p>C. Visalakshi Chandra, M.N. Sheela, Sarvananan Raju, C. Mohan, Vivek Hegde, S. Darshan and Ambu Vijayan</p>
YS-10	<p>Molecular phylogeography of cassava mosaic viruses in Kerala</p> <p>J.T. Jayakrishnan and T. Makeshkumar</p>
YS-11	<p>Standardization of virus inoculation method for cassava mosaic disease</p> <p>Geethu S. Nair and T. Makesh Kumar</p>
YS-12	<p><i>Manihot esculenta</i> Crantz: A potential source for mining insecticidal molecules for the management of <i>Sitophilus oryzae</i> L. In stored wheat grain (<i>Triticum aestivum</i> L.)</p> <p>V.K. Vikas, C.A. Jayaprakas, M. Sivasamy, G Ajesh, P. Sampath Kumar and L.S. Rajeswari</p>
YS-13	<p>Effect of ultrasound and cellulase pre-treatment on yield and properties of taro starch</p> <p>Nandan Sit</p>
YS-14	<p>Production and evaluation of functional cookies using unexploited <i>curcuma angustifolia</i> starch with millet and pulses for tribal communities</p> <p>Namrata Ankush Giri, Anjudas, M.S. Sajeev, J.T. Sheriff and C. Pradeepika</p>
YS-15	<p>Anthocyanin rich greater yam and sweet potato: nature's promising nutraceuticals</p> <p>R.S. Renjith, V.R. Vishnu, M.N. Sheela, Shirly Raichal Anil, J. Sreekumar and A.N. Jyothi</p>

YS-16	<p>Phytochemical analysis of phenolics and terpenoids in Chinese potato (<i>Plectranthus rotundifolius</i>)</p> <p>V.R. Vishnu, R.S. Renjith, G. Suja and A.N. Jyothi</p>
YS-17	<p>Accelerating tuber crops technologies for food and nutritional security of tribal population of north east region of India</p> <p>M.R. Sahoo and M. Das Guptha, Y.I. Devi, T.R. Devi, N. Prakash and S.V. Ngachan</p>
YS-18	<p>Synthetic seeds in Cassava (<i>Manihot esculenta</i>)</p> <p>Vivek Hegde, T. Makesh Kumar, M.N. Sheela, C. Visalakshi Chandra, A.V.V. Koundiniya and S. Darshan</p>





**SESSION IV**  
**SUSTAINABLE MANAGEMENT OF TUBER CROPS**  
**FOR LIVELIHOOD SECURITY**

**October 21, 2016**

**11.45 am to 2 pm**

**Chairman**                      **Dr. George V. Thomas**  
Emeritus Scientist Council for Food Research and  
Development Konni, Pathanamthitta-689692, Kerala &  
Director (Retd), Central Plantation Crops Research Institute,  
Kudlu, Kasragod-671124, Kerala

**Co-Chairman**                **Dr. Jacob John**  
Professor and Head Cropping System Research Centre,  
Karamana, Thiruvananthaapuram,-695 002, Kerala

**Rapporteurs**                **Dr. M. Nedunchezhiyan and Dr. M. Velmurugan**

Lead Lecture SM-L1            Resilient and sustainable tuber crop production in India  
Dr. Ch. Srinivasa Rao

Invited Lecture SM-I1        Tuber crops – A prominent component in integrated  
farming system  
Dr. Jacob John

Invited Lecture SM-I2        Dr. H.B. Babalad  
Professor, Department of Agronomy, College of  
Agriculture, Dharwad, University of Agricultural  
Sciences, Dharwad, Dharwad-580 005

**ORAL PRESENTATIONS**

**Session Code**                      **Title and Authors**

SM-O1            Is organic production sustainable? Insights from tuber crops  
G. Suja, A.N. Jyothi, V.S. Santhosh Mithra and J. Sreekumar

SM-O2            Nutrient use efficient genotypes of cassava: A good alternative for  
tribal livelihood for healthy sustenance  
K. Susan John, M.N. Sheela., S.U. Shanida Beegum, G. Suja and  
V. Ravi

SM-O3            Tuber crop based farming system: An approach to boost up livelihood  
of marginal farmers  
Bijit Kr. Saud, S. Alam, James George, G.N. Hajarika, Madhumita  
Choudhury Talukdar, U. Kotoky and B. Gogoi

SM-O4	<p>Low cost traditional cassava starch solid waste (thippi) composting: A possible strategy for organic nutrient management and economic security for tribal farmers</p> <p>S. Chithra, K. Susan John and J. Sreekumar</p>
SM-O5	<p>Effect of methods of planting and nutrient management on yield and yield attributes of rice-cassava intercropped with groundnut cropping system</p> <p>V.P. Vipitha and P. Babu Mathew</p>
SM-O6	<p>Photosynthetic response of sweet potato to elevated carbondioxide</p> <p>V. Ravi, R. Saravanan, G. Byju and James George</p>
SM-O7	<p>Effect of macro and micronutrients on the growth and yield of sweet potato</p> <p>B.K.M. Lakshmi, D. Anitha Kumari and M. Vijaya</p>
SM-O8	<p>Effect of weed management practices on weed dynamics, yield and economics of sweet potato (<i>Ipomoea batatas</i> L.)</p> <p>R.S. Singh, P.P. Singh and A. Narayan</p>
SM-O9	<p>Quality planting material production of elephant foot yam through farmers participatory approach in the tribal belts of Kerala</p> <p>S. Sunitha, James George, R. Muthuraj, M.N. Sheela and T. Makesh Kumar</p>
SM-O10	<p>Effect of growth regulators and chemical treatments on dormancy breaking in elephant foot yam (<i>Amorphophallus paeoniifolius</i> (Dennst.) Nicolson)</p> <p>R. Muthuraj, James George, S. Sunitha and V. Ravi</p>
SM-O11	<p>Nutrient customization for elephant foot yam intercropped in coconut gardens for the two AEU's of Kerala</p> <p>P.S. Anju, K. Susan John, Subhendu Bhadraray, G. Suja, Jeena Mathew, K.M. Nair, S. Sunitha, S.S. Veena, B.R. Renjith and S.R. Monu</p>
SM-O12	<p>Performance of elephant foot yam variety 'Palam Zimikand-1' under low hill conditions of Himachal Pradesh</p> <p>Ravinder Singh, K.S. Verma and Reena Kaushal</p>
SM-O13	<p>Effect of tillage system, soil conditioners and nutrient management on cormel quality of tannia (<i>Xanthosoma sagittifolium</i> (L.) Schott.)</p> <p>Atul Jayapal, O.K. Swadija and V.S. Anju</p>

SM-O14	Influence of different intercrops as live stakes on the growth and yield of greater yam ( <i>Dioscorea alata</i> L.) under Godavari alluvial soils of Andhra Pradesh K. Mamatha, R. Naga Lakshmi and B.V.K. Bhagavan
SM-O15	Organic management of Chinese potato ( <i>Plectranthus rotundifolius</i> ): Safe and sustainable alternative Rakhi K. Raj, C. Lintu Maria and G. Suja
SM-O16	Effect of fertilizer levels on yield potential of tuber crops intercropped in mango orchardK. Ramachandra Naik, D. Sreedhar, T.B. Allolli and Soumya Shetty
<b>POSTER PRESENTATIONS</b>	
SM-P1	Effect of tuber and spice crops intercropping system on yield, economics and soil fertility in arecanut based cropping system N.V. Mhaskar, A.A. Dademal, L.S. Chavan and U.V. Mahadkar
SM-P2	Defoliation of cassava leaves for eri silk worm rearing and its impact on tuber yield Bijit Kr. Saud, S. Alam, L. Dutta, B.D. Narzary and P. Bora
SM-P3	Current and future climate suitability of cassava in major growing environments of India R. Shiny and G. Byju
SM-P4	Response of cassava under integrated soil water and nutrient conservation measures in hill soils V. Ramesh, C.S. Ravindran, G. Byju and J. Sreekumar
SM-P5	Phenology of cassava ( <i>Manihot esculenta</i> Crantz) under humid tropical conditions of Kerala S. Haripriya, S. Sunitha, James George and V.S. Santhosh Mithra
SM-P6	Quality planting material production of cassava through farmers participatory approach in the Attapadi and Wayanad tribal area of Kerala R. Muthuraj, James George, S. Sunitha, M.N. Sheela and T. Makesh Kumar
SM-P7	Performance of short-duration cassava ( <i>Manihot esculenta</i> Crantz.) varieties under Manipur Condition K. James Singh, Kh. Swarnalata Devi, Momoko Thokchom and A.K. Bijaya Devi

SM-P8	Influence of graded levels of potassium and time of application on tuber yield and starch content in cassava S. Suganya and S. Manickam
SM-P9	Potassium availability, uptake and economics as influenced by different levels of potassium in cassava S. Suganya and S. Manickam
SM-P10	Effect of weed management practices in cassava on the growth, yield and weed control efficiency M. Velmurugan, L. Pugalendhi and S. Manickam
SM-P11	Demonstration of integrated crop management practices in tapioca M. Malarkodi and M. Ravi
SM-P12	Validation of organic production technologies in cassava and yams intercropped in a coconut plantation C. Lintu Maria, Rakhi K. Raj, R. Surekha, G. Suja and P. Subramanian
SM-P13	Performance of orange-fleshed sweet potato varieties under rainfed situation of Karnataka K. Ramachandra Naik, D. Sreedhar, Pratiksha, K. Samreen and Soumya Shetty
SM-P14	Geo-referenced characterization of organic farmers in Thiruvananthapuram, Kerala C.R. Neeraja, G. Suja and R.S. Anjana Babu
SM-P15	Tribal ecosystem conservation through nutrient best management practices: Experience in tuber crops under coconut intercropping G. Suja, K. Susan John, P.S. Anju, Jeena Mathew, K.M. Nair, S. Sunitha, S.S. Veena, B. R. Renjit and S.R.Monu
SM-P16	Standardization of spacing and size of planting materials of elephant foot yam as an intercrop under coconut garden P.K. Salam, Beena Singh, D.S. Ram, K.P. Singh and Rajesh Kumar Patel
SM-P17	Site specific nutrient management practices in elephant foot yam ( <i>Amorphophallus paeoniifolius</i> (Dennst.) Nicolson) under Coimbatore condition P.R. Kamalkumaran, T. Arumugam and R. Sujatha

SM-P18	Effect of organic sources of nutrients on the growth and yield of elephant foot yam ( <i>Amorphophallus paeoniifolius</i> (Dennst.) Nicolson) cv. Gajendra under Jharkhand condition S. Sengupta, H.C. Lal, Binay Kumar, Arun Kumar Tiwary and K.K. Jha
SM-P19	Fertigation in elephant foot yam cv. Gajendra under coastal alluviums of Andhra Pradesh R. Naga Lakshmi, K. Mamatha, B.V.K. Bhagavan, Padma and G.N. Murthy
SM-P20	Effect of herbicides on the growth and yield of elephant foot yam ( <i>Amorphophallus paeoniifolius</i> ) cv. Gajendra R. Naga Lakshmi, K. Mamatha, B.V.K Bhagavan and M.M. Naidu
SM-P21	Conservation agriculture in banana + elephant foot yam system K. Remya and G. Suja
SM-P22	Effect of intercropping on yield attributes of taro/arvi ( <i>Colocasia esculenta</i> Schott.) cv. Mukhi Pan and assessment of yield advantage under the sloppy foot hills of Imphal East Momoko Thokchom, K. James Singh, Ravi Kiran Thirumdasu and A.K. Bijaya Devi
SM-P23	Effect of leafy vegetables as intercrops on the yield of summer <i>Colocasia</i> under Bastar plateau of Chhattisgarh Deo Shankar, R.R. Kanwar, A.K. Thakur, R.S. Netam and A.K. Gupta
SM-P24	Seed village programme in quality planting material production of greater yam for sustenance of tribal communities in Kerala R. Muthuraj, James George, S. Sunitha, M.N. Sheela and T. Makesh Kumar
SM-P25	Impact of improved varieties of greater yam on the socio-economic upliftment of tribal farmers of Attappadi region and Wyanad district of Kerala S. Sunitha, James George, R. Muthuraj, M.N. Sheela and T. Makesh Kumar
SM-P26	Uptake of nutrients and tuber quality of coleus as influenced by date of planting and nutrient management V.S. Anju, O.K. Swadija and Atul Jayapal

SM-P27	Method for leaf area estimation in yam bean ( <i>Pachyrrhizus erosus</i> L.). J. Suresh Kumar, Sanket J. More, V. Ravi, G. Byju and James George
SM-P28	Tuber crop cultivation in Mewar region of Rajasthan: Opportunities and challenges R.S. Rathore, Sunil Pareek, G.S. Ameta and James George
SM-P29	INM a potential tool for increasing the production of tuber crops and soil fertility in tribal areas. K.D. Desai, K. Navya, Shet Sachin Gautamkumar and N.D.Vinay
SM-P30	Performance of tropical sugar beet cultivars in intercropping with sugarcane at different row proportions S. Vishwanatha, S.M. Hiremath, K.R. Naik and P.L. Patil
SM-P31	Effect of sources of nitrogen and liquid manures on the growth, yield and quality of tropical sugar beet S. Vishwanatha, S.M. Hiremath, B.T. Nadagouda, P.L. Patil and K.R. Naik

**SESSION V**  
**PLANT PROTECTION: CONCERNS AND CARE**

**October 21, 2016**

**3.30 pm to 5.30 pm**

<b>Chairman</b>	<b>Dr. S.K. Chakrabarti</b> Director ICAR-Central Potato Research Institute Shimla-171001, Himachal Pradesh
<b>Co-Chairman</b>	<b>Dr. M. Mani</b> ICAR-National Bureau of Agriculturally Important Insect Resources Bangalore- 560 024, Karnataka
<b>Rapporteurs</b>	<b>Dr. E.R. Harish and Dr. J. Tarafdar</b>
Lead Lecture PP-L1	Virus diseases of tuber crops and their management Dr. S.K. Chakrabarti
Invited Lecture PP-I1	Invasive insect pests and their management on tuber crops Dr. M. Mani
Invited Lecture PP-I2	Dr. C.K. Peethambaran Director of Research (Retd.) KAU, Thrissur

**ORAL PRESENTATIONS**

<b>Session Code</b>	<b>Title and Authors</b>
PP-O1	Progress and prospects of collar rot management in elephant foot yam S.S. Veena, R.S. Misra and M.L. Jeeva
PP-O2	Management of anthracnose/die-back caused by <i>Colletotrichum gloeosporioides</i> in greater yam ( <i>Dioscorea alata</i> L.) M.L. Jeeva, S.S. Veena, M.N. Sheela, A.N. Jyothi and J. Sreekumar
PP-O3	Biocontrol and IAA production efficacy of <i>Bacillus subtilis</i> strains isolated from cow dung in controlling postharvest rotting and growth stimulation of yam ( <i>Dioscorea rotundata</i> L.) minisetts Ramesh C. Ray and M. Nedunchezhiyan
PP-O4	Imunocapture reverse transcription loop mediated isothermal amplification for rapid detection of <i>Dasheen mosaic virus</i> (DSMV) without RNA extraction R. Arutselvan, S. Kamala and T. Makesh Kumar
PP-O5	Effect of different treatments against sweet potato weevil, <i>Cylas Formicarius</i> (Fabricius) S.S. Deogharkar, K.V. Naik, N.V. Mhaskar and V.S. Desai

PP-O6	Optimization of media for antimicrobial activity of <i>Enterobacter</i> sp. Associated with entomopathogenic nematode <i>Rhabditid</i> sp. B.G. Sangeetha, C.A. Jayaprakas, J.R. Jithine and C. Mohandas
<b>POSTER PRESENTATIONS</b>	
PP-P1	Friable embryogenic callus production and agrobacterium mediated transformation of farmer preferred Indian cassava cultivar- H165 Dhanya Jayaseelan, Leen N. Abraham, D.C. Deepthi, M. Moushmi and T. Makesh Kumar
PP-P2	Characterization of <i>Bemisia tabaci</i> (Gennadius) (Hemiptera: Aleyrodidae) for vector-virus interactions in cassava E.R. Harish, Mani Chellappan, T. Makesh Kumar and M.T. Ranjith
PP-P3	Effects of cassava based bio pesticide, a synthetic pesticide and a neem based biopesticide on biochemical and haematological parameters of exotic fish <i>Oreochromis niloticus</i> (Nile Tilapia) B.S. Ajitha and C.A. Jayaprakas
PP-P4	Screening of sweet potato cultivars against sweet potato weevil, <i>Cylas formicarius</i> (Fabricius) S.S. Deogharkar, K.V. Naik, N.V. Mhaskar and A.A. Baikar
PP-P5	Profiling of bacterial communities associated with cassava whitefly, <i>Bemisia tabaci</i> (Gennadius) in different agro ecological zones of Kerala, India E. R. Harish, Mani Chellappan, T. Makesh Kumar and M.T. Ranjith
PP-P6	Plant parasitic nematodes associated with elephant foot yam in Kerala H. Kesava Kumar, Sirisha Tadigiri and C.A. Jayaprakas
PP-P7	Evaluation of bioactive principles isolated from cassava ( <i>Manihot esculenta</i> Crantz) against burrowing nematode: <i>Radopholus similis</i> Rashid Pervez, C.A. Jayaprakas and Santhosh J. Eapen
PP-P8	Bioefficacy of cassava based biopesticide against <i>Meloidogyne incognita</i> under <i>in-vitro</i> conditions Sirisha Tadigiri, C.A. Jayaprakas and H. Kesava Kumar
PP-P9	Distribution pattern of Spiralling whitefly, <i>Aleurodicus dispersus</i> (Hemiptera: Aleyrodidae) in cassava, ( <i>Manihot esculenta</i> L) C.A. Jayaprakas, V.S. Abila and Nidhi Dev



**SESSION VI**  
**INDIGENOUS TECHNICAL KNOWLEDGE AND**  
**TRANSFER OF TECHNOLOGY**

**October 22, 2016**

**9 am to 11 am**

**Chairman**                      **Dr. M. Anantharaman**  
Former Head, Extension and Social Sciences, ICAR-Central  
Tuber Crops Research Institute, Sreekaryam,  
Thiruvananthapuram-695 017, Kerala

**Co-Chairman**                **Dr. A.K. Sherief**  
Director, Centre for E-Learning, IT-BT Complex, Kerala  
Agrl. University, Thrissur-680656, Kerala

**Rapporteurs**                **Dr. P.S. Sivakumar and Dr. S. Alam**

Lead Lecture TT-L1            Connecting indigenous technical knowledge to tuber  
crops technology generation and transfer  
Dr. M. Anantharaman

Invited Lecture TT-I1        Reaching the unreached: Agri-Info-Educational portal  
Kerala Agricultural University  
Dr. A.K. Sherief

Invited Lecture TT-I2        Dr. C. Bhaskaran  
Professor (Rtd), KAU, Vellayani, Thiruvananthapuram

**ORAL PRESENTATIONS**

**Session Code**                **Titile and Authors**

TT-O1                      Understanding farmers' perspectives to support the development of  
biotechnology innovation on cassava planting material: A qualitative  
socio- economic study in Tamil Nadu  
A. Giuliani, K.R. Ashok, Rahel Wyss and Karin Zbinden

TT-O2                      Development of a sensory lexicon for functional sweet potato pasta  
P.S. Sivakumar and Sheela Immanuel

TT-O3                      Study of production and disposal of lesser yam at farmers level - an  
economic analysis  
S.S. Lendave, V.G. Naik, N.V. Mhaskar and J.M. Thalathi

TT-O4	Analysis of sweet potato value chain and determinants of market options choice in selected districts of Odisha in India P. Prakash, A. Kishore, D. Roy and D. Behura
TT-O5	Socioeconomic analysis of cassava production for industrial use in western Tamil Nadu K.R. Ashok, A. Giuliani, M. Thilagavathi, S. Varadha Raj, M. Devi and A. Sanjeevi Kumar
TT-O6	Indigenous traditional knowledge on tuber crops in Bihar P.P. Singh, A. Narayanan and R.S. Singh
<b>POSTER PRESENTATIONS</b>	
TT-P1	Livelihood analysis of tuber crops farmers in Kerala Sheela Immanuel and P.S. Sivakumar
TT-P2	TOMS: SMS based online marketing system for tuber crops V.S. Santhosh Mithra, C.S. Abhinand, Riji Raj and G.Vandana

**SESSION VII**  
**PROCESSING AND PRODUCT DEVELOPMENT**

**October 21, 2016**

**11.30 am to 3.30 pm**

<b>Chairman</b>	<b>Dr. G. Padmaja</b> Emeritus Scientist and Former Head, Division of Crop Utilisation, ICAR-Central Tuber Crops Research Institute, Sreekariyam, Thiruvananthapuram-695 017, Kerala
<b>Co-Chairman</b>	<b>Dr. K.P. Sudheer</b> Professor & Project Coordinator (Centre of Excellence in Post Harvest Technology) Project Coordinator (Food & Agricultural Process Engineering) Department of Food & Agricultural Process Engineering, KCAET, Kerala Agricultural University, Malappuram- 679 573, Kerala.
<b>Rapporteurs</b>	<b>Dr. A.N. Jyothi and Dr. Surajit Mitra</b>
Lead Lecture PD-L1	Technological strategies for diminution of post harvest losses in perishable produce with special reference to tuber crops Dr. S.K. Nanda
Invited Lecture PD-I1	Functional foods from tuber crops Dr. G. Padmaja
Invited Lecture PD-I2	Food safety management system to enhance food export through improved supply chain management Dr. K.P. Sudheer
Invited Lecture PD-I3	Commercialization of agricultural technologies: Innovations in business incubation and start-ups Dr. Manoj. P. Samuel
Invited Lecture PD-I4	Shri. M. Rajendran IAS Managing Director, SAGOSERVE, Salem, Tamil Nadu

Invited Lecture PD-I5	Shri. Alex Thomas CEO, Tierra Food India Pvt. Ltd., Adoor
Invited Lecture PD-I6	Shri. Sreejith T.S. CEO, Environmental Measurements Controls, KP Vallon road, Kadavanthra, Kochi, Kerala 682020
Invited Lecture PD-I7	Shri. S.P. Rajesh CEO & Managing Director, Spac Starch Products (India) Ltd, Erode, Tamil Nadu
Invited Lecture PD-I8	Shri. Radhakrishnan MD, Angel Starch & Food Pvt Ltd, Erode, Tamil Nadu
<b>ORAL PRESENTATIONS</b>	
Session Code	Title and Authors
PD-O1	An overview of cassava processing industries in India J.T. Sheriff and M.S. Sajeev
PD-O2	Development of tuber crop based extrudates S.B. Swami and N.V. Mhaskar
PD-O3	Pretreatment effect on the composition and ultrastructure of root crop processing residues for enhancing saccharification and fermentation M.G. Mithra and G. Padmaja
PD-O4	Effect of pretreatments on quality of sweet potato chips R. Jeevan, K. Ramachandra Naik and Lakshman Kukanoor
PD-O5	'Green' particle board from cassava stem using starch as bioadhesive K.V. Mubashir, M.S. Sajeev and A.N. Jyothi
PD-O6	Incorporation of natural pigments into native cassava starch Vishal Tripathi, Chandra Deo, L.S. Rajeswari and C.N. Ram
PD-O7	Octenyl succinylation as a method for developing slowly digestible starch and resistant starch in stem and root tuber starches R. Remya and A.N. Jyothi
PD-O8	Alkali pretreatment coupled with non-ionic surfactant effect on the fermentable sugar yield from agricultural residues of cassava N.S. Pooja and G. Padmaja

PD-O9	Sustainable production and post-harvest management of sweet potato for food and nutrition security Surajit Mitra and J. Tarafdar
<b>POSTER PRESENTATIONS</b>	
PD-P1	Effects of ozonation on bleaching and rheological properties of cassava starch T. Krishnakumar, Sheriff. J.T and M.S. Sajeev
PD-P2	A study on the changes in physicochemical properties of starch in cassava tubers of diverse varieties during their development S.S. Gouri Lekshmi and A.N. Jyothi
PD-P3	Dielectric properties of cassava ( <i>Manihot esculenta crantz</i> ) tubers and their importance in the biochemical analysis V. Sabarinath, R.J. Jibinraj, M. Kuriakose, N. Sujatha Kumari and J.T. Sheriff
PD-P4	Development of thermoplastic sheet from cassava starch E. Shalu, M.S. Sajeev, A.N. Jyothi, R. Harikrishnan
PD-P5	Mechanisation in cassava cultivation in India: Present status and prospects Edwin Benjamin and J.T. Sheriff
PD-P6	Post-harvest physiological deterioration in cassava B. Babu Rao, R.P. Chaitanya, T. Kranthi Kumar, Ch. Sankaradasu and G. Lakpathi
PD-P7	Value added products of cassava B. Babu Rao, G. Lakpathi, T. Kranthi Kumar, G. Ramanandam and Ch. Sankaradasu
PD-P8	Amorphophallus konjac - A new emerging tuber crop Dhawani A. Patel, S.L. Chawla, S.J. More and Maitry Desai
PD-P9	Biochemical characterization of major wild yam species in Western Ghats Irfa Anwar, M.N. Sheela, K.I. Asha, Athira Jyothy, B.S. Prakash Krishnan and P.V. Abhilash

PD-P10	<p>Ceropegia species, an endemic medicinal tuberous plant: Ethnomedicine and ethnopharmacology Pradeepika Chintha, Namrata Ankush Giri, J.T. Sheriff, M.S. Sajeev and K. Hanume Gowda</p>
PD-P11	<p>Convenience food from Nol Kachu (<i>Colocasia antiquarum</i> var. <i>stolonifera</i>) and locally available fruits P.K. Borthakor, P. Kalita, S. Alam, P. Dutta and Bhoirab Gogoi</p>
PD-P12	<p>Development of mechanised processing technology to improve recovery of good quality of starch S. Patel, N.K. Mishra, P.S. Pisalkar and D. Khokhar</p>
PD-P13	<p>Techno-incubation centre: The way forward for entrepreneurship development in tuber crops M.S. Sajeev, G. Padmaja, S. Shanavas and J.T. Sheriff</p>
PD-P14	<p>Capacity buiding of women self help group through training intervention on value addition and product diversification of tuber crops N.V. Mhaskar, N.N. Maskar, P.A. Sawant, S.A.Chavan and R.P. Goriwali</p>
PD-P15	<p>Modified storage methods of cassava (<i>Manihot esculanta</i> Crantz) roots on post-harvest physiological deterioration and root quality Sarvanan Raju, Roy Stephen and V. Ravi</p>

**SESSION VII  
PLENARY SESSION**

**October 22, 2016**

**4 pm to 5 pm**

<b>Welcome Address</b>	<b>Dr. C.A. Jayaprakas</b> President, Indian Society for Root Crops
<b>Presidential Address</b>	<b>Dr. James George</b> Director, ICAR-CTCRI
<b>Guest of honour</b>	<b>Shri. M. Rajendran IAS</b> Managing Director, SAGOSERVE Salem, Tamil Nadu
<b>Presentation of Awards</b>	
<b>Recomendations of the conference</b>	
<b>Vote of thanks</b>	<b>Dr. Santhosh Mithra</b> Secretary, Indian Society for Root Crops

