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From Director's Desk



This issue of ICAR-CITH Newsletter provides the glimpse of the research achievements, extension activities, trainings, events, man power strengthening etc covered by the Institute during 2016-17.

During the period 2016-17 trait specific germplasm lines were collected, introduced or identified by the institute in temperate horticultural crops. Breeding in apple for introgression of scab resistant genes from resistant cultivar Prima into cultivar Ambri has been attempted. Production and protection technologies were developed in temperate fruits and nut crops. Technology was also developed in plant protection and post harvest management. Under TSP and MGGM schemes technologies/varieties were demonstrated on farmer's field and farmers were benefitted with latest technologies and varieties of temperate horticultural crops. Institute is putting continuous efforts to make the farmers/ officers of line departments aware of various technologies generated in temperate horticultural crops for improving productivity and quality. The Institute has organized number of programs for human resource development. For the quick adoption of technologies, ICAR-CITH is continuously organizing vocational trainings, model training courses, crop

days, on campus and off campus trainings as well as demonstrations, farm visits, diagnostic visits, supply of quality planting material, publication in local language, participation in farmer fairs, radio talk, TV shows and display of exhibits on various occasions/ farmers fair etc. During 2016-17 an Olive workshop & awareness programme was organized by the Institute in which large number of farmers participated. In addition one Model Training Course was also organized for development department officers. Various awards/recognitions were won by the scientists of our Institute for their significant contribution in the field of temperate horticulture. I extend my heartfelt wishes to the scientists and staff members for their well deserved promotions.

I hope the current issue of this newsletter reflecting the activities of ICAR-CITH will enlighten the writers about the ongoing activities and status of the Institute. Feedback and suggestions for further improvement of the Institute will always be acknowledged.

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RESEARCH HIGHLIGHTS

ICAR-Central Institute of Temperate Horticulture, Srinagar is currently working on collection, evaluation, characterization, identification, registration and release of superior cultivars of different temperate horticultural crops like apple, pear, peach, plum, apricot, cherry, walnut, kiwi fruit, olive, vegetables, flowers and saffron. In collection and evaluation of germplasm Institute has added 67 new germplasm in its field gene bank and its number has reached to 2540 at Srinagar, J&K while Regional Station Mukteshwar is maintaining 313 germplasm of various fruits, vegetables and flowers.

In apple, 120 genotypes were evaluated to identify most diverse and superior genotypes and heaviest fruits were harvested from cv. Maharaji (340.10g). To identify the regular and irregular genotype in apple, a total of 13 genotypes were assessed and medium alternance was shown by Gala Mast, Vance Delicious, Firdous, American Apirouge, Mollies Delicious and Oregon Spur with ABI values of 0.28, 0.33, 0.36, 0.40, 0.41 and 0.44 respectively. In a pre harvest fruit drop study, the spur type cultivars such as Silver Spur (8.14%), Well Spur (6.90%), and Oregon Spur (7.51%) showed the fewer drops as compared to standard cultivar i.e. Vance Delicious (9.34%). In evaluation of 18 apple cultivars belonging to Delicious group, spur type and colour strains at Regional Station Mukteshwar, highest fruit yield (46.11 kg/tree) and fruit weight (217.33 g), was recorded in spur type Red Delicious cultivar and Skyline Supreme. Studies on storage life reveal that Skyline Supreme, Red Chief and Bright- N-Early have better shelf-life than other apple cultivars under ambient storage conditions. In apple evaluation at regional station Mukteshwar, 18 apple cultivars belonging to Delicious group, spur type and colour strains were evaluated and highest fruit yield (46.11 kg/tree) and fruit weight (217.33 g), was recorded in Spur Type Red Delicious cultivar and Skyline Supreme. Studies on storage life reveal that Skyline Supreme, Red Chief and Bright-N-Early have better shelf-life than other apple cultivars under ambient storage conditions. In pear, 20 European pear and 4 Asian pear were evaluated and maximum fruit weight (200.1 g) was recorded in cultivar King Pear and maximum fruit length (102.0 mm) in cultivar Santya Braskaya, whereas minimum fruit weight (16.9 g), fruit diameter (29.2 mm) and fruit length (26.8 mm) was recorded in cultivar Devol. Among the Asian pear cultivars, Chinese sandy pear produces fruits with highest fruit weight (175.6 g). In quince, 20 genotypes were evaluated and fruit weight ranged from 33.73 to 319.56 g. Maximum fruit weight. (319.56 g) and fruit length (84.94 mm) was recorded in the genotype CITH-Q-02 and lowest in the genotype CITH-Q-15.

In evaluation of 22 cherry selections, maximum fruit weight was recorded in CITH-C-12 (7.97 g) and minimum in CITH C-20 (3.83 g) while among cultivars maximum fruit weight was recorded in Makhmali (7.88 g) and minimum in Awal No. (2.37 g). In plum, 22 cultivars (15 Japanese

plum and 7 European plum) were evaluated and in case of Japanese plum, maximum yield was recorded in Au-Cherry (28.00 kg/tree) and minimum in Krassivica plum (4.76 kg/tree). In European plum maximum yield was recorded in President Plum (18.26 kg/tree) and minimum in Italian Plum (11.43 kg/tree). In apricot, fifty-nine accessions were evaluated to identify the trait specific genotypes, especially to identify late blooming and early/late maturing genotypes. Yield of top 10 varieties/genotypes ranged from 24.3-57.8 kg/tree whereas, fruit weight of top ten varieties ranged from 57.27-77.18g. Among commercial varieties, maximum oil content was found in New Castle (39.33 %) followed by Heartley (38.3 %). Among indigenous genotypes, maximum oil content was found in CITH-AP-7 (50.25%) with bitter kernel followed by CITH-AP-24 (49.66%) and CITH-AP-13 (49.42%) both with sweet kernel. Under evaluation studies of 15 peach and 7 nectarine genotypes, highest yield was recorded in Red Globe (33.36 kg/tree) while among nectarine cvs. maximum yield was recorded in Fantasia (6.63 kg/tree).

In walnut, 136 accessions were evaluated and some trait specific walnut genotypes were identified. Based on desirable traits CITH-W-62 (IC-587085), CITH-W-114 (IC-0622832) and CITH-W-121 (IC-0622836) were found new best genotypes. In almond, among 22 selections, CITH-Almond-9, CITH-Almond-11, CITH-Almond-14 and CITH-Almond-23 while among cultivars Merced and California Paper Shell were found promising in respect of physical attributes of nut, kernel and yield, whereas Shalimar, Non Pareil and Primorskij were found better for kernel recovery.

Among 18 olive genotypes, highest yield per plant was recorded in genotype Picholine and Cipressino while maximum oil content on fresh and dry weight basis was estimated in genotype Cipressino. The heaviest fruit were produced by Coratina. In Kiwi fruit highest yield per plant was recorded in Hayward followed by Allison, Abbott and Monty and lowest in Bruno. Studies on maturity indices indicated that genotype Hayward had attained optimum maturity (days from full bloom to harvest) between 170 to 177 days, (Allison 167 days, Monty 178 days and Abbott 169-176 days).

In vegetable crops, 56 genotypes of Kale including 5 checks were evaluated and highest leaf yield was recorded in HW-5 (253.33 t/ha). Among 16 exotic collections of Alliums from Central Asia the EC-862426 was found better for some traits. Some of the species were unique in plant architecture, bulb structure and flavor with respect to local Alliums. In garlic, one variety of garlic CITH-G-3 was notified for release for hill zone-1 by variety release committee of AINRPOG, DOGR, Rajgurunagar, Pune. At Regional Station, Mukteshwar, 6 lines in cherry tomato, 5 in tomato, 8 in capsicum, 6 in garlic, 2 in onion, 2 in cucumber, 3 in bottle gourd, 1 in pumpkin, 2 in French bean and 2 in Ram karela were identified and selected; of which 2 lines of cherry tomato and 1 of French bean were included in AICRP (Veg.) trials.

In saffron, apocarotenoid biosynthesis study during flower development stage was conducted to optimize the best harvesting time with maximum apocarotenoid content. Also apocarotenoid content was evaluated during different storage conditions to identify the best storage conditions with maximum quality retention.

In ornamental crops, 27 cultivars in chrysanthemum were evaluated for field performance and based on flower yield cultivars Punjab Anuradha, Pusa Sona, Ajay, Holiday Purple and Dirty White were found promising for temperate climate. In liliium, 4 cultivars were evaluated under polyhouse conditions and 3 cultivars under open conditions. Based on flower yield, flower size and vase life, cultivar Pavia was found best for polyhouse conditions while in open conditions, maximum flowers were produced by cultivar Brunello and biggest flowers were produced by Litouwen.

In development of superior cultivars in apple through conventional and non-conventional breeding methods, four cross combinations using Prima as one parent were done to transfer the scab resistance from Prima to commercial apple cultivars. Hybrid plants raised from last year's crosses were evaluated and screened for scab, powdery mildew and aphid infection/infestation. S-allele typing of hybrids was done using specific primers to reveal the pollinizer potential of these hybrids.

In development of superior varieties and hybrids in solanaceous vegetables, two entries of chilli; CITH-HP-85/13 (18.51 t/ha) and Sel-136-1-2 (18.44 t/ha), three entries of sweet pepper; Nishat-1-Sel-2 (136.94 t/ha), Gold-Sel (31.86 t/ha) and SH-SP-4 (39.56 t/ha), and one entry of brinjal; B-4-9-Sel-1 (84.92 t/ha) performed significantly better than their respective local checks at Srinagar. In Mukteshwar among 16 genotypes of tomato highest average fruit yield/plant (3.236 Kg) was recorded in VL-4. In capsicum, six genotypes were evaluated at Mukteshwar and highest fruit yield/hectare was recorded in CITH-Sel-2 (1204.44 q/ha).

In characterization and diversity analysis for flowering related gene/ genes in almond, floral biology of different cultivars/ genotypes were studied. Phenotyping of almond germplasm for leaf fall and senescence revealed rapid senescence in CITH-A-4 and Makhdoom while IXL and Pranyaj were slow senescing genotypes. Another observation was that leaves of genotypes with small size tend to age slowly compared to those with larger leaves.

Under diagnosis and prognosis of apple viral diseases, spatial and temporal variation in virus infection in apple was studied and it was found that ACLSV showed high incidence during spring and summer months in leaves while ASPV and ASGV were detected in bark and leaf tissue during spring and summer while low detection was found in buds and flowers.

For enhancing feathering through plant growth regulators for high quality nursery production in apple, various growth regulator combination were tried and it was found that all treatments of plant growth regulators increased number of feathers, feather length, branching zone and per cent

feathered plants compared to control. In a study on climate change impact on phenological stages of different varieties of apple revealed a significant impact of temperature variation on timing of attaining various phenological stages. The impact was more pronounced on the initial or early stages. The canopy architectural engineering experiments and outreach of technologies for temperate fruits were also laid out and demonstrated at various states having temperate crops. In a INM experiment, the treatment comprising of FYM + vermicompost + biofertilizers + inorganic was found best in both pea and cauliflower intercrops in apple orchard exhibiting highest growth and yield followed by FYM + vermicompost + inorganic treatment.

In almond-saffron intercropping, maximum saffron equivalent yield (6.31 kg/ha) was recorded in saffron + semi erect type of cultivars. The highest percentage of crocin (3.2%) and safranal (0.03%) was recorded in sole followed by intercropping with erect type of almond cv. As there is less effect on various traits, so the saffron + almond cropping system especially erect and semi erect type of cultivars can be successfully inter planted in saffron. In saffron it was observed that midrib placement of fertilizers upper to corn in two splits is the best mode to get utmost results without polluting the environment.

For raising, the cost effective vegetable seedlings (tomato, capsicum, cucumber, lettuce, Chinese cabbage and broccoli) different growing nutrient media were tried under polyhouse conditions at Uttarakhand and media combinations were standardized. For getting round the year supply of vegetables under polyhouse conditions 14 cvs of tomato, 12 cvs of capsicum, 3 cvs. of cucumber were tried at High hills and mid hill conditions of Uttarakhand. Besides experiments were also conducted under AINP on onion and garlic and AICRP on vegetables.

In aquatic dissipate management, aquatic dissipate and worm ratio of 15:1 was found best proportion to get utmost benefit in terms of quality, worm counts and economic returns. The vermicompost was analyzed for microbial population. Bacteria, fungi and actinomycetes in vermicompost were 211, 33.67 and 23.33 *10⁸ CFU g⁻¹ dry VC respectively. The vermicompost was used to prepare nutrient rich dispersible vermiballs, bars and pellets. In order to optimize fertilizer use efficiency and to get optimum fruit yield various fertigation treatments, highest fruit yield as well as fertilizer use efficiency was observed in treatments where 75 per cent of recommended dose of fertilizer was applied through fertigation. To know the soil and leaf nutrient status of apple growing areas of Kashmir surveyed were conducted and deficit areas were identified. In order to identify the nutrient deficiency a mobile application Nutrient Deficiency Diagnoser and Manager for Apple was developed. The App was developed in three languages covering the common languages of the farmers of the apple growing areas of India. In Uttrakhand, the apple orchard at Chaubatia showed high and significant SOC levels and available P content was more in subsurface than surface soil at the apple orchard of Chaubatia.

An experiment was carried out to visualize the effect of different weather parameters on the development of major canker and foliar diseases of apple in Nainital district of Uttarakhand. The coefficient of multiple determination (R^2) was calculated as 0.767- 0.917 for major canker and foliar diseases of apple which signifies that 76.70 - 91.70 per cent variation in percent severity of major canker and foliar diseases during the period under report dependent on weather parameters included in these studies. In another study to know the relationship between percent mortality of apple plants by white root rot of apple and edaphic factors, it was observed that there was a definite relationship between percent mortality of apple by *Dematophora necatrix* viz a viz soil temperature and soil moisture. In Consortium research platform on fungal foliar diseases; production and sporulation studies in *Venturia inaequalis*, scab disease management studies in apple, disease management studies for the control of *Alternaria* in apple, pathogenic variability of *Venturia inaequalis*, *in vitro* evaluation of different contact and systemic fungitoxicants against apple scab, molecular characterization of *Venturia inaequalis* isolates - isolated from different apple growing areas of Kashmir, population structure analysis for estimating genetic divergence and differentiation of *Venturia* isolates, molecular characterization of *Alternaria* isolates through SSR markers and population structure analysis for estimating genetic divergence and differentiation of *Alternaria* isolates was done. For continuous monitoring of different types of borer infestation and their symptoms, surveys were carried out and a total of 183 insect pest specimens along with some natural enemies have been collected from apple, almond, cherry, plum, peach, and walnut. In addition to that willow, ulmus and poplar trees were also monitored for their pest complex and possible shift of these towards major horticultural crops.

Two drying modes along with 3 cultivars were used for dehydration of plum into prune. Over all study reveals that Italian Plum took less time for dehydration and retained colour and ascorbic acid in addition to relatively higher rehydration ratio. In blending of juices in different ratios, blending of sweet cherry and sour cherry after six months of storage study it was found that blend of 50% sweet cherry + 50 % sour cherry treated with sodium benzoate retained maximum desirable colour *i.e.* brightness, redness and freshness when compared with other blending combinations. This blend was also found superior in retaining vitamin C, desirable blend of acidity and TSS. In blending of plum and apricot juices, 25% apricot + 75 % plum treated with sodium benzoate retained maximum desirable colour when compared with other blending combinations. This blend was also found superior in retaining vitamin C, desirable blend of acidity and TSS. In chilli, 22 accessions were evaluated for capsaicin and dihydrocapsaicin through HPLC analysis and CITH-HP-92-13 was found to have highest capsaicin (4010 $\mu\text{g/g}$), dihydrocapsaicin (1863 $\mu\text{g/g}$) and pungency (64160 SHU) values.

MEETINGS AND EVENTS

Model training course organized



Dr Desh Beer Singh, Director ICAR-CITH, Srinagar interacting with the participants of MTC

An eight-day Model Training Course on “Post-Harvest Management of Temperate Fruits and their Value Addition” was organized from 18-25th March 2017 at ICAR-Central Institute of Temperate Horticulture, Srinagar (J&K). The training was sponsored by Directorate of Extension, Department of Agriculture cooperation & Farmers welfare, Ministry of Agriculture & Farmers welfare, Government of India. A total of 23 state department officials from 4 States *i.e.* Arunachal Pradesh, Himachal Pradesh, Uttarakhand and Jammu and Kashmir participated in the programme.



Dr Desh Beer Singh, Director ICAR-CITH, Srinagar presenting research achievements during RAC

13th Research Advisory Council Meeting

The 13th meeting of RAC was held on 4 - 5th May 2016 at CITH, Srinagar under the Chairmanship of Padma Shri Dr. K. L. Chadha. The members of RAC who attended the meeting were Dr B Venkateshwarlu, Dr. A. A. Sofi, Dr. V. V. Ramamurthy, Dr. S. K. Tikoo, Dr. J L Karihaloo, Dr. Hina Shafi, Dr. D B Singh and Dr. O C Sharma. The scientists of CITH and NBPGR also attended the meeting. The member and chairman gave critical input on experimentation for obtaining realistic and reproducible results. Discussion was also held on initiation of new proposals. The committee members also visited different laboratories, Technology Park and the experiments in the field.

Workshop and Awareness Programme on Olive

One day workshop and awareness programme on olive was celebrated at ICAR-Central Institute of Temperate Horticulture, K.D. farm, Old Air Field, Srinagar on 22nd October, 2016. Scientists from SKUAST-K, officials from State Development Department and 150 farmers from different districts of Kashmir participated in this event. All the participants were taken to olive research field where detailed discussion was made on olive varieties grown at CITH, pollination management in olive, breeding opportunities for varietal development in olive, use of ITKs and novel technologies for addressing propagation problems in olive, area expansion under olive cultivation, use of biotechnological interventions for olive crop improvement etc.



Director and scientists of ICAR-CITH interacting with the participants during olive workshop

State-wise coordination committee for doubling the farmers' income by 2022

The first meeting of the Co-ordination Committee for Doubling the Farmers' Income in Jammu and Kashmir State by 2022 was held at Sher-e-Kashmir University of Agricultural Sciences and Technology, Jammu, Chatha, Jammu on 24th March, 2017 under the Chairmanship of Dr Pradeep K. Sharma, Vice Chancellor, Sher-e- Kashmir University of Agriculture Science and Technology-Jammu. Dr D. B. Singh, Director, ICAR-CITH, Srinagar, convener of the committee made a presentation on the Objectives and Agenda of the meeting. Dr Pradeep K. Sharma, Vice Chancellor of SKUAST-J observed that three pronged approach was needed to double the income of farmers in a given time-frame viz (a) increasing the productivity, quality production and reducing the cost of production, (b) access to assured market and (c) Policy support. Directors of State Development Departments and other Senior Officials of State Government Departments attended the meeting and provided significant inputs.

Hindi week

Hindi Week was observed by ICAR-Central Institute of Temperate Horticulture, Srinagar and its Regional Station, Mukteshwar from 14 to 21st Sept., 2016 for compliance of official language policy. Institute organized some competition for students, staff members and their children.

Vigilance week

ICAR-Central Institute of Temperate Horticulture, Srinagar and its Regional Station, Mukteshwar observed Vigilance Awareness Week w.e.f 31st Oct to 5th Nov, 2016. The theme of the week was "Public Participation in Promoting Integrity and Irradiating Corruption" Director ICAR-CITH emphasizes the objectivity in governance for eradication of corruption from public life

National Productivity Week



Dr J. I. Mir presenting the importance of 3Rs during National Productivity Week

ICAR-Central Institute of Temperate Horticulture, Srinagar celebrated National Productivity Week from February, 12-18, 2017 under the theme "From waste to profits through Reduce, Recycle and Reuse". During the inaugural session Dr Javid Iqbal Mir, gave a power point presentation on "Importance of waste reduction, recycling and reutilization for obtaining profit from waste" and he demonstrated the importance of 3R's for enhancing the productivity of the community in general and nation in particular. During the week activities related to 3R's were taken upon and the week ended with the cleanliness drive of the Institute and disposal of waste for recycling

EXTENSION AND HRD

Under extension programme different activities were conducted during 2016-17. About six training programmes for officials of line departments, eight student visits, 16 farmer visits, seven exhibitions etc were organized at CITH, Srinagar main campus. In addition 32 training and awareness programmes and two crop oriented field days (Peach & Apple Day) were conducted at regional station Mukteshwar.

Training programme on canopy management and plant architecture engineering

Short term training programme on "Canopy management and plant architectural engineering in temperate fruits crops" was organized by ICAR-CITH, Srinagar during January 16-18, 2017 at ICAR-CITH, Srinagar. Officials from Department of Horticulture, Baramulla, J & K, Department of Horticulture and Food Processing, Uttarakhand and technical staff of ICAR-CITH, Srinagar participated in this programme. During the training programme maximum emphasis was given to practical and hands on training on canopy management and architectural engineering. Canopy management and plant architectural engineering of apple, pear, peach, kiwi fruit etc were demonstrated through lectures and on farm training.

Training programme conducted at Dirang, Arunachal Pradesh

A three days training programme on “Basics of orchard establishment and management on scientific lines for high quality temperate fruit production in Arunachal Pradesh” was conducted at Regional Apple Nursery, ICAR-CITH-RS, Dirang w.e.f. 17th to 19th Feb., 2017, in which 33 farmers of various villages of West Kameng district participated. During the training programme various lectures on different aspect of temperate fruit and vegetable production were thoroughly covered. Scientists of CITH, officers from horticulture department and SMS from KVK, Dirang delivered various lecture to the farmers. During the training programme along with oral lectures, practical demonstration on different aspects of temperate fruit production was also imparted to the participants.

Trainings organized for Skilled supporting staff

A three days training programme was imparted on handling of various equipments, instruments, farm machinery, farm implements, official files, documents dissemination, nursery management and motivation at work to skilled supporting staff of ICAR from 28th to 30th December, 2016

Diagnostic visits, publications and Radio/ TV programmes

The expert scientists from CITH main station and regional station Mukteshwar visited farmer's field for identifying and solving different problems faced by these farmers. Remedies pertaining to plant and soil health were provided by the visiting experts. During the year more than 28 diagnostic visits were conducted to solve the farmer's problems in J & K and Uttarakhand. Besides this, more than 22 radio/ TV talks were delivered on various season based issues. The scientists of CITH published 28 research papers, 7 review articles, 3 books, 6 book chapters, 4 popular articles and 6 extension bulletin/ folders for the benefit of researchers, extension functionaries and farmers.

Tribal Sub Plan Scheme

During 2016-17 eight districts viz Ganderbal, Rajouri, Kathua etc were covered under TSP scheme. Technological and varietal demonstrations were laidout with complete package and practice developed by CITH, Srinagar for the benefit of tribal farmers. Tribal families of these districts were benefitted through this scheme. Scientists from CITH,



Planting material distribution at Babanagri, Ganderbal under TSP Programme

Srinagar are regularly visited the identified tribal villages to observe the performance and give technical advice for success of the programme.

DISTINGUISHING VISITORS

A) CITH, Srinagar

- ♦ Shri Chhabilendra Raul Additional Secretary DARE & Secretary, ICAR, New Delhi visited ICAR-CITH, Srinagar on 18th June, 2016 and he was shown various activities of Institute



Shri Chhabilendra Raul Additional Secretary DARE & Secretary, ICAR, interacting with scientists of ICAR-CITH, Srinagar

- ♦ Mr Naem Akhtar, Education Minister J&K visited ICAR-CITH, Srinagar on 31st October, 2016. He was shown various research activities of the Institute



Dr D. B. Singh, Director, ICAR-CITH, demonstrates different technologies and varieties to Mr Naem Akhtar, Education Minister J&K and other dignitaries

B) CITH, Regional Station, Mukteshwar

- ♦ Hon'ble Director General, ICAR Secretary, DARE, Dr Trilochan Mohapatra, visited ICAR-CITH, Regional



Hon'ble Director General, ICAR Secretary, DARE, Dr Trilochan Mohapatra, interacting with scientists of ICAR-CITH-RS, Mukteshwar

Station Mukteshwar on 3rd July, 2016 and he was apprised regarding different activities being carried out at regional station Mukteshwar

- ♦ Shri Chhabilendra Raul Additional Secretary DARE & Secretary, ICAR, New Delhi visited ICAR-CITH, Regional Station Mukteshwar on 29th May, 2016 and he was shown various activities of station.



Shri Chhabilendra Raul Additional Secretary DARE & Secretary, ICAR, interacting with Director and scientists of ICAR-CITH, RS, Mukteshwar

- ♦ Dr T. Jankiram, Additional Director General (Hort.), ICAR, New Delhi visited ICAR-CITH, Regional Station Mukteshwar on 30th May, 2016 and he was shown various activities of station

AWARDS AND RECOGNITIONS

- ♦ Dr Shiv Lal received Best Oral Paper Presentation Award in National conference of Fruit Breeding in Tropics and Subtropics - An Indian Perspective. Organized by Society of Promotion of Horticulture during April 27-29th, 2016, at IIHR, Bangaluru.
- ♦ Dr Shiv Lal received IARI merit medal (Gold medal) for outstanding academic performance in Doctor of Philosophy programme. The award is conferred during 55th convocation of the IARI, New Delhi held on 9th Feb., 2017.



Dr Shiv Lal receiving IARI merit medal (Gold medal) for outstanding academic performance

- ♦ Dr. Anil Kumar (Scientist, Plant Pathology) awarded with Honorary Life Membership Certificate by Asian PGPR Society of Sustainable Agriculture USA EIN: 47-4803807 Alabama, USA: 1309/490 in the month of April, 2016

in recognition and sincere appreciation of outstanding loyalty and dedication to this society. This honour recognizes the commitment demonstrated towards the programs, activities and vision of the Asian PGPR Society of Sustainable Agriculture.

- ♦ Dr. Anil Kumar (Scientist, Plant Pathology) received Bharat Gaurav Award from International Business Council (IBC), New Delhi during Seminar on “Socio-Economic Development” held on 25th July, 2016 at New Delhi for outstanding achievements in the field of Plant Pathology.
- ♦ Dr. Anil Kumar (Scientist, Plant Pathology) received Rashtriya Gaurav Award from India International Friendship Society (IISC) during Seminar on “Economic Growth & National Integration” held on 25th March, 2017 at New Delhi for meritorious services, outstanding performance and remarkable role in the field of Plant Pathology



Dr Anil Kumar receiving awards during different occasions

- ♦ Dr Selvakumar R received Best Poster Award for ‘Genetic analysis of nutritional traits in tropical carrot (*Daucus carota* L.)’ during 7th Indian Horticulture Congress held at ICAR-Indian Agricultural Research Institute, New Delhi, between 15-18th November 2016.
- ♦ Dr Selvakumar R. received “Best Young Scientist Award” for the Ph. D thesis entitled “Genetic studies on economic traits and molecular mapping for anthocyanin content in carrot (*Daucus carota* L.)” by Pear Foundation-A foundation for Educational Excellence during ‘National Conference on Smart Summit-2016 (Science, Medicine, Agriculture, Research and Technology) on 10th December at Madurai.



Dr Selvakumar R. receiving Best Young Scientist Award

- ♦ Mr Sovan Devnath, Scientist (Soil Science) received 'Yong Scientist Award' for the oral presentation on 'Short-term changes in labile pools of organic carbon, microbial biomass and enzyme activities in soil under an organically managed peach (*Prunus persica* L.) orchard' in 11th Uttarakhand State Science and Technology Congress, organized by Uttarakhand State Council for Science and Technology during 2-4th March, 2017 held at Dehradun.



Mr Sovan Devnath, Scientist receiving 'Yong Scientist Award'

- ♦ Dr O C Sharma, Sr. Scientist received Outstanding Scientist Award 2016 by International Journal of Tropical Agriculture on 31st Dec, 2016 during IJTA 4th International Conference on Recent Advances in Agriculture and Horticulture Science held at Jodhpur during 30 to 31st Dec, 2016.



Dr O C Sharma, Sr. Scientist receiving Outstanding Scientist Award 2016

- ♦ ICAR-CITH, Regional Station Mukteshwar received Second Prize for producing best quality apple (Skyline Supreme) in the competition on apple exhibition in National Apple Festival Cum Workshop jointly organized by Department of Horticulture and Food Processing and State Horticulture Mission during 17-18th September, 2016.

APPOINTMENTS/PROMOTIONS/TRANSFERS/RETIREMENTS

Appointments

- ♦ Dr D B Singh, Acting Director joined as permanent Director at ICAR- CITH on 7th July, 2016.
- ♦ Mr Sajad Un Nabi joined as Scientist (Plant Pathology) at ICAR-CITH, Srinagar on 13th October, 2016
- ♦ Sh Mukul Raj Singh joined ICAR-CITH, Srinagar as Administrative Officer on 23rd Nov., 2016.

Transfers

- ♦ Dr. G. Mahendiran, Scientist (Agri. Entomology) transferred from ICAR-CITH, Srinagar to ICAR-NBAII, Bangaluru on 16th June, 2016.
- ♦ Sh. Lal Chand, Scientist (Fruit Science) transferred from CITH, Srinagar to ICAR-CAFRI, Jhansi on 8th March, 2017.
- ♦ Dr K M Rai Scientist, Fruit Science transferred from ICAR- CITH, RS Mukteshwar to NBPGR, New Delhi on 22nd March, 2017.
- ♦ Dr Susheel Kumar Raina, Scientist (Plant Breeding) transferred from ICAR - CITH, Srinagar to NBPGR, New Delhi on 28th March, 2017.

Deputation

- ♦ Sh. Akhil Thukral, Asstt. Admn. Officer relieved on deputation to Competitive Commission of India, New Delhi on 11th November, 2016.

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