

Vol 12 (1 & 2) April 2014 – March 2015

CONTENTS	
Research Highlights	2
Meetings/Trainings/Events	4
Extension and HRD	5
Distinguished visitors	7
Awards/Recognitions	8
Appointments / Joining	8

# New genotypes with superior yield and quality attributes were identified for release

Two new genotypes in garlic (CITH-Garlic-1 & CITH-Garlic-2) and two genotypes in cherry (CITH-Cherry-7 & CITH-Cherry-9) with superior yield and fruit quality attributes were identified by CITH for release. The plants of CITH-Garlic-1 are vigorous, semi dwarf with green foliage, curved bulb neck, moderately tolerant to purple blotch (16.90%), resistant to Stemphylium blight (3.72%), moderately resistant to thrips (8 no. /plant), highest yielder





CITH-Garlic-1 CITH-Garlic (M)-2

over all checks and candidate entries at all AINRP centres having yield of 174.83, 199.86 and 240.97 q/ha, showed an increase in yield over national check VLG-1 at the tune of 107.34% 129.68 % and 187.85% during year 2010, 2011 and 2012 respectively and produces 93.28 % marketable bulbs. In CITH-Garlic (M)-2 plants are vigorous, semi dwarf with green foliage, moderately tolerant to Purple blotch (20.12%), resistant to Stemphylium blight (3.39%), moderately resistant to thrips (10 no. /plant), recorded higher yield over the all checks at all network centres (158.94 g/h, 210.85 g/ha, 183.46 g/ha and 174.60 g/ha) during four consecutive years of evaluations, recorded an increase in yield over national check VLG-1 at the tune of 114.26%, 177.84 %, 266.39% and 108.66% during 2008-12, recorded 94.18% yield increase over all checks and candidate entries at all centers irrespective of years. Highest average bulb weight (39.85g) against the checks, average 50 clove weight was also high (154.05g) and has also produced higher percentage of marketable bulbs (91.47%) over the checks. CITH- Cherry-07 has spreading, high yielding genotype (12-14t/ha) with large having fruit size (22.76 mm), high pulp stone ratio (14.20) and high TSS (16.10B). CITH- Cherry-09





CITH-Cherry-07

CITH-Cherry-09

has spreading tree growth habit, high yielding genotype (10-12 t/ha) having attractive fruits with dark red skin colour. High fruit set in natural condition (78.0%) with high TSS (15.8 oB).

Six promising advanced breeding lines of vegetable crops viz SH-C-11 (carrot), CITH-T-2 (turnip), SH-HP-1154-3-1 (hot pepper), SH-SP-603 & SH-SP-3-1 (sweet pepper) and CITH-KC-10 (kale) were found superior under station trials for yield as well as quality were submitted for testing under All India Coordinated Research Project-Vegetable Crops for the year 2015-16.

# **Research Highlights**

In collection and evaluation of germplasm Institute has identified large number of genotypes in different crops and added about 107 new genotypes this year totalling to 2333 which have been maintained at CITH various traits.

In apple ninety commercial apple cultivars, 38 clones and 10 species were evaluated and screened for scab infection under open field conditions. Among 90 cultivars, 30 cultivars were found resistant, 21 moderately resistant, 12 moderately susceptible and 27 were found susceptible to scab infection under natural field conditions. Among the 28 lines 13 were found resistant, 9 moderately resistant, 4 moderately susceptible and 2 lines were found susceptible to scab infection. Out of ten species, 5 showed resistance to scab, 3 were moderately resistant and 2 moderately susceptible. Thirty six apple cultivars of same age group (12 years) maintained on seedling rootstock at 4.0 X 4.0 m spacing were evaluated and significant correlation was observed between fruit characteristics. Colour traits "L", "b" and "Tint" were positively correlated with TSS while fruit size showed negative correlation with TSS but was positively correlated with fruit firmness. Ten apple varieties grown under two planting densities (2.5 x 2.5 m & 4.0 x 4.0 m) grown on MM-106 and seedling root stocks respectively were evaluated for fruit yield and other attributes. Highest crop density coefficient (number of fruits per unit trunk cross sectional area) and yield potential was observed under 2.5 x 2.5 m spacing in almost all cultivars. Maximum yield potential of 43.2 t/ha was found in cultivar Oregon Spur with crop density coefficient of 1.48 under 2.5 x 2.5 m spacing followed by Vance Delicious (40.32 t/ha) and Golden Delicious (36.4 t/ha). Under 4 x 4m spacing maximum yield potential of 28.93 t/ha was observed in cultivar Red Delicious with crop density coefficient of 1.58 and fruit weight of 197 g followed by Oregon Spur (25.06 t/ha) and Red Chief (19.76 t/ha). In early maturity group cultivar June Eating gave maximum yield of 20.63 t/ha followed by 16.50 t/ha in Vista Bella. Among mid maturity group cultivar Red Barron gave maximum yield (26.15 t/ha) followed by Shireen (17.91 t/ha) and Starkrimson (17.65 t/ha). In late maturity group maximum yield (31.19 t/ha) was observed in cultivar Silver Spur followed by Red Gold (30.03 t/ha).

In apricot highest fruit yield (23.64 t/ha) was recorded in CITH-AP-03 followed by CITH-AP-02 (23.02 t/ha), CITH-

AP-01 (19.06 t/ha) and Harcot (18.20 t/ha) respectively

In plum highest fruit yield of 27.26 t/ha was recorded in Mariposa followed by AU-Cherry (23.99 t/ha) and Tarrol (23.40 t/ha).

In almond selections highest kernel recovery (50.0%) having soft shell was observed in CITH-A-08 followed by semi hard CITH-A-21 (48.38%), CITH-A-23 (45.85%), CITH-A-22 (43.72%), CITH-A-09 (43.42%) and CITH-A-19 (39.09%).

In evaluation of walnut genotypes ,highest nut weight (29.05g) and kernel weight (14.09) with good kernel recovery (53.11%), light shell colour, long trapezoidal shape and easy kernel removal was recorded in CITH-W-1 followed CITH-W-6 having respective nut & kernel weight (24.35 &13.64g), CITH-W-9 (23.77&12.02g) and CITH-W-8(23.10 &11.08g). Two gynoecious plants were observed which do not produced male catkin during last two years.

In cherry maximum fruit yield (12.77 kg/tree) was recorded in CITH-Cherry-07 followed by CITH-Cherry-09 (11.10 kg/tree) and CITH-Cherry-06 (10.48 kg/tree). However, highest TSS (20.46 0B) was estimated in CITH-Cherry-02. In exotic varieties, maximum fruit yield (9.35 kg/tree) was recorded in Bigarreau Napoleon followed by Lapinus and Stella whereas, highest TSS (18.8 0B) was estimated in Lapinus followed by Stella (18.4 0B) and Sweet Heart (17.9 0B).

In olive highest yield efficiency (0.120 kg/c m2) was recorded in Zaituna followed by Coratina (0.111 kg/cm2), Cipressino (0.101 kg/cm2) and Frontoio (0.100 kg/cm2). The cultivar Tonda Ibea produced heaviest fruits having weight of 4.70g, followed by Cipressino (4.27g), Pendolino (4.13g) and Coratina (4.07g).

In peach heaviest fruits of 89.09~g were produced by Red Globe followed by Nimla (82.56~g). The cultivar Nimla excelled all genotypes by producing the yield of 26.01~kg / plant.

In lilium Brunello, Pavia, Brindsi and Litouwen were found best for Kashmir under polyhouse conditions.

In onion, 53 long day onion genotypes collected in previous year and 82 exotic collections received from DOGR are in seed production for the year 2015. Among varietal trials in onion, variety OLR-1364 in IET trial recorded highest marketable yield (864.53 q/ha) followed by ALRO-1213 (783.29 q/ha) in AVT-I and BLRO-1229 (780.27 q/ha) in AVT-II.

Yield and related attributes were recorded in various varietal trials of varieties and hybrids of onion at Mukteshwar. The entries OLR-1352 (462.4 q/ha), ALRO-1277 (359.14 q/ha) and BLRO-1229 (407 q/ha) recorded the highest bulb yield in IET (variety), AVT-I (variety) and AVT-II (variety) trials of onion, respectively. The entries OLR-1377 (308.7 q/ha) and ALRO-1222 (331.2 q/ha) showed the highest bulb yield in IET (hybrid) and AVT-I (hybrid) trials of onion In garlic highest marketable yield was recorded in CITH-G-5 (672.03 q/ha) while highest total yield was observed in CITH-G-12 (712.23 q/ha). In case of garlic, IET trial the genotype GRL-

1330 (336.09 q/ha) showed maximum yield followed by AGLD-1215 with 264.46 q/ha marketable yield in AVT-I.

At Mukteshwar, among nine germplasm lines of garlic line GRL-1349 recorded the highest average bulb weight (67.33 g), total bulb yield (444.33 q/ha), average polar diameter (53.86mm) and average equatorial diameter (49.07 mm). In garlic varietal trials, entries GRL-1349 (444.33 q/ha), AGLD-1204 (347.5 q/ha) and BGLD-1315 (415.5 q/ha) recorded the highest bulb yield in IET, AVT-I and AVT-II trials, respectively.

In breeding of Solanaceous vegetables among fifteen best performing advanced breeding lines of brinjal under AVT trial highest yielding breeding lines found were CITH-BR-1 (105.07 t/ha). CITH-B (O)-4-6 (96.19 t/ha) and CITH-B (O)-4-8 (93.99 t/ha). In chilli highest yield was exhibited by CITH-HP-KL-2 (60.78 t/ha) followed by CITH-HP-1154-7-2 (54.93 t/ha) and CITH-HP-10-13 (54.56 t/ha), in sweet pepper the highest yield was recorded in CITH-SP-1(67.16 t/ha) followed by SH-SP-603 (61.23 t/ha). At Mukteshwar tomato genotype VL-4 exhibited highest fruit yield of 2202.19 q/ha with highest average fruit yield (5945.93 g/plant) followed by CITH- RS CT-4 (1216.92 q/ha), H-86 (1055.09q/ha), Pant Tomato-3 (1042.52q/ha) and FT-5 (1039.02q/ha).

The genetic characterization of 24 elite plum cultivars (Prunus sp.) was carried out by analyzing 31 pairs of Simple Sequence Repeat (SSR) markers and 15 ISSR markers. A high level of genetic variability was found for these two molecular markers among the plum cultivars. Both marker techniques proved to be highly effective in discriminating the 24 plum genotypes, since the majority of bands were polymorphic amongst genotypes (more than 90%).

In micropropagation studies best rooting combination with respect to rooting percentage, number of roots, days to root and root length was standardized. Best rooting percentage (>95%), maximum number of roots (>10), length of roots (4 cm), minimum days to initiate rooting (7 days) with no intermediate callusing was observed on MS media supplemented with IAA  $(2\mu M)$  + PG (10 mg/l) + activated charcoal (200 mg/l) in lilium. In apple successful protocol for efficient root development in apple clonal root stock MM-111 has been standardized on MS (1/2 strength) supplemented with IAA, activated charcoal and phloroglucinol. In cherry clonal rootstock, successful rooting has been observed on MS media supplemented with different combinations of IBA, NAA, GA3, 2,4-D and activated charcoal. But the best combination for rooting with respect to number (6) and length (30) of roots was observed on MS (half strength) supplemented IBA (1 mg/l) and Ac tivated Charcoal (200 mg/l).

Under breeding programme of apple thirty four crosses were attempted between the cultivars of diverse traits in apple during current season. Twenty eight crosses showed fruit set, maximum fruit set was observed in Granny Smith x Oregon Spur. Hybrid plants raised previous year's (2009-2013) were screened for scab, powdery mildew and aphid

infection/infestation. Least scab infection (14%) was recorded in Copper IV  $\times$  Firdous. In walnut 50 crosses were attempted involving cultivar Opex Caulchery and diverse CITH genotypes. Among the crosses only 19 crosses were germinated and data is being recorded.

In canopy management and architectural engineering apple cultivar Coe Red Fuji registered maximum fruit yield of 23.31 kg/tree (62.94 t/ha) and productivity efficiency (0.57 kg/cm2) and was significantly superior over other varieties. Among training systems, Espalier system performed better in respect to fruit yield and quality. In peach different varieties like Cresthaven, Red Globe, Glohaven and Fantasia gave highest yield of 18.17, 22.16, 18.48 & 20.59 kg per tree in Tatura trellis system.

In pruning experiment of walnut, highest nut efficiency (0.8449 nuts/cm2) was recorded with 10% thinning regularly closely followed by 10% thinning in alternate years (0.8249 nuts/cm2) The nut efficiency reduces as the thinning level increases in regular as well as in alternate years. Similarly the 10% level of thinning regularly produced heaviest nuts.

Under intensive saffron production highest total saffron yield of 27.16 kg/ha in 5 years with average yield of 5.43 kg/ha was obtained in planting density 10 lakh corm/ha in raised bed system with sprinkler irrigation and highest corm yield (40.11 t/ha) was recorded after 5 years of planting in treatment sprinkler irrigation on raised bed with 15 lakh corms/ha density. The erectile of almond cultivars were found suitable for intercropping of almond with saffron.

In alstroemeria, raised bed planting at  $45 \times 60$  cm, 10% thinning and media containing vermiculite were found best under polyhouse conditions. The cultivar Rosita was found best for higher yield and long term supply (9 months) of cut flowers. A new disorder "shoot flatness" or "shoot deformation" was again observed in Alstromeria with similar symptoms as in 2013-14. This disorder was noticed in some plants of some varieties with very low frequency.

Aquatic dissipate from water bodies was utilized for preparation of vermicompost. The prepared vermicompost contained 1.8% nitrogen, 0.21% phosphorus and 0.71% potassium. Amongst the micronutrients it contained substantial amount of zinc and boron which was 223 ppm, and 6.79 ppm, respectively.

Different modes of fertilizer application were followed to fertilize saffron. Two years results revealed that saffron yield in case where small corms were planted (5-7gm) was more in treatment where fertilizer was placed in mid rib and upper to the corm position. In case where the corm size was around 8-10 gms, mid rib placement of fertilizers was superior over other treatments, but within the mid rib treatment both upper as well as parallel placement were at par with each other.

Apple yield as influenced by fertigation was assessed and two years average data revealed that highest fruit yield of 28.05 kg/tree was noticed in fertigation treatment where 75% of recommended fertilizer was applied in two splits

followed by treatment where whole of the recommended fertilizer was applied in two splits (27.85 kg/tree).

The pest density of the European red mite, (Panonychus ulmi) was recorded on weekly interval from March to November on apple and almond. The mite activity starts from second week of June and continue up to late October. The highest population density of ERM was 31.56 and 6.46 mites/leaf on almond and apple, respectively.

Nine different spray schedules were evaluated against major diseases of apple and all the spray schedules reduced the disease incidence to a greater extent over control. However, among the spray schedules, schedule comprising of copper oxychloride (0.3%) at dormant stage, captan (0.3%) at green tip, mancozeb (0.3%) at pink bud, carbendazim (0.05%) at petal fall, carbendazim + mancozeb (0.05%) at fruit development stage, Dodine (0.075%) 20 days after 4th spray, captan (0.3%) at pre-harvest stage and copper oxychloride (0.3%) at post harvest stage exhibited highest overall disease control in respect of major canker (96.54%), foliar diseases (70.37%) and fruit diseases (81.56%) of apple.

In a study for control white root rot of apple, among different treatment combinations maximum disease control of 82.74 per cent under nursery was recorded with combination of azoxystrobin (0.1%)+ Quercus samiecarpifolia (Kharsu) leaves+ Trichoderma viride+ neem cake.

Response of early, mid and late Season apple cultivars to storage behavior and quality attributes revealed that there was significant physiological loss in weight of different cultivars during storage. However, after 30 days of storage minimum physiological loss of weight was recorded in cultivar Well Spur (4.8%), Oregon Spur (4.9%), Red Fuji (5.0%), Granny Smith (5.2%) and Coe Red Fuji (5.3%) and maximum shelf life of fruits was recorded in cultivar Granny Smith (60 days) and Well Spur (50 days). Maximum firmness after 30 days of storage was recorded in cultivar Granny Smith (61.7 RI), Coe Red Fuji (56.0 RI), Well Spur (47.3RI), Red Fuji (40.0 RI) and Michael (47.3RI).

In blending of apricot and plum juices blend ratio 75 % apricot + 25 % plum and 50% apricot + 50 % plum is standardized with maximum retention of nutrients, taste, flavor and aroma and were found acceptable for 3 months.

Technology was developed and standardized for making plum fruit bar having excellent texture, colour, taste and chewing quality with least browning and spoilage. It can be stored for nine months without loss in nutrition, quality and appeal.

# **Meetings and Events**

# **Biotechnology and Tissue Culture Laboratory** inaugurated

Dr. N.K. Krishna Kumar, Deputy Director General (Horticultural Science), Indian Council of Agricultural Research, New Delhi inaugurated Biotechnology and Tissue Culture Laboratory of Central Institute of Temperate Horticulture, Srinagar on 5th May, 2014, in presence of Prof.

Nazeer Ahmed, Director, CITH, Srinagar. The laboratory is well equipped with need based equipments and other facilities for conduct of research on biotechnology and plant tissue culture.

## 12th Research Advisory Council Meeting



DDG (HS), inaugurating biotechnology and tissue culture laboratory

The 12th RAC meeting was held on 24th March, 2015 at main campus Srinagar under the chairmanship of Padmashri Dr. K.L. Chadha, Former DDG (Horticulture), ICAR, New Delhi. The other members of RAC who attended the meeting were Dr. A. A. Sofi, Ex-Director, CITH, Dr. V.V. Ramamurthy, Professor, Division of Entomology, IARI, New Delhi, Dr. S. K. Tikoo, Director Research, Breeding and Development, Tierra Seed Science, Pune, Dr. Hina Shafi, Srinagar, J&K, Shri Desh Kumar Nehru, Baramullah, J&K, Prof. Nazeer Ahmed, Director, CITH, Srinagar and Dr. Dinesh Kumar, Pr. Scientist and Member Secretary RAC, CITH. The committee had detailed discussion and interaction with the scientists and suggested recommendation after reviewing all the ongoing projects.



Director, CITH interacting with Chairman and other members of RAC

### 11th Institute Research Council Meeting

Institute Research Council Meetings were held on 24th December 2014, 26th December 2014 and 5th March 2015 at CITH, Srinagar under chairmanship of Prof. Nazeer Ahmed, Director, CITH, Srinagar. Project-wise presentations were made by respective PI's and results/ outcomes along with

the activities to be taken up in next year were presented and discussed in details.

## 3rd ORT

Meeting of QRT members of Central Institute of Temperate Horticulture, Srinagar was held with DDG (Hort.) on 1st July, 2014 at New Delhi. QRT members visited CITH Regional Station, Mukteshwar on 2nd July, 2015 to review for the period 2009-2014. The work was discussed in detail and various suggestions were given by the chairman and other committee members.

### **Swachh Bharat Mission**

In consonance with the call of Hon'ble Prime Minister and message from Secretary, DARE and DG, ICAR 'Swachh Bharat Mission' was launched on second October, 2014 on birth anniversary of Mahatma Gandhi. During the occasion, Director CITH Prof. Nazeer Ahmed administered "Swachhta Shapath' and requested all the employees to sincerely follow and adhere to the contents of the shapath to fulfill the dream of Mahatma Gandhi and vision of our dynamic Prime Minister for Swachh and Vikasith Bharat.



Director CITH and other staff members perform Swachh Bharat Mission activities

# Rastriya Ekta Diwas

Central Institute of Temperate Horticulture, Srinagar organized the Rashtriya Ekta Diwas commemorating the birth anniversary of Sardar Vallabhbhai Patel on 31st October, 2014. During the event Prof. Nazeer Ahmed, Director, CITH enlightened the role of Sardar Vallabhbhai Patel in India's Independence and his contribution in unification of India. He asked every staff to work as a sincere citizen of India and contribute to the unity, integrity and security of the country. He also administered Rashtriya Ekta Diwas pledge to all the staff members of the Institute followed by a collective singing of the national anthem.

# **Vigilance Awareness Week**

ICAR-Central Institute of Temperate Horticulture and its Regional Station, Mukteshwar observed vigilance awareness week from 27th Oct. to 1st Nov. 2014 for combating corruption, promote transparency, probity and integrity in public life.



Director CITH and other staff members took oath during vigilance awareness week inauguration

#### **Parthenium Awareness Week**

ICAR-Central Institute of Temperate Horticulture and its Regional Station, Mukteshwar organized "Parthenium Awareness Week" from 16th to 22nd August, 2014 for control of this weed.

### **Communal Harmony Week**

The Communal Harmony Week of National Foundation for Communal Harmony (NFCH) was observed from 19th to 25th Nov., 2014 by CITH, Srinagar and its Regional Station, Mukteshwar. Campaign for inculcating the noble ideas of communal harmony and national integrity among the staff members was held and as part of the week activities, a fund raising and person-to-person interaction campaign was also observed.

## Hindi Week

Hindi week was observed by ICAR-Central Institute of Temperate Horticulture, Srinagar and its Regional Station, Mukteshwar from 15-20th September, 2014 for compliance of official language policy. Institute organized an essay writing and poster drawing competition for students, staff members and their children.

### **Extension and HRD**

## **Saffron Day**



Director CITH presenting various developments in saffron to the farmers

A saffron day was organized on 1st November, 2014 at CITH, Srinagar where saffron growers from different saffron growing areas of Kashmir participated. Great interest was shown by the saffron farmers about the technologies developed by CITH on intensive saffron production which has shown excellent results even under adverse climatic conditions during the current year.

## **Olive Day**

The Institute organized olive day on 2nd December, 2014. Farmers from different districts of Jammu and Kashmir and officers of development departments took part in the event. The participants were very much impressed with the success and performance of olive cultivation under temperate conditions of Kashmir. Olive and saffron intercropping experiments was also shown to the farmers and officers who showed very good interest for adopting the technologies in their fields.



Director CITH and other scientists discussing about olive cultivation at CITH

# Training programme organized for progressive farmers of Tamil Nadu

Ten days training programme on "Advance cultivation practices of temperate horticultural crops" was organized to the progressive farmers of Tamil Nadu w.e.f. 21st to 30th April, 2014 at CITH, Srinagar in which 19 farmers participated. During the programme trainees were taught on latest developments in cultivation practices of temperate horticultural crops and hands on training on various essential operations.

## In Plant Training for Students of B. Tech

In Plant Training on "Post Harvest Technology, quality control in agriculture, marketing and servicing of agricultural produce" was provided to B. Tech. Students of SKUAST (K) was conducted from 26th April to 7th June, 2014.

# Training programme to Air Force Wives Welfare Association (AFWWA)

Training on "processing and preservation of horticultural produce" was provided to Air Force Wives Welfare Association (AFWWA) on 29th to 30th August, 2014.



# **Trainings on temperate fruit production and PPV&FRA**

One day training programmes were organized on temperate fruit production and farmers rights at Gurez area of J&K on 20th and 21st August, 2014 where 80 farmers participated in each programme.

# Training Programmes at Regional Station, Mukteshwar

- Organized three days training programme on protected cultivation of vegetables, flowers and nursery raising techniques w.e.f. 22-24th Sept., 2014 at CITH-RS, Mukteshwar in which 40 farmers/orchardists from nearby villages participated.
- One day training programme on production of horticultural crops, planting, after care, training/ pruning and protection measures was organized at Gajar (Mukteshwar) on 30th Jan., 2015 in collaboration with Gene Campaign, Odakhan in which 25 farmwomen participated.
- One day training programme on scientific training and pruning of the temperate fruit crops (apple, peach, pear, plum and apricot) was organized at Darim (Mukteshwar) on 11th Feb., 2015 in which 10 farmers/ orchardists participated.
- One day training programme on vegetable nursery raising was organized on 28th Feb., 2015 at CITH-RS, Mukteshwar in which 20 farmers/orchardists from Sasbani, Letibunga, Parbada, Kasialek and Bhateliya participated.
- One day training programme on planting, training/ pruning, protection and post harvest management of temperate horticultural crops on 24th Jan., 2015 at CITH-RS, Mukteshwar in collaboration with CHIRAG in which 40 farmers form Nathuakhan and Kasilek participated.
- Organized a kisan goshthi at Naukana, Talla Ramgarh (Nainital) on 19th Sept., 2014 in which more than 20 farmers/orchardists participated.

### **Farm Visits**

The CITH has emerged as a mega technological hub for temperate horticultural crops. A large number of farmers visited CITH individually for solution of their problems as well as for want of quality planting material during whole year. Besides this, ten farmer groups visited CITH, Srinagar and six groups visited CITH, Regional Station Mukteshwar and they were made aware of various technologies generated at CITH which are available for farmers to enhance their productivity in different horticultural crops

## Exhibitions/Mela

Exhibitions were laid during Agri Expo 2015 in XII Agricultural Science Congress, at NDRI, Karnal, During Kisan Mela 2014, CAZRI Regional Station, Leh; Vegetable cum Fruit Expo, 2014, LAHDC, Deptt. of Agriculture and Horticulture, Leh; Kisan Mela, VPKAS, Almora and Kisan Mela, IVRI, Muktehswar.

# Diagnostic visits, publications and Radio/ TV programmes

The scientist of CITH and its Regional Station regularly visited farmers field to suggest immediate measures for their problems. During the year more than 20 diagnostic visits were conducted to solve the farmers problems in J &K and Uttarakhand. Besides this, more than 15 radio/TV talks were delivered on various season based issues. The scientists of CITH published 25 research papers, one book, 7 book chapters, 7 popular articles and 8 extension bulletin/ folders for the benefit of researchers, extension functionaries and farmers.

#### **Tribal Sub Plan Scheme**

During 2014-15 eight districts viz Leh, Kargil, Bandipora, Ganderbal, Ramban, Poonch, Rajouri, and Srinagar 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. About 800 families were benefitted through this scheme. Scientists from CITH, Srinagar are regularly visited the identified tribal villages to observe the performance and give technical advice for success of the programme. Four low cost polyhouses were also constructed at Gurez region of district Bandipora and demonstrations on protected cultivation of vegetables and nursery raising are being imparted.

## **Distinguishing Visitors**

## A) CITH, Srinagar

Maiden visit of Hon'ble Union Minister for Agriculture:

Union Minister for Agriculture, Govt. of India, Shri Radha Mohan Singh, visited Central Institute of Temperate Horticulture, Srinagar on 24th August, 2014. Prof. Nazeer



Hon'ble Union Minister for Agriculture during his maiden visit to CITH

Ahmed, Director and staff of CITH welcomed the Hon'ble Minister and thereafter an interaction meeting was held where Director, CITH highlighted the achievements of the Institute and gave an account of new varieties and technologies developed. He also draw the attention of Hon'ble Minister about major constraints faced by the institute and the temperate horticulture in particular. The Hon'ble Union Minister for Agriculture, during his address highlighted the importance of horticulture sector for livelihood security of farmers in the country in general and valley in particular.

- Dr. S. Ayyapan, Secretary DARE and Director General ICAR visited CITH, Srinagar on 27th September, 2014 to enquire the well being of flood victims and damage assessment.
- Dr. S.D. Shikhamani, Former Vice-Chancellor, A.P. Horticultural University & Project Advisor Administration



Dr. S. Ayyapan, Secretary DARE and Director General ICAR with staff of CITH

- Staff College of India Hyderabad visited ICAR-CITH, Srinagar on 7th April, 2014.
- Dr. R.R. Hanchinal, Chairperson PPV & FRA (MOA) visited CITH on 27th April, 2014.
- QRT of IGFRI visted CITH on 4thSeptember, 2014.
- Secretary Horticulture, J&K visited CITH, Srinagar on 4thSeptember, 2014.

# B) CITH, Regional Station, Mukteshwar

- Dr S.K. Bandopadhyay, Member, ASRB, New Delhi visited the station on 21st April, 2014.
- Sh. S. Abbasi, Joint Secretary, Ministry of Steel, Govt. of India visited the station on 6th May, 2014.
- Dr S. Solomon, Director, IISR, Lucknow along with other scientists visited the station on 4th July, 2014.
- Dr P.K. Mishra, Director, CSWCR&TI, Dehradun visited on 29th Sept., 2014.
- Sh. P.K. Pujari, IAS, Special Secretary DARE and Financial Advisor (ICAR) from Delhi visited the station on 21st Nov., 2014.

# **Awards and Recognitions**

**Dr R. S. Paroda Award for 2014** Confederation of Horticulture Associations of India, New Delhi conferred the prestigious Dr R. S. Paroda Award for 2014 to Prof. Nazeer Ahmed, Director, Central Institute of Temperate Horticulture,

Srinagar during "Global Conference on Technological Challenges and Human Resources for Climate Smart Horticulture" held at NAU, Navsari, Gujarat from 28-31st May 2014. The award was conferred to Prof. Nazeer Ahmed in recognition of his



Prof. Nazeer Ahmed, Director CITH receiving Dr R.S. Paroda Award for 2014

outstanding contributions made in the field of horticultural research and development in the country.

#### **Best Technocrat Award**

Dr B L Attri, Received Best Technocrat Award- 2014 from EET CRS, Science & Technology Award-2014, Noida (U.P.) for devising the technology of Rhododendron and ginger blended squash as well as postharvest management, storage and value addition of Horticultural crops.

# **Young Scientist Award-2014**

Received Young Scientist Award-2014 by SEEA during 7th NEEC-2014 at ICAR Research Complex for NEH, Umiam (Individual).

#### **ISO** Certifiaction

Central Institute of Temperate Horticulture, Srinagar got ISO 9001: 2008 certification on 5th August, 2014 vide Certificate No. 1040QAS25 for provision of basic, strategic and applied research on temperate horticulture including human resource development, transfer of technology and other associated administrative activities.

### Copyright

Dr Anil Sharma (Sr. Scientist) and Prof. Nazeer Ahmed, Director, CITH of Central Institute of Temperate Horticulture, Srinagar got copyrights for software application Predictor and Planner for Almond (PPA) on 14th July, 2014 (Registration No. SW-8054/2014).

# Appointments/Promotions/Transfers/ Retirements

### **New Joining**

 Dr. Kishan Lal Kumawat joined CITH, Srinagar on 13.10.2014 (F/N) as Scientist (Fruit Science)

#### Retirements

 Shri Gh. Hassan Mir, SSS superannuated from Council's service w.e.f. 30th April, 2014 (A/N)

## **Transfers**

- Dr. K.K. Srivastava, Senior Scientist (Fruit Science) relieved on 11th August, 2014 (A/N) consequent upon his transfer from CITH, Srinagar to CISH, Lucknow.
- Dr. S.R. Singh, Senior Scientist (Veg. Science) relieved on 3rd December, 2014 (A/N) consequent upon his transfer from CITH, Srinagar to CISH, Lucknow.
- Shri Ramesh Kumar, Scientist (Floriculture) relieved on 13th October, 2014 (A/N) consequent upon his transfer from CITH, Srinagar to CIAH, Bikaner.
- Dr. Sarvendra Kumar, Scientist (Soil Science) relieved on 3rd June, 2014 (A/N) consequent upon his transfer from CITH, Srinagar to IARI, New Delhi
- Dr. Alok Kumar Gupta, Scientist relieved on 14th January, 2015 consequent upon his transfer from CITH, Srinagar to NRC Litchi. Muzaffarpur.

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