

# CISH NEWS

01 January - 30 June, 2018

Number - 01

## FROM THE DIRECTOR'S DESK



ICAR-CISH has a mandate to develop coloured mango varieties to tap the export market. Gradually increasing awareness about medicinal properties of mangoes due to bioactive compounds has given a new target to develop varieties rich in these compounds. Analysis of mango pulp indicated wide variations in content of bioactive compounds among the varieties. Mango cv. Amrapali had high flavonoid as well as total carotenoid content, whereas, cv. Langra was rich in total antioxidant activity but low in carotenoids. Mango cv. Amrapali had high flavonoid as well as total carotenoid content, whereas, cv. Langra was found rich in total antioxidant activity but low in carotenoids. Reduction in production of guava has been witnessed in spite of regular expansion of area under the crop during last few years. This happened due to death of guava plants by root-knot nematode, *Meloidogyne enterolobii* infection in majority of orchards during the last 4-5 years. The nematode alone is able to kill the seedlings in nurseries and young trees (1-4 years old) of guava and to cause decline of older tree. Mango thrips has also become a serious threat in quality fruit production in most of the mango belts in north India. Management technologies were developed and made available for the implementation against thrips. Pointed ground is a popular vegetable in north India. However, its low productivity has been a serious constraint in area expansion. Twenty one germplasm of pointed geurd collected from Malda and Murshidabad were evaluated at Lucknow. Three high yielding genotypes were identified. In the series of development of products from fruit waste, raw mango peel based soup powder was developed with some additives for taste. Emphasis has been given on horti-entrepreneurship development by extending the technologies like value addition, fruit crop nursery raising, growing tissue culture plants, green house fruit and vegetable cultivation and mushroom diversity adaption for round the year cultivation. Programmes like national conference, workshops and *Kisan Kalyan Karyashala* have also been conducted. Efforts are going on for area expansion of fruits crops in north-eastern states through capacity building of stakeholders and by supply of quality planting materials.



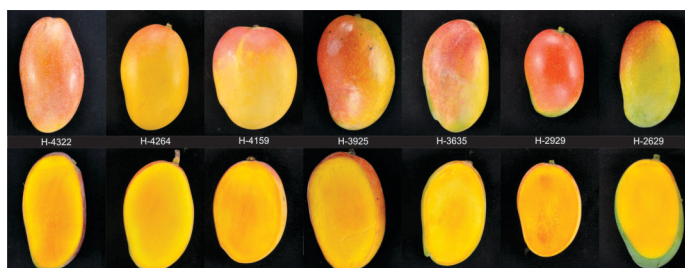
(SHAIENDRA RAJAN)

## RESEARCH HIGHLIGHTS

### Profiling of major nutraceuticals in mango

It is important increase awareness in domestic and export markets about medicinal properties of mangoes due to presence of bioactive compounds. Coloured varieties has given an opportunity for developing varieties rich in such compounds. The ICAR-CISH conserves one of the world's richest mango germplasms. Analysis of pulp of thirty selected mango hybrids and varieties has been done for total antioxidants, phenols, the flavonoids and total carotenoids. Wide variations in content of bioactive compounds were recorded. The total antioxidant content ranged from 0.35-1.14  $\mu\text{mol Trolox}/100\text{g}$ , total phenols 23.05-92.08 mg gallic acid equivalent/100g, total flavonoids 11.00-32.0 mg quercetin equivalent/100g and

total carotenoids 1.76-15.56 mg/100g pulp. The lowest carotenoids (1.78 mg/100g) content was recorded in H-707 while hybrid H-4509 recorded the highest carotenoids (15.56 mg/100g) content indicating its potential as carotenoids rich hybrid. Mango cv. Amrapali had high flavonoid as well as total carotenoid content,



whereas, cv. Langra was found rich in total antioxidant activity but low in carotenoids.

### Relationship of *Meloidogyne enterolobii* with guava wilt

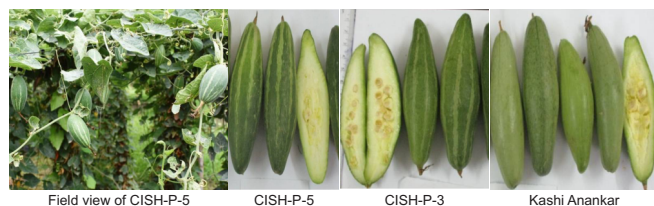
*Meloidogyne enterolobii* was identified as a severe constraint in guava production after thorough surveys in Andhra Pradesh, Himchal Pradesh, Uttar Pradesh, Madhya Pradesh and Rajasthan states. The widespread death of guava seedlings, grafts and trees was recorded in many guava orchards and nurseries due to the onslaught of nematode. The nurseries, the major source of inoculum, contributed in the primary spread of the disease caused by infected grafts planted in nematode free areas. Secondary spread of nematodes was recorded through irrigation water, soil and human interventions. The severely infected grafts planted for developing new orchards could not survive for more than two years. Infection taken place in young roots and aerial symptoms appeared either within a month or even after several



years also depending upon the inoculum load and conditions in the rhizosphere. Keeping in view the seriousness of guava decline, the Institute has recommended soil application of *T. harzianum* or *T. virens* enriched 5 kg compost with 250 g neem cake or 50 g carbofuran per pit 7 days before transplantation of grafts. Repeated application of enriched compost with neem cake in tree basin every year before the onset of monsoon helps in maintaining orchard health. The doses of enriched compost with neem cake may be increased gradually as per the age of trees.

### Pointed Gourd genotypes identified for high productivity

Pointed gourd is a popular tropical vegetable praised for its nutritional and medicinal properties. It is one of the most favourite vegetables of farmers in northern plain but lower productivity of prevailing cultivars is a major problem in wide adoption of the crop. In order to solve this problem, comprehensive survey and selection programme were conducted in Malda and Murshidabad districts of West Bengal, where wide variability was recorded and 21 selections were evaluated on the basis of visual phenotypic characteristics. Genotypes CISH-P-5 and CISH-P-3 were found best on the basis of high yield (3.54 and 3.49 kg/plant, respectively). The highest



Field view of CISH-P-5

CISH-P-5

CISH-P-3

Kashi Anankar

average fruit weight was recorded in CISH-P-4 (65 g) followed by CISH-P-5 (56 g). Both the genotypes have striped fruit with oval shape, green colour and good luster. These genotypes have much higher yield over the check variety Kashi Alankar (2.35 kg/plant) and are being multiplied for popularizing among the growers to improve productivity and economy.

### Instant soup from raw mango peel

Raw mango is characterized by its peculiar aroma coupled with mouth watering sour taste. Fruit contains ample amount of citric acid, vitamin-C and minerals and are used commercially for the preparation of pickle, chutney, dried slices, panna, etc. During the preparation of certain raw mango products, huge amount of peel is left out which goes waste due to lack of appropriate technology for its utilization. The ICAR-CISH, Lucknow has developed a technology for the preparation of instant raw mango peel based soup powder using certain additives. The product contained 52.6 mg vitamin-C and 944 mg phenolics per 100 gram of powder. The soup prepared from powder had good consistency and acceptable flavour and taste. The light sour taste of soup provides a good appetizing property.

### Scientist-Farmers interaction cum-participatory assessment of banana Fusarium wilt (TR-4) management technology

To assess the impact of the bio-formulation "CSR-FUSICONT" adopted for managing the spread of banana Fusarium wilt disease caused by *Fusarium oxysporum* f. sp. *cubense* Tropical race 4, ICAR-CISH and ICAR-CSSRI organized a Scientist Farmers participatory evaluation programme under the chairmanship of Dr. S.K. Chaudhari, Asst. Director General (NRM), ICAR, New Delhi along with Dr. P.C. Sharma, Director, ICAR-CSSRI, Karnal, Dr. D.K. Sharma, Emeritus Scientist & Former Director, ICAR-CSSRI, Dr. S. Rajan, Director, ICAR-CISH, Lucknow, Dr. V.K. Mishra, Head, ICAR-CSSRI, RRS, Lucknow. Scientists of ICAR-CSSRI, RRS, Lucknow and ICAR-CISH participated in the evaluation programme. The experts were taken to the affected fields where they interacted with the farmers. Addressing the farmers in the meeting organized at Magalsi village, Dr. Chauldhari, ADG (ICAR, New Delhi) applauded the efforts of the scientist Dr. T. Damodaran, scientist, ICAR-CSSRI and Dr. S. Rajan, ICAR-CISH and their team who had worked very hard for successfully managing the disease as revealed by farmers interaction. Dr. S. Rajan, Director, ICAR-CISH emphasized that the disease could be controlled only owing to the continuous collaborative endeavours of both the institutes.



## Miscellaneous

### Tribal farmers meet at Kheribari

Scientists of ICAR-CISH RRS, Malda interacted with the tribal farmers of Kheribari village and updated them about the seeds of different vegetables (brinjal, chilli, bottle gourd, cow pea, bitter gourd, pumpkin) suitable for kitchen gardening to tribal farmers on March 15, 2018.



### Green house operator training under ASCI

Under the aegis of Precision Farming Development Centre (PFDC), ICAR-CISH, Lucknow conducted 200 hours skill development training as per the guidelines of Agriculture Skill Council of India for greenhouse operators at its Rehmankhara campus for developing entrepreneurship in the arena of green house production and management during January 15 to February 14, 2018. Thirty trainees from different parts of the country attended the training. With the increasing number of green houses for cultivation of high value vegetables, flowers and nursery crops, there is an augmenting demand of green house operators who could manage protected structures effectively.



### Horti-entrepreneurship seminar

The Institute, in collaboration with Centre for Agriculture and Rural Development (CARD), organized a one-day Horti-entrepreneurship seminar on January 19, 2018. It was inaugurated by Shri Sudhir Garg, Principal Secretary (Horti.), Govt. of U.P., Lucknow. Dr. Anis Ansari, Chairman, CARD, Dr. S. Rajan, Director, ICAR-CISH, Mr. Nabin Roy, AGM, NABARD, Ms. Neera Chakrabarty, Zonal Manager, Indian Bank, scientists of ICAR-CISH and other Institutes attended the seminar. Technical sessions were conducted on entrepreneurship development in the field of tissue culture, green house cultivation, high tech nursery and value addition for seventy experts, entrepreneurship aspirants and bankers. Financial assistance provided in divergent areas

of Horti-entrepreneurship was discussed among various state department officers, bankers and delegates.

### Horti-entrepreneurship seminar on value addition, nursery and tissue culture

The Institute, in collaboration with SDSH and CARD, organized a Horti-entrepreneurship seminar at ICAR-CISH, Lucknow on February 12, 2018. Horticultural technologies such as value addition, protected cultivation of high value horticultural crops, nursery and tissue culture could play a pivotal role in developing entrepreneurship in Uttar Pradesh, told Dr. S. Rajan, Director on this occasion. The seminar brought policy makers, bankers, research institutions, private players and potential entrepreneurs on one platform to promote and proliferate Horti-food processing entrepreneurship in the state.



### Agro-biodiversity exhibition

The Institute showcased diversity of mango, guava, jamun bael, sem (Dolichos bean) and aonla varieties maintained at its Rehmankhara premise. Initiatives made by the Institute to protect farmers' varieties with the help of communities were displayed. More than 400 farmers visited the exhibition.



### Live broadcasting of Prime Minister's speech

The Hon'ble PM, Shri Narendra Modi inaugurated twenty five new Krishi Vigyan Kendras (KVKS) in the country on the auspicious occasion of Krishi Unnati Mela 2018 organized by ICAR-IARI, Pusa, New Delhi from March 16 to 18, 2018. On this occasion, live broadcasting of Prime Minister's speech for farmers was arranged at the Institute. Participating 500 farmers and gardeners from different parts of country garnered knowledge of

the technologies developed by the Institute and showed eagerness to adopt them.



### Participation in TEDx event at SRMU

Dr. Shailendra Rajan, Director delivered a lecture on King of Fruits Mango and the craft that goes into creating new varieties in TEDx at SRM University, Lucknow on January 20, 2018. TEDx provides a platform to successful entrepreneurs, social workers, artists, engineers, doctors, speaking at the function, etc. to share their experiences.



### Kisan mela at CIMAP

The Institute displayed its technologies in the kisan mela organised by CSIR-Central Institute for Medicinal and Aromatic Plants (CSIR-CIMAP), Lucknow on January 31, 2018. The event was inaugurated by Hon'ble Minister State (Independent Charge) for Micro, Small & Medium Enterprises, Govt. of India, New Delhi, Shri Giriraj Singh. Hon'ble Minister for Agriculture, Govt. of Uttar Pradesh, Shri Surya Pratap Shahi graced the occasion.

### Refresher course at ICAR-CISH, RRS, Malda for ATMA officials

The CISH-KVK and CISH-RRS, Malda had taken initiatives for up-scaling the knowledge of ATMA functionaries organising three-days refresher course during February 1 to 3, 2018. The programme was organized in collaboration with Deputy Director of Agriculture (Admn.) and financial support of the office of the State Nodal officer, ATMA and Director of Agriculture, Government of West Bengal. Fifty ATMA functionaries (BTMs & ATMs) from 15 different blocks of Malda attended the course for updating different improved technologies and schemes runned by Government of West Bengal and Government of India. It was noticed that ATMA schemes have great potential with intensive deployment of ATMA functionaries at grass root level.

### Mango pests and diseases status in Uttar Pradesh and Uttarakhand

Dr. P.K. Shukla and Dr. Gundappa surveyed Hardoi, Badaun, Sambhal, Meerut, Muzaffarnagar, Bagpat, Shamli, Saharanpur, Bijnor, Amroha, Moradabad, Rampur, Bareilly districts of U.P. and Haridwar of Uttarakhand during April 01 to 05, 2018 to identify incidence of insect pests and diseases of mango along with natural enemies of pests and told that ecosystem balance is very important for getting proper management of insect pests and diseases.



### Kisan mela at NDUA&T

The Institute displayed its technologies during the state level kisan mela organized at NDUA & T, Faizabad from April 5-6, 2018. Hon'ble Minister for Agriculture, U.P. Shri Surya Pratap Shahi was the chief guest of the inaugural ceremony. On this occasion, farmers visited the Institute stall and enquired about availability of rootstocks scion, unfruitfulness in mango, HDP of mango and guava, mango harvesting techniques, mango harvester, control of aphid, bhunga, powdery mildew, anthracnose, dieback, etc. A new entrepreneurs number of showed their interest in establishing nursery and fruit based processing units.

### Livelihood and skill development diwas

The Institute organised Aajivika Evam Kausal Vikas Diwas under Gram Swaraj Abhiyan at Babu Triloki Singh Inter collage, Kakori and Bari Garhi village of Lucknow district on May 5, 2018. On this occasion, students were sensitized about improving their livelihood and skill development. Scientists discussed various technologies viz., production of quality planting materials, suitable intercrops, bee keeping and poultry farming in mango orchards for increasing income. Students were also exhorted about judicious application of pesticides to control insect pest. Sixty students of class XII and faculty members of Babu Triloki Singh Inter College Kakori, Lucknow attended it.

At Bari Garhi, scientists taught the stakeholders about nursery management of vegetables, flowers, fruits, roof top gardening and kitchen gardening, post harvest management and preparation of value added products of mango for income generation and nutrition security of the family. Thirty women and men participated in the event.

## 35<sup>th</sup> Foundation Day celebration

The ICAR-CISH, Rehmankhhera, Lucknow celebrated its 35<sup>th</sup> Foundation Day on June 01, 2018. Dr. K. K. Lal, Director, ICAR-NBFGR, Lucknow was the chief guest of the function. In his address he exhorted the farmers to look into the possibilities of integrating fisheries with horticultural crops for enhancing their income. Appreciating the achievements of ICAR-CISH, Lucknow in the sphere of augmenting livelihood of mango growers, Dr. Lal firmly believed that, in future, both the Institutes would work in tandem to augment farmers' income.



On this occasion, Dr. Shailendra Rajan, Director briefed the farmers about the achievements of the Institute. He further told that the Institute is devoted to research and extension for the enhancement of fruit production and livelihood of farmers growing horticulture crops.

A gosthi was also organized, on this occasion, on the topic of improving the income through minimizing post harvest losses. Scientists of the Institute interacted with the farmers and resolved their problems. In scientist-farmers interaction programme, major issues of harvesting, de-sapping, ripening, packaging and transport were deliberated.

## PM addressed the farmers

The scientists, officers, staff as well as farmers of nearby areas of the Institute viewed Hon'ble PM, Shri Narendra Modi talking to the farmers directly about the methods used to double their incomes on June 20, 2018. In course of his address, Hon'ble PM talked to the farmers of West Bengal, Gujarat, Rajasthan, Manipur states. More than two hundred officers, staff and farmers watched the live telecast in the Institute auditorium.

## International yoga day

On the occasion of the International yoga day, scientists, officers and employees of ICAR-CISH, Lucknow performed yoga at the Institute's Rehmankhhera, premise on June 21, 2018. Shri Dhiraj Sharma, Assistant Director (OL) led all the officers and employees in the practice with the chanting of mantra 'Om'. After that *Padmasana*, *Vajrasana*, *Sukhasana* and *Siddhasana* followed by *Kapalbhati* and *Mandook Asana* prior to *anulom vilom pranayama* were exercised by one and all present. Besides, *Tadasana*, *Vrikshasana*, *hast padasana* and *ardh-chakrasana* were also practiced.

During the programme, Dr. Shailendra Rajan, Director delineated the significance of yoga for healthy



body and mind. He summed up with a remark that yoga is a sublime method by which we could remain fit at body as well as mind levels. The programme ended with *hasyana*.

## National conference on doubling farmers' income

A two-day National conference on "Strategies & Challenges in Doubling Farmers' Income through Horticultural Technologies in Subtropics" was jointly organized by ICAR-Central Institute for Subtropical Horticulture, Lucknow and the Society for Development of Subtropical Horticulture, Lucknow during June 21-22, 2018. Delegates and farmers from 28 cities of 10 states participated in the National conference and presented technologies developed on mango, guava, litchi, aonla, bael, strawberry, banana, citrus, grapes, jamun, forest trees, medicinal and aromatic crops, spices, vegetables



and mushrooms. All aspects of horticulture crop production and protection were covered including improved cultivars, tree architecture management, post-harvest handling along with waste utilization. Dr. R.C. Srivastava, Vice Chancellor, RAU, Pusa was the chief guest, Whereas Dr. W.S. Dhillon, ADG (Horti. Science) and Swami Vishwamayananda ji, Ram Krishan Ashram, Saragachi were the guests of honour during in the programme. Five eminent horticulturist of the country was conferred with SDSH fellow during the conference.

## Important Meetings

### Annual review meeting of DUS

The ICAR-CISH, Lucknow organized the Annual DUS Review meeting at its Rehmankhhera Campus during January 15-17, 2018. Speaking on the occasion, Dr. S. Rajan, Director underlined the need to standardize on-site test methodology of DUS testing of fruit crops for completing the testing in two years usually taking more time due to long juvenile period. Progress on on-site

certification of mango, kagzi lime and walnut varieties were reviewed. It was observed that the Institute should provide technical assistance to the farmers' for variety registration.



### QRT meeting on AICRP fruits

The Quinquennial Review Team (QRT) meeting of AICRP Fruits on mango, guava and litchi was held at ICAR-CISH, Lucknow during April 11-13, 2018. The objective of the meeting was to test and recommend the locations and need based technology depending on agro-climatic conditions. The QRT meeting started with the welcome address of Dr. S. Rajan, Director. Under the chairmanship of Padmashri Dr. K.L. Chadha, other distinguished members Dr. S. Maiti, Dr. D.S. Khurdia, Dr. B.M.C. Reddy and Dr. V.S. Thakur were also present. Project Coordinator, Dr. P. Patil, ICAR-IIHR, Bengaluru submitted the AICRP (Fruits) report in detail. Forty scientists working on various aspects of mango, guava and litchi fruits from different parts of India participated and discussed the progress made in different experiments from 2011 to 2017 during the review. A total of 80 experiments of mango, guava and litchi were discussed extensively.



### 23<sup>rd</sup> RAC meeting

The 23<sup>rd</sup> Research Advisory Committee (RAC) meeting of the Institute convened during June 26 to 27, 2018 under the chairmanship of Dr. B.S. Chundawat, Ex-Vice Chancellor, Navasari Agriculture University, Gujarat. Dr. K.K. Jindal, Ex-ADG (Hort. Science), Dr. N.S. Pasricha, Ex-Head, Deptt. of Soil Science, PAU, Ludhiana, Dr. Prem Shankar Singh, Professor & Head, Deptt. of Entomology, BHU, Varanasi, Dr. C. Aswathi, Ex-Head, Division of Biotechnology, ICAR-IIHR, Bengaluru and Dr. W.S. Dhillon, ADG (Hort. Science), ICAR, New Delhi participated in the deliberations along with Director, ICAR-CISH, Heads of respective Divisions of the Institute and scientists.



### Group Visit

#### Visit of Puducherry farmers and officials

Twenty farmers and five officials from Puducherry visited ICAR-CISH, Lucknow on April 02, 2018 to learn novel technologies for mango and guava cultivation developed at the Institute. They were made aware about Institute's technologies and various problems related to mango and guava cultivation faced by them. Farmers were fascinated to see ultra high-density planting in guava. They showed interest in developing nurseries at their respective places and subsequently had training in their areas by the scientists so that many more farmers could be benefitted.

#### Banda students' educational visit

Forty-five students of fruit breeding course at Banda University of Agriculture and Technology, Banda visited ICAR-CISH, Lucknow to update their knowledge on April 21, 2018. Dr. Shailendra Rajan, Director, on the occasion, briefed the students about fruit breeding course covering various aspects of breeding of major fruits grown in India. He firmly believed that this exposure visit could be helpful in understanding practical and scientific aspects of grafting new varieties. The students were keen to know recent developments in the sphere of transgenic in papaya and use of molecular breeding for improvement of fruit crops. Dr. Maneesh Mishra and Dr. Anju Bajpai, Principal Scientists delivered talk on biotechnology.

#### Study tour of students of CMS, Lucknow

Fifty higher secondary students led by five teachers, from City Montessori School, Station Road, Lucknow visited ICAR-CISH as a part of their study tour programme on May 8, 2018. Dr. V.K. Singh, Principal Scientist coordinated the group and enlightened them about the rich heritage of fruit crops diversity in India and germplasm conservation strategies adopted for mandated crops like mango and guava. On this occasion, Dr. Muthukumar M., Scientist illustrated the accomplishments as well as prospects of genomics and molecular breeding of fruit crops with special reference to mango. The students were also sensitized about the career opportunities in horticultural biotechnology.

## Gramin Swaraj Abhiyan

### Panchayati Raj diwas

The Institute organized Panchayati Raj Diwas under Gram Swaraj Abhiyan on April 24, 2018 at Amethia – Salimpur, Moidinpur and Nejabhari Khera Panchayat of Lucknow district. Various programmes were undertaken by the government to enlighten and empower the panchayati raj functionaries. Gram Panchayats were requested to organize special Gram Sabhas to discuss important social issues viz, immunisation and health, women empowerment, social development, etc.

### Gram swaraj diwas

The Institute organized Gram Swaraj Diwas under Gram Swaraj Abhiyan on April 28, 2018 at Sanyasibagh Kanar Panchayat of Lucknow district. The Govt. of India has launched 'Gram Swaraj Abhiyaan' on April 14, the birth anniversary of Baba Sahab Dr. Bhim Rao Ambedkar to observe social justice day and push for inclusion of marginalised people from the most backward villages of the country in welfare schemes. It would be followed by 'Swachh Bharat Diwas', 'Ujjwala Diwas', 'Panchayati Raj Diwas' and 'Gram Shakti Diwas. Panchayat officials like Pradhan, Lekhpal, BDO, BDC and about 25 farmers of these villages also attended the programme.

### Kisan kalyan diwas

The Institute celebrated *Kisan Kalyan Diwas* under Gram Swaraj Abhiyan at Saidpur village of Lucknow district on May 02, 2018. On this day awareness campaign and training programme were organized to disseminate information regarding judicious application of pesticides and fungicides for the management of insect pests and diseases of mango, intercropping of suitable crops, keeping bee hive in mango orchards to increase production by enhanced pollination and poultry farming interventions for doubling the income of farmers by 2022. Twenty five farmers of Saidpur village attended the programme.



## Workshops

### Workshop on Display methods for extension of agro-technologies

A workshop on Display Methods for Extension of Agro-technologies was organized at ICAR-CISH, Rehmankhera, Lucknow on February 2, 2018. Inaugurating the workshop, Dr. Shailendra Rajan, Director delivered a talk on the overview of agriculture based museums in India and apprised how museum could play predominant role in the extension of technologies.



### Kisan kalyan karyashala under Gram Swaraj Abhiyan

The ICAR-CISH participated in Kisan kalyan karyashala for farmers outreach at Malihabad and Kakori blocks on May 02, 2018. The Deputy Chief Minister of U.P., Dr. Dinesh Sharma was the chief guest of the Karyashala. The function was presided over by Hon'ble MP, Shri Kaushal Kishore from Mohanlalganj parliamentary seat. Dr. Sharma, in his address, explained how various activities mobilized at village level are benefiting people who were deprived earlier. Hon'ble MP, Shri Kaushal Kishore underlined the steps being taken for the upliftment of the poor and how various insurance provisions and financial support have changed the views of people.

The scientist-farmers interaction was one of the important components of this programme. Many booklets and farmer-friendly literature were also distributed during the function.

### Training on milky mushroom cultivation

A training programme on the cultivation of milky mushroom was organized at ICAR-CISH, Lucknow on March 21, 2018. About 120 farmers including 10 rural women of 5 districts of UP participated in it. Farmers were given tips on how they could improve the quality of their produce as well as retain its white color and freshness for a longer period.



## Personalia

### Joining

#### Administration

- Shri Sulabh Singh Sengar, Assistant joined the Institute after being transferred from KVK Tamenglong, Manipur on March 22, 2018.

- Ms. Jyoti Meena joined the Institute on selection as Technical Assistant (T-3) on June 13, 2018.



- Dr. Sumit Kumar Soni joined the Institute on selection as Technical Assistant (T-3) on June 19, 2018.



#### Promotion

- Dr. P.K. Shukla, Sr. Scientist was promoted to the level 12 Sr. Scientist w.e.f. August 19, 2012.

#### Retirement

##### Scientists

- Dr. Ram Kumar, Pr. Scientist retired from the Council's service after attaining the age of superannuation on January 31, 2018.
- Dr. R.M. Khan, Pr. Scientist retired from the Council's service after attaining the age of superannuation on June 30, 2018.

### Technical

- Shri Brahampal, Technical Officer (T-5) retired from Council's service after attaining the age of superannuation on January 31, 2018.

### SSS

- Shri Kalloo S/o Shri Chandrika, S.S.S. retired from the Council's service on February 28, 2018.
- Shri Shriram S/o Shri Fattey, S.S.S. retired from the Council's service on February 28, 2018.
- Shri Shiv Das, S.S.S. retired from the Council's service on March 31, 2018.
- Shri Mahabeer, S.S.S. retired from the Council's service on June 30, 2018.
- Shri Shriram S/o Shri Dalla, S.S.S. retired from the Council's service on June 30, 2018.
- Shri Atique Ahmad, S.S.S. retired from the Council's service on June 30, 2018.

### New Joining after court order

|                                |            |
|--------------------------------|------------|
| 1. Shri Govind Prasad, S.S.S.  | 04.04.2018 |
| 2. Shri Ram Khelawan, S.S.S.   | - do -     |
| 3. Shri Raja Ram, S.S.S.       | - do -     |
| 4. Shri Bholanath, S.S.S.      | - do -     |
| 5. Shri Ram Lakhan, S.S.S.     | - do -     |
| 6. Shri Ram Swaroop, S.S.S.    | - do -     |
| 7. Shri Devi Deen, S.S.S.      | - do -     |
| 8. Shri Ram Bali, S.S.S.       | - do -     |
| 9. Shri Nankau, S.S.S.         | - do -     |
| 10. Shri Ram Pratap, S.S.S.    | - do -     |
| 11. Shri Shatrohan Lal, S.S.S. | - do -     |

### Hindi Workshop

A Hindi Workshop was organized at the Institute on May 16, 2018. Dr. Vijay Narayan Tiwari, ex-JD, CDRI, Lucknow delivered a lecture on Rajbhasha Adhiniyam 1963 and Rajbhasha Niyam 1976 on this occasion.

A Hindi Workshop was organized for administrative and supporting staff on May 26, 2018. Shri Dhiraj Sharma, AD (OL) delivered a talk on official Correspondence in Hindi.



Published by S. Rajan, Director



### Compilation & Editing

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