



VOL 15
No 1-2 & 3-4
January-June &
July-December, 2013

UHF News

A Quarterly Publication of Dr Y S Parmar University of Horticulture and Forestry, Nauni, Solan (HP)



From the Vice Chancellor's Desk

Dr Y S Parmar University of Horticulture and Forestry established on 1 December, 1985 has a defined mandate of teaching, research and extension for quality human resource development, research in horticultural, forestry and allied subjects as well as serving the farming community of Himachal Pradesh for their upliftment and economic growth. The university has made numerous achievements in these priority areas besides supply of quality planting material and seeds of fruits, vegetables, flowers etc. It has still many challenges ahead due to climate change which need to be addressed for enhancing the productivity of horticultural crops. There is a need to prioritize this action for economic development. I am happy to present before you the progress made by Dr Y S Parmar University of Horticulture and Forestry, Nauni, Solan during the last few months. It has been found during my visits to different departments in College of Horticulture, College of Forestry, Regional Horticultural Research Stations and KVKs that scientists are earnestly undertaking research work in the mandate crops and also engaged in disseminating technical know-how to the growers of the Pradesh.

Horticulture is a major economic opportunity with a large global export market. It also has a potential for social impact and income generation as well as sustainability. Value addition has an immense scope in the offing for developing the fruit and vegetable market

due to changing food habits, lifestyles and health consciousness levels of the people. It is thus an important sector that needs to be promoted for enhancing food, nutraceuticals, livelihood and environmental security. Bumble bee colonies are being maintained in the university for managing pollination problems in fruit crops. The university has an excellent pesticide residue analysis facility wherein pesticide residue is being analyzed for good health of human beings. Direct shoot regeneration in high frequency has been achieved from leaf explants of apple rootstock Merton-793. The university has been able to supply quality planting material of apple, plum, apricot, almond, pomegranate, walnut, kiwi, peach, mango, poplar, willows, medicinal plants and seed and seedlings of vegetables and flowers to the farming community of the state. The university has also been able to supply quality planting material of onion, broccoli, capsicum (Solan Bharpur), tomato (Solan Lalima), turnip, pea, coriander, spinach, fenugreek, ginger and turmeric to the growers of the state. Forest and trees are important to all of us not only as a source of food, timber and income but to sustain our ecosystem. The university will identify and evolve varieties of species used in afforestation and social forestry. Research efforts are afoot to develop, conserve, manage and sustain forest species of *Cedrus deodara*, *Pinus roxburghii*, *Populus deltoides*, *Grewia optiva*, *Bauhinia variegata*, *Morus alba*, *Rhododendron arboreum*, *Sapindus mukorossi* etc. as well as medicinal and aromatic plants.

Memorandum of Understanding (MoU) has been signed between this university and Regional Station (Cereals and Horticultural Crops), Amartara (Shimla) as well as CSIR-CDRI, Lucknow. Besides, MoU was signed between Dr YS Parmar University of Horticulture and Forestry Nauni, Solan (HP) and CLJ Griba India Private Limited, New Delhi to set up a world class nursery at the university main campus Nauni in partnership mode for commercial production of elite planting material of apple, pear, cherry and walnut. A number of projects have been sanctioned to the university by different funding agencies in disciplines of horticulture, forestry and allied sciences.

A two days State Level Horticulture Officers Workshop was held in the university on 8-9 October

2013. During this period, exposure visits of farmers were also conducted. The 18th meeting of the Research Council and 16th meeting of the Extension Council of the university were held at the main campus of the university on 10 October 2013 wherein researchable and extension issues pertaining to horticulture and forestry crops were discussed. National Symposium on Nematode-A Friend and Foe for Agri-Horticultural Crops was organized by the Department of Entomology in collaboration with Nematological Society of India, ICAR, New Delhi at the main campus from 21-23 November 2013. A National Symposium on Mushrooms for Medicinal Value and Nutritional Security under Changing Climatic Conditions was organized by this university on 27-28 December 2013. The 29th Foundation Day of the university was celebrated with great enthusiasm on 1 December, 2013 in which Sh Virbhadra Singh, Chief Minister, Himachal Pradesh was the chief guest. On the occasion newly constructed Dr L S Negi Auditorium was inaugurated by the Chief Minister. Among other personalities who graced the occasion were Smt Vidya Stokes, Minister of IPH, Horticulture and IT; Sh Thakur Singh Bharmouri, Minister of Forests and Fisheries and Col (Dr) Dhani Ram Shandil, Minister of Social Justice and Empowerment and Sainik Welfare, Government of Himachal Pradesh.

The Board of Management meeting of the university was held on 13 November 2013 wherein important issues for the development of horticulture and forestry in the state were discussed. Experts of the university in their specialized disciplines inspected nursery plants of different temperate fruit crops grown at the main campus of the university and its research stations/ Krishi Vigyan Kendras. Soil samples received from farmers were also analyzed to various macro and micro nutrients besides, diagnosis as well as management practices on insect pest and diseases were recommended to the farmers under Farmer Advisory Service. Genetically superior willow clones (15,000 plants) were supplied to District Rural Development Agency of District Lahaul and Spiti by the Department of Tree Improvement and Genetic Resources. The Board of Management of this university has approved to change the nomenclature of various university Research Stations and Krishi Vigyan Kendras as Regional Horticultural Research and Training Station, Mashobra (Shimla); Regional Horticultural Research and Training Station, Jachh (Kangra); Regional Horticultural Research and Training Station, Bajaura

(Kullu); Regional Horticultural Research and Training Station and KVK, Sharbo (Kinnaur); Temperate Horticultural and Forestry Research Station, Kotkhai (Shimla); Horticultural Research and Training Station and KVK, Kandaghat (Solan) and Regional Horticultural Research and Training Station, Dhaulakuan (Sirmour). Besides this, the nomenclature of Seed Technology and Production Centre was changed to Department of Seed Science and Technology to be functional under College of Horticulture. Scientific Advisory Committee meetings of KVKs, Sharbo (Kinnaur) (26.09.2013); Rohru (Shimla) (28.09.2013); Kandaghat (Solan) (30.12.2013) and Chamba (08.01.2014) were held successfully during this period.

Short term weather forecasting was made by the university biweekly and Agromet Advisory Service bulletins were prepared and disseminated through university website, newspapers and radio station for the benefit of farmers. Solar radiation resource assessment system was installed at Energy Park of the university. The scientists were able to analyze water samples for chloride, nitrate and heavy metal concentrations. This year farmers have faced an effect of bad weather on temperate horticulture especially in cold desert area of the state. The university is thus fully determined to disseminate the technical know-how on plant health management to the growers of the affected areas so as to bring respite and happiness amongst them. I assure that the university scientists will make their all sincere efforts in reaching farming community with an objective of Farm Science-Farmer's Smile.

I am happy to inform that our students are excelling in extracurricular activities and a number of students have qualified ICAR and UGC Net examinations in 2013. A few of the students were able to get INSPIRE fellowship also. The university will make earnest efforts in strengthening its financial structure through income generation from different sources, externally funded research projects etc. All efforts will be made to strengthen infrastructure of Regional Research Stations and Krishi Vigyan Kendras in order to meet out the needs of tribal and hill farmers of the state and for achieving higher growth rate in horticulture, forestry and allied sectors. Let us all join our hands to fulfil the mandate of the university and work hard for the welfare of the farming community of Himachal Pradesh.

(Vijay Singh Thakur)

TRAININGS/SYMPOSIA/SEMINARS/ WORKSHOPS/CONFERENCES ORGANIZED

Training on Post Harvest Handling of Cut Flowers:

Department of Floriculture and Landscaping organized a training on 'Post Harvest Handling of Cut Flowers' wef 26-28 February 2013 under the project 'Standardization of packaging technologies of commercially important cut flowers and dissemination of their technical knowhow to the farmers/entrepreneurs' funded by NABARD in which thirty farmers from Himachal Pradesh participated.

Zonal Workshop on Agro Processing: Zonal Level workshop on 'Agro Based Food Processing Industries' for Technical staff of khadi and village industry commission and assisted units was organised on 7 March 2013 by the department of Food Science and Technology. More than one hundred forty participants attended the workshop. The Organizing Secretary of the workshop was Dr VK Joshi and Ms Surekha Attri, Dr Rakesh Sharma and Dr Manisha Kaushal were the Coordinators



breeding and production technology for vegetable crops was developed and distributed among the participants. Dr Vijay Singh Thakur, Vice Chancellor was the chief guest of the concluding ceremony and addressed the gathering. He emphasized on the need to promote commercial cultivation of vegetables and stressed upon that the package of practices for protected cultivation of vegetables should be developed. The chief guest also outlined the future strategies for developing varieties which are sustainable in changing climate scenario. The training was attended by 18 scientists of different SAUs and ICAR institutes of eight states of the country.

State Level Workshop on Package of Practices:

Dr YS Parmar University in collaboration with State Horticulture Department and NABARD organized a State Level Workshop on 'Package of Practices of Fruit and Flower Crops' from 8-9 October 2013. The chief guest of the workshop was Smt Vidya Stokes, Minister of IPH, Horticulture and IT who stressed the need to transfer the new technologies to the farmers at their fields. The scientists made presentations on the recommendations on production, protection and post harvest management of horticulture and floriculture crops. The recommendations were finalized after detailed discussion among scientists, state



department horticulture officers and farmers/orchardists for the inclusion in Package of Practices for Horticulture Crops and Package of Practices of Floriculture Crops. Speaking on the occasion Dr Vijay Singh Thakur, Vice Chancellor asked the officers of the horticulture department to give



Training-cum-Workshops on PDA: Two training-cum-workshops on Plan Do Check & Act (PDA) cycle were organized by the department of Business Management at the main campus, Nauni on 3-4 and 6-7 June 2013. Both the trainings were sponsored by HPCDP-JICA, Hamirpur.



Advance Training on Vegetable Crops: The Centre of Advanced Faculty Training in Horticulture (Vegetables) of department of Vegetable Science organized a National Level Faculty Training on 'Recent Approaches for Breeding and Production of Vegetable Crops' wef 20 August to 9 September 2013. A compendium of lectures on various topics on

their valuable suggestions for effective implementation of the recommendations. On this occasion Director, Extension Education Dr NB Singh and guest of honour Dr Satish Narula also expressed their views.

Model Training Programme on Post Harvest Management: A Model Training Course on 'Value Addition and Post Harvest Management of Horticultural Crops' was organized by the Directorate of Extension Education at the main campus from 22-29 October 2013. The main objective of the programme was to upgrade the professional competence and skill of senior level departmental officers, Subject Matter Specialists and Horticulture/Agriculture Development Officers. The concluding session was chaired by Dr NB Singh, Director, Extension Education and he urged the participants to apply the technologies acquired by them during the training programme in their respective work places for the benefit of the farmers. The training was sponsored by the Directorate of Extension, Ministry of Agriculture, GOI, New Delhi in which 19 participants from seven states viz Jammu & Kashmir, Punjab, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Chhatisgarh and Maharashtra participated.



Workshop on Awareness of e-courses of BSc: A one day workshop on 'Awareness of e-Courses for BSc (Horticulture) on Moodle platform delivered online and offline" was organized by the College of Horticulture, UHF, Nauni in the university campus on 25 October 2013 under the NAIP project in which 45 faculty members from different universities of North India participated. Dr Manjit Singh, Director, DMR,



Solan was the chief guest. The other dignitaries present were Dr RC Sharma, former Dean-cum-Nodal Officer (NAIP), College of Horticulture, Dr RC Goyal, Emeritus Scientist, IASRI, New Delhi and Dr JP Sharma, Dean-cum-Nodal Officer, College of Horticulture. Dr RC Goyal, Dr RC Sharma and Sh Mohinder Singh were the resource persons for



imparting the training to participants. A similar training programme of two days duration was organized by the university at Horticultural College and Research Institute for Woman, Trichy, Tamilnadu Agricultural University, Coimbatore on 7-8 November 2013. In this training 55 faculty members from different universities from south India as well as UHF, Nauni took part. Dr JP Sharma expressed his views on the use and future scope of e-course contents. The programme included technical sessions, hands on training, utilizations of video conferencing facility and recent techniques in content capturing and management. The e-contents of BSc (Horticulture) degree programme are available on the National web portal-<http://ecourses.iasri.res.in> and on the university website i.e. www.yspuniversity.ac.in.

Workshop on Medicinal Plants: The department of Forest Products organized a three days workshop on 'Medicinal Trees and Herbal Plants' for Eco Clubs, Incharges of school and colleges of Chandigarh from 28-30 October 2013. Director, Extension Education, Dr NB Singh was the chief guest on this occasion who shared his experiences on the traditional uses of precious herbs and their present status. Dr Kulwant Rai Sharma, Chairman of Organizing Committee welcomed the chief guest and the delegates and expressed his views on uses of medicinal plants. During the workshop, deliberations were made on cultivation

and processing of medicinal and aromatic plants by the scientists of the university. The workshop was sponsored by the Medicinal Plants Board, department of Forest and Wildlife, Chandigarh and was attended by fifteen participants.



National Symposium on Nematology: A three days National Symposium on 'Nematology – A Friend and Foe to Agri-horticultural Crops' was organized by the department of Entomology in collaboration with Nematological Society of India and ICAR from 21-23 November 2013. Dr Vijay Singh Thakur, Vice Chancellor was the chief guest of the inaugural session. While addressing the audience he said that nematodes cause 15-35 per cent yield losses in field and fruit crops, some nematodes cause disease complex when they



interact with other micro organisms in soil and low to heavy losses to the field crops when they act as nematode vectors. Dr Thakur reiterated that management strategies against these nematodes needs to be developed and for the management of plant parasitic nematodes, cultural practices, crop rotation with non host crops and use of resistant varieties can be the effective measures. On this occasion Dr HS Gaur, Vice Chancellor, Sardar Vallabh Bhai Patel Agriculture University, Meerut was felicitated by Dr Vijay Singh Thakur by conferring on him D'Souza Memorial Lecture Award. Dr M Luqman Khan, Professor & Head, department of Entomology and Local Organizing Secretary welcomed the chief guest and delegates and presented a brief report on symposium. Others who expressed their views were Dr AK Ganguly, President, Nematological Society of India and Dr HK Sharma, Secretary of the society. The workshop was attended by hundred delegates.

Training on Kitchen Gardening: A Training on Kitchen Gardening (Vegetable Production) for a batch of 9 woman extension workers from Afghanistan sponsored by Ministry of Agriculture, Irrigation and Livestock (MAIL), Govt of Afghanistan was organized by the university from 23 December 2013 to 2 January 2014. Field visits to the experimental farms of main campus and out stations of the university, Chandigarh and progressive farmers' fields were organized. The delegates were also addressed



by the Vice Chancellor, Dr Vijay Singh Thakur. He said that almost similar crops are grown in Afghanistan and the university has all expertise and resources to impart training to the extension workers and farmers of Afghanistan. Dr Thakur thanked the MAIL, Govt of Afghanistan for opting UHF, Nauni as venue for the training. Dr RC Sharma, Director of Research was the chief guest on the concluding day of the training who gave away the certificates of participation and literature to the trainees.

National Symposium on Mushroom: The Department of Plant Pathology in collaboration with Indian Mushroom Growers' Association organized 2nd National Symposium on Mushroom on the theme 'Mushrooms for Medicinal Value and Nutritional Security under Changing Climatic Conditions' wef 27-28 December 2013 at main campus Nauni where more than sixty distinguished mushroom scientists across the country participated in different useful deliberations. About 58 abstracts and six lead lectures on proposed theme areas resulted into valuable recommendations for value addition and nutritional enhancement in mushrooms. The symposium was inaugurated by the chief guest, Dr Jagmohan Singh, former Vice Chancellor of this university. Dr Manjeet Singh, Director, Directorate of Mushroom Research, Chambaghat, Solan was the guest of honour while Dr Vijay Singh Thakur, Vice Chancellor, UHF, Nauni presided over the function.



DR VIJAY SINGH THAKUR TOOK OVER AS VICE CHANCELLOR

Dr Vijay Singh Thakur took over as the new Vice Chancellor of Dr YS Parmar University of Horticulture and Forestry, Nauni, Solan on 28 July 2013. Dr Vijay Singh Thakur was serving as Associate Director at RHRS, Mashobra, Shimla. Dr Thakur was born on 12 June 1959 in Pohlad village near Jubbal, district Shimla. He got his school education from Jubbal and graduated from College of Agriculture, Chambaghat in 1982. He did his MSc and PhD in Plant Pathology from this university and joined at HPKV Palampur. Dr Thakur started his career in this university as Assistant Professor in 1988. The statutory officers, heads of the departments, faculty and staff members, members of various associations accorded a warm welcome to Dr Thakur on his appointment and congratulated him for this new assignment. Dr Thakur in his brief address said that his main focus would be on addressing the problems of the farming community, strengthening of research and extension activities of the university. He reiterated that efforts would be made to take the latest research techniques from laboratory to the fields as it would certainly help farmers of the state in uplifting their status. He again impressed upon that it is our prime duty to provide technical knowhow on horticulture/forestry to the farmers living in far flung areas of the state.



MS RUPALI THAKUR JOINED AS REGISTRAR

Mrs Rupali Thakur, HAS joined as Registrar of Dr YS Parmar University of Horticulture and Forestry, Nauni on 4 February 2013. Prior to this assignment, she was the Registrar of CSKHPKV Palampur. Mrs Thakur was 1st women topper in HAS examination in the state of Himachal Pradesh. She did MA in English and also cleared



UGC-NET in JRF category. She was a Gold Medalist in MA in Gandhian and Peace Studies. She also remained President/Admiral of St Bedes College, Shimla in the year 1995. She has served as SDM, Nalagarh, AC to DC Bilaspur and Senior Administrative Officer, PGIMER, Chandigarh.

DAYS/GOSHTHIS/FARMERS-SCIENTISTS INTERACTION ORGANIZED

Kisan Goshthi and Tomato day: Horticultural Research Station and KVK, Kandaghat (Solan) organized two Kisan Goshtis under NABARD sponsored project on "Sabjiyon ki swasth paudh utpadan" on 13 January and 15 February 2013 at KVK Kandaghat.



National Science Day: Regional Horticultural Research Station, Mashobra (Shimla) organized National Science Day-2013 on 17 April. On the occasion a declamation contest was conducted on 'Clean energy options for nuclear safety' in which students of different schools of Kotkhai area participated.



Farmers-scientists Interaction: Regional Horticultural Research Station, Dhaulakuan (Sirmour) organized Farmers-scientists Interaction on 'Cultivation of fruits, vegetables and flowering plants and their disease management' on 29 May 2013. The programme was sponsored by the State Bank of India, Dhaulakuan, district Sirmour, Himachal Pradesh.

Monsoon Planting Day: RHRS, Dhaulakuan celebrated 'Monsoon Planting Day-2013' on 18 July and the celebration was accomplished with the planting of ornamental plants. Dr RC Sharma, Director of Research, UHF Nauni was the chief guest on the occasion and a sapling of *Codieum variegata* was planted by him. Dr AK Joshi, Sr Scientist-Incharge and his team alongwith 31 farmers joined hands together to plant saplings of *Calliandra tweedii* and *Bougainvillea*

spectabilis. A Farmers-Scientists interaction was also organized for the benefit of farmers. The station also celebrated 'Vanmahotsava week' wef 13-19 August 2013 during which plants of wild mango (150), bamboo (100), ashoka tree (20), arjuna tree (50), willow tree (85) and harar (38) were planted.

Birth Anniversary of Dr YS Parmar Celebrated: On 4 August 2013, university celebrated the birth anniversary of Dr YS Parmar, founder and first Chief Minister of Himachal Pradesh with great enthusiasm at the main campus as 'Van Mahotsava'. The function started with the garlanding of statue by Dr Vijay Singh Thakur, Vice Chancellor followed by Statutory Officers, Professors and Heads, teachers, staff and students of the university. On this occasion about 1000 plants of mulberry, aonla, drake etc were planted. While addressing the audience, Dr Thakur said that late Dr YS Parmar was a visionary personality and we should put every effort to follow his vision. He emphasized that this day should also be celebrated at every research station/KVK. Dr Thakur stressed the need for making separate blocks for planting different species of the trees which in future can help the students and researchers for identification and teaching purpose. About 250 persons attended the function. Sweets were distributed to all present on the occasion.



Parthenium Erradication Day: The department of Environment Science of this university organized 'Parthenium Erradication Day' on 24 August 2013. *Parthenium hysterophorus* L. commonly called as carrot grass, chatak chandni, white top weed or congress grass in India, is a serious alien weed. Nearly 700 persons including scientists, staff members and students participated in the campaign. Dr Vijay Singh Thakur, Vice-Chancellor, the chief guest on the occasion addressed the huge gathering. He said that nation wide awareness programme are required for strategic integrated weed management for eradication

of such obnoxious weed and all should join hands together for this cause. Dr Satish Bhardwaj, Professor and Head of the department stated that the weed was uprooted from about 60 hectare area of the campus and this will be utilized for the preparation of quality compost/vermicompost for supplementing the nutrient requirement of crops in the research farm.



University Celebrated the Foundation Day: University celebrated 29th Foundation day on 1 December 2013 in which Sh Virbhadra Singh, Chief Minister of Himachal Pradesh was the chief guest. On this occasion Sh Virbhadra Singh inaugurated the newly constructed Dr LS Negi Auditorium. While addressing a huge gathering, the Chief Minister said that university had contributed immensely for the development of horticulture and allied activities in the state. This has only been possible due to the earnest efforts of the university scientists. Himachal Pradesh has made a mark in the production of fruits,



floriculture, mushroom, medicinal and aromatic plants as well as in the field of forestry. He emphasized the need to provide latest technical knowhow to the farmers and orchardists in order to improve the cultivation of different varieties of horticultural crops. On this occasion Chief Minister released various publications brought out by the university and honoured renowned personalities from horticulture field, progressive farmers, horticulturists and

meritorious students who have made their distinction in the field. A new cultivar of chrysanthemum was released by the Chief Minister. Among different personalities felicitated on the occasion were Sh Rajender Kumar Negi, son of Late Dr LS Negi, former Pro-Vice Chancellor; Dr DR Thakur, former Pro-Vice Chancellor; Dr JM Singh Chauhan, former



Vice Chancellor; Major Krishna Mohini, former Member of Legislative Assembly and Sh Baldev Thakur, Pradhan, Gram Panchayat, Nauni for their contribution in different fields. Smt Vidya Stokes, Minister of IPH, Horticulture and IT inaugurated the Solar Energy Park and was chief guest of closing ceremony of All India Inter University Women Kabbadi Championship organized by the university from 26 November to 1 December 2013. Sh Thakur Singh Bharmouri, Minister of Forests and Fisheries inaugurated the Examination Hall Building of College of Forestry. Col (Dr) Dhani Ram Shandil, Minister of Social Justice and Sainik Welfare laid the foundation stone of Girls' Hostel. All the guests expressed their views on this occasion. Dr Vijay Singh Thakur, Vice Chancellor



put forth the achievements made by the university and detailed future strategies for overall development and betterment of the university. A Farmers-Scientists Interaction on various aspects of horticulture and forestry was held on this occasion and solutions to the field problems of the farmers were addressed by the scientists. Dr Thakur, also extended the vote of thanks to the chief guest, guests of honour and delegates for their gracious presence.

TRAINING/WORKSHOP/CONFERENCE/ SEMINAR ATTENDED BY SCIENTISTS

- Dr ML Verma attended and presented a paper on 'Faculty and staff training needs' in the Executive Development Workshop on 'Educational Policy and Planning for Promoting Innovation in Agriculture' held at National Academy of Agricultural Research Management, Hyderabad during 16-19 January 2013.
- Dr Shalini Verma participated in training programme on 'Production Protocol for Bioagents and Quality Assessment & Quality Management of Microbial Biopesticides' wef 1-21 February 2013 at NIPHM, Hyderabad, Andhra Pradesh.
- Dr Pramod Kumar attended a training programme on 'Microbiological Processes in Soil Carbon Dynamics and Sequestration vis-vis Anticipatory Climate Changes' at TNAU, Coimbatore, Tamil Nadu, wef 1-21 February 2013.
- Dr Naveen C Sharma took part in 1st International Conference on 'Bio-Resource and Stress Management' w.e.f. 6-9 February, 2013 at Science City, Kolkata and presented a research paper entitled "Effect of plastic mulch colour on growth, fruiting and fruit quality of strawberry under polyhouse cultivation".
- Dr Satish K Sharma attended 'Managerial Effectiveness Enhancement Programme for Scientists/Technologists/Educationist Working in

- Government Sector' w.e.f. 4-8 February, 2013 at Institute of Management Training and Research, (IMTR), Damodar College Complex, G.R. Kare Road, Tansor, Comba, Margao, Goa.
- Dr AK Nath, participated in workshop on 'Biocatalysis Current Status and Challenges' on 8-9 February 2013 at IIT, New Delhi.
 - Dr Naveen C Sharma attended Awareness-cum-Training Programme on 'Accreditation of Horticultural Nurseries' organized by National Horticulture Board, Gurgaon at CPRI, Shimla on 15 February 2013
 - Dr ML Verma participated in workshop on finalization of 'XII Plan EFC of KVKs of Zone-1' on 23 February 2013 at Zonal Project Directorate, PAU, Campus, Ludhiana, Punjab.
 - Dr Manju Modgil attended National Symposium on 'Plant Tissue Culture and Biotechnology for Food and Nutritional Security' at CFTRI, Mysore w.e.f. 11-13 March 2013 and presented papers on 'Production of quality planting material of apple through micropropagation – A commercial approach' and 'Studies on induction of rooting in *in vitro* grown shoots of apple clonal rootstock Merton 793'.
 - Dr DK Srivastava took part and delivered a lecture on 'Plant tissue culture and biotechnology for food and nutritional security' in National Symposium on 'Plant Tissue Culture and Biotechnology for Food and Nutritional Security' at CFTRI, Mysore, Karnataka w.e.f. 11-13 March 2013.
 - Dr JN Raina participated and presented a research paper in the National Seminar on 'India Water Week' held at Vigyan Bhawan, New Delhi from 8-10 April 2013.
 - Dr Kulwant Rai Sharma and Dr Bhupender Dutt attended and presented paper as expert in Discussion Meet on UNEP GEF-MoEF Access and Benefit Sharing Project and Biodiversity Management Committees organized by Himachal Pradesh Biodiversity Board (State Council for Science and Technology) in collaboration with National Biodiversity Authority, Chennai at HP Institute of Public Administration, Fairlawn, Shimla on 9-10 April 2013.
 - Dr ML Verma participated in State Level Action Planning Workshop of KVK's of Himachal Pradesh at CSKHPKV-Palampur, on 9 April 2013.
 - Dr Rajesh Thakur attended three days refresher training course on 'Recent Trends in Cultivation of Vegetables and Ornamental Crops' held at DEE, UHF, Nauni, Solan w.e.f. 22-24 April 2013.
 - Dr Sudhir Verma took part in three days refresher training course on 'Recent Trends in Fruit Crop Production' sponsored by ICAR at Dr Y S Parmar University of Horticulture & Forestry, Nauni, Solan, HP from 25-27 April 2013.
 - Dr ML Verma attended Review cum Action Planning Workshop of NICRA project of KVKs of Zone-1 at KVK-Bathinda, Punjab on 9 May 2013
 - Dr Sudhir Verma participated in a training programme on 'Agricultural Extension Management' for the Extension Scientists of KVKs from 10-19 May 2013 at National Institute of Agricultural Extension Management (MANAGE), Hyderabad, Andhra Pradesh.
 - Dr Priyanka Thakur attended and presented papers on 'Introduction and evaluation of gerbera cultivars under low-hill conditions' and 'Propagation in *Phlogacanthus pubinervius* under sub-tropical, sub-montane low hill conditions' in National Seminar on Today's Innovations, Tomorrow's Sustainability in Allied Sciences, Technology, Management and Education from 25-26 May 2013 at Selaqui organized by Doon group of colleges and sponsored by Uttarakhand Council of Science and Technology.
 - Dr Priyanka Thakur took part in training on 'FRI-Wire Technique for Propagation of Ornamentals and Perennials' at FRI, Dehradun, Uttarakhand on 23 July 2013.
 - Dr Rajesh Kumar Kaler attended National Training on 'Exploitation of Underutilized Fruits' held at MPKV, Rahuri, Maharashtra w.e.f. 17 September to 7 October 2013
 - Dr Kulwant Rai Sharma attended a seminar on 'High Resolution X-Ray Radiography for Seed Applications' from Kub Tec, USA on 26 September 2013 at UHF, Nauni, Solan
 - Dr Shalini Verma participated in the CAFT training programme on 'Understanding of Mechanism of Host-Pathogen Bio-agent Interaction and Sustainable Bio-management Strategy for Threatening Crop Diseases : Hand-on-Practice of Molecular Technique' organized at Division of Plant Pathology, IARI, New Delhi w.e.f. 24 September to 14 October 2013
 - Dr AK Joshi and Dr Priyanka Thakur attended State level officers' workshop on Package of Practices of Fruits and Flower Crops on 8-9 October 2013 at UHF, Nauni.

- Dr HR Gautam presented a paper on 'Use of natural resources in managing plant diseases' in 'Fourth Biopesticide International Conference (BIOCICON 2013) – Ecofriendly Plant Protection and Production for Food Security, Food Safety and the Role of Biopesticides in Global Economy' wef 28-30 November 2013 organized by Crop Protection Research Centre and Department of Zoology, St. Xavier College, Palayamkottai, Tamil Nadu.
- Dr Joginder Singh took part in a training on 'Pesticides for food safety and food security' at TNAU, Coimbatore, Tamil Nadu, wef 11-31 December 2012.
- Dr Rakesh Sharma participated and presented paper in '7th International Food Convention (IFCON) 2013' held at CFTRI, Mysore wef 18-21 December 2013.
- Dr Shalini Verma presented a paper on 'Evaluation of microbial contamination on ready-to-eat apple fruits for healthy consumptions' at International Conference on 'Food Technology : Impact of Nutrition and Plant Health' sponsored by DST and organized by JNU, New Delhi wef 23-24 December 2013.
- Dr Devina Vaidya and Ms Rajni attended and presented a paper at International Conference on 'Food technology: Impact on nutrition and health (ICFIN-2013)' at Jawahar Lal Nehru University, New Delhi wef 23-24 December 2013.
- Dr Devina Vaidya and Ms Nilakshi Sharma participated and presented a paper at International Conference on 'Food technology: Impact on nutrition and health (ICFIN-2013)' at Jawahar Lal Nehru University, New Delhi wef 23-24 December 2013.
- Dr Manisha Kaushal took part and presented a paper in International Conference on 'Food technology: Impact on nutrition and health (ICFIN-2013)' at Jawahar Lal Nehru University, New Delhi wef 23-24 December 2013.
- Dr AK Joshi and Dr MK Brahmi attended the '8th Uttarakhand State Council of Science and Technology Congress' held at Doon University, Dehradun wef 26-28 December 2013.
- Dr AK Joshi participated in brainstorming session on 'Genetically modified crops: Potential for mountains' in '8th Uttarakhand State Council of Science and Technology Congress' held at Doon University, Dehradun wef 26-28 December 2013.

- Dr Manisha Kaushal attended and presented a paper at National Symposium on 'Mushrooms for Medicinal Value and Nutritional Security under Changing Climatic Conditions' wef 27-28 December 2013 at UHF, Nauni.

NEW DEVELOPMENTS/ACHIEVEMENTS/ RECOGNITION

Performance of New Varieties

Tomato (Solan Lalima): A self pollinated indeterminate tomato variety developed by selection bears fruits weighing 70-80 g with an average yield of 75-80 t/ha. The first harvest is ready in 70-80 days.



Lettuce (Solan Kriti):

An open type (Non-heading) cultivar of lettuce having long leaves, soft & dark green in color. Early in maturity (71.57 days), rich in beta-carotene contents (5.59 µg/100g), iron (1.63 mg/100g) and calcium (58.07 mg/100g). The variety is suitable for cultivation in zones II and III of Himachal Pradesh. Average yield per hectare is 24.8 t/ha in open field conditions. Under protected conditions, it matures in 62 days after transplanting. Average yield is 8.0 kg m⁻².



Chrysanthemum (Solan Shringa): A seedling selection of 'Honey Comb' having tall plants, bears many (66.25), large (7.00 cm), double type, white coloured flowers and requires 71.67 short days for flowering and is suitable for cut, pot as well as loose flower production



New exotic apricot varieties yield sample fruits for the first time: Exotic cultivars of apricot imported from Armenia namely, Yerewani and Sateni started bearing fruits during 2013-14 at RHRS, Sharbo. Amongst these cultivars, on an average, Yerewani registered 53.5mm fruit length, 32.2mm breadth, 44.9mm diameter, 70.0g weight, 4.20kg/cm² firmness with corresponding values of 34.4mm, 31.4mm, 37.4 mm, 26.0 g, 3.8kg/cm² and 21.0 for Sateni. Sateni recorded the higher TSS (21.0 °Brix) in comparison to Yerewani (14.9 °Brix).



Sateni



Yerewani

Organic production practices under open field cultivation for vegetable crops

- Biofertilizers - Azotobacter and Phosphate solubilising bacteria (5 kg / ha) along with vermicompost @ 10t/ha has been found beneficial in organic cultivation of tomato.



- Treatment of pea and French bean seeds with biofertilizers (Rhizobium and PSB) @ 200g/10 kg seed and application of vermicompost @ 5t/ha in furrows at the time of seed sowing has been found effective.



- Azospirillum @ 5.0 kg/ha as root/steckling dip + recommended dose of NPK @ 150: 60: 54kg/ha and applied at the time of field preparation resulted in higher seed yield and better quality character of radish seed under mid hill conditions of HP.
- Spinosad (Tracer 45 SC) @ 2ppm (4.4mg/kg seed) applied for the control of *Callosobruchus chinensis* in garden pea and *Callosobruchus maculatus* in French bean improved seed germination under mid hill conditions of HP.
- An application of poultry manure @ 3.5 t/ha + vermi compost @ 3t/ha at the time of field preparation can be used to obtain best results in terms of higher seed yield and other seed characters in indeterminate tomato under mid hill conditions of HP.
- Cucumber seed primed with Disodium hydrogen phosphate @ 10^{-3} M for 24 hours may be used to get higher yield with more germination percentage, seedling length, seedling dry weight, seed vigour index-I and II under mid hill conditions of HP.

- An application of 0.50cm irrigation at alternate day after the establishment of seedlings (15 days) through drip is found quite productive and economical for capsicum cultivation in naturally ventilated polyhouses in mid hills of Himachal Pradesh
- For lettuce cultivation in naturally ventilated polyhouses in mid hills of HP, an application of 0.50cm irrigation at two days interval after the establishment of seedlings (15 days) through drip has been found quite productive and economical.

Improvement in cultivation practices for mango and litchi

- Rooting media comprising of soil and FYM in the ratio of 2:1 with 20g of moss grass was found to be the best and most economical for layering of litchi plants. In litchi, best time for air layering was found to be July-August and under sub tropical conditions of LMRS, Nagrota Bagwan giving a maximum success of 68.3 percent.



- Performance studies on seven cultivars of Litchi (Dehradun, Culcuttia, Muzzafarpur, Large Red, Rose Scented, Saharanpur and Seedless) revealed that cultivar Dehradun was having maximum yield (39.00 kg) followed by Rose Scented (32.00 kg) and Calcuttia (30.00 kg). Cultivar Dehradun was observed to be early maturing, whereas, Calcuttia was late maturing under sub-tropical conditions of LMRS, Nagrota.



Dehradun



Seedless

Calcuttia

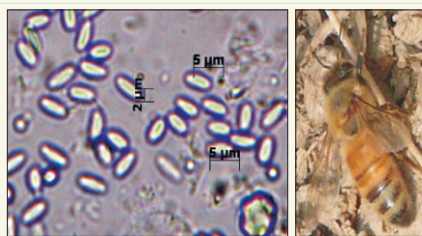
- Triaccontanol applied @ 20 ppm (2g/100L water) in the month of May and June was found to be the most effective in improving the growth of litchi and mango plants.

Bio-pesticides against apple root borer, *Dorystenes hugelii* under field conditions: Among various biopesticide tested, *Metarhizium anisopliae* (10^6 conidia/cm²) resulted in the highest grub mortality (74.4%). Other biopesticides like *Beauveria bassiana* (10^6 conidia/cm²), *Heterorhabditis indica* and *Steinernema carpocapsae* (80 IJ/cm² each) were moderately effective against apple root borer resulting in 34.0, 45.9 and 34.9 per cent mortality, respectively.



Grubs of apple root borer infected with *Metarhizium anisopliae*

Incidence of Nosema disease in *Apis mellifera* apiaries in Himachal Pradesh: The nosema disease (now fungal, earlier known to be protozoa) was recorded in some apiaries of Himachal Pradesh where 15% of *A. mellifera* colonies showed 30 per cent mortality of worker bees during March. The samples collected from the field were diagnosed and millions spores of *Nosema sp.* were observed under microscope in the gut region of diseased adult bees. For proper management it was suggested that long confinement of the bees should be avoided and keep colony strong with proper cleanliness.



Nosema spores

Adult bee with disjointed wings



Bee with swollen abdomen

Dead bees due to Nosema

Reducing the incidence of fruit cracking in litchi (*Litchi chinensis*): Experiments conducted at RHRS, Jachh has shown that irrigation, twice a week followed by spray of zinc sulphate (0.5%) at 15 days interval from fruit set to harvesting considerably reduce the fruit cracking and improved the fruit quality.

Tale formulation of biocontrol agent – Trichoderma developed: Tricho-Vir-a tale information of biocontrol agent *Trichoderma viride* has been developed by the scientists of the university and the formulation is available @ ₹ 100 per 500 g to the farmers and researchers. The formulation is effective against soil-borne diseases of tomato, peas and cauliflower.

Management of root rot of bean through non-chemical methods: Incorporation of one and half month old green manure crop (Daincha) in soil 25 days prior to sowing and usage of *Trichoderma viride* seed treatment (4g/kg) and its soil application (2.5kg/50 kg FYM/ha) at the time of sowing effectively manage the root rot of bean with simultaneous increase in green pod yield.

Management of soft rot of ginger through eco-friendly methods: The usage of pre planting hot water rhizome treatment at 47°C for 30 minutes and soil application of *Trichoderma harzianum* @ 2.5kg/50kg FYM/ha followed by six periodic drenching of copper oxychloride @ 0.3 per cent at 15 days interval with the appearance of disease proved most cost effective (cost : benefit ratio 1:18.6) in limiting the disease and increasing the rhizome yield of ginger by 62.0 per cent.

Agrobacterium isolates from stone fruit plants: Protocol for isolation and identification of *Agrobacterium* isolates from stone fruit plants has been developed (Natl. Acad. Sci. Lett. 36:79-84) under the National Fund for Basic, Strategic and Frontier Application Research Project on Biological Control of Crown Gall in Stone Fruits.

Commercialization of salix wood clones: Department of Tree Improvement and Genetic Resources of UHF, Nauni has been working actively in the genetic improvement of willow (*Salix* species) for the last 10 years. Samples of wood were supplied to different wood industries like bat, plywood, pencil, mushroom so that suitability of particular clones could be identified.

Salix for mushroom production: Shiitake mushroom (*Lentinula edodis*) which is full of medicinal value and is an important ingredient for some anticancer

medicines can be successfully raised on different clones of willow. Sawdust of *Salix* mixed with wheat bran (20%) and lime (calcium carbonate 1%) was used to grow Shiitake under controlled condition. About 700-1200g mushroom could be harvested from 1000g of saw dust within 50 days. Fresh Shiitake sells for ₹ 200-500/kg where as dried shiitake mushroom sells upto ₹ 2500 per kg. Unlike button mushroom, shiitake can be dried and kept for a longer time. Results have indicated that some of the clones of *Salix* provided by the industry are highly suitable for shiitake mushroom cultivation. Use of *Salix* wood in Shiitake production



will increase the demand of *Salix* wood which will encourage farmers to undertake plantation of *Salix* along with cultivation of Shiitake mushroom. Vikas Mushroom Farm, Solan has been successful in raising shiitake mushroom on wood of different clone of willow in collaboration with Dr NB Singh, Director, Extension Education.

Industrial link of *Salix*: Six years old *Salix* clones were harvested to test the industrially important wood characters. The wood samples of these clones along with poplar clones as check were sent to Galaxy Plywood Industry Ltd. Yamunangar, Haryana to test the wood properties. All the samples passed well in



cycle test and mycological test with respect to the standard fixed by the industry. These clones are well suitable for plywood industry and few clones were graded better than poplar. The initiation and linkages were worked out under the guidance of Dr NB Singh, Director, Extension Education, UHF, Nauri, Solan.

Income generation through poplar cultivation:

Farmers can earn a good return by raising the nursery of fast growing poplar clones like G-48. A revenue of ₹ 3 to 4 lakh per ha per annum can be generated by growing and selling poplar nursery. A production of

about 500 cum per ha can be achieved in 7-8 years generating a revenue of approximately 10-12 lakhs. University is providing quality clonal material to the farmers for raising disease free and quality plantation.



Solar Radiation Resource Assessment system:

Department of Environmental Science, UHF, Nauri has installed Solar Radiation Resource Assessment system at the State Level Energy Park of the university with assistance from Centre for Wind Energy



Mass multiplication of selected cultivars of chrysanthemum and dahlia in Sirmour district:

Out of 42 introduced and evaluated cultivars of chrysanthemum, standard cultivars namely; Snow Ball, Pink Cloud, Apricot Parasol, Chandrama, Sonar Bangla, Casa Grande, Ajina Purple, SL Red, White Star, Pink Lady; spray cultivars like DKCS-Yellow and DKCS-Pink were found promising for low hill conditions of HP. Plant growth regulators i.e. IBA 1000 ppm followed by NAA 500 ppm induced maximum rooting in standard and spray cultivars of chrysanthemum. Out of 12 introduced cultivars of

dahlia; 'Maa Sharda' and 'Giani Zail Singh' produced sturdy stems (67.5cm) which can be exploited for cut flower production.



Dahlia (Giani Zail Singh) Chrysanthemum (DKCS Yellow)

Accreditation of Fruit Nursery: The NHB accredited the Fruit Nursery of RHRS, Dhaulakuan with 3-star rating, which is the highest grading for a nursery having less than one hectare area. The certificate was conferred upon the stations at CPRI, Shimla on 15 March 2013.

AWARDS/ HONOURS/RECOGNITIONS

- ❖ Dr Kulwant Rai Sharma, Dr Priyanka Thakur, Dr Mary Pat Denne and Dr Ajay Thakur got Best Publication Award-2012 sponsored by Society for Advancement of Human and Nature (Sadhna) for their publication on 'Studies on stem structure of *X Laburnocytisus adamii* (Poit) Scheid'. *Current Science*. 92: 437-440.
- ❖ Dr VK Joshi was selected as Fellow of Indian Society of Hill Agriculture on the recommendation of Executive Council, ISHA.
- ❖ Dr Kulwant Rai Sharma was invited as a guest of honour on the occasion of 'Fascination of Plants Day' organized by the School of Bioengineering and Food Technology, Shoolini University, Bajhol, Solan, Himachal Pradesh.
- ❖ Ms Prabha Negi N and Dr Manju Modgil received best poster award (first prize) in National Symposium on 'Plant Tissue Culture and Biotech and Biotechnology for Food and Nutritional Security' at CFTRI, Mysore in March 2013.
- ❖ Dr Naveen C Sharma, Dr NC Sharma, Dr SD Sharma and Sh RS Spehia got Best Poster Award in Horticulture during 1st International Conference on 'Bio-Resource and Stress Management' wef 6-9 February 2013 at Kolkata for the paper entitled 'Effect of plastic mulch colour on growth, fruiting and fruit quality of strawberry under polyhouse cultivation'.

- ❖ Uma Datt Mamgain Research Award (2nd best) was bestowed on Dr Naveen C Sharma for his PhD thesis work from the Society for Advancement of Human and Nature (SADHNA) at UHF, Nauni, Solan on 18 April 2013.
- ❖ In recognition of the services of Dr AK Gupta in the field of Plant Pathology, his name has been included in the Professional Group by Springer, Netherlands.
- ❖ Dr Rakesh Sharma received 2nd prize in Bio Nutra Award for the research paper on 'Development of antioxidant rich low calorie functional bitter gourd appetizer' in National Conference on 'Bioactive Compounds and Functional Foods in Health and Disease Management' held at NIFTEM, Kundli, Haryana wef 15-16 November 2013.
- ❖ Best Presentation Award was conferred on Mr JP Sharma for his paper on 'Growth performance of hybrid seedlings of willow (*Salix* species) in nursery conditions' in National Seminar on 'Forestry and Agriculture' organized by Kerala Forest Research Institute and Gregor Mendel Foundation, University of Calicut on 7-8 November 2013 at Peechi, Thrissure, Kerala.
- ❖ Dr Manisha Kaushal, Devina Vaidya, Anil Gupta and Anil Verma won 3rd prize in the oral presentation on 'Effect of osmotic dehydration process on quality characteristics of destoned plum cv. Santa Rosa fruits' at International Conference on 'Food Technology: Impact on Nutrition and Health' wef 23-24 December 2013 at Jawahar Lal Nehru University, New Delhi

VISITORS TO THE UNIVERSITY CAMPUS

- ◆ A team comprising of ten scientists, planners and professionals from Bhutan visited the university on 5 January 2013. Three senior scientists Dr Uma Partap, Dr Nanisang Suvedi and Kasang Dema accompanied the delegation. The delegation interacted with Dr KR Dhiman, Vice Chancellor and Professor and Heads of different departments of the university. The latest research developments made by the university in fields of vegetable, horticulture, floriculture, apiculture and forestry were discussed. The team visited various experimental fields and Solar Energy Park. The visit was sponsored by ICIMOD, Kathmandu, Nepal.

- ◆ Sh Jagat Singh Negi, Deputy Speaker, HP Vidhan Sabha, visited RHRS, Sharbo on 17 April 2013 and discussed about the various activities of the station. He visited different laboratories, orchards and nursery blocks and appreciated the work being carried out and the progress made by the station.



- ◆ The Councilors from Municipal Corporation, Shimla and the students from Lakehead University, Canada visited the State Level Energy Park, Nauni on 6 March and 10 May 2013, respectively. Dr S Bhardwaj, Professor & Head and Dr RK Aggarwal, Assistant Professor, department of Environmental Science demonstrated various models on the use of conventional and non-conventional energy sources.
- ◆ Shri V Valte, Commissioner, Central Excise and Taxation, Shillong; Dr PK Pandey, Scientist, Forest Research Institute, Dehradun and Dr DS Khurana, Professor (Vegetable



Crops), PAU, Ludhiana visited the RHRS, Dhaulakuan and appreciated the research and other activities being carried out at the station.

- ◆ Forest Officers from Uttarakhand, 59 Cadets and two Escorts from Rashtriya Military School, Chail, 37 Forest Range Officers from Central Academy for State Forest Service, Burnihat visited the department of Forest Products, respectively on 4 September, 21 October and 7 December 2013.

Dr Kulwant Rai Sharma briefed them with the university and departmental activities.

INVITED LECTURES DELIVERED BY SCIENTISTS

- Dr DK Srivastva participated and delivered a lecture in National Symposium on 'Plant Tissue Culture and Biotechnology for Food and Nutritional Security' held on 11-13 March 2013 at CSIR-CRTRI, Mysore, Karnataka.
- Dr DK Srivastva participated and delivered invited talk in workshop on 'Biodiversity of Himachal Pradesh-The way forward' held at State Council for Science Technology and Environment, Govt of Himachal Pradesh, Shimla on 22-23 March 2013.
- Dr DK Srivastva participated and delivered a lecture in 'BIT'S 6th Annual World Congress of Industrial Biotechnology (IBIO-2013)' held at Nanjing, China on 25-27 April 2013.
- Dr Kulwant Rai Sharma was invited to deliver a lecture during the celebration of 'Fascination of Plants Day' by the School of Bioengineering and Food Technology, Shoolini University, Solan (HP) on 17 May 2013.
- Dr Priyanka Thakur delivered a lecture on 'Entrepreneurship through floriculture' in training on 'Entrepreneurship through Aromatic Plants and Floriculture' held at Dolphin Institute of Biotechnology and Natural Sciences, Dehradun on 31 May 2013 organized by Uttarakhand State Council of Science and Technology (UCOST).
- Dr R Raina delivered a lecture on 'Sustainable utilization of temperate medicinal plants – the way forward' and also chaired a session on 'Plant Sciences' during the National Conference on 'Status and Conservation of Biodiversity in India with special reference to Himalaya' held at Kashmir University, Srinagar wef 4-5 October 2013.
- Dr AK Joshi delivered a lecture on 'Concomitance of agriculture in changing climate' in the technical session on Agricultural Sciences in '8th Uttarakhand State Council of Science & Technology Congress' held at Doon University, Dehradun, Uttarakhand wef 26-28 Dec 2013.
- Dr Devina Vaidya delivered a lecture on 'Postharvest management and value addition of mushrooms' at National Symposium on 'Mushrooms for Medicinal Value and Nutritional Security under Changing Climatic Conditions' wef 27-28 December 2013 at UHF, Nauni

MEETINGS

Meetings Attended by the Scientists

- ❖ Dr Manish Kumar and Dr S Kansal attended Annual Meeting of Mini-Mission project organized at main campus of UHF Nauni, Solan from 9-10 January 2013.
- ❖ Dr Manisha Kaushal attended and presented the Annual Progress Report of the NOVOD funded project entitled 'Development of post harvest equipments and refinement of technology for extraction and value addition of wild apricot oil for commercial adoption' during Annual Review Meeting of R&D National Network Programme on Tree Borne Oilseeds (TBOs) held on 16-17 April 2013 at NOVOD Board Campus, Gurgaon, Haryana
- ❖ Dr ML Bhardwaj, Dr Manish Kumar, Dr Ramesh Bhardwaj and Dr S Kansal attended XXXI Group meeting of All India Coordinated Research Project on Vegetable Crops at CSKHPKV, Palampur, HP wef 2-5 May 2013.
- ❖ Dr VK Joshi attended 5th meeting of Expert Group on Alcoholic Drink Standards, at FSSAI, New Delhi on 7 May 2013. He also attended a meeting regarding BIRAC discussion on Secondary Agriculture: Leading to Tertiary and Quaternary Value Addition through Biotech Approaches, at Bhisham Pitamah Marg, Defence Colony, New Delhi on 13 May 2013.
- ❖ Dr R Raina attended 1st Project Monitoring Committee Meeting of DBT Network Project on 'Preventing extinction and improving conservation status of threatened plants through application of biotechnological tools' at Sikkim University, Gangtok and presented a report of the work done under the project on 17-18 May 2013.
- ❖ Dr R Raina, Dr Meenu Sood and Dr YP Sharma attended XX Group Meeting of AICRP on Medicinal and Aromatic Plants wef 23-26 September 2013 held at Tamil Nadu Agricultural University, Coimbatore and presented the progress of work done under the project.
- ❖ Dr Kulwant Rai Sharma and Dr Bhupender Dutt attended the 5th Coordination Committee Meeting of the Network Project on 'Harvesting, Processing and Value Addition of Natural Resins and Gums' (FCR-037-22) wef

8-9 October 2013 at JNKVV, Jabalpur, Madhya Pradesh.

Meetings Organized

Mini-Mission Project Meeting: A two days Mini Mission Project meeting was held at the university campus from 9-10 January 2013. The meeting was chaired by Dr KR Dhiman, Vice Chancellor of the university. He said that the emphasis will be given on healthy seed and nursery production of fruit crops of temperate and sub-temperate regions in Mini Mission. Vice Chancellor also released a book on this occasion. He further said that the recommendations emerging from this meeting will be useful to the people of North East also. The Nodal Officer Dr BP Singh, Director, CPRI, Shimla emphasized the need for production of diversified fruit crops. Dr RC Sharma, Director of Research presented the research activities of the university. Near about 71 scientist from CSKHPKV, Palampur, UHF, Nauni and CPRI, Shimla attended the meeting.



Research Recommendation Screening Committee Meeting: Research Recommendation Screening Committee meeting was held on 3 May 2013 at main campus Nauni for preparation/finalization of the draft of research recommendations for Package of Practices for Fruit Crops for further discussion and approval in State Level Officers' Workshop. The scientists presented their research recommendations on different areas such as fruit crops/variety improvement, fruit crop management, fruit crop protection and post harvest management/technology. In this workshop about fifty research recommendations in these fields were finalized.

ICAR Regional Committee-I Meeting: The university organized ICAR Regional Committee-I meeting on 13 August 2013 which was chaired by Dr Vijay Singh Thakur, Vice Chancellor. In his inaugural address Dr Thakur said that horticulture is the backbone of the farmers of this hilly state as the economy of farmers depends on this. He emphasized that collaborative efforts are required for strengthening agriculture and horticulture in the state.



He reiterated that every effort should be made to transfer the latest technical knowhow as well as early bearing varieties to the farmers. Dr Thakur stressed on the need for planting fruit trees in forests to avoid damage of crops in the farmers' fields by the forest animals. Dr KK Katoch, Vice Chancellor of CSK HP Krishi Vishwavidyalaya, Palampur was of the view that there is a great need for conservation of rain water and enough work is required on problems caused by stray animals. While Dr Gurdev Singh, Director of Horticulture, Himachal Pradesh spoke on conservation of biological diversity. He stated that the fruits are grown in two lakh hectare in the state out of which one lakh hectare is covered with apple and in the remaining area other fruits are grown. The apple production is 90 per cent while it is 10 per cent for other fruits. Dr PK Mishra, Director, Central Soil and Water Conservation Research and Training Institute, Dehradun also spoke on the occasion. Dr RC Sharma, Director of Research of this university welcomed the guests and said that the objective of this meeting is to discuss the problems being faced by farmers of different parts of the state. He also highlighted the research activities of the university. In this meeting forty officers from different Agriculture, Horticulture and Forestry colleges, officers from Agriculture, Horticulture and Forestry department participated.

Scientific Advisory Committee meetings: Scientific Advisory Committee meetings of KVKS, Sharbo (Kinnaur), Rohru (Shimla) and Kandaghat (Solan) were held successfully on 6 September, 28 September and 30 December 2013, respectively.

NEW PROJECTS SANCTIONED

Sr. No.	Title of the Project	Funding Agency	Amount Sanctioned (in lakh)
1.	Enhancing productivity of apple in Tribal Districts of Himachal Pradesh (PI: Sharma, RHRS, Sharbo)	ICAR,	115.00
2.	Integrated project on quality /seed / planting material production, irrigation management and soil health concerns in vegetable and spice crops (PI: Dr H S Kanwar, Department of Seed Science and Technology)	Director of Agriculture, HP Shimla	95.00

3.	ZECS & quality production of apple (PI: Kaith, KVK Rohru)		84.0
4.	Demonstration of in-situ plantation and moisture conservation techniques for replantation of old orchards of stone fruits under rainfed conditions of Himachal Pradesh (PI: Dr DP Sharma, Department of Fruit Science)	Director of Agriculture	71.14
5.	Network project on strengthening of nursery production of fruit crops (PI: Dr JS Chandel, Department of Fruit Science)	Ministry of Agriculture, GOI (through CPRI, Shimla/ICAR)	40.99
6.	Freeze restriction studies for frost protection in subtropical fruit plants. (PI: Dr Shashi Kumar, IBES, Neri)	DST,	37.77
7.	Widening the genetic base of cucumber (<i>C.sativus</i> .L) cultivars through transferring of useful traits from exotic and unadapted landraces (PI: Dr Ramesh Kumar, Dept of Vegetable Science)	CSIR	34.75
8.	Breeding day neutral strawberries and tagging everbearing gene using PCR based markers (PI: Dr Girish Sharma, Department of Fruit Science)	CSIR	30.0
9.	Biotechnological interventions for establishment of own rooted progeny orchard of some stone fruits (PI: Dr Manisha Thakur, Department of Biotechnology)	DST,	28.73
10.	Refinement, Demonstration and promotion of intensive production technologies of commercially important high value vegetable crops in Shivalik regions of Himachal Pradesh (PI: Dr Ramesh Kumar, Department of Vegetable Science)	DST,	28.63
11.	Breaking yield barriers in cucumber (<i>Cucumis sativus</i> L) through introgression of useful genes from unadapted landraces and wild relatives (PI: Dr Ramesh Kumar, Department of Vegetable Science)	CSIR	27.92
12.	Establishment of Clonal Bank (Nursery) and DUS specific characterization of willow (<i>Salix</i> species) germplasm. (PI: DR Sanjeev Thakur, Department of Tree Improvement)	Protection of Plant Varieties and Farmers' rights Authority,	24.12
13.	Network project on Production of Quality Material of Vegetable Crops (PI: Dr HS Kanwar, Department of Seed Science and Technology)	Ministry of Agriculture, GOI (through CPRI, Shimla/ICAR)	22.90
14.	Network project on Production of quality seed planting material of spice crops (PI: Dr DK Mehta, Department of Seed Science and Technology)	Ministry of Agriculture, GOI (through CPRI, Shimla/ICAR)	22.90
15.	Establishment of clonal bank (Nursery) and development of DUS specific characterization of poplar germplasm (PI: Dr Sanjeev Thakur, Department of Tree Improvement)	Protection of Plant Varieties and Farmers' rights Authority ,	20.82
16.	Development of innovative methods for resistance induction in cucumber against fungal foliar diseases (PI: Dr Monica Sharma, Department of Plant Pathology)	DST,	19.35
17.	Instant products of carrot for nutrition, income generation and self employment of the farm women of Himachal Pradesh (PI: Dr N S Thakur, Department of Food Science and Technology)	DST,	18.55

18.	Development of low cost value added processed products from ripe pumpkin (<i>Cucurbita moschata</i>) and dissemination of technology to the farm women of Himachal Pradesh (PI: Dr Anju Kumar Dhiman, Department of Food Science and Technology)	DST,	17.67
19.	Improvement of livelihood and socio-economic status of tribal community in dry temperate zone of Himachal Pradesh through Oyster mushroom (PI: Dr R S Jarial, RHRSS, Tabo, Lahaul & Spiti)	DST,	17.63
20.	Dehydration and value addition of flowers and foliage for making floral craft (PI: Bharati Kashyap, Department of FLS)	DST,	15.94
21.	Production of virus tested planting stock of carnation, chrysanthemum and liliun (PI: Dr Puja Sharma, Department of FLS)	Ministry of Agriculture, GOI (through CPRI, Shimla/ICAR)	13.59
22.	Refinement for optimization of <i>in vitro</i> rooting and acclimatization of micropropagated plants of clonal rootstocks of stone fruits. (PI: Dr Rajinder Kaur, Department of Biotechnology)	Ministry of Agriculture, GOI (through CPRI, Shimla/ICAR)	12.70
23.	Adoption of meadow orchard plant geometry for ameliorating guava production in foothills of Himachal Pradesh. (PI: Dr A K Joshi, HRRS, Dhaulakuan)	Ministry of Agriculture, GOI (through CPRI, Shimla/ICAR)	12.67
24.	Developing ecofriendly strategies of nematode management in vegetable crops under protected cultivation and their dissemination. (PI: Dr Anju Sudhakar Khanna, Department of Entomology)	Ministry of Agriculture, GOI (through CPRI, Shimla/ICAR)	12.05
25.	Remapping of medicinal and aromatic plant niches and expansion of their cultivation under changing climate scenario in mid hill zone of Himachal Pradesh. (PI: Dr M K Brahmi, Department of Environmental Science)	Ministry of Agriculture, GOI (through CPRI, Shimla/ICAR)	11.99
26.	Standardization of production technology of exotic vegetables for their year round cultivation under mid hills of Himachal Pradesh. (PI: Dr Dharminder Kumar, Department of Vegetable Science)	Ministry of Agriculture, GOI (through CPRI, Shimla/ICAR)	11.95
27.	Climate change impact studies on commercial vegetable crop production in Himachal Pradesh. (PI: Dr Subhash Chander Verma, Department of Environmental Science)	Ministry of Agriculture, GOI (through CPRI, Shimla/ICAR)	11.95
28.	Rejuvenation of peach plantation in Rajgarh area of Sirmour district of HP. (PI: Dr Vishal Ran, Department of Fruit Science)	Ministry of Agriculture, GOI (through CPRI, Shimla/ICAR)	11.93
29.	Refinement and demonstration of technology for value addition of ginger grown in Solan and Sirmour districts of Himachal Pradesh. (PI: Dr Manisha Kaushal, Department of Food Science and Technology)	Ministry of Agriculture, GOI (through CPRI, Shimla/ICAR)	11.92
30.	Introduction and evaluation of new germplasm of edible-podded peas & standardization of agro-techniques for production and seed production in Himachal Pradesh (PI: Dr Ashok Kumar, Department of Seed Science and Technology)	Ministry of Agriculture, GOI (through CPRI, Shimla/ICAR)	11.91

31.	Evaluation of low cost storage technologies for enhancing quality and shelf- life of fruits grown in Kullu and Mandi districts of Himachal Pradesh. (PI: Dr Vishal Barwal, RHRSS, Bajaura)	Ministry of Agriculture, GOI (through CPRI, Shimla/ICAR)	11.86
32.	Development of fruit, vegetable and medicinal herbs based low calorie functional food products (PI: Dr Rakesh Sharma, Department of FST)	Ministry of Agriculture, GOI (through CPRI, Shimla/ICAR)	11.83
33.	Pomegranate bacterial blight (<i>Xanthomonas axonopodis</i> pv. <i>punicae</i>) and refinement of its management strategy. (PI: Dr R C Sharma, Directorate of Research)	Ministry of Agriculture, GOI (through CPRI, Shimla/ICAR)	11.58
34.	Refinement of technology by developing protocol for managing replant problem in apple (PI: Dr Pankaj Gupta, RHRSS, Mashobra)	Ministry of Agriculture, GOI (through CPRI, Shimla/ICAR)	11.40
35.	Development of F ₁ hybrids in hot-pepper (<i>Capsicum annum</i> , L) using genic male sterility. 1. Evolvement of inbred lines (PI: Dr. A. K. Joshi, HRS Dhaulakuan)	Mini-I	11.15
36.	Popularization and seed production of newly developed tomato variety through farmers' participation. (PI: Dr H R Sharma, KVK, Kandaghat)	Ministry of Agriculture, GOI (through CPRI, Shimla/ICAR)	9.63
37.	Establishment of DUS coordinating Centre for Orchids (PI: Dr SR Dhiman, Department of FLS)	PPVFRA,GOI	4.50 (annual grant)
38.	Refinement of integrated management technology of wooly apple aphid in dry temperate region of Kinnaur (PI: Dr Joginder Singh, RHRSS, Sharbo)	Project Director (ATMA), Reckong Peo, District Kinnaur (HP)	1.50
39.	Validation and promotion of fixed beehive for rearing indigenous honeybee (<i>Apis cerana</i>) in Kullu . (PI: Dr J P Sharma, Department of Entomology)	NABARD	1.05
40.	Mass multiplication of selected cultivars of chrysanthemum in Sirmour district (PI: Dr Priyanka Thakur, HRRS Dhaulakuan, Sirmour)	ATMA , Nahan	0.50

APPOINTMENTS

Sr.No.	Name and Office	Date
Professor/Equivalent		
1.	Dr AS Chandel, Students Welfare Officer (Re-employed for a period of six months with the approval of the BOM)	6.4.2013
2.	Dr MS Pathania, Librarian (Re-employed for a period of six months with the approval of the BOM)	17.5.2013
Ministerial/Administrative/Otherstaff		
1.	Sh Jitender Kumar, Field Asstt (contact basis) (Compassionate ground after obtaining the approval of the State Govt)	22.4.2013
2.	Sh Virender Kumar, Clerk (contact basis) (Compassionate ground after obtaining the approval of the State Govt)	22.4.2013
3.	Sh Balak Ram, Jr Scale Stenographer	17.10.2013
4.	Smt Lata Kumari, Clerk	1.11.2013

AWARENESS OF STUDENTS THROUGH WORKSHOP

In order to create awareness on climate change aspect, a group of forty undergraduate (BSc Forestry

and Horticulture) and post graduate students of the department of Environmental Science attended one day workshop on 'Understanding Climate Change' organized by Indian Institute of Science, Bangalore and State Centre on Climate Change, State Council for Science, Technology and Environment, Himachal Pradesh, Shimla on 15 November 2013 at Gaiety Theatre, the Mall, Shimla. The workshop was sponsored by department of Science and Technology, GOI, New Delhi.

SELECTION OF UNIVERSITY STUDENTS

A total number of 16 students of this university were selected by different agencies such as Adani India Ltd, Bayer (I) Ltd, Savannah Seeds, HDFC, BASF Ltd, Insight Development Agency, Axis Bank, NARM, ICICI Bank, Mahindera and Mahindra, MART, Torrent Pharma and MS Services Pvt Ltd at various positions.

PROMOTIONS

Sr. No.	Name of the Employees	Date of Promotion
Professor/Equivalent (Date of issue of orders 15.9.2012)		
1	Dr SVS Chaudhary, Sr Scientist (FLS)	01.01.2009
2	Dr BP Sharma, Sr Scientist (FLS)	01.01.2009
4	Dr SR Dhiman, Sr Scientist (FLS)	13.12.2011
5	Dr JS Wazir, Sr Scientist (FLS)	30.03.2012
Ministerial/Administrative/Other staff		
1.	Sh PC Jogi, Assistant Registrar	23.01.2013
2.	Sh Arun Kumar Lamba, Assistant Registrar	24.01.2013
3.	Sh Amar Singh Thakur, Assistant Registrar	31.10.2013
4.	Sh ID Sharma, Assistant Registrar	01.11.2013
5.	Sh Padam Singh Chandel, Section Officer	06.12.2013
6.	Sh Rishi Ram Verma, Section Officer	06.12.2013
7.	Sh Jaswant Singh, Section Officer	06.12.2013
8.	Sh BS Sharma, Section Officer	06.12.2013
9.	Sh Purushotam Chand Dogra, Private Secretary	06.12.2013
10.	Sh Ram Swaroop, Personal Assistant	06.12.2013
11.	Sh Dev Brat Negi, Section Officer	07.12.2013
12.	Sh Lila Dutt Sharma, Superintendent	10.12.2013
13.	Sh Goverdhan Singh, Superintendent	10.12.2013
14.	Sh Shyam Lal Verma, Superintendent	10.12.2013
15.	Sh Parveen Negi, Superintendent	10.12.2013
16.	Sh RC Sharma, Superintendent	11.12.2013
17.	Sh Ram Krishan Tegra, Superintendent	11.12.2013
18.	Sh Vinod Kumar Rana, Sr Scale Stenographer	23.12.2013

ADMISSION OF STUDENTS

Degree programme	College of Horticulture	College of Forestry	Institute of Biotechnology and Environmental Science, Neri, Hamirpur
BSc (Hons)	72	57	58
BSc (Hons), Biotech			32
MSc	65	44	
MBA (Agri Business)	03	-	-
MBA	37	-	-
Total	177	101	90

STUDENTS COMPLETED DEGREES

Degree programme	College of Horticulture	College of Forestry
BSc (Hons), Hort	58	43
MSc	44	36
PhD	14	05
Total	169	84

SUPERANNUATIONS

Sr. No.	Name and Office	Date
Professor/Equivalent		
1.	Dr AS Chandel, Students Welfare Officer	31.3.2013
2.	Dr MS Pathania, Librarian	30.4.2013
3.	Dr SV Bhardwaj, Professor and Head	30.4.2013
4.	Bhardwaj, Professor and Head	30.4.2013
5.	Dr Rajan Bawa, Sr Scientist	31.5.2013
6.	Ms Romila Bali, Associate Professor	31.5.2013
7.	Dr JN Raina, Professor and Head	31.8.2013
Ministerial/Administrative/Other staff		
1.	Sh YS Verma, Assistant Registrar	31.1.2013
2.	Sh Uttam Chand Sharma, Superintendent	31.1.2013
3.	Sh Surjeet Singh, Gatekeeper	31.1.2013
4.	Sh Dutt, Beldar	31.1.2013
5.	Sh TR Dwivedi, Section Officer	28.2.2013
6.	Sh Lekh Ram, Junior Assistant	28.2.2013
7.	Sh AK Lamba, Section Officer	31.3.2013
8.	Sh TR Gautam, Section Officer	31.3.2013
9.	Sh Mani Ram, Junior Assistant	31.3.2013
10.	Sh Jagdish Chand, Security Supervisor	31.3.2013
11.	Sh Mangat Singh, Technial Assistant Gr-I (F)	31.5.2013
12.	Sh Salig Ram, Jr Technician	30.6.2013
13.	Sh Singh, Library Cleaner	30.6.2013
14.	Sh Bishan Dutt, Beldar	30.6.2013
15.	Sh Charan Singh, Sr Technial Assistant Gr-I	31.7.2013
16.	Sh Amar Singh, Beldar	31.7.2013
17.	Sh Jia Lal Sharma, Section Officer	30.9.2013
18.	Sh Jai Dev Sharma, Beldar	30.9.2013
19.	Sh Rajender Singh Guleria, Library Cleaner	30.9.2013
20.	Sh AS Thakur, Assistant Registrar	31.10.2013
21.	Sh GS Kanwar, Assistant Registrar	30.11.2013
22.	Sh Ramesh Kumar Sood, Private Secretary	30.11.2013
23.	Smt Vidya Devi, Beldar	30.11.2013
24.	Shiv Charan, Pump Operator	31.12.2013

STUDENTS ACTIVITIES

Election to the Central Students' Association : The elections to the CSA of this university for the academic session, 2013-14 were conducted on 4 September 2013. The Independent Students Union (ISU) won all the four seats. Ms Raveena Negi, Mr Pushp Raj, Mr Ankush Bhaik, Mr Harsh Vardhan Singh were elected President, Vice-President, General Secretary and Joint Secretary-cum-Treasurer, respectively.

North Zone Inter Varsity Kabbadi (Women) Championship: The North Zone Inter Varsity Kabbadi (Women) Championship 2013-14 was organized from 16-19 November 2013 at the university campus in

which 250 women players of 20 universities of the country participated. Dr Vijay Singh Thakur, Vice Chancellor, UHF, Nauni was the chief guest of the closing ceremony who gave away the trophies to the winners. CCS University, Meerut was the winner of the championship while MDU, Rohtak was runner-up.. Punjab University, Chandigarh and Kurukshetra University, Kurukshetra got third and fourth position, respectively.

All India Inter Varsity Kabbadi (Women) Championship: All India Inter Varsity Kabbadi (women) Championship was held at the university campus wef 26 November to 1 December 2013. In all 204 players from 17 universities of the country took part in the event. Sh Suresh Nagta, Vice President of



Shimla District Sports Cultural and Environment Association and the General Secretary of Shimla District Congress Committee (Rural) was the chief guest of inaugural ceremony. The closing function was held on 1 December 2013 and Smt Vidya Stokes, Minister of IPH and Horticulture was the chief guest who awarded the prizes to the winners. The winner of



the tournament was Punjab University, Chandigarh while CCS University, Meerut was runner-up. The third and fourth position was bagged by MDU, Rohtak and Krishana University, respectively.

North Zone Inter Varsity Volley Ball (Men) Championship: University at the main campus conducted North Zone Inter Varsity Volley Ball (Men) Championship wef 18-22 December 2013 in which 300 players from 23 universities of the country participated. The prizes to the winners were distributed by Dr JP Sharma, Dean, College of Horticulture who was the chief guest of closing ceremony on 22 December 2013.



The winner and runner up of the tournament Kurukshetra University, Kurukshetra and Himachal Pradesh University, Shimla, respectively. Punjab University, Chandigarh got third position while Punjabi University, Patiala stood at fourth position.

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Vice Chancellor

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