ICAR

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NRCAF

National Research Centre for Agroforestry, Jhansi

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CONGRATULATIONS

Dr. Panjab Singh
Secretary, DARE, Government of India &
Director General, Indian Council of Agricultural Research(ICAR),
Krishi Bhawan, New Delhi

Dr.Panjab Singh, a renowned agriculture Scientist and Director, IARI, has taken over the new assignment as Secretary, DARE, Government of India and Director General of the Indian Council of Agricultural Research, Krishi Bhawan, New Delhi on 4th October, 2001.

Dr. Singh had worked as Assistant Director General (NARP),ICAR, New Delhi (1979-86) Director, Indian Grassland and Fodder Research Institute (IGFRI), Jhansi (1986-94), Joint Director (Research) at the Indian Agricultural Research Institute (IARI), New Delhi (1995-1997) , till joining the Jawaharlal Nehru Krishi Vishv Vidhyalaya (JNKVV), Jabalpur (1997-2000) as its Vice Chancellor in April, 1997. Then he became Director, IARI, New Delhi (April, 2000 to October,2001).

He was the FAO Regional Coordinator, Temperate Asia Pasture and Fodder (TAPAFON) working group. He also worked as FAO's Regional Plant Production and Protection Officer at Bangkok (Thailand). He has been a member of a number of scientific and professional societies and consultant to the World Bank, FAO, IDRC, ADB, etc.

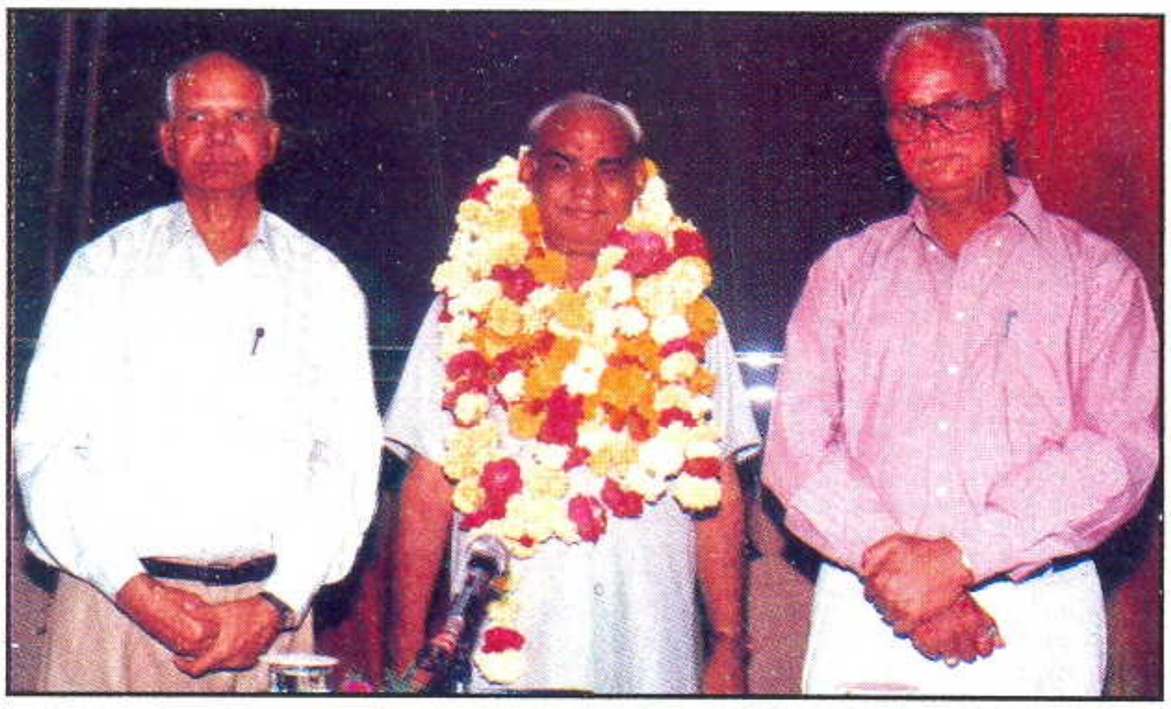
He is also the recipient of a number of awards like Krishak Bharati Barani Kheti Award, National Productivity Council Award, Rishabh Shree Award, Ram Nath Singh Award, ISA Gold Medal and Certificate for outstanding achievement in the field of agronomy.

Dr. Singh has more than 250 publications to his credit.

Director and all the staff members of the Centre wish him all the success in his new endeavor.

CONGRATULATIONS

Dr. K. R. Solanki
Assistant Director General(Agroforestry)
Indian Council of Agricultural Research
Krishi Bhawan, New Delhi



Dr. K. R. Solanki,a noted agriculture Scientist and Director, NRCAF (1996-2001), has taken over as Assistant Director General (Agroforestry), the new assignment at Indian Council of Agricultural Research, Krishi Bhawan, New Delhi on 12 November, 2001.Prior to his joining at the ICAR he served as Botanist and Forage breeder in Haryana Agricultural University, Hisar. He has also worked as Head of Division ,Perennial Cropping System, Central Arid Zone Research Institute, Jodhpur. Dr. Solanki is not only a renowned Scientist but also a good teacher. Six research scholars have received Ph.D.degree under his ableguidance. Dr. Solanki has visited Switzerland, U.K., West Germany, Kenya Sudan Burkina Faso,Italy, Bangkok and Egypton academic missions .

He has made significant contribution in the area of agroforestry as Director of the Centre.Dr. Solanki is a recipient of the prestigious ICAR Award for Team Research on Tree Improvement as a Team leader during 1991-92. He jointly received Dr .Rajendra Prasad Award for the book entitled "Krishivaniki Ke Sidhant,Mahatwa avam Upyogita"for original writing in Hindi.

Dr. Solanki is a well Known Plant Breeder and has a number of research papers, articles, technical bulletins and books to his credit.

Achievements

The Centre got 3rd prize in the Agriculture Exhibition and Animal Fair held at Jhansi on the occasion of Kisan Samman Diwas -2001. About 60 organisations participated in the exhibition. It was organized during 23-24 December, 2001 in the memory of Lt. Ch. Charan Singh, Hon. Ex-Prime Minister of India .

Visits Abroad

★ Dr. K.R.Solanki,Director of the Centre visited Egypt for a study in the field of agroforestry under the work plan between the ICAR and Agricultural Research Centre (ARC), Ministry of Agriculture and Land Reclamation, Govt. of Arab Republic of Egypt during 14-19 July, 2001.

★ Dr. A. Datta, Tech. Officer of the Centre attended a training programme (4-6 October, 2001)on High Performance Liquid Chrometography(HPLC) and class Vp Softwareorganised by Shimadzu Asia Pacific Pte. Ltd., Singapore at Shimatzu Customer Support Centre, Science Park Drive, Singapore.

From Director's Desk

One of the fundamental inputs for efficient resource management is to have comprehensive information on the extent, nature and properties of various natural resources and their utilization for sustainable food security for growing population of the country. In India, many organisations have proved their excellence in collection, interpretation and utilization of databases in their respective field of operation. However, data are rarely available at one source, and the scattered mode of data is a bottleneck in data accessability to many real users. The development of an integrated information system and warehouse (non-spatial, spatial and bibliographic) in the field of agricultural research and education thus, was a long felt need. This information system will be extensively used with an ultimate objective of enhancing the agricultural production and productivity for better quality of life of the farming community and society at large.

The major objective of the agroforestry database development programme at NRCAF, Jhansi is to design and develop database on agroforestry covering the detailed information on multipurpose tree species used in agroforestry in India along with the various crops being taken as intercrops with those trees in a temporal and spatial framework.

(P.Rai)

Annual Group Meeting-All India Coordinated Research Project on Agroforestry (AICRPAF)

The Annual Group Meeting of All India Coordinated Research Project on Agroforestry was organised by Dr. K.R. Solanki, Project Coordinator, AICRPAF cum Director, NRCAF Jhansi. The meeting was held at Punjab Agricultural University, Ludhiana from 30th June to 2nd July, 2001. Dr. J.S. Samra, DDG (NRM), ICAR, New Delhi was the Chief Guest and Dr. M.S. Bajwa, Director of Research, PAU, Ludhiana presided over the group meeting. Dr. D .K. Paul, ADG (AF), ICAR and about 100 delegates including officers-in-charge of all the coordinating centres and Principal Investigators of adhoc research schemes under AP Cess Fund (Agroforestry), attended the group meeting. Dr. K.S. Dadhwal, Pr. Scientist, Dr. A.K. Handa, Scientist and Sh.C.Siva dasan

from project coordinating unit, NRCAF, Jhansi attended the meeting.

Dr. K. R. Solanki, Project Coordinator AICRPAF and Director, NRCAF, Jhansi presented the coordinator's report for the last year and highlighted the research achievements of the project. Dr. M.S. Bajwa in his presidential address stressed upon the fact that there is an urgent need to develop the seed and planting material as an industry. The credibility of the seed and planting material supplier is an important factor for the success of agroforestry systems.To compete internationally we have to decrease the cost of production and increase the efficiency. According to him we have to exploit the farmer's innovations and identify them for sustaining the systems.

The chief guest Dr. J.S. Samra, DDG (NRM) informed the gathering that the most important issue before us is diversification of production systems. As we all are aware that procurement system in agriculture has been decentralized. The poplar based agroforestry system is one alternative by which we can diversify our production and also reduce the import bill of wood and wood products. Bamboo is an important component of the vegetation of whole of the Shivaliks and North-eastern India. It is very good soil conservation species. It is an important component of pulp and paper in dustry. A bamboo based system starts to give returns within 5-6 years. He emphasised the need to start work on bamboo based systems.

There is a need to focus on the nutrient cycling in the system. Now we have to shift from production to environmental issues. Time has come to re-prioritize our needs. There should be system approach and multi-disciplinary programme. We have to study how the organic carbon status is behaved under agroforestry systems. The issues of green house gas production and carbon sequestration are on the international agenda of environmentalists. It is reported that about 35m tonnes of rice and wheat residue is burnt in India every year. This liberates million tonnes of carbodioxide. It

must be sequestered. The scope for carbon sequestration through agroforestry is unlimited. If there is diversification from rice-wheat to agroforestry, it will result in carbon sequestration. Agroforesty should be a pioneer and take lead in this field of research.

Agroforestry research is very difficult to conduct due to its perennial nature. Market trends may change by the time tree component reaches harvesting stage. There is need for more competence and more resources are required. It varies from situation to situation and is site specific. It can not be uniform throughout the country. We have to work that much harder to achieve these goals. There were five technical sessions namely, presentation of results by the AICRPAF centres (two sessions), presentation of results of AP Cess fund schemes, technical programme finalization and plenary session. The Plenary session was chaired by Dr. M.S. Bajwa. Proceedings of all the technical sessions along with some broad recommendations were presented by rapporteurs of the respective sessions. The house unanimously accepted the proceedings / recommendations. The major recommendations of the Annual group Meeting are :

* To avoid duplication of work with ICFRE, Dehradun, no tree improvement work will be undertaken by any centre for *Tectona grandis* and *Dalbergia sissoo*. ICFRE is having better resources to work on these species. However, these two species can be studied under agroforestry management systems.

* The three main projects under the AICRPAF will be
  -MPTS Evaluation / Tree Improvement
  -Agroforestry Management Systems
  -On Farm Research on watershed basis

* All centres should intensify work on mandatory species allotted to them and all aspects of those species should be worked out in order to establish their leadership for those species.

* All the centres should undertake soil studies and report the data.

* Production of quality seed and planting material of promising and identified tree species needs to be done on priority. Techniques need to be standardized for asexual propagation of trees suitable for agroforestry.

* There is need to initiate new experiments on nutrient cycling, carbon sequestration, organic matter addition, bio-drainage and soil fertility improvement in relation to agroforestry.

* Next year all the centres shall bring atleast one innovative technique being practiced by the farmers in their region in relation to agroforestry.

(K.R. Solanki, A.K. Handa and Uma)

Agroforestry Database Development Programme -Requirement Analysis Workshop NATP -INARIS project

The Requirement Analysis Workshop of the Agroforestry Database Development Programme under the NATP (National Agricultural Technology Project) sponsored INARIS (Integrated National Agricultural Resources Information System) project was organised by Dr.Ajit,Cooperating Centre Principal Investigator at National Research Centre for Agroforestry, Jhansi during 4-6 September, 2001.Dr.K.R. Solanki,Director, NRCAF, Jhansi presided over the function and Dr.P.S.Pathak, Director, IGFRI, Jhansi was the Chief Guest in the Inaugural Function of the Workshop. The Workshop was attended by distinguished scientists and delegates in the field of agroforestry throughout the country namely Dr. Sunil Puri, Professor and Head-Department of Forestry and Agroforestry, IGAU, Raipur; Dr. V.K.Mishra, Professor and Head-Department of Forestry and Agroforestry, YSPUH&F, Solan; Dr.S.K.Dhyani, PS & Head, CSWCR & TI, Dehradun; Dr.M. Osmaan, PS& OIC (Agroforestry), CRIDA, Hyderabad; Dr. P.Rai, PS, NRCAF, Jhansi, Dr. V.K.Gupta, PS, NRCAF, Jhansi; Dr.

N.P.Melkania, Project Coordinator-Forage Crops, IGFRI, Jhansi; Dr.Gurbachan Singh, PS& Head, IGFRI, Jhansi; Dr. M.M.Roy, PS& Head, IGFRI, Jhansi, and other scientists of NRCAF and IGFRI. The Agroforestry Database Development Programme under INARIS project at NRCAF, Jhansi envisages to develop comprehensive National, Agroforestry Database using secondary/ published information. The prime objective of the Workshop was to finalize the databases to be developed in the field of agroforestry and their field (items), data structure, data availability, data sources and data gaps etc.

Major critical gaps identified:

* No systematic approach has been adopted to generate, collate and correlate data on agroforestry systems.
* Little efforts have been made to study the interactive results of the components in agroforestry systems.
* Sporadic and scattered information may not be in a position to give holistic views on agroforestry systems in India .
* No modern information system i.e warehouse is in vouge on agroforestry systems.
* Accessibility to data sources is not appreciable and proper and precise information is not available about the nature and kind of data being generated by various agencies.

Hence it was decided in the workshop that five separate databases as mentioned below should be developed under the umbrella of comprehensive Agroforestry BASE.

a) Agroforestry Research Projects database
b) Agroforestry MPTS database
c) Agroforestry Production System database
d) Agroforestry Potential Transferrable Tech-nologies database
e) Agroforestry Economic Analysis database

Research Project Database

This database will contain information on the research projects being currently undertaken or concluded under ICAR Institutes/ NRC's , Agricultural Universities, AP Cess Fund Scheme of ICAR, and projects funded by other agencies. The discussions in the workshop led to consider the following fields in research project database : Project type, Project title, Objectives, Year of start, Duration, Name of PI and associates, Contact address, Salient research findings, Other information, Location, Funding agency, Tree crop associates.

Agroforestry MPTS database

This database will contain comprehensive information on the MPTS (Multipurpose Tree Species and Shrubs) being utilized in agroforestry systems. ICRAF's existing bibliographic (http://www.icraf.cgiar.org/treessd/AFT/AFT.htm) was taken as the base primary document and the improvements /modifications / additions that emerged out of the discussions in the workshop led to consider the following fields in MPTS database: Botanical name, Common names, Family Provenances/ clones/ecotypes/varieties sources, Geographical distribution (Latitude, Longitude, Altitude), Climate (Rainfall, temperature, Humidity, Agroclimatic zone), Soil (Geographic strata, Soil type, Soil fertility, Topography), Propagation (Seed, Vegetative parts, Seed and vegetative parts), Regeneration (Natural, Artificial), Nursery management, Seed (sowing time,method, spacing), Vegetative parts (planting time and method), Fertilizer, Plant protection, Seed Technology (Seed pre treatment, Viability, Storage, Dormancy, Ripening), Phenology (Leaves,Flowers, Fruits), Growth (Height, DBH, Volume, Crown), Functional uses (Fuel, Fodder, Timber, Medicinal value, Soil improver, Oil, Gum/resin, Crude protein, Tannins, Toxic, Crude fibre) ,Management (Pruning, Lopping, Pollarding, Coppicing), Planting Technique (Planting method, Spacing, Cultural practices), Pests and diseases, Rotation and productivity-tonnes/ha/yr (Rotation cycle, Fuel, Fodder, Fruit, Timber (m^3/ha/year), Biomass, Productivity, Other), Environmental benefits, Compatible Associate/ Systems (Crops, Grasses, Legumes, Shrubs), Root distribution (Lateral, Vertical), Image of tree (photograph) and / or line diagram, Organizations engaged in research and development, Bibliography.

Agroforestry Production System Database

This database will contain information on the growth and production data of tree as well as crop as reported by the researchers in various journals, newsletters, reports, books etc. The house decided to have the following fields in the Production System database: species identity(Botanical name, Common names), Site-spatial information (Experimental location, Latitude, Longitude, Altitude), Site's Physico Edaphic chracteristics, AF system (Agrisilvi, Agrihorti, silvipasture etc.), Agroclimatic zone, Rainfall, Minimum and maximum Temperature, Soil characteristics (pH, drainage, texture, structure), Tree data (Planting pattern (boundary, block, bund, inside the field), Tree spacing density, Survival %, Irrigated/Rainfed, Tree management techniques (pollarding, pruning, coppicing, lopping), If pruning (% of pruning, pruned biomass), Fibre yield/Fruit yield, Tree age, Height, MAI of height, DBH, MAI of DBH, Volume, Tree pest and diseases) Associated species data -Tree age wise Broad category (crop or grass) of commodity, Cropping season, Crop's pest and disease, Irrigated/Rainfed, Crop yield (tree age wise) agroforestry system (tree+crop), Crop yield (control) i.e only crop, % enhancement/reduction in crop yield over

control, Tree age, Tree height, MAI of height, DBH, MAI of DBH), Other information (Expected biological/economic returns, Soil amelioration, Miscellaneous information) , Bibliography (References).

Transferrable Agroforestry Technology Database

This database will contain information on the tranferrable agroforestry technologies developed so far by the NRCAF, ICAR Institutes, Agricultural Universities and Centres of All India Coordinated Research Project on Agroforestry. The house was of the opinion to consider the following fields for Transferable Technologies database: About site and climate (suitability), Technology details, Whether tested on farms, If tested -then the extent of testing, Drawbacks of the technology, if any, Attempts made to remove the drawbacks, Any other information, Bibliography.

Agroforestry Economic Analysis Database

This database will contain information on economic returns from case studies of some prevalent agroforestry systems. The house decided to have the following fields in this database: project specifications (zone, AF system, situation, tree species, intercrop), analysis (benefit cost ratio,IRR), NPV (NPV DF , NPV expenditure, NPV benefit), Assumptions of the analysis (number of trees per hectare, yield per tree, sale price per kg of tree yield, income per tree, yield per hectare of crop1/ grass, sale price of crop 1 / grass, yield per hectare of crop1/ grass, sale price of crop2/ grass,'1rotation, Input Output analysis (year, tree expenditure, combination 1 expenditure, combination2 expenditure, tree benefit, cropl benefit, crop2 benefit).

(Ajit and A. K. Handa)

Zonal Sports

A contingent of 28 players participated in ICAR Zonal Sports Meet (Zone IV) held at CIRB,Hissar during 3-7 November, 2001 and Sh. Attar Singh got first prize in the Cycle Race.

Human Resource Development

Dr. P. Rai, Principal Investigator, RNPS-3(NATP),Dr. K. Kareemulla, Sr. Scientist and Er. Ramesh Singh, Scientist particiated in the interactive meeting of RNPS-3(NATP) at regional station,CSWCR&TI, Koraput (Orissa).

Sh. Veer Singh Pal, Jr.Clerk of the Centre participated in the Hindi Workshop from 19.11.2001 to 23.11.2001 organised by Central Hindi Training Institute (Ministry of Home Affairs,Department of Official Language), New Delhi.

A training programme on MS-Word and MS-Excel was organised during 13-21, Aug, 01 Sh.U.P. Singh, Sh.S.P.S.Chauhan Sh. S.S. Gajbhiye and Sh. Rajendra Singh, Technical officers of the Centre participated.

New Project/schemes/programmes Initiated

ICAR sponsored AP Cess fund Adhoc scheme "An Economic Diagnosis of Agroforestry in Western Uttar Praesh"was started from 1st December,2001 at the Centre. Dr. K. Kareemulla, Sr. Scientist is the P.I. of the project. The project aims to study the cost-benefit and socio- economic impact of prevalent agroforestry systems in Western Uttar Pradesh.

Transfer

- Dr. K. R. Solanki, Director of the Centre joined as ADG(AF), ICAR, at New Delhi.
- Dr. K. S. Dadhwal, Pr. Scientist of the Centre joined as Head of Division (Soil Science & Agronomy) at CSWCR&TI, Dehradun.

Promotions

- Dr. Rajeev Tiwari and Sh. C. K. Bajpai, Technical Officers (T-5) were promoted to the post of Technical Officer (T -6) .Sh. Rajesh Srivastva, Sr. Technical Assistant (T -4)was promoted to the post of Technical Officer (T-5).

राजभाषा हिन्दी सप्ताह
(14–20 सितम्बर, 2001)

राष्ट्रीय कृषिवानिकी अनुसंधान केन्द्र, झाँसी द्वारा दिनांक 14.9.2001 को राजभाषा हिन्दी के उपलक्ष्य में हिन्दी सप्ताह का विधिवत शुभारम्भ किया गया । इस कार्यक्रम के मुख्य अतिथि डा0 प्रेम शंकर पाठक, निदेशक भारतीय चारागाह एवं चारा अनुसंधान संस्थान, झाँसी थे। कार्यक्रम की अध्यक्षता डा. खीमराज सोलंकी, निदेशक, राष्ट्रीय कृषिवानिकी अनुसंधान केन्द्र, झाँसी ने की। इस अवसर पर केन्द्र के सभी वैज्ञानिक, अधिकारी एवं कर्मचारियों ने भाग लिया। सर्वप्रथम सभी अधिकारियों एवं कर्मचारियों ने सरकारी कामकाज में हिन्दी को बढ़ावा देने के लिये अधिक से अधिक काम हिन्दी में करने की शपथ ली । डा0 राम नेवाज, प्रभारी अधिकारी हिन्दी ने राजभाषा कार्यान्वयन के कार्यक्रम के रूप एवं सीमाओं पर प्रकाश डालते हुये सभी का स्वागत किया। प्रभारी अधिकारी हिन्दी ने केन्द्र में हिन्दी के कार्यो की प्रगति की संक्षिप्त जानकारी दी और भारत सरकार के मानदण्डो को दोहराया ।

केन्द्र के वरिष्ठ वैज्ञानिक डा. के. करीमूल्ला ने भाषा की शुद्धता और सतत प्रयोग की आवश्यकता पर बल दिया और कहा कि राजभाषा के स्थान पर राष्ट्र भाषा के नाम से पुकारा जाना चाहिये। सहायक वित्त एवं लेखाधिकारी श्री राम बाबू शर्मा ने सहज और सरल प्रयोग के साथ कृषकों को समझायी जा सकने वाली भाषा बोलने की आदत डालने एवं दैनिक प्रयोग वाली हिन्दी बोलने का आह्वान किया।

अपने अध्यक्षीय भाषण में निदेशक डा0 खीम राज सोलंकी ने भारत सरकार के आदेशों को अनुपालन में केन्द्र के सभी अधिकारी एवं कर्मचारियों को हिन्दी भाषा के दैनिक प्रयोग हेतु आग्रह एवं आदेश दिया कि वे अधिक से अधिक काम हिन्दी में करें। इसी प्रकार मुख्य अतिथि डा0 प्रेम शंकर पाठक ने कहा कि कृषि तकनीकी को किसानों तक पहुँचाने के लिए हिन्दी ही एक सरल भाषा है जिसके द्वारा किसानों तक कृषि तकनीक को पहुँचाया जा सकता है और ये भाषा ऐसी होनी चाहिये कि जो किसानों को अच्छी लगे और पत्र पत्रिकाओं में ऐसे हिन्दी के लेख दिये जाये जो किसान रूचि पूर्वक पढे।

हिन्दी सप्ताह के दौरान वैज्ञानिकों ने अपने शोध अनुभव किये तथा केन्द्र के वैज्ञानिकों को विभिन्न फल वृक्षों व वानिकी वृक्षों की वानस्पतिक संवर्धन के बारे में प्रशिक्षण भी हिन्दी में दिया गया।

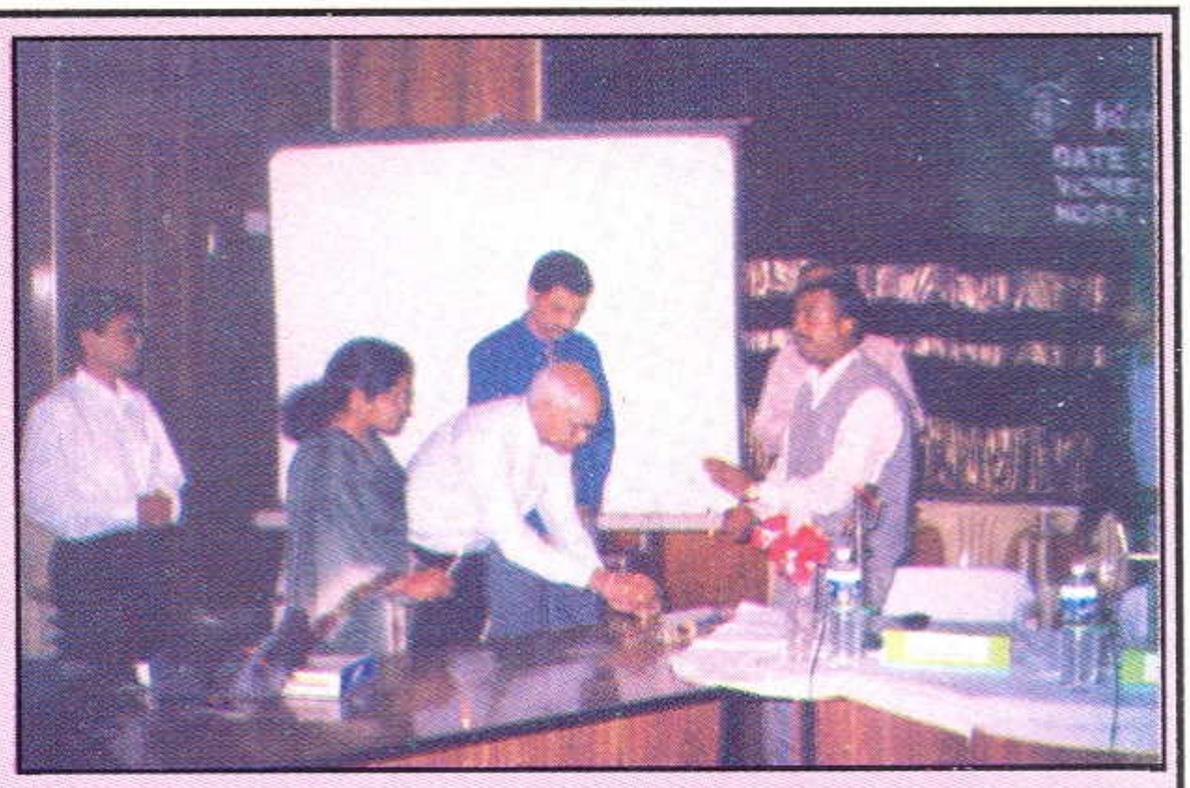
इसी क्रम में केन्द्र के तकनीकी अधिकारियों द्वारा किये गये शोध अनुभवों को हिन्दी में प्रस्तुत किया गया तथा सरकारी कामकाज में हिन्दी को बढ़ावा देने के उपायों पर विचार किया गया । इसी क्रम में केन्द्र के विभिन्न वैज्ञानिकों द्वारा कृषिवानिकी तकनीक को किसानों तक पहुँचाने के लिये हिन्दी में पत्र–पत्रिकाओं को विकसित करने पर बल दिया जिससे किसानों की कृषिवानिकी तकनीकी की जानकारी दी जा सके। इस प्रकार सभी वैज्ञानिकों का यह मानना है कि हिन्दी ही एक ऐसी सशक्त माध्यम है जिसके द्वारा तकनीकी का प्रचार एवं प्रसार किया जा सकता है।

Retirement

Sh. Nathu Ram,
S.S. Gr. II, of the Centre
retired on 31.08.2001

Interactive Meeting of RNPS - 3 (NATP)

An interactive meeting of the centres involved in the NATP project on "Developing Live fencing for Soil and Water conservation , Crop diversification and sustaining productivity in Rainfed Region" was held at CSWCR & TI, Regional Station, Koraput, Orissa during 20-22 November 2001. Twenty scientists from all the eight centres participated in the meeting. Half yearly reports were presented by PI/CCPIS of the centres. The major issuesand suggestion of the meeting were as follows :



- Data on biofence root spread (horizontal and vertical) must be reposted, besides the root shoot ratio.
- The next Interactive meeting will be held at Rahuri, Maharashtra in October - November, 2002.

Visitors: -

- Dr. Mangla Rai, DDG (Crop Science), ICAR, Krishi Bhawan, New Delhi.
- Dr. Rakesh Yamdagni, Vice Chancellor, NDUAT, Kumar Ganj, Faizabad (U.P.).
- Dr. V.K. Mishra, Professor and Head, Department of Forestry and Silviculture, Dr. Y.S. Parmar University of Forestry & Horticulture, Solan (H.P.).
- Dr. Sunil Puri, Professor & Head, Department of Forestry, Indira Gandhi Krishi Vishvavidyalaya,Raipur (M.P.).
- Dr. S.K. Dhyani, Pr. Scientist & Head, Department of Economic Botany, CSWCR&TI, Dehradun (Uttaranchal).
- Dr. M. Osmaan, Pr. Scientist, CRIDA, Hyderabad (A.P.).
- Dr. Anil Rai, Sr. Scientist, IASRI, Pusa, New Delhi.
- Dr. P. K. Batra, Pr. Scientist IASRI, Pusa, New Delhi.
- Dr. V. K. Jain, Sr. Scientist, IASRI, Pusa, New Delhi.

- Dr. V.K. Gupta, Pr. Scientist & Head, Division of Designs of Experiment, IASRI, Pusa, New Delhi.
- Dr. R. S. Dhanda, Professor, Department of Forestry &Natural Resources, PAU, Ludhiana (Punjab).
- Dr. M. S. Hooda, Professor of Forestry, HAU, Hissar.
- Dr. V. P. Singh, Ex. Director of Research, HAU, Hissar.
- Dr. P. N. Mathur ,16-B ,Pocket-AN,DDA Flats, Shalimar Bagh, New Delhi.
- Dr. B. L. Sharma, Dean, College of Agriculture, RAU, Bikaner (Raj.).
- Dr. N. L. Joshi, Head, Regional Research Station of CAZRI , Pali (Raj.).
- Dr. A. S. Arya, D-219, Sector 55, Noida (U.P.).
- Dr. O.P. Pareek, Ex. Director, NRC on Arid Horticulture,Bikanare (Raj.) .
- Dr. A. K. Srivastava, Director of Research, Rajendra Agriculture University, Pusa (Bihar).
- Dr. A. N. Lahri, Ex. Head of Division, CAZRI, Jodhpur (Raj.) .
- Dr. A. K. Sharma, Officer In Charge, Regional Research Station of CSWCR&TI, Datia (M.P.) .
- Dr. B.R.Bhumbla, Ex.DDG(Soil Science &Agronomy),ICAR, Krishi Bhawan, New Delhi .
- Prof. Dinesh Marotia, Prof. & Head, Department of Agriculture & Natural Resource Economics, IGKV, Raipur (M.P.).
- Sh. P .C.Little, Ex. Director, Rashtriya Lalit Kala Kendra, Lucknow(U.P.).
- Smt. Stuti Kakar, lAS, Commissioner, Jhansi (U.P.).
- Dr. B. S. Dhilon, Director, NBPGR, New Delhi.
- Dr. Masood Ali, Director, IIPR, New Delhi.
- Dr. P. S. Pathak, Director, IGFRI, Jhansi (U.P.) .
- Dr. Suresh Kumar Billore, Professor, Institute of Environment Management & Plant Sciences, Vikram University, Ujjain (M.P.).
- Sh. U.B.S. Sengar, Programme Co-ordinator, Institute of Entrepreneurship Development U.P., Sarojni Nagar, Lucknow (U.P.).

CONGRATULATIONS

Dr. P. Rai

Acting Director, NRCAF, Jhansi

Dr. P. Rai received M. Sc. degree from Gujarat Agricultural University, Anand and Ph.D. degree from Jiwaji University, Gwalior.

He entered into ICAR stream at Indian Grassland and Fodder Research Institute (IGFRI), Jhansi in 1966. He worked for 23 years at IGFRI, Jhansi in different capacities. Thereafter, Dr. P. Rai joined National Research Centre for Agroforestry (NRCAF), Jhansi in 1989 as Principal Scientist. Dr. Rai is a well known figure in the field of agroforestry research with particular reference to silvipasture. , Dr. Rai took over the new assignment of Acting Director NRCAF, Jhansi w.e.f. 12 November, 2001.

Dr. Rai is associated with various professional societies and is on the Editorial Board of many journals. He has visited many countries viz. Pakistan, China and UK.

Dr. Rai has published more than 150 research papers and 4 books/bulletins and has more than 90 popular articles, abstracts etc. to his credit.

All the staff members of NRCAF congratulate him on occupying this position.

Training on budding on Desi Ber

A two days training programme (17-18 July, 2001) on budding of Desi Ber was conducted at village Bamer in Babina block of Jhansi District ,in which 33 farmers and village youth participated.

Supervision and Guidance : Dr. P. Rai, Director (Acting), NRCAF, Jhansi.

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K. Kareemulla	**Director**	**Veer Bundelkhand Press**
Ajit	N.R.C.A.F.,Jhansi	178, Gusain Pura
A.K. Handa	Ph.:+91-(0517)-448214	Jhansi - 284002
Rajeev Tiwari	Fax : +91-(0517)-442364	Ph.:+91-(0517)-440931
	E.mail : nrcaf@hub1.nic.in	E.mail : veer_178@yahoo.com