



18. Partnership and Linkages

The International Co-operation in DARE/ICAR has been operating through the Memoranda of Understandings (MoUs)/Work Plans signed by the ICAR/DARE as the Nodal Department with various countries/International organizations, and through participation of DARE/ICAR in the MoUs/Work Plans signed by the Department of Agriculture and Cooperation as the Nodal Department. Besides, Ministry of Science and Technology has developed Programme of co-operation with various countries and international organizations in which DARE/ICAR is the participating agency in agricultural research. The Joint Commissions/Working Groups constituted by Ministry of External Affairs and Ministry of Commerce have component of agriculture/agricultural research in which DARE participates directly or through the Department of Agriculture and Co-operation. The activities of the Division are mainly carried out under Memoranda of Understandings (MoUs)/Agreements/Work Plans signed with different international organizations/countries etc.

The Department is also organizing visits of foreign nationals under “*Ad-hoc* Category”. The Department also receives proposals for customized training courses for foreign nationals.

of Agriculture and Food Industry, Socialist Republic of Vietnam.

- During the visit of a four member delegation led by Dr Andrey I. Ivanov, Vice President, Russian Academy of Agricultural Sciences (RAAS), Russia, a Memorandum of Understanding was signed between the Indian Council of Agricultural Research (ICAR), New Delhi, India and the Russian Academy of Agricultural Sciences (RAAS), Moscow, Russia in New Delhi on 19 November, 2007.



MoUs/WORK PLANS

- A Memorandum of Understanding was signed on 26 February 2007 between the Indian Council of Agricultural Research, New Delhi, India, and the University of Western Australia, Australia, for co-operation in agricultural research and education.
- A Work Plan for 2007–2009 was signed on 6 July 2007 for co-operation in Agricultural Research and Education under the Memorandum of Understanding between Ministry of Agriculture, India and Ministry



- The Indian Council of Agricultural Research, New Delhi, has signed a Work Plan with International Centre for Research in Agroforestry (ICRAF) in New Delhi on 19 November 2007.

INTERNATIONAL LINKAGES

During the reported period first 2 projects were finally approved for implementation and third project was extended.

1. Atmospheric brown cloud: The Indian Agricultural Research Institute (IARI), New Delhi, has been allowed to participate in the United Nations Environment Programme, Regional Resource Centre for Asia and Pacific, UNEP (RRC-AP) Programme on “Atmospheric Brown Clouds” to serve as a lead institution for Agricultural Impacts Assessment Study. The total cost of the project is US\$ 100,000 and is for 18 months w.e.f. 23 July 2007. The IARI will conduct assessment studies on the impacts of atmospheric brown clouds on agriculture, and will serve as the South Asian Lead Regional Institution for co-ordinating work of the Atmospheric Brown Clouds.

Impact team on agriculture. The first Impact Assessment Meeting of the Project has already been held at Seoul, Republic of Korea from 27 to 29 August 2007 in which Dr A.K. Singh, the then Project Director, Water Technology Centre, Indian Agricultural Research Institute, New Delhi participated.

2. Multitrophic interactions in the rhizosphere and management of nematode pests and diseases: The Indian Agricultural Research Institute, New Delhi, has been allowed to participate in the collaborative project “Multitrophic interactions in the rhizosphere and the management of nematode pests and diseases” of Rothamsted Research, United Kingdom, for 3 years. The approval has been conveyed on 9 October, 2007. Total cost of the project is £149,999.85 (Rs 1.215 crore) out of which £ 90,940 (Rs 73.66 lakh) + 5% contingency is meant for the Indian Agricultural Research Institute, New Delhi. The aim of the project is to improve root health using approaches relevant to United Kingdom and India. The project will target soil-borne pests and diseases on the productivity of agricultural and horticultural crops.

3. Genetic improvement of *Penaeus monodon* tiger shrimp through selective breeding for growth and white spot disease resistance: This Indo-Norwegian Project was funded by Indo-Norwegian Programme Institutional Co-operation — and is being implemented at (i) Central Institute of Brackish Water Aquaculture, Chennai, and (ii) Central Institute of Fisheries Education, Mumbai. It has been extended up to 31 March 2009 at an

additional cost of Rs 1,778,000 for Central Institute of Brackishwater Aquaculture, Chennai, and Rs 1,328,000 for Central Institute of Fisheries Education, Mumbai, and NOKS 295,000 for the Institute of Aquaculture Research Ltd. (AKVAFORSK), Norway.

Major event

An India – US Joint Workshop on ‘Curriculum Development’ under the Agriculture Knowledge Initiative (AKI) was organized in New Delhi from 22 to 23 January 2007.

CENTRAL AGRICULTURAL UNIVERSITY

The Central Agricultural University, Imphal, is an autonomous body and functions under DARE. The academic, research and development achievements are enumerated.

Academic achievements

- A new College of Post-graduate Studies was established during 2007–08 at Barapani in Meghalaya. The University has established 5 Schools, viz. Crop Improvement, Crop-Protection, Horticulture and Forestry, Natural Resource Management, and Social Sciences, at the Post-graduate College. The teaching programme is being conducted in collaboration with ICAR Research Complex for NEH Region, Barapani, by making best use of their scientists and laboratories.
- The University started Under-graduate Programme in Forestry at the College of Horticulture and Forestry, Pasighat (Arunachal Pradesh), during 2007–08 with intake capacity of 22 students of which 11 joined the course.
- The University also started Post-graduate Programmes in 3 new disciplines at College of Veterinary Sciences and Animal Husbandry, Aizwal (Mizoram), and 2 disciplines at College of Fisheries, Tripura (Agartala), in the academic year 2007–08, with intake of 3 students per department including a nominee of the ICAR in each department.
- The University organized its First Convocation on 9 June 2007.

Research achievements

- The varieties Bhawani in *toria* and Pusa Agrani and GM-2 in mustard; Meha in mungbean; JS 335, RKS 18 and JS 97-52 in soybean; ICGS-76, TG-51, TAG-24 and JL-24 in groundnut were suitable for Manipur.

Developmental activities

- The University has initiated steps to provide video-conferencing facilities to all college



campuses and as a result, most of the colleges have already received the necessary equipment and accessories, which are in the process of installation and operationalization.

- The laboratories of Thermodynamics and Heat Engines, Farm Power, Farm Machinery, Electrical Engineering, Electronics and Instrumentation, Soil-and-Water Conservation Engineering, Hydraulics and Fluid Mechanics, Soil Mechanics, Automatic Weather Station, Agricultural Processing, and Agricultural Science including Agronomy, Soil Science and Horticulture, were developed at College of Agricultural Engineering and Post-harvest Technology, Gangtok during 2007–08. The laboratories of Food Analysis, Apparel Designing, Multimedia Production and Food Service Management were developed at College of Home Science, Tura.

PROTOCOL ACTIVITIES

Foreign delegations

- His Excellency Mr Eric Cline, Minister of Industry and Resources, Province of Saskatchewan, Canada accompanied by delegation met Sh A.K. Upadhyay (Additional Secretary, DARE and Secretary, ICAR) on 26 February 2007.
- His Excellency Mr Francisco Laizez (Minister of External Affairs Relations of El-Salvador) and Mr Laizez visited Indian Agricultural Research Institute, New Delhi on 6 March 2007.
- His Excellency Mr Arefaine Berhe, Minister of Agriculture, Eritrea visited National Dairy Research Institute, Karnal on 7 April 2007 and Indian Agricultural Research Institute, New Delhi on 9 April 2007.
- His Excellency Mr Wan Baorui (Vice Minister Level), Chairman of Agricultural Trade Promotion Centre, Ministry of Agriculture, China, met Sh A K Upadhyay (Additional Secretary, DARE and Secretary, ICAR) on 22 May 2007.
- His Excellency Hon'ble Milroy Fernando (Minister of Public Estate Management and Development, Sri Lanka) and accompanied delegation visited TNAU/SBI/Cotton Research Station, Coimbatore from 1 to 6 July 2007.
- His Excellency Mr Lufto E. Dlamini (Minister of Enterprise and Employment, Swaziland) accompanied by business level delegation visited Indian Agricultural Research Institute, New Delhi on 21 August 2007.
- His Excellency Mr Chhabilal Biswakarma (Minister for Agriculture and Cooperatives,

Government of Nepal) accompanied by a delegation met Dr Mangala Rai (Secretary, DARE and Director-General, ICAR) on 20 August 2007.

- His Excellency Mr Francisco Itai Meque (Hon'ble Governor of Inhambane, Government of Mozambique) visited CRIDA, Hyderabad, on 17 September 2007.
- Ms F B Marshoff, Premier (Free State of South Africa) visited Indian Agricultural Research Institute, New Delhi, on 11 September 2007.
- His Excellency Mr Barry Todd, Deputy Minister of Agriculture, Manitoba, Canada visited Indian Agricultural Research Institute, New Delhi on 2 November, 2007.
- His Excellency Mrs Vanya Dobrova, Deputy Minister of Education and Science, Republic of Bulgaria and accompanied 7-member delegation visited Indian Agricultural Research Institute, New Delhi on 15 November, 2007.

Delegations abroad

- Dr Mangala Rai (Secretary, DARE and Director-General, ICAR) visited Kathmandu, Nepal, for attending the 13th Meeting of the Regional Steering Committee on 12 and 13 of February 2007, and the 14th Meeting of Regional Technical Coordinating Committee (RTCC) of the Rice-Wheat Consortium from 14 to 15 February 2007.
- Dr Ramesh Chand (National Professor, National Centre for Agricultural Economic and Policy Research, New Delhi) visited Melbourne, Australia from 8 to 9 February 2007, for attending the Workshop on 'Indian Agricultural Market Reform' at University of Melbourne under ACIAR projects ADP/2002/089.
- Dr S K Sharma (Director, National Bureau of Plant Genetic Resources, New Delhi) visited Aleppo, Syria from 19 to 22 February 2007 for participating in the Global Diversity Trust/International Centre for Agricultural Research in Dry Area) ICARDA.
- Dr (Mrs) Saroj Sardana (Principal Scientist, NBPGR, New Delhi), Dr Shiv Kumar (Principal Scientist, IIPR, Kanpur) and Anita Roy (Aich Assistant Botanist, Murshidabad, West Bengal) visited Bangladesh for participating in the International Travelling Workshop on 'Lentil' being jointly organized by Bangladesh Agricultural Research Institute (BARI) and International Centre for Agricultural Research in Dry Areas (ICARDA) from 14 to 19 February 2007.
- Dr B Mishra (Project Director, DWR, Karnal),



- Dr Alok K Sikka (Director, ICAR Research Complex for Eastern Region, Patna), Dr Rajender Prasad (National Fellow, IASRI, New Delhi), Dr Sain Dass (Project Director, Directorate of Maize Research, New Delhi) and Dr M L Jat (Scientist (SS), Project Directorate on Cropping System Research, Modipuram) visited Kathmandu, Nepal from 13 to 16 February, 2007 for participating in the 14th Regional Technical Co-ordinating Committee Meeting of Rice-Wheat Consortium-CIMMYT.
- Dr S N Shukla, ADG (F and FC), ICAR, New Delhi, and Dr M. P. Pandey Director, CRRI, Cuttack, visited Vientiane, Lao PDR for attending the CURE Annual Meeting, 2007 and workshop on 'Socio-economic Aspects in Unfavourable Environment' from 21 to 23 February 2007.
 - Dr J S Samra, DDG (NRM), ICAR, New Delhi, visited California, USA, for attending in the Central Steering Committee Meeting of Challenge Programme on 'Water and Food' from 6 to 8 March 2007.
 - Dr Sanjoy Saha (Sr. Scientist, CRRI, Cuttack) visited IRRI, Philippines, for participating in the short-term training workshop on 'Ecological Management of Pest (Rodent, Insects and Weeds) : Biological Economic and Social Dimensions' from 19 to 30 March 2007.
 - Dr Sanjoy Kumar Singh (Scientist (SS), DWR, Karnal) and Dr Gurbinder Singh Mavi (Assistant Plant Breeder, PAU, Ludhiana) participated in the Wheat Improvement Course under ICAR-CIMMYT, bilateral programme in Mexico for 3 months i.e. from 26 February to 25 May 2007.
 - Dr Raj K Gupta, OSD, NAIP, New Delhi, visited Tashkent to attend the Expert Consultation on Regional Research Need Assessment Jointly organized by CACAARI, GFAR and ICARDA from 7 to 9 March 2007.
 - Dr S Ayyappan, DDG (FY), ICAR, visited Penang, Malaysia, to attend the Board of Trustees Meeting of World Fish Centre in his capacity as Board Member from 11 to 14 March 2007.
 - Dr Mangala Rai, Secretary, DARE and DG, ICAR, visited Washington DC to participate in the Advisory Committee set up by the Consultative Group on International Agricultural Research (CGIAR) for interviewing the candidates short-listed for the post of Director, CGIAR from 5 to 6 March 2007.
 - Dr Raj K Gupta, OSD, NAIP, New Delhi, visited Tashkent to attend the Expert Consultation on Regional Research Need Assessment jointly organized by CACAARI, GFAR and ICARDA from 7 to 11 March 2007.
 - Dr V D Patil, ADG (O&P), ICAR, New Delhi, and Dr Arvind Kumar, Director, NRC on Rapeseed-Mustard, Bharatpur, and Dr J S Chauhan, Principal Scientist, NRC on Mustard, visited Wuhan, China to participate in the 12th International Rapeseed Congress from 26 to 30 March 2007, and Progress Meeting for ACIAR-ICAR Collaborative Project 'Oilseed *Brassica* Improvement in China, India and Australia' from 2 to 4 April 2007.
 - Dr Masood Ali, Director, IIPR, Kanpur, visited Tunis, Tunisia, for attending in the International Meeting on Cool-season food legumes Model Legumes Congress 2007, from 24 to 28 March 2007.
 - Dr K C Bansal, Professor, NRC on Plant Biotechnology, IARI, Pusa, New Delhi, visited China, under the ACIAR Project and also to participate in the 12th International Rapeseed Congress and Progress Meeting for the ACIAR-ICAR Collaborative Project on "Oilseed *Brassica* Improvement in China" from 26 to 30 March, 2007.
 - Dr Jai Gopal, Principal Scientist, CPRI, Shimla, visited Lima Peru to act as a member of CGIAR/FAO panel for external review of International Potato Centre (CIP) from 10 to 14 April 2007 and 19 to 29 June 2007.
 - Dr Mangala Rai, Secretary, DARE and DG, ICAR, visited Philippines to participate in the IRRI's Board of Trustees Meeting at IRRI (Headquarters), Philippines from 16 to 18 April 2007.
 - Dr S K Yadav, Senior Scientist, Division of Seed Science and Technology, IARI, New Delhi, visited China for participating in the meeting of 12th International Rapeseed Congress, Wuhan, China from 25 to 30 March 2007.
 - Dr N Sarangi, Director, Central Institute of Freshwater Aquaculture, Bhubaneswar, and Dr K K Vass, Director, CIFRI, Barackpore, visited Hanoi, Vietnam for participating in the Final Workshop of Achieving Greater Food Security and Eliminating Poverty by Dissemination of Genetically Improved Carp Strain to Fish Farmer from 3 to 6 April 2007.
 - Dr Mangala Rai, Secretary, DARE and DG, ICAR, visited Rome to participate in the first meeting of the Executive Board of the Global Crop Diversity Trust from 3 to 4 April 2007.
 - Dr M P Pandey (Director), Dr O N Singh



(Principal Scientist), Dr A Gosh (Senior Scientist), Dr R N Das (Principal Scientist) and Dr P Samal (Senior Scientist, all from CRRI, Cuttack) visited Bangladesh for participating in the Annual Review and Planning meeting of the ADB funded Project “Development and disseminating water saving rice technology in South Asia” from 3 to 5 April 2007.

- Dr S P Tiwari, DDG (CS and Edn.), ICAR, visited Los Banos, Laguna, Philippines from 5 to 7 May 2007, and to Bangkok from 8 to 11 May 2007, for participating in the meeting with the members of IRRI Management and Scientific Staff to discuss various existing collaborative research activities between IRRI and ICAR, New Delhi, India, and INGER Technical Advisory Committee meeting.
- Dr J S Sandhu, Sr. Scientist (Pulses), PAU, Ludhiana, visited International Centre for Agricultural Research in Dry Areas, Mexico, to interact with legume researchers and other colleague from 12 to 18 May 2007.
- Dr Jai Gopal, Principal Scientist, CPRI, Shimla, visited Kenya, Uganda, and Tanzania from 13 to 19 May 2007, and Kazakhstan, Uzbekistan, Azerbaijan and Georgia, from 1 to 10 June 2007, as a Panel Member appointed by CGIAR for undertaking field visits for the review.
- Dr B C Viraktmath, Project Director, Directorate of Rice Research, Hyderabad, visited Bangkok for participation in the INGER Technical Advisory Committee Meeting from 8 to 11 May 2007.
- Dr Shiv Sewak (Sr. Scientist, IIPR, Kanpur) and Dr H K Dikshit (Sr. Scientist, IARI, New Delhi) visited ICARDA, Aleppo, Syria, to attend training programme as Junior Breeders as individual trainees on ‘Lentil and Chickpea Breeding’ from 20 April to 10 May 2007.
- Dr S K Naskar, Principal Scientist and Head, Regional Centre for CTCRI, Kerala, visited Manila, Philippines to participate in Workshop from 30 April to 2 May 2007.
- Dr S G Sharma, Principal Scientist, Dr (Mrs) Sanjukta Das, Senior Scientist from CRRI, Cuttack, and Dr N Shobha Rani, Principal Scientist, DRR, Hyderabad, visited Philippines for attending the International workshop on ‘Clearing Old Hurdles with New Science: Improving Rice Grain Quality’ from 17 to 19 April 2007.
- Dr R Kalpana Sastry, Principal Scientist, NAARM, Hyderabad, visited Caccarese, Rome, Italy for attending the Central Advisory Service on ‘Intellectual Property’ (CAS-IP) under Central National Partner programme meeting from 20 to 21 May 2007.
- Dr Seshu Madhav, Scientist (SS), DRR, Hyderabad, visited Philippines to undergo the training programme on Rice Research to Production, at International Rice Research Institute, Manila, from 14 May to 1 June 2007.
- Dr Anju Mahendru Singh, Senior Scientist, IARI, New Delhi visited Turkey for attending the Annual Meeting of Harvest and Consortium from 28 May to 2 June 2007.
- Dr Sant Kumar, Senior Scientist, and Dr Usha Rani Ahuja, Senior Scientist, NCAP, New Delhi, visited Nijoro, Kenya, for attending a training workshop on ‘Planning Monitoring Evaluation and Impact Assessment of Research and Development Investments in Agriculture’ from 16 to 27 July 2007.
- Shri A K Upadhyay, Additional Secretary, DARE and Secretary, ICAR, visited Lausanne, Switzerland to attend 3rd CGIAR Senior Leadership Programme from 2 to 6 July 2007.
- Dr C K Narayana, Senior Scientist, National Research Centre for Banana, Tiruchirapalli, Tamil Nadu, visited Ghana for attending workshop on ‘Tools for Improving the Quality and Efficiency of Processed Products from Banana and Plantain for Small Processing Business’ from 30 July to 3 August 2007.
- Dr George V. Thomas (Director) and Dr S Kalavathi (Senior Scientist, CPCRI, Kasaragod, Kerala) visited China for attending the Third Annual Project Planning Meeting of IFDA funded project “Overcoming Poverty in Coconut Growing Communities: Coconut Genetic Resources for sustainable Livelihoods’ from 2 to 6 July 2007.
- Dr B Mishra, Project Director, Directorate of Wheat Research, Karnal, visited CIMMYT, Mexico, to participate in the meeting to discuss collaborative Project on ‘Drought Tolerance in Wheat’ under GC Programme from 6 to 8 August 2007.
- Dr A K Gogoi, ADG (Agronomy), ICAR, and Dr S K Dhyani, Director, NRC for Agroforestry, Jhansi, visited Sri Lanka to attend 3-day First Working Group meeting to develop a South Asia Regional Collaboration program on ‘Agro-forestry at Topaz Hotel, Kandy, Sri Lanka from 28 to 30 June 2007.
- Dr Y S Ramakrishna, Director, CRIDA, Hyderabad, and Dr K P R Vittal, Director, CAZRI, Jodhpur, visited Montpellier, France for attending an oasis pro-proposal workshop organized by ICRISAT and ICARDA from



20 to 24 August 2007.

- Dr Mangala Rai, Secretary, DARE and DG, ICAR, visited Vientiane, Laos to attend IRRI's Board of Trustees Meeting from 19 to 21 September 2007.
- Dr M Prashar, Sr. Scientist, DWR, Karnal, and Dr J P Jaiswal, Assistant Professor, GBPUA&T, Pantnagar, visited Mexico to attend Programme for intensive agro-ecosystem for 6 weeks with effect from 1 September 2007.
- Dr Uma, Sr. Scientist, NRC for Banana, Thiruchirapalli, Tamil Nadu, visited South Africa for attending the Symposium on 'Recent Advances in Banana Crop Protection for Sustainable Production and Improved Livelihoods' from 10 to 15 September 2007.
- Dr J S Sandhu, Sr. Scientist, Department of Plant Breeding, Genetics and Bio-technology, PAU, Ludhiana, visited Western Australia, Australia, to attend Planning Meet for "Accelerated Genetic Improvement of Chickpea" and International alliance among DAFWA, CLIMA, COGGO and ICRISAT and joint work on DEST DY01-0003-Eco-geographical and physiological approaches to improve chilling tolerance in chickpea in Australia and India from 16 to 27 September 2007.
- Dr Gurubachan Singh, Director, CSSRI, Karnal, visited Philippines International Rice Research Institute from 5 to 11 October 2007.
- Dr S Ayyappan, DDG (Fy), ICAR, visited Colombo, Sri Lanka from 1 to 4 November 2007 to attend the 34th Board of Trustees Meeting.
- Dr M P Pandey, Director, Central Rice Research Institute, Cuttack, and Dr A K Singh (the then Project Director, WTC, New Delhi) visited Hanoi, Vietnam for attending the Steering Committee Meeting of the Irrigated Rice Consortium from 8 to 10 October 2007.
- Dr S Edison (Director, Central Tuber Crops Research Institute, Thiruvananthapuram) and Dr D P Balasubramanian (Director, Centre for Plant Molecular Biology, Tamil Nadu Agricultural University, Coimbatore) visited St. Louis, Missouri, USA, from 30 to 31 January 2007, to attend International Workshop on Cassava Genomics under the Indo-US Agriculture Knowledge Initiative.
- Dr R P Nachane (Principal Scientist, CIRCOT, Mumbai) and Dr K Gururajan (Principal Scientist, CICR, Nagpur) visited Egypt from 18 to 31 May 2007, for study in the field of "Cotton Improvement and Quality Assurance".
- Dr Nawab Ali, DDG (Engg.), ICAR, New Delhi, visited USA from 30 May 2007 to 8 June 2007, as a member of the Indian delegation led by Hon'ble Minister of State for Food Processing and Industries.
- A high level delegation led by Dr Mangala Rai (Secretary, DARE and Director -General, ICAR) and consisting of Shri A K Upadhyay (Additional Secretary, DARE and Secretary, ICAR), Dr S K Bandyopadhyay (Animal Husbandry Commissioner, Department of Animal Husbandry, Dairying and Fisheries), Dr S P Tiwari (DDG (Edn.), ICAR), Sh Virender Paul (Director (AMS), Ministry of External Affairs, New Delhi), Dr P L Gautam (Vice Chancellor, G B Pant University of Agriculture & Technology, Pantnagar), Shri Anurag Bhatnagar (Director-General, National Institute of Agricultural Marketing, Jaipur) and Shri Feroze Noshir Masani (Masani Farm, Nasik, Maharashtra) visited USA to attend the 5th Agriculture Knowledge Initiative (AKI) Board Meeting from 14 to 15 June 2007. Some members of the delegation also visited Ohio State University, USA from 12 to 13 June 2007.
- A 5-member multi-departmental delegation, viz Dr R K Khetrapal (Head, Division of Plant Quarantine, NBPGR, New Delhi), Dr V K Dilawari (Professor of Ecology, PAU, Ludhiana), Dr Ashish Motiram Paturkar (Professor, Bombay Veterinary College, Maharashtra Animal and Fisheries Science University, Mumbai), Shri Arvind Kumar Gupta, Advisor (WTO), Agricultural and Processed Food Products Export Development Authority (APEDA), Ministry of Commerce and Industry, New Delhi, and Shri Surendra Singh (Assistant Director, Ministry of Food Processing Industries, New Delhi, visited USA on cooperation exchange of information and SPS requirements, regulations and development under the Indo-US Agriculture Knowledge Initiative (AKI) from 11 to 16 June 2007.
- Dr (Ms) S Elain Apsara, Scientist (Senior Scale), Central Plantation Crops Research Institute, Kasaragod, visited Embrapa Coastal Tablelands Aracaju-SE, Brazil from 15 to 22 July 2007, for undergoing training in "Coconut and Cocoa Production".
- Dr Rajbir Singh, Senior Scientist, Central Institute for Post Harvest Engineering and Technology, Ludhiana, visited Embrapa Vegetables, Brasilia-DF, Brazil, from 16 to 20 July 2007, for undergoing training in "Post Harvest Technology and Value Addition".
- Dr K C Jain, ADG (CC), ICAR Headquarters, New Delhi, visited Bhutan as a member of



the delegation led by Agriculture Commissioner to participate in the India-Bhutan Joint Technical Working Group Meeting on Co-operation in Agriculture from 23 to 24 July 2007.

- Dr Ravender Singh (Principal Scientist) and Dr Atmaram Mishra, Principal Scientist, Water Technology Centre for Eastern Region, Bhubaneswar, visited ARC, Egypt from 1 to 14 August 2007, for study on "On Farm Water Management".
- Dr Shyam Singh, Director, NRC for Citrus, Nagpur, visited Embrapa Cassava and Fruits, Cruzdas Almas-BA from 5 to 10 August 2007, for undergoing training in the field of Orange Production and Processing.
- Dr Pitam Chandra, ADG (PE), ICAR Headquarters, New Delhi, visited ARC, Egypt from 1 to 7 September 2007, for study in Post-harvest Management and Processing of Fruits (Date Palm and Pomegranate).
- Dr Khajanchi Lal, Senior Scientist, CSSRI, Karnal, visited ARC, Egypt from 1 to 14 September 2007, for study in the field of Water Quality and Bio-remediation.
- Dr Murari Shyam, Project Coordinator (Res.), CIAE, Bhopal, visited Nepal Agricultural Research Council, Nepal, for study in Renewable Energy Resource in Nepal from 15 to 21 September 2007,.
- Dr Lal Krishna, ADG (AH), ICAR Headquarters, New Delhi, visited ARC, Egypt, for study in "Animal Disease Diagnosis and Surveillance," from 16 to 29 September 2007.
- Dr Sunil Gorla, Assistant Librarian, Govind Ballabh Pant University of Agriculture and Technology, Pantnagar, visited USA (Washington) for training in "Strengthening the Knowledge Information System: Library and Information System", under Indo-US Norman Borlaug Fellowship covering Indo-US Agriculture Knowledge Initiative from 27 September to 10 November 2007.
- Dr R R Saxena, Associate Professor, Indira Gandhi Agricultural University, Raipur, Chhattisgarh visited USA for training in "Distance Learning and Agricultural Curricula Building", at Purdue University, West Lafayette, USA from 1 October to 11 November 2007.
- Dr N Gopalakrishna Pillai, Principal Scientist, Central Marine Fisheries Research Institute, Cochin, visited ARC, Egypt for study in the field of "Marine Fisheries Resources", from 20 October to 1 November 2007.
- Dr Hari Lal Kushwaha, Scientist, Central Arid Zone Research Institute, Jodhpur, visited

University of Missouri, USA, for training in Biofuel Production from Mustard, Sesame and Cottonseed, under Indo-US Norman E. Borlaug International Agricultural Science and Technology Fellowship Program under Indo-US Agriculture Knowledge Initiative (AKI) from 1 November to 15 December 2007.

- Dr Srinivas Indravarapu, Scientist, Central Research Institute for Dryland Agriculture, Hyderabad, visited University of Missouri, USA for training in the field of Biodiesel, under Indo-US Norman E. Borlaug International Agricultural Science and Technology Fellowship Program under Indo-US Agriculture Knowledge Initiative (AKI) from 1 November to 15 December 2007.
- Dr A K Nayak, Senior Scientist, CSSRI Regional Station, Lucknow, will be visiting ARC, Egypt for study in the field of "Salinity Control" from 17 to 30 December 2007.

Delegations hosted

- Mr Sanjaya Kumar Kafly and Mr Amber Bahadur Gurung (Accounts Officers from Nepal Agricultural Research Council, Nepal) came at National Academy of Agricultural Research Management, Hyderabad, for study visit/training in the field of 'Personnel and Fiscal Management training' for a period of 3 weeks from 10 to 30 July 2007 under the ICAR-NARC Work Plan for the years 2006–07.
- Mr S N Vaidhya and Pulkit Mandal, Senior Scientists (S-4), from Nepal Agricultural Research Council, Nepal, had observation visit at National Academy of Agricultural Research Management, Hyderabad, in the field of 'Management Institute' for 1 week from 16 to 21 July 2007 under the ICAR-NARC Work Plan for 2006–07.
- Mr Mahendra Jung Thapa and Mr Ram Bahadur K C (Senior Scientists) from Nepal Agricultural Research Council, Nepal, had observation visit at Indian Institute of Horticultural Research, Bangalore in 'Fruits and Vegetable Processing, Packaging and Product Diversification' for 1 week from 4 to 10 July 2007 under the ICAR-NARC Work Plan for 2006–07.
- Ms Sharmila Piya (Technical Officer) from Nepal Agricultural Research Council, Nepal, had Study visit/training to Indian Institute of Horticultural Research, Bangalore, in "Post Harvest Management in Ornamental Crops", from 16 to 26 August 2007 under the ICAR-NARC Work Plan for 2006–07.
- Mr Ram Bahadur Rane, Technical Officer (T-



- 6), from Nepal Agricultural Research Council, Nepal, had study visit/training in the field of Cryopreservation Technology in Cattle/ Buffaloes/Goats/Sheep at Indian Veterinary Research Institute, Izatnagar, for 3 weeks from 11 to 31 August, 2007 under the ICAR-NARC Work Plan for 2006–07.
- Mr Ram Babhu Peneru, Scientist (S-2), from Nepal Agricultural Research Council, Nepal had study visit/training at Indian Agricultural Research Institute, New Delhi, in Taxonomy and Identification of Insects of Agricultural Importance, for 1 month from 15 August to 14 September 2007; and Mr Govind Prasad Timilsha, Scientist (S-1), from Nepal Agricultural Research Council had study visit/training at Indian Agricultural Research Institute, New Delhi, in ‘Pesticides Residue Extraction and Analysis Procedures’ for 1 month from 15 August to 14 September 2007, under the ICAR-NARC Work Plan for 2006–07.
 - Mr Mathura Yadav (Technical Officer) from Nepal Agricultural Research Council, Nepal, had study visit/training at Indian Agricultural Statistics Research Institute, New Delhi, on ‘Biometrics in Agricultural Research’ for 2 months from 3 October to 1 December 2007, under the ICAR-NARC Work Plan for 2006–07.
 - Dr Shambhu Bahadur Pandey (Director, NASRI) and Dr Adarsha Pradhan (Livestock and Fishery) from Nepal Agricultural Research Council, Nepal, had study visit/training at National Dairy Research Institute, Karnal, from 8 to 10 October 2007, and Indian Veterinary Research Institute, Izatnagar, from 11 to 13 October 2007, for study in the field of ‘Animal Science Research Institute’ under the ICAR-NARC Work Plan for 2006–07.
 - Mr Mishri Lal Sah, Senior Scientist, from Nepal Agricultural Research Council and Dr Siddhi Ganesh Shrestha (Senior Economist) from Ministry of Agriculture and Co-operative from Nepal, had observation visit to Indian Agricultural Research Institute, New Delhi, from 24 to 30 September 2007 under the ICAR-NARC Work Plan for 2006–07.
 - Dr R K Mittal, (Principal Scientist, ICAR (Hq), New Delhi) visiting NARC, Nepal from 7 to 13 December 2007, for study in “Biological control agents and antagonists.
 - Dr Ravi R Saxena (Associate Professor, Indira Gandhi Agricultural University, Chhattisgarh) visited Purdue University, West Lafayette, USA from 1 October to 11 November 2007, for training in “Distance Learning and Agricultural Curricula Building” under Indo-US Norman Borlaug Fellowship.
 - Dr N Gopalkrishna Pillai (Principal scientist, CMFRI, Cochin, visited Agricultural Research Centre, Egypt from 20 October to 1 November 2007, for study in Marine Fisheries Resources under Indo-US Norman Borlaug Fellowship.
 - Dr Hari Lal Kushwaha (CAZRI), Jodhpur, visited University of Missouri, USA from 1 November to 15 December 2007, for training in “Biofuel Production from Mustard, Sesame, Cottonseed” under Indo-US Norman Borlaug Fellowship.
 - Dr Srinivas Indavarapu (CRIDA, Hyderabad) visited University of Missouri, USA from 1 November to 15 December 2007, for training in the field of “Biodiesel” under Indo-US Norman Borlaug Fellowship.
 - Dr R K Mittal, ADG (EQR), ICAR Hq, New Delhi visited Indonesia from 30 to 31 October 2007, for attending the ASEAN-Indian Working Group Meeting held at Jakarta, Indonesia.
 - Dr Mahavir Singh (Project Coordinator, AICRP on Micro- and Secondary Nutrients and Pollutant Elements in Soil and Plants, Bhopal) and Dr A K Sarkar (Dean, College of Agriculture, Birsa Agricultural University, Ranchi) visited Addis Abada, Ethiopia from 2 to 17 December 2007, for studying salinity problems and agriculture problems in Ethiopia for increasing output.
 - Dr S P Tiwari (DDG (Edn.), ICAR Hq, New Delhi) visited Brasillia, Brazil from 21–24 November 2007, for attending the India-Brazil-South Africa Joint Working Group Meeting on Agriculture.

Scientists to foreign countries on deputation

- Dr G J N Rao (Head, Crop Improvement, CRRI, Cuttack) visited for building up anther culture laboratory and demonstration in Sierra Leone from 19 to 27 April 2007.
- Dr N Sarangi (Director, CIFA, Bhubaneshwar) attended NACA workshop at Bali, Indonesia, from 30 April to 5 May 2007.
- Dr C S Chaturvedi, SS (Fisheries) CARI, Port Blair, and Dr Prem Kumar, Sr. Scientist, NRC, Cold Water Fisheries, Bhimtal, deputed to China from 25 April to 24 June 2007.
- Dr Madhwan (Principal Scientist) and Dr C Palaniswami (Sr. Scale Scientist) visited Fizi under ITEC Programme of MEA for 1 year.
- Dr T C Santiago (Head, Aquaculture, Animal Health Division, CIBA, Chennai) attended ACIAR Project Co-ordination Meeting in Bangkok, Thailand, from 14 to 15 May 2007.
- Dr D K Sadana (Principal Scientist, NBAGR,



Karnal) attended Regional multi-stake holder workshop, Ethiopia, from 24 to 25 May 2007.

- Dr K V Prabhu (Head, Division of Genetics, IARI, New Delhi) participated in the FAO consultation to review the draft on Food Safety Assessment from 23 to 25 May 2007.
- Dr Sushil Pandey, Scientist (Senior Scale), Division of Seed Science and Technology, IARI, New Delhi, attended a Seed Quality Assurance Workshop under FAO's TCDC Programme at Baku, Azerbaijan, from 29 May to 2 June 2007.
- Dr P K Joshi (Director, NCAP, New Delhi) participated in IAASSTD, Bureau Meeting in Washington from 29 to 30 May 2007.
- Dr B M Khadi (Director, CICR, Nagpur) participated in the 3 Steering Committee Meeting of INCANA in Damascus from 19 to 21 June 2007.
- Dr P K Joshi (Director, NCAP, New Delhi) participated in GC Meeting of UNESCAP-CAPSA in Indonesia, from 18 to 19 June 2007.
- Dr P S Minhas, ADG (IWM), attended the Steering Committee Meeting in Ethiopia from 18 to 23 June 2007.
- Dr Ramesh Chand (National Professor, NCAP, New Delhi) visited Bangkok, under FAO Consultancy Programme in different spells, for 3 months from mid- June 2007.
- Dr L Joseph Shayarajan (Technical Officer, CIBA, Chennai) visited Australia for training under Commonwealth Programme from 30 August to 24 October 2007.
- Dr R S Misra (Principal Scientist and Head, Division of Protection, CTCRI, Thiruvananthapuram) visited China as FAO (TCDC) consultant on Konjac Seed Production and Storage from 25 August to 8 September 2007.
- Dr M Prabhakar (Principal Scientist) and Dr (Mrs) Girija Ganeshan (Principal Scientist, IIHR, Bangalore) participated in the 5th International ISHS symposium on Edible Alliance, and 2nd World Onion Conference, 2007 at Lelystad, Netherlands from 29 October to 3 November 2007.
- Dr S K Tandon, ADG (Engg.), attended UNESCAP-APCAEM Workshop from 24 to 28 October 2007.
- Dr A K Singh, Head, Germplasm Collection Division, NBPGR, New Delhi, visited Kathmandu, Nepal, to establish long-term conservation facility under consultancy proposal for 2 weeks.
- Dr Jagdish Rane, Senior Scientist, DWR, Karnal, visited Cali, Columbia, as a visiting Scientist at CIAT for MAFF, Japan Project for 2 years w.e.f. the date he is relieved from the Institute.
- Dr P K Joshi, FAO-GOI Strategic Alliance for South-South Cooperation, attended meeting of SAARC in support of National and Regional Programmes for Food Security at Dacca, Bangladesh from 3 to 5 November 2007.
- Dr R S Misra (Principal Scientist and Head, Division of Crop Protection, CTCRI, Thiruvananthapuram) visited Kabul under FAO Consultancy Programme from 2 November to 16 December 2007.
- Sh. Amar Pal (Technical Officer, NBFGR, Lucknow) visited Bangkok for training in the Fish Health Master Class sponsored by NACA, Bangkok, from 12 to 23 November 2007.
- Dr G Gopa Kumar, Principal Scientist, CMFRI, Kochi, participated in workshop on Marine Finfish Aquaculture in Indonesia from 7 to 10 November 2007.
- Dr B M Khadi, Director, CICR, Nagpur, attended World Trade Organization workshop on the development aspects of cotton in Geneva from 19 to 21 November 2007.
- Dr Sita Ram Aryal (Senior Scientist, Nepal Agricultural Research Council, Nepal) visited Indian Veterinary Research Institute, Izatnagar from 16 November to 4 December 2007, for study in Avian influenza of poultry culture identification.
- Dr (Mrs) Wafaa Taha El-Ater (Principal Scientist, Agricultural Research Centre, Egypt) visited Central Soil Salinity Research Institute, Karnal from 17 November to 4 December 2007 for study in the field of Saline Control.
- Dr Hossain Ali Ali Metwaly and Dr (Mrs) Fatma Esmat (Senior Scientist, Agricultural Research Centre, Egypt) visited Central Institute for Post-harvest Engineering and Technology, Ludhiana from 19 to 27 November 2007, for studying in Post Harvest Management and Processing of Fruits (Date Palm and Pomergranate).
- Dr Mahmoud Atiya and Dr Hassan Shams El-Din (Chief Researchers of Soil Water and Environment Research Institute, Agricultural Research Centre, Egypt) visited to Water Technology Centre for Eastern Region, Bhubaneshwar from 22 October to 7 November 2007, for studying in On Farm Water Management.



Approved deputation cases of the ICAR scientists

- Dr Sadhan Bag Senior Scientist, IVRI, Izatnagar availed Long-Term training at Germany under DBT, Biotechnology Overseas Associationship Programme to Germany, sponsored by Department of Biotechnology (DBT), New Delhi, for 12 months w.e.f. 6 September 2006.
- Dr T K Bhattacharya, Scientist (SS), IVRI, Izatnagar, visited Canada for availing training under DBT, Biotechnology Overseas Associationship Programme, sponsored by Department of Biotechnology (DBT), New Delhi, to Canada for 12 months w.e.f. 6 September 2006.
- Dr Aniket Sanyal, Scientist, Project Directorate on Foot-and-Mouth Disease, Mukteswar, visited for availing Biotechnology Overseas Associationship to CSIRO, Australia w.e.f. 1 September 2006 for 12 months. It was sponsored by Department of Biotechnology, New Delhi.
- Dr S B Barbudde, Scientist (SS) (Veterinary Public Health), ICAR Research Complex for Goa, visited Germany for availing DBT Biotechnology Overseas (Associationship (Long-term) 2005–06 for 1 year beginning from October/November 2006 to October/November 2007. It was sponsored by Department of Biotechnology, New Delhi.
- Dr S K Mahanker, Scientist (SS), CIAE, Bhopal, visited USA for pursuing Ph.D., sponsored by Oklahoma State University, USA, for 3 years w.e.f. 9 August 2006.
- Dr M K Singh, Scientist, CIAE, Bhopal, visited Shizuoka University, Johoku Hamamator, Japan, for pursuing Ph.D. programme, sponsored by Shizuoka University, Japan, for 3 years w.e.f. 1 October 2006.
- Dr N K Shivakumar Gowda, Senior Scientist, NIANP, Bangalore, visited USA to avail Biotech Overseas Associationship (Short-term) Programme 2005–06, sponsored by Department of Biotechnology, New Delhi, for 6 months tentatively and 15 January to 1 February 2007.
- Dr S Kannappan, Scientist (SS), CIBA, Chennai, visited USA to avail DBT Biotech Overseas Associationship (Long term) Programme 2005–06, sponsored by Department of Biotechnology, New Delhi, for 12 months w.e.f. 23 October 2006.
- Dr A K Singh, Senior Scientist, IARI, New Delhi, visited USA to avail DBT Biotechnology Overseas Associationship (Short-term) Program 2005–06, sponsored by Department of Biotechnology, New Delhi, for 6 months beginning from first week of November 2006.
- Dr T K Behra, Scientist (S-3), IARI, New Delhi, visited University of Wisconsin, Madison, USA, to avail DBT Biotechnology Overseas Associationship (Long-term) Programme 2005–06, sponsored by Department of Biotechnology, New Delhi for 12 months i.e. 5 October 2006 to 4 October 2007.
- Dr M Vanaja, Senior Scientist, CRIDA, Hyderabad, visited University of Essex, United Kingdom, to avail Commonwealth Academic Staff Fellowship, sponsored by Commonwealth Fellowship Commission, United Kingdom, for 6 months i.e. from October 2006 to April 2007.
- Dr (Mrs) R Manimekalai, Scientist, CPCRI, Kasragod, visited Japan to avail DBT Biotechnology Overseas Associationship (Long-term) program 2005–06, sponsored by Department of Biotechnology, New Delhi, for 10 months tentatively from last week of March 2007.
- Sh Ranjan Bhattacharya, Scientist, VPKAS, Almora, visited UK for pursuing Ph. D. Programme at the School of Applied Sciences, University of Woverhamton, UK under BORASSUS Project for 3 years w.e.f. September 2006.
- Dr O P Yadav, Principal Scientist, CAZRI, Jodhpur, visited USA to avail DBT Biotechnology Overseas Associationship (short-term) sponsored by Department of Biotechnology, New Delhi, for 6 months w.e.f. 25 November 2006.
- Dr Rajsekhar Rao Korada, Scientist (SS), CTCRI's Regional Station, Bhubaneshwar, Orissa, visited Netherlands to avail long-term DBT Biotechnology Overseas Associationship, sponsored by Department of Biotechnology, New Delhi, for 12 months w.e.f. 25 March 2007.
- Dr Raveendra N Gadag (Senior Scientist, IARI, New Delhi) visited UK to undergo UGC's sponsored Commonwealth Academic Staff Fellowship to John Inne's Centre, Norwich, United Kingdom, sponsored by Commonwealth Fellowship Commission, United Kingdom for 6 months w.e.f. 2 October 2006.
- Dr P Das, Senior Scientist, CIFA, Bhubaneshwar, visited USA for availing DBT's Biotechnology Overseas Associationship (Short-term) program 2005–06 on "Aquaculture and Marine Biotechnology" to Eventual and Genomics Sec., Department



of Environ Pop Health, Tufts University, USA, sponsored by Department of Biotechnology, New Delhi, for 6 months w.e.f. 26 November 2006.

- Dr Pious Thomas, Senior Scientist (IIHR, Bangalore), visited Australia for availing Biotechnology Overseas Associateship (Short-term), 2005–06 training in “Molecular Endophytic Microbiology” to Elinders University, Adelaide, Australia, sponsored by Department of Biotechnology, New Delhi, for 6 months w.e.f. 17 March 2007.
- Dr C P Balasubramanian, Senior Scientist, CIBA, Chennai, visited USA for availing DBT's Biotechnology Overseas Associateship (Short-term), 2005–06 to California State University in USA, sponsored by Department of Biotechnology, New Delhi for 6 months w.e.f. February 2007.
- Dr K K Vijayan, Head, PNP Division, CMFRI, Cochin, visited Belgium for availing Biotechnology Overseas Associateship (Short-term), 2005–06, sponsored by Department of Biotechnology, New Delhi for 5 months and 3 weeks w.e.f. 8 March 2007.
- Dr R Thangavelu, Senior Scientist, N R C Biotechnology, Truchirappaly, Tamil Nadu, visited for availing DBT long-term Biotechnology Overseas Associateship to Department of Primary Industries and Fisheries, Indooroopilly, Brisbane, Australia, 2005–06, sponsored by Department of Biotechnology, New Delhi, for 12 months w.e.f. 01 January to 31 December 2007.
- Dr Murali Gopal, Senior Scientist, CPCRI, Kasaragod, visited United Kingdom for undergoing research work on the project entitled Evaluating the effect of coconut leaf vermicompost on the soil microbial, biomass, microbial diversity and glomalin production as biological indicators of soil fertility to UK, sponsored by Organizers (Rothamsted), for 12 months w.e.f. January 2007.
- Dr Ramesh Sundar, Senior Scientist (SBI, Coimbatore), visited Australia for carrying research work in the areas entitled “Functional Genomics of Transcription Factors Regulating Defence against Fungal Pathogens in Monocotyledonous Crops, e.g. sugarcane under DBT's Biotechnology Overseas Associateship 2005–06 Programme to CSIRO, Brisbane, sponsored by Department of Biotechnology, New Delhi, for 12 months w.e.f. 1 February 2007.
- Dr R S Kataria, Senior Scientist, NBAGR, Karnal, visited Iowa State University, Iowa, USA, for availing Biotechnology Overseas Associateship, 2005–06, sponsored by Department of Biotechnology, for 6 months w.e.f. January 2007.
- Dr Dinesh Kumar, Scientist (SS), NBAGR, Karnal, visited Iowa State University, Iowa, USA, for availing Biotechnology Overseas Associateship, 2005–06, sponsored by Department of Biotechnology for 12 months w.e.f. 23 January 2007.
- Dr Dinesh Singh, Senior Scientist, IARI, New Delhi, visited IRRI, Philippines for training course on Identification of Resistant Genes through Marker Assisted Selection, sponsored by IARI, New Delhi, under their budget head Human Resource Development 10th Plan, for 3 month w.e.f. 5 January 2007.
- Dr S K Chakravarty, Senior Scientist, IARI, New Delhi, visited IRRI, Philippines, for training course on Innovative approaches in Hybrid Seed Production of Rice, sponsored by IARI, New Delhi under their budget Head HRD 10th Plan, for 2 months w.e.f. 26 March 2007.
- Dr (Mrs) Latha Sabikhi, Senior Scientist, NDRI, Karnal, visited Italy for undergoing training course, organized by CoRFiLac, Ragusa, Italy on Cheese Making, for 13 days w.e.f. 29 April 2007.
- Dr Sanjay Gupta, Senior Scientist, ICAR Research Complex for NEH Region, Baarapani, Meghalaya, visited CSIRO, Canberra, Australia, for undergoing specialized training of young scientist in Niche areas of Biotechnology under DBT, sponsored by Department of Biotechnology, New Delhi, for 12 months w.e.f. 10 December 2007.
- Dr J P Mittal, National Coordinator, NAIP, New Delhi, visited USA for undergoing training course on Accessing Global Markets, sponsored by NAIP, New Delhi, and organized by Cornell University in collaboration with Sathguru Management, Hyderabad at Cochin, Kerela and at Ithaca, New York, USA from 15 to 20 April 2007 and from 2 to 9 May 2007 respectively.
- Dr Sant Kumar (Sr. Scientist, NCAP, New Delhi) attended training course on Accessing Global Markets, sponsored by NCAP, New Delhi, and organized by Cornell University in collaboration with Sathguru Management, Hyderabad, at Cochin, Kerala and at Ithaca, New York, USA from 15 to 20 April 2007 and from 2 to 9 May 2007, respectively. □

