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SPECIAL DONOR MEETING ON CGIAR PROGRAM FOR CAC

A special luncheon meeting for the CGIAR Program for Central Asia and the Caucasus (CAC) was organized in Marrakech, Morocco on 5 December, 2005 during AGM'05. The meeting was co-sponsored by the World Bank, ADB and Ministry of Agriculture, Syria. In all, 34 representatives of various CG Centers as partners of the Consortium, donor organizations and Science Council as well as CGIAR Secretariat participated.

The meeting was chaired by Prof. Dr. Adel El-Beltagy, Chairman, CDC Task Force for CAC. Dr. Kevin Cleaver from the World Bank, Dr. Franklin Moore from USAID, Dr. Tumurdavaa Bayarsaihan from ADB, Dr. Adel Safar, Minister of Agriculture, Syria, Dr. Jafar Khalghani, Deputy Minister of Agriculture, Iran, Dr. Thomas Lumpkin, Director General, AVRDC, Dr. Mohammad Roozitalab, Chairman, GFAR and Dr. Abdushukur Khanazarov, Deputy Minister of Agriculture and Water Resources, Uzbekistan were among the various distinguished participants.

Prof. Dr. El-Beltagy in his remarks gave the background relating to the initiation of the Program in 1998, when CGIAR agreed to expand its geographic mandate to cover the region and asked ICARDA to organize a Consortium being the Lead Center. He expressed his satisfaction with various significant achievements made by the Program involving 9 CGIAR Centers, two international research institutions and 8 country NARS. An impressive presentation on the Program achievements was made by Dr. Raj Paroda, Head, PFU-CGIAR for CAC and Regional Coordinator, ICARDA.

Dr. Kevin Cleaver in his response congratulated the Program partners and stated his satisfaction for the remarkable results achieved. He emphasized that the Program could be used as a model of excellent partnership and coordination to be taken up by CGIAR in other regions including Sub-Saharan Africa. Ms. Iklass Najib, Head, Grants Unit, OPEC Fund for International Development called the CAC Program a great success attained jointly by CGIAR and ICARDA.

(Continued on page 2)
We acknowledge with appreciation the efforts of Dr. Surendra Beniwal, the then Regional Coordinator of ICARDA for CAC and Head of PFU, in the early stages of the establishment of the Unit and promoting its role in coordinating the activities of the various partners. Dr. Raj Paroda, who later took over the role of ICARDA's Regional Coordinator and Head of PFU, has ably conducted dialogs with different stakeholders and, through his effective leadership, continues to enhance the linkages and outputs of the Program. We also acknowledge the important role and contributions of the other team members of PFU.

Driven by the dedication of the scientists and policy makers in the CAC region, the progress made in the Program has been exemplary. New germplasm introduced for major food and feed crops and its rigorous evaluation under varied agroecological conditions resulted in the release of a large number of improved varieties. A seed system was developed to ensure that improved seed became available to the farmers. At the same time, collection, evaluation, conservation and documentation of germplasm in the region was greatly promoted. Research on soil and water management resulted in the development of more efficient technologies. Crop-livestock integration and range management contributed to improving livestock productivity and reducing pressure on grazing lands. Training of a cadre of young scientists and enhancing linkages with the peers in the world has been another major accomplishment of the Program. The national programs have also started harvesting the fruits of complementarity in their efforts. They have established an active regional forum CACAARI that has provided a strong voice to them in the global programs on agricultural research and development.

The success of NARS efforts in the CAC region has received international recognition, and attracted new international research partners AVRDC and ICBA to join forces with the Program partners. New projects are being launched and the presence of CGIAR scientists in the region has increased.

The Steering Committee of the CGIAR Program for CAC, which has provided oversight to the activities of the Program, has greatly benefited from the wisdom and foresight of the research leaders and policy makers in the CAC region. Having worked on this Committee as a Co-chair since its establishment, I am happy to recognize the contributions made by these leaders.

As my term of office as the Director General of ICARDA and the Chair of CDC Sub-Committee for CAC would soon come to an end, I would like to take this opportunity to thank all the scientists, the heads of the research institutions and policy makers in the CAC region for their efforts, which have contributed to the success of the Program. I would also like to thank all the colleagues from the CGIAR Centers and other International Centers for their continued commitment to the region. The CAC Newsletter has been an excellent vehicle for quick dissemination of information about the work in the CAC region amongst the partners. I sincerely hope that it will continue to serve the needs and aspirations of the readership in the future.

I wish the CAC Program continued success.

Prof. Dr. Adel El-Beltagy
Director General, ICARDA

Dr. Franklin Moore also appreciated the impressive achievements of the Program. Replying to his question regarding the Program’s spill over effect, Dr. Abdushukur Khanazarov pointed out a well established cooperation between scientists and farmers that has become possible under this program - thanks to several projects that include participatory activities. The CAC farmers, he said, are now keen to work hand-in-hand with the scientists as they have gained required confidence and trust. Dr. T. Bayarsaihan considered the CAC Program to be very crucial for future agricultural development in the region and outlined the main elements of its success, such as research activity prioritization, well established coordination and matured leadership provided to the Program. He also emphasized the need for addressing the issues relating to policy and market research in the region and hoped that regional cooperation among NARS would be sustainable in future as well. In his statement, Dr. Carl-Gustaf Thornstrom from Sida noted that his organization is planning to strengthen its activities in CAC after the upcoming mission in April, 2006 and assured of Sida support to the Program. Dr. Michael Stahl, Director, International Foundation for Science (IFS) expressed his interest to initiate support activities relating to equipment supply and networking in the CAC region. Dr. Thomas Lumpkin felt happy for the successful start of AVRDC activities in CAC and emphasized the importance of crop diversification in view of the large irrigated area in the region. Dr. Mohammad Al-Attar, Director General, ICBA was also happy about the progress achieved by the Program and expressed his appreciation to the donor community, especially OPEC, for having provided their much needed financial support for various important training activities for CAC scientists in the field of bio-saline agriculture.

The participants were impressed by various posters and publications displayed during the meeting, highlighting the achievements made by various CGIAR Centers in a short span.

The meeting ended with the assurance by the donors and other active partners for their continued support to the Program.

Participants of the luncheon meeting
SPECIAL FUNCTIONS TO HONOR PROF. DR. ADEL EL-BELTAGY AND DR. HAVENER

On 4 December, 2005, just before the opening of the CGIAR Annual General Meeting in Marrakech, Morocco, a special seminar was organized to honor Prof. Dr. Adel El-Beltagy for his contributions to global agricultural research and development, as the Director General of ICARDA. Dr. Margaret Catley-Carlson, ICARDA Board Chair, chaired the session. In her introductory remarks, Dr. Catley-Carlson said, “Adel is a remarkable man. We have gathered here this afternoon to felicitate him for the extraordinary things he has done for ICARDA during the past 10 years. He will be stepping down in May, and will take over the role of Chair of the Global Forum for Agricultural Research (GFAR),” she said.

The session was marked by two seminars in honor of Prof. Dr. El-Beltagy. The first, on “A Systematic and Quantitative Approach to Improve Water-Use Efficiency in Agriculture”, was delivered by Dr. Theodore C. Hsiao, Professor Emeritus, Department of Land, Air and Water Resources, University of California, Davis, USA. The second seminar, on the “Role of Biotechnology in Addressing Water Scarcity in Dry Areas of the World”, was delivered by Dr. Marc van Montagu, Professor Emeritus, Ghent University, Belgium.

Dr. Abdushukur Khanazarov, Deputy Minister of Agriculture, Uzbekistan, representing the CAC-NARS, said: “In Prof. Adel El-Beltagy we see a real friend and well-wisher of our region. It was his initiative that led to the establishment of the CGIAR Program for CAC. He facilitated our interface with the global community at a time when we were feeling isolated. We very much value his mature guidance in the developing world. All my colleagues from the region join me in conveying our sincere thanks and good wishes to him. May God bless and guide him.” Dr. Khanazarov then presented a traditional Uzbek gown to Prof. Dr. El-Beltagy.

Prof. Khanazarov honouring Dr. Beltagy

Responding to the remarks made by various speakers in his honor, Prof. Dr. El-Beltagy said, “What has been important for us is the service to national programs - they are dear to us. Scientists and administration in ICARDA have great respect for our NARS colleagues, and we have inherited this tradition from my predecessors. We work with them as partners, and this has been preserved through the years. We feel that we are still only scratching the surface as far as agriculture in the dry areas is concerned, and as far as CWANA is concerned. A lot more work needs to be done and this is what Bob Havener said in his speech at the 25th Anniversary of ICARDA.”

Dr. Beltagy and Dr. Margaret Catley-Carlson

The session was also dedicated to honor the late Dr. Robert D. Havener. Mrs. Elizabeth Havener, and Mr. Tyler, grandson of the Haveners, were present. A video covering important events in which Dr. Havener had been involved from 1975 when he came to Aleppo to identify a site for ICARDA and until May 2005 when he last visited the Center with Nobel Laureate Dr. Norman Borlaug was screened. In her introductory remarks, Dr. Catley-Carlson, referring to Bob and Adel, said, “The two men had huge respect for each other, and listened to each other. They both felt frustrated and enraged by the fact that dryland agriculture is not exploited to its full potential to make the lives of millions of people better”.

H.E. Dr. Abdushukur Khanazarov said, “Although Dr. Havener is not with us anymore, his spirit will continue to be with us. We are indebted to him for his great vision and outstanding support to the CGIAR Program for CAC. He was a great champion of the developing world. We will miss him, and we pray to God almighty to rest his soul in peace”.

Other speakers who remembered Dr. Bob Havener were: Dr. Per-Andersen, Dr. Bob Zeigler, Director General, IRRI, Dr. Roczitalab and Dr. Al-Attar. Prof. Dr. El-Beltagy said, “I feel greatly humbled on this occasion in paying tribute to a great personality, Robert D. Havener, whom we fondly called Bob, and who was a true friend of all of us. Bob was extraordinary because of his deep and wide knowledge, his strong integrity, his true concern for those who never shared in the Earth's bounty, and his great intelligence and force of character which pulled these elements together and drove him forward. Bob had a special place for ICARDA in his heart. He was not only one of the founding fathers and a member of the first Board of Trustees of ICARDA, but he was also one who guided its development into a Center of Excellence.” Bob last visited ICARDA with Nobel Laureate Dr. Norman Borlaug in May 2005. He took great pride in showing the Center that he had built and nurtured for nearly three decades”.

Prof. Dr. El-Beltagy added that the Future Harvest Alliance Executive has decided to commemorate Dr. Havener’s contributions to the CG Centers and the international agricultural research by instituting a Series of Robert D. Havener Memorial Lectures, the first of which would be organized at ICARDA in May 2006. “Bob is no more with us, but his legacy would always remain with us. The best tribute that we could pay to Bob is by dedicating ourselves to the ideals that he adhered to during his illustrious professional career of nearly five decades”. To end the session, everybody in the room stood in silence to pray for the departed soul to rest in peace.

(Source: This Week at ICARDA, # 903, Jan, 2006)
WHEAT

NEW VARIETY RELEASED IN KYRGYZ

Almira a new winter wheat variety has officially been released in the Kyrgyz Republic by the State Variety Testing Commission on 14 December, 2005. The variety was bred by the Kyrgyz Research Institute of Farming. It was selected from the nursery 5th FAWWON entry # 157 and represents a Romanian breeding line F.474S10.1 developed by Dr. Nickolae Saulescu from Fundulea Field Crop Research Institute. During his visit to Kyrgyzstan in 2003, Dr. N. Saulescu saw the new variety and encouraged its submission for official testing. In 2005, its average yield was 7.52 t/ha across four testing sites which is 1.4 t/ha (18.6%) higher compared to the check variety Kyial. In addition, this variety has higher protein and gluten content than Tilek and Kyial. One of the authors of the variety Dr. Mira Djunusova says: “We selected this variety from the international nursery provided under the Turkey-CIMMYT-ICARDA program and are very pleased with its yield performance, grain quality and, above all, its resistance to yellow rust. The new variety Almira is once again an outcome of the strong cooperation between the Kyrgyz Republic, CIMMYT and ICARDA”.

GERMPLASM ENHANCEMENT

NEW ICARDA/CIMMYT INITIATIVE

During the meeting of the Board of Trustees of CIMMYT at ICARDA, the two centers agreed to the joint implementation of the ICARDA/CIMMYT Wheat Improvement Program (ICWIP) in the Central and West Asia and North Africa (CWANA) region. ICWIP will be hosted in CWANA by ICARDA and include all research undertaken on wheat improvement in CWANA by both centers, including spring, facultative, and winter bread wheat and durum wheat. The centers also agreed that the ICARDA/CIMMYT Wheat Improvement Program should be managed by a jointly appointed Director. As the first major outcome of the new agreement, which was signed officially at the annual general meeting of the CGIAR in December 2005, the two centers have named Dr. Sanjaya Rajaram director of the new program.

Dr. Rajaram joined ICARDA, based in Aleppo, Syria, in early 2005 as Director of the newly-formed Megaproject, “Integrated Gene Management” (MP2), which includes wheat improvement, after having worked as a wheat scientist at CIMMYT for 34 years. His association with ICARDA, however, goes back to the 1980s, when a joint CIMMYT/ICARDA program was established at ICARDA and, while still serving at CIMMYT in Mexico, he directed the ICARDA/CIMMYT staff posted at ICARDA in the joint program.

ICARDA and CIMMYT wish Dr. Rajaram every success in his new appointment. Both centers are confident that his efforts will promote effective delivery of useful products to partners and, given his experience in wheat research and familiarity with both centers, will foster and take advantage of the many synergies between the ICARDA and CIMMYT research teams.

NEW VARIETY ALMIRA RELEASED IN KYRGYZSTAN

Imira - a new winter wheat variety has officially been released in the Kyrgyz Republic by the State Variety Testing Commission on 14 December, 2005. The variety was bred by the Kyrgyz Research Institute of Farming. It was selected from the nursery 5th FAWWON entry # 157 and represents a Romanian breeding line F.474S10.1 developed by Dr. Nickolae Saulescu from Fundulea Field Crop Research Institute. During his visit to Kyrgyzstan in 2003, Dr. N. Saulescu saw the new variety and encouraged its submission for official testing. In 2005, its average yield was 7.52 t/ha across four testing sites which is 1.4 t/ha (18.6%) higher compared to the check variety Kyial. In addition, this variety has higher protein and gluten content than Tilek and Kyial. One of the authors of the variety Dr. Mira Djunusova says: “We selected this variety from the international nursery provided under the Turkey-CIMMYT-ICARDA program and are very pleased with its yield performance, grain quality and, above all, its resistance to yellow rust. The new variety Almira is once again an outcome of the strong cooperation between the Kyrgyz Republic, CIMMYT and ICARDA”.
On 26 October 2005, a Farmers’ Field Day on Raised-bed Planting for Higher Productivity and Water-Use Efficiency was organized at Ter-Ter, Azerbaijan by Azerbaijan Research Institute of Land Management (AzRILM), Azerbaijan Research Institute of Soil Erosion and Irrigation, Ter-Ter Experimental Station, and ICARDA-CAC under the ADB funded project on “Improving rural livelihoods through efficient on-farm water and soil fertility management in Central Asia”.

Mr. Faik, Director of Ter-Ter Experimental Station, Dr. Imran Djumshudov, Senior Researcher, AzRILM, Dr. Wali Ubaidov, Deputy Director, Center for Agrarian Sciences of Azerbaijan, and Mr. Seimur Safarli, Head of Micro Sprinkler Irrigation Laboratory, Azerbaijan Research Institute of Soil Erosion and Irrigation participated in the Field Day. Ms. Musayeva Madina, Socio-economist, represented ICARDA.

Participants were briefed about raised-bed planter, improved irrigation technology, agro-techniques, financial and labor saving aspects of raised-bed planting in Ter-Ter site. The Field Day coincided with the actual planting time for barley and farmers were exposed to this technology at their farms in the same season. Farmers were interested in knowing irrigation techniques on crops planted with raised-bed planter. Farmers were told that irrigation is much easier due to well-made furrows, that are made by raised-bed planter and the work of a farmer, who applies irrigation, becomes much easier. Farmers were told that both yield of crops and water-use efficiency were relatively higher when planted with a raised-bed planter compared to the conventional system. Many farmers expressed their willingness to apply this technology on their fields.

Currently raised-bed planting is applied on about 1,000 ha in Ter-Ter area by private farmers, who rent the raised-bed planter from the Experimental Station or District Agrarian Center, which is leasing agricultural machinery to private farmers.

**BARLEY**

**NEW VARIETY FOR KYRGYZSTAN**

In Kyrgyzstan, Dr. T. Bessonova, Barley Breeder, has identified a line named as Jenish-60 from ICARDA nursery (EBON 1996/1197, entry 106/Septore/Ligne-640) For the last six years, this line has shown excellent performance, outyielding the local check Osnova by 0.7 t/ha. It also has good resistance to lodging and diseases.

**LEGUMES**

**NEW CHICKPEA VARIETY FOR KYRGYZSTAN**

Rafat is a new chickpea variety which was officially released by the SVTC on 14 December, 2005. It is the third chickpea variety released in the CAC region after Eleker (Georgia) and Narmin (Azerbaijan). It was tried at Laylak trial fields in Kyrgyzstan, and demonstrated high yield and good draught tolerance as well as resistance to ascochyta blight. The average yield of Rafat is 1.3 t/ha, which is 31.5% higher than that of the local check Uzbekistanskaya-32. We would like to congratulate Dr. Amantay Samsaliev, responsible for selection of Rafat, on this considerable achievement.

**PROMISING CHICKPEA VARIETIES IDENTIFIED**

Recently, in December 2005, a promising chickpea line FLIP 98-143C was selected from ICARDA materials by Dr. M. Mannapova, Legume Breeder, Andijan Research Institute of Grain and Legume crops under Irrigation. During the last three years, it has outyielded local check by 12-15% and also demonstrated good resistance to diseases. This line has recently been submitted to SVTC under the name Palvon. Another good promising chickpea variety Javlon has been officially submitted for testing to SVTC. It is selected by Dr. Nadir Ergashev, Legume Breeder at the Galla-Aral Research Station from line FLIP 97-99 of ICARDA nurseries. In the last four years, this entry has consistently outyielded local check by 15-18%.

**NATURAL RESOURCE MANAGEMENT**

**FARMERS’ FIELD DAY ON RAISED-BED PLANTING IN AZERBAIJAN**

On 26 October 2005, a Farmers’ Field Day on Raised-bed Planting for Higher Productivity and Water-Use Efficiency was organized at Ter-Ter, Azerbaijan by Azerbaijan Research Institute of Land Management (AzRILM), Azerbaijan Research Institute of Soil Erosion and Irrigation, Ter-Ter Experimental Station, and ICARDA-CAC under the ADB funded project on “Improving rural livelihoods through efficient on-farm water and soil fertility management in Central Asia”.

Mr. Faik Mamedov, Director of Ter-Ter Experimental Station, Dr. Imran Djumshudov, Senior Researcher, AzRILM, Dr. Wali Ubaidov, Deputy Director, Center for Agrarian Sciences of Azerbaijan, and Mr. Seimur Safarli, Head of Micro Sprinkler Irrigation Laboratory, Azerbaijan Research Institute of Soil Erosion and Irrigation participated in the Field Day. Ms. Musayeva Madina, Socio-economist, represented ICARDA.

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Currently raised-bed planting is applied on about 1,000 ha in Ter-Ter area by private farmers, who rent the raised-bed planter from the Experimental Station or District Agrarian Center, which is leasing agricultural machinery to private farmers.

**Demonstration of the raised-bed planter**

**The raised-bed planter in operation**
COTTON EXPERTS FROM CAC PARTICIPATE IN INCANA WORKSHOP

Dr. Hakimjon Saydaliev, Head of Cotton Germplasm Department, Cotton Breeding Institute, Uzbekistan and Dr. Bayramgeldi Gurtgeldiyev, Principal Cotton Specialist, Ministry of Agriculture, Turkmenistan participated in a Traveling workshop on Hybrid and Bt Cotton, which was conducted in India from 21 - 26 November, 2005. It was organized with the active involvement of the Indian Council for Agricultural Research (ICAR) for participants of four cooperating members of the Inter-regional Network on Cotton in Asia and North Africa (INCANA). The visit of both the participants from CAC was sponsored by GFAR.

Dr. O. M. Bambawale, Principal Scientist and Mr. U. R. Sangle, Research Associate, National Centre for Integrated Pest Management, ICAR accompanied the participants during the traveling workshop and interacted with them technically on IPM in hybrid and Bt cotton and facilitated their visits to different Institutions. Mr. Sanjay Deshpande, AGM (Public Relations & Coordination), Mahyco Seeds Ltd, New Delhi also accompanied the participants to achieve harmoniumous interactions.

The travel-study itinerary was chalked out by Dr. C. D. Mayee, President, Indian Society for Cotton Improvement (ISCI) with the objective to expose the participants to all the three major cotton growing zones of India with respect to the hybrids and Bt cotton scenario. During their travel the Group visited the following centers/stations/field sites:

- Centre Institute for Cotton Research (CICR) Regional Station, Sirsa and experimental fields including Bt cotton, for the north zone
- CICR Regional Station, Coimbatore and experimental fields for the south zone including Bt cotton trials and IPM and IRM sites
- Research Facility of Mahyco Life Sciences Research Centre with orientation given by Dr. Brent Zehr, Director of Research Maharashtra Hybrid Seeds Co. Ltd. (Mahyco), followed by visit to performance trials of Bt cotton in farmers fields.

These visits to selected centers/stations to observe field performance of hybrid and Bt cotton enabled the participant to interact with the expert scientist, field managers and farmers. The team also attended The National Dialogue on Resurgence of Cotton held at Central Institute for Research on Cotton Technology, Mumbai on 26 November, 2005. The participants were highly impressed by the scientific achievements of cotton experts in India in the field of hybrid and Bt cotton and considered their visit to be highly rewarding.

Meetings/Workshops/Conferences

AGM'05 include:
- Approval of the System Priorities for CGIAR Research 2005-2015
- Agreement on the next steps for funding the system priorities
- Approval of 2006 Financing Plan at the level of $489 million
- Agreement on increased programmatic, corporate services and structural alignment among the Centers working in Sub-Saharan Africa and beyond
- The final stage of the compensation study was presented and the next steps discussed
- Confirmation of a CSO Forum at AGM’06, from 4-6 December, 2006.

Prof. Abdushukur Khanazarov, Deputy Minister of Agriculture and Water Resources of Uzbekistan and Director General of USPCA, was present on behalf of CAC Association of Agricultural Research Institutions (CACAARI) as its Chairman, whereas Dr. Raj Paroda represented the CGIAR Program for CAC.

CHICKPEA GAINING POPULARITY IN NORTHERN KAZAKHSTAN

During the Soviet era, chickpea was grown only for feed purposes on small area in dry steppe zone of Northern Kazakhstan yielding on an average about 0.5-0.8 t/ha. Keeping in view the importance of crop diversification and high potential of chickpea as a drought tolerant crop, it was included into several agronomy studies, initiated in 2001 under the ADB funded Project on Soil and Water Management at the experimental fields of the Scientific-Production Center of Grain Farming at Shortandy, Kazakhstan.

In a long-term experiment where rotations of small grains with fallow was compared with continuous grains with oats replacing fallow, chickpea was incorporated also as replacement of fallow (Principal investigator Dr. K. Akshalov). The methodology of the trial implies growing all crops at three levels of inputs: low, medium and high. The high input technologies included intensive snow management practices, efficient weed control and application of both phosphorus and nitrogen fertilizers.

Five year data show dramatic influence of technologies on chickpea yield: it got increased 2.8 and 3.6 times under medium and high levels of inputs, respectively. This is explained by the fact that chickpea plants are much less aggressive than small grains and get more affected by weed infestation and lack of moisture under poor management practices. Very impressive data were obtained in 2004, which was characterized with high infestation of Ascochyta blight, causing considerable crop damage. While under low level of inputs, the chickpea crop failed (0.22 t/ha), under medium and high levels of inputs, the yield was 1.01 t/ha and 2.31 t/ha, respectively. This indicates the correlation of plant resistance to diseases with the cultural practices, although no plant protection measures were used.

Economical analysis in 2005 has suggested that growing chickpea under low level of inputs was not profitable, whereas the net profit from 1 ha under medium and high levels of inputs, respectively, was US $ 38 and US $ 71. Presently, the chickpea prices are within the range of US$ 150-200 per ton, but in Kazakhstan, the market for this crop does not exist. In this context, there is a need to explore export opportunities for chickpea and further improve its grain quality for large scale adoption.
PARTICIPATION IN THE INTERNATIONAL RICE SYMPOSIUM

From 16-24 November, 2005, Prof. Abdushukur Khanazarov, Deputy Minister of Agriculture and Water Resources, Uzbekistan and Director General of USPCA accompanied by Dr. Zakir Khalikulov, PFU-CGIAR, visited the International Research Institute of Rice (IRRI) to participate in the 5th International Rice Genetics Symposium, which was held in Manila, Philippines. In all, more than 700 scientists representing different countries attended the Symposium. The discussions were focused on rice genetic improvement for increasing productivity, which is a great challenge.

The invitation by IRRI provided Drs. Khanazarov and Khalikulov with an excellent opportunity to meet a number of eminent scientists in the field of rice improvement, including those from China, USA, Iran, Korea etc. On 22 November, 2005, Drs. Khanazarov and Khalikulov attended the meeting with the scientists from Iran, who put forward an idea of creating a Rice Network in the region which would cover Iran, Turkey, Pakistan, Azerbaijan, Uzbekistan, Kazakhstan, Tajikistan, Kyrgyzstan, and Turkmenistan. In order to create such a network, it was decided that PFU-CGIAR would organize a meeting in Tashkent at the end of March, 2006 and invite the representatives of the above countries and IRRI to discuss this opportunity. Dr. Faramarz Alinia, Director General, Rice Research Institute, Iran, who is responsible for the organization of the network, will discuss this issue with the representatives of Turkey and Pakistan and provide a report on the outcomes of the negotiations in the Tashkent meeting. It is expected that the establishment of the network, which is to cover 9-10 countries of region, will increase the region's attractiveness for the donors' community in terms of funding of rice research activities. This idea was also supported by the Dr. Zeigler, DG of IRRI, who assured of his commitment to strengthen the IRRI’s involvement in the CAC region. He also confirmed his participation in the upcoming Steering Committee Meeting of the CGIAR Program for CAC to be held in Tashkent in April, 2006.

WORKSHOP ON CARBON SEQUESTRATION IN CENTRAL ASIA

An International Workshop on Carbon Sequestration in Central Asia was held from 1-4 November, 2005 in Columbus, Ohio, USA. The workshop was jointly organized by the Ohio State University, ICARDA, CIMMYT, and the ARS-USDA. Soil and environmental degradation are serious problems throughout the Central Asia.

Soil degradation is exacerbated by accelerated erosion, salinization, and depletion of soil organic carbon (SOC) pool. Conversion of extensively used natural systems into agricultural ecosystems has accelerated the process of mineralization and depletion of the SOC pool with an attendant emission of CO2 from soil to the atmosphere. There is a need to establish a common policy for use of soil and water resources, a policy that spans the various nations involved. A need also exists to identify alternative farming systems with lesser dependence on irrigation, which would help conserve and restore soil nutrients, enhance soil carbon pool, improve soil quality, and mitigate climate change by offset-setting anthropogenic emissions. This requires the review of successful efforts to accomplish these outcomes, as well as the analysis of new alternatives.

The audience for this workshop was largely interdisciplinary and heterogeneous. It included 61 members of the science community that work at university settings as well as at government institutions and multi-national research centers, such as ICARDA, CIMMYT and IPGRI. A total of 24 papers were presented, including eight papers by scientists from the region: Kazakhstan (4), Uzbekistan (3), Russia (2) and Tajikistan (1). The diverse participant mix enriched workshop outcomes and resulted in important new approaches to the mitigation of the problems.

During the first day of the Conference, a University Distinguished Lecture: Addressing the challenges of agriculture in Central Asia was given by Dr. Raj Paroda, Regional Coordinator, ICARDA-CAC for the professors, teachers, and students of the Agriculture Department, OSU and the participants, which was well received.

The workshop lasted for two days, and it was supplemented by the field trips to the OSU agricultural experiment station in Wooster and the East Appalachian Watershed Experiment Station in Coshocton, Ohio to observe projects designed to ameliorate problems similar to those discussed at the workshop. The participants were impressed by visiting the oldest continuous no-till plots in Wooster demonstrated by soil scientist Dr. Warren Dick.

The Conference recommended to publish workshop proceedings and establish a Network on Carbon Sequestration in Central Asia including sites representing different ecosystems in the region starting form black soil zone in northern Kazakhstan down to deserts of Turkmenistan and Pamir mountains.
PARTICIPATION IN THE INTERNATIONAL WHEAT CONFERENCE

Four scientists from Kazakhstan, Drs. A.Kurishbaev, Y.Zelensky, K.Abdullaev, and A.Sagitov accompanied by Dr. Bitore Djumakhanov from ICARDA-CAC Office recently participated in the 7th International Wheat Conference held at Mar del Plata, Argentina from 27 November to 2 December, 2005. Around 450 scientists from all over the world attended the conference. The program was very tight and included sessions on aspects such as: Breeding for Resistance to Biotic Stress; Crop and Natural Resources Management; Breeding for Improved Industrial and Nutritional Quality; Breeding for Resistance to Abiotic Stress; Physiology of Wheat Production; Biotechnology and Cytogenetics; Conservation and Management of Genetic Resources.

During the official opening, Dr. Norman Borlaug, delivered a Keynote Address entitled “From the Green to the Gene revolution: Our 21st Century Challenge”. He stressed that such events as this 7th International Wheat Conference were an excellent opportunity for wheat researchers to exchange latest achievements and develop new strategies to overcome technological bottlenecks for improving wheat productivity.

The participants visited INTA (Instituto Nacional de Tecnología Agropecuaria) Balcarce Experimental Station. The scientists of INTA demonstrated their experiments, including the work on zero and minimum tillage equipment, as well as agronomical experiments based on date of planting, application of fertilizers and use of various irrigation systems.

REGIONAL PGR CONFERENCE HELD IN SAMARKAND

A regional Conference for the young scientists working on conservation and use of underutilized and neglected plant species in Central Asia, was organized by the Samarkand State University (SSU) named after A. Navoi in collaboration with IPGRI and the Zarafshan State National Park on 12 October, 2005 in Samarkand.

While opening the Conference, Vice-Rector of the University for International Cooperation Dr. M. Nosyrov expressed his satisfaction about the fact that international organizations have concentrated their efforts on capacity building of young scientists, especially in the field of genetic resource conservation. As a good example of this, he noted the research work on sea-buckthorn conducted by Mr. F. Babadjanov, covered in the previous issue of the Newsletter. Impressive results achieved by this young scientist have become a source of inspiration for the organizers of this conference.

Prof. A. Soleev, Vice-Rector for Education, appreciated the role played by IPGRI to organize this important conference.

Dr. P. Bordoni emphasized on the important role of plant gene pool of Central Asia for the global plant breeding program and hoped that young scientists from the region would make a considerable contribution towards conservation of plant genetic resources for future generations.

Ms. M. Turdyeva, Forest Genetic Resources Scientist, IPGRI-Tashkent, noted that the rich bio-diversity of PGR of Central Asia has not been fully assessed and is presently underutilized. In this context, she emphasized the importance of coordination of the efforts by PGR specialists, including young scientists, towards the development of sustainable use of plant genetic resources in Central Asia that would strengthen the economy of the region.

The conference included two sessions: (1) environmental and biological peculiarities of genetic resource conservation in Central Asia and (2) Bio-diversity of gene pool of Central Asia as a basic for the development of national economies of the region. In all, about 25 young scientists from research institutes and Universities of Kyrgyzstan, Tajikistan, Uzbekistan and Nepal participated. They made presentations on sea-buckthorn, berberis, pear, hawthorn pontica (C. pontica C. Koch), Climacoptera, pistachio, walnut and other plants. The participants developed recommendations on expanding the research in the field of assessment and conservation of underutilized and neglected plant species in the region as well as on strengthening their activities in these areas. During the visit to the Zarafshan State National Park, they got acquainted with the research results achieved by Mr. F. Babadjanov in the area of conservation and use of sea-buckthorn.

The conference materials will be published soon in both Russian and English under the Global Program on Underutilized Species (Italy).
Five scientists from CAC region had recently attended the Fourth International Food Legume Conference held in New Delhi, India from 18-22 October, 2005. Around 500 scientists attended the Conference. Drs. Lutfiar Amirov from Azerbaijan, Sohib Imamov from Tajikistan, Sofia Kobakhia from Georgia and Rakhim Medeuybaev from Kazakhstan presented their posters, whereas Dr. Bitore Djumahanov made an oral presentation on Chickpea and Lentil: Future Protein Rich Crops for Central Asia and the Caucasus.

The Conference was inaugurated by Honorable Shri Bhairon Singh Shekhawat, Vice President of India. He mentioned that about 780 million people in the developing world are currently undernourished. Hence, the efforts to improve food security and nutrition as a means to end hunger and malnutrition were important and needed due priority at national, regional and international level. Dr. Mangala Rai, Director General, ICAR, emphasized on need for increased R&D efforts on food legumes.

These scientists attended various technical sessions and also tasted the great variety of dishes based on legumes. It helped them to change the widely held belief that meat is a necessary part of a healthy diet.

The participants had an opportunity to visit the Genebank at the National Bureau of Plant Genetic Resources (NBPGR), New Delhi. Dr. Gurinder Jit Randhawa, Senior Scientist, briefed them about the genebank history and on-going activities. They were also shown the quarantine facilities and long term and medium term storage facilities. They were highly impressed with the Indian Genebank and came back with high impressions of food legume research in India and were pleased that the conference provided them with an excellent opportunity to communicate with foreign experts working in this field.

The Harvest Plus Challenge Program addresses enhancement of the nutritional value of the major agricultural crops: potato, rice and wheat. The Annual Meeting of Wheat Enhancement Group took place in Beijing, People's Republic of China from 11-13 October, 2005. The Wheat Group activities have been coordinated by CIMMYT. Central Asia and the Caucasus region was represented by Dr. Kenzhe Abdullayev, Director of Pavlodar Agricultural Research Institute, Kazakhstan, and Dr. Alex Morgounov, CIMMYT Regional Wheat Breeder/Agronomist. The meeting was attended by 30 participants from many countries.

The Harvest Plus activities in the field of wheat improvement focus on enhancement of Iron and Zink content in grain, making it more valuable for human diet. The three days' meeting addressed the following issues: socio-economic consequences of Iron and Zink deficiency; germplasm and genetic resources with high Zinc and Iron content; breeding for enhancement of the content of these micronutrients; application of biotechnological tools, cooperation and information framework.

Under the Harvest Plus Program, a study was conducted in Northern Kazakhstan on variations of spring wheat across seven locations for Zn and Fe content in grain. The data which was presented in Beijing suggested that there is significant variation for both elements depending on genotypes and environmental conditions. Several varieties with 30-40% higher Iron and Zink content have been identified; unfortunately, they had lower yield compared to regular varieties. The data from Kazakhstan attracted the attention of the participants and it was suggested to have a regional Harvest Plus meeting in Kazakhstan in the spring of 2006 to continue the analysis of the regional material.

(Source: Dr. A. Morgounov, CIMMYT-Almaty)
The efficient transfer and adoption of new technologies is very important for the agricultural development of the CAC Region. Farmers worldwide are in continuous need of cost effective technologies; it is especially true for the resource poor farmers in the developing world. Reorganization of agricultural structure in the region has posed tremendous challenges for technology transfer and adoption by the farmers. Considering importance of the subject, a training course on Agricultural Extension and Transfer of Technology was conducted under Soil and Water Project funded by ADB from 21-25 November, 2005 in Tashkent, Uzbekistan. In total, 23 participants from Central Asia and Azerbaijan benefited from the training course and received accomplishment certificates from ICARDA. The purpose of the training was to provide the information on the latest methodologies and approaches applied in extension services worldwide to the decision makers and scientists involved in agricultural research for development in the countries of Central Asia and Azerbaijan. In order to enhance coverage, farmers involved in the research activities of the Project were also invited beside the scientists and policy makers from the Ministry of Agriculture in these countries.

Dr. P.N. Mathur, a highly experienced and resourceful extension specialist, with broad knowledge of extension services operation in India and abroad, acted as resource person for the training and developed special training manuals taking into account the specifics of the CAC Region. In all, the subjects covered were: i) General idea of modern extension services; ii) Extension methods; iii) Organization of interactive field demonstrations, farmers’ fairs and exhibitions; iii) Various participatory extension approaches for facilitating farmer to farmer extension and farmers’ field schools; iv) Understanding farmers’ needs: participatory methods of interacting with farmers; v) Technology development process: technology assessment and refinement through participation of farmers and researchers.

During the training, the scientists from ICARDA-CAC Office also shared their experiences on interactions with farmers, and actively participated in the discussions. Dr. Raj Paroda took active part and provided impressive presentations on the (i) challenges in agricultural sector of the Region and (ii) history of Green Revolution in India, emphasizing the decisive role of decision makers’ commitment and dynamic leadership towards making technology transfer possible and effective. It was unanimously agreed that a workshop on institutional aspects of technology transfer needs to be organized for the senior policy makers of the region.

International training course on “Conservation Agriculture Technologies for Rainfed Wheat Production Systems” was hosted by Turkish Ministry of Agricultural and Rural Affairs (MARA) from 26 September to 7 October, 2005. The course was jointly coordinated by General Directorate of Agricultural Research (GDAR) of MARA, CIMMYT and ICARDA, and it aimed at training the participants in the use of zero and minimum tillage for wheat production systems. A total of 20 scientists from Central and West Asia, the Caucasus and North Africa took part in the course. Central Asia and the Caucasus were represented by 10 participants. Four of them were supported by the Washington State University and CIMMYT through the project on International Cooperation in Agricultural Research (ICAR).

The program included lectures delivered by invited specialists and field visits within the middle Anadolu Province of Turkey. Emphasis were given on the activities promoting rainfed zero/reduced tillage systems for planting in the flat surface using alternative crop residue management strategies as well as reduced till permanent bed planting for rainfed conditions. Presentations and discussions stressed that conservation agriculture is not the technology per se but a whole system. Therefore, it is important to understand not only planting methodologies and machinery required for different planting systems, but also the whole crop production cycle including weed control, crop rotation and residue management methods.

During the field visits, the machinery available to farmers in Turkey and the modifications made by the researchers to adapt planters to local conditions were demonstrated to the participants. The demonstration of field methods of residue ground cover evaluation was met with great enthusiasm as well as side-by-side comparison of various planters.

The course allowed all participants to interact with the invited lecturers, scientists, colleagues, and to exchange experiences. Participants felt that the course was very useful and expressed their gratitude to the funding organizations/projects for this opportunity.
The International Center for Biosaline Agriculture (ICBA) organized a 5-day training course on 'Germplasm evaluation, multiplication and data collection' in collaboration with ICARDA and IWMI in Tashkent from December 12-16, 2005. The training course was conducted under the project 'Enabling communities in the Aral Sea Basin to combat land and water resource degradation through the creation of 'Bright Spots' (RETA 6208) being implemented in Uzbekistan, Kazakhstan and Turkmenistan. The course was attended by 16 participants, including those from regional Cotton Research Institutes, Karakul Sheep Breeding Research Institute and Uzbek Research Institute of Plant Industry. Dr. Shoaib Ismail, Course Coordinator from ICBA, together with a number of eminent researchers from Uzbekistan, gave lectures.

The Inaugural Session was attended by Mr. Rustam Abdulqayoumov, ADB representative; Dr. Herath Manthrihilake, Regional Coordinator, IWMI; and Dr. Mekhlis Suleimenov, Deputy Head, ICARDA Regional Office. They emphasized the importance of such projects as this one for the region where salinity problem was increasing and where there was a need to look for alternative productive systems, other than cotton.

The course content was divided into eight sessions, covering different aspects on germplasm evaluation, multiplication and data collection of salt tolerant plants and halophytes. A field trip was organized to the Uzbek Research Institute of Plant Industry where participants were briefed about over 17,000 germplasm collections stored in the Gene Bank. Dr. Ismail also demonstrated to the participants the procedures for germination and testing of salt tolerant materials.

On concluding day, the certificates were awarded by Dr. Raj Paroda, Regional Coordinator, ICARDA-CAC. In his address, Dr. Paroda emphasized on the increasing problem of salinity that is affecting productivity of crops. He highlighted the role of crops and salt tolerant species to increase the productivity and called upon national scientists to look for indigenous salt tolerant species. He also mentioned about the existing collaboration between IWMI, ICARDA and ICBA and appreciated the role of ICBA for taking salinity research in the region.

The training workshop on Conducting Trials of Promising Vegetable Varieties took place from 25 September to 8 October, 2005 at AVRDC (the World Vegetable Center), Taiwan. In total, 30 specialists working in the field of vegetable research from 15 countries participated. Six specialists from CAC region have benefited from the training, including: Mssrs. Hajiaga Zeynalov and Tofig Malikov, Azerbaijan Research Institute of Vegetable Growing (ARIVG); Bahytbek Amirov, Kazakhstan Research Institute of Potato and Vegetable Farming (KRIIPVF); Bayrammurad Seyidov, Turkmenistan Research Institute of Agriculture (RIA); Firuz Yuldashev, Tashkent State Agrarian University (TSAU) and Jorabek Pirnazarov, Uzbek Research Institute of Plant Industry (UzRIPI) from Uzbekistan.

The training course embraced the following subjects: regional variety trials and design of experiments; evaluation of indigenous vegetables and introduction to AVRDC promising varieties/lines; soil fertility and field management; seedling and integrated crop management; economics of maximum yield production; diagnoses of major pests and diseases and integrated pest management; seed multiplication and quality; and data collection for regional trials and statistical analysis of trial results. The hands-on training on preparation of seedlings and field for planting, composting as well as data gathering for regional trials were also conducted.

The workshop provided the participants with an excellent opportunity to get exposed to the activities of AVRDC and meet the scientists working there as well as to exchange the information regarding the status of vegetable research in their countries. They have got acquainted with the activities of experimental research stations, the Associations of Farmers, seed breeders and maintenance service providers, as well as the Cooperative of Fruit and Vegetables' Producers of Taiwan. At the end of the training, each participant received the Training Certificate from AVRDC.

In 2006, the scientists from CAC countries who attended this training course will be involved in regional variety trials in their home countries. The aim of the trials will be to test three vegetable crops including seven varieties of tomato, eight of pepper and six of vegetable soybean. The best varieties will then be widely introduced in these countries.
**Miscellaneous News**

**KAZAKH SCIENTISTS HONOURED**

We are happy to extend our heartiest congratulations to our colleagues from the South-Western Scientific-Production Center for Agriculture, Kazakhstan - Dr. Abdyrahman Umbayev, Director; Dr. Kopmakhambet Yelemesov, Chairman of the Joint Stock “Ayl-Tulik”; Dr. Nuradin Allabayev, Deputy Director; Dr. Hismidullu Ukbayev, Head of the Station Operation; Dr. Tagay Kanseliev, Leading Scientist; and Dr. Rabykba Shamenkenova, Leading Scientist. They have recently received the State Award of the Republic of Kazakhstan for the year 2005 in the field of Science, Technology and Education. They have been awarded in recognition of their outstanding achievements for breeding of Kazakh type of Karakul and Ataay sheep breeds.

**New Staff Members**

**DR. SINGH JOINS ADB PROJECT**

Dr. Guriqbal Singh has joined ICARDA-CAC Office in Tashkent, Uzbekistan as a Technical Coordinator for the ADB funded project on water and soil fertility management. He was awarded Commonwealth Scholarship for doing PhD at the University of Wales, Bangor, United Kingdom. He has worked as an Agronomist for more than 15 years at the Punjab Agricultural University, Ludhiana, India, where he was looking into the agronomic management of grain legumes. Dr. Singh has an extensive experience of working for national and international projects. PFU-CGIAR and ICARDA-CAC family welcome Dr. Singh and wish him every success in his new assignment.

**Future Events**

**CGIAR-CAC STEERING COMMITTEE MEETING**

The 9th Steering Committee Meeting of the CGIAR Program for CAC will be held from 3-5 April, 2006 in Tashkent, Uzbekistan. For more information, please contact pfu-tashkent@cgiar.org

**ICARDA REGIONAL PLANNING MEETING**

ICARDA Regional Planning Meeting of ICARDA Regional Program for Central Asia and the Caucasus will be held on 6 April, 2006 in Tashkent, Uzbekistan. For more details, please contact cac-tashkent@cgiar.org

**ADB PROJECT STEERING COMMITTEE MEETING**

The Third Steering Committee Meeting of the ADB project on Water and Soil Fertility Management, implemented by ICARDA, will be held on 7 April, 2006 in Tashkent, Uzbekistan. For more details, please contact cac-tashkent@cgiar.org

**‘BRIGHT SPOTS’ PROJECT MEETING**

The Second Steering Committee Meeting of the ADB Project on Saliency Management through Creation of “Bright Spots” will be held on 6 April, 2006 in Tashkent, Uzbekistan. For more information, please contact pfu-tashkent@cgiar.org

**IPM-SUNN PEST WORKSHOP**

IPM Sunn Pest Workshop on Increased Stability of Winter Wheat Production in Central Asia: A Systems Approach to Management of Sunn Pest will be held from 13-19 March in Almaty, Kazakhstan by ICARDA/University of Vermont/UNESCO/IBSP. For more details, please contact icarda@CGIAR.ORG.

**TRAINING ON WATER MANAGEMENT**

Training Course: Water Management for Improved Water-Use Efficiency in the Dry Areas with Special Focus on Supplemental Irrigation in Rainfed Environments will be held from 7 May to 8 June, 2006 in Aleppo, Syria by ICARDA/JICA. For more details, please contact icarda@CGIAR.ORG.

**2ND INTERNATIONAL RICE CONGRESS**

The 2nd International Rice Congress will be held from 9-13 October, 2006 in New Delhi, India. It will be jointly organized by the Government of India (Department of Agricultural Research and Education and the Indian Council of Agricultural Research) and the International Rice Research Institute (IRRI). For more information, please contact rice2006@gmail.com

**GFAR GENERAL CONFERENCE**

The Indian Government has agreed to host the third GFAR General Conference to be held in New Delhi, from 9-11 November, 2006 at the National Agricultural Science Center of the Indian Council for Agricultural Research (ICAR). The GFAR conference will follow immediately the 2006 APAARI General Assembly meeting to be held at the same venue from 6-8 November, 2006.

The GFAR and APAARI Secretariats with the support of Dr. Mangala Rai, Director General, ICAR and the officials of the Department of Agricultural Research and Education (DARE), Ministry of Agriculture, Government of India have started preparing for the two conferences, and will soon provide information on various aspects of the proposed events including the themes, structure and draft program. Updates will be provided on the websites of both GFAR and APAARI as preparations move forward.

**CONFERENCE ON DRY LANDS DEVELOPMENT**

The 8th International Conference on Dry Lands Development, with the Theme “Human and Nature - Working Together for Sustainable Development in Dry Lands” will be held Feb. 25-28, 2006 in Friendship Hotel, Beijing, China, under the auspices of the International Dry Lands Development Commission (IDDC) and the Chinese Academy of Sciences (CAS), sponsored by FAO, ICARDA, UNESCO, UNU, Arid Land Research Center (ALRC, Japan), Desert Research Institute (IRD, USA), National Natural Science Foundation of China (NSFC), Cold and Arid Regions Environmental and Engineering Research Institute (CAREERI) and other international and national organisations.

The Conference will provide an opportunity to exchange research results and experiences in dry lands development and control of desertification/land degradation among colleagues and officials from around the world and to promote international cooperation. It will also identify challenges that may be faced by the research community in dealing with the problems of dry lands development.

The registration form can be found at the following address: http://www.icarda.org/Announcement/Registration_Form.pdf