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EIGHTH CGIAR-CAC PROGRAM STEERING COMMITTEE MEETING HELD

The eighth meeting of the Steering Committee of the CGIAR Eco-Regional Program for Sustainable Agriculture in Central Asia and the Caucasus (CAC) was held at ICARDA on 2-3 May 2005. More than 50 scientists from the eight CAC countries of Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan as well as from the nine CG centers and two IARCs participating in the program attended the meeting. Dr. Geoff Hawtin, Executive Secretary, Global Crop diversity Trust (GCDT) from FAO and Prof. Hans Van Genkel, Rector of the UN University (UNU) also participated.

During the opening session, the Director of International Cooperation at ICARDA, Dr. Magdy Madkour, welcomed participants to the meeting which also marked the celebration of a decade of collaboration between ICARDA and national programs in the CAC region to improve agriculture and livelihoods. He hailed the strong partnership between the CG centers and NARS, adding that this should be extended to NGOs, the private sector and other research institutes. He said that the impact of the CGIAR program is already visible and results need to be linked to various development projects at national level.

The IRRI Deputy Director General (Research), Dr. Ren Wang, who represented Dr. Ronald Cantrell, Co-Chair of the Program Executive Committee, thanked the donors, mainly the World Bank, for supporting the CG program in CAC. “Without their participation we the centers would not have the impact we have had,” he said.

Prof. Dr Adel El-Beltagy, Director General, ICARDA, who is also the Chair of the Center Directors Committee Task Force for CAC, welcomed participants saying, “its heartening to see that most of the heads of the NARS are attending.” He said the meeting was indeed historic, as it marked the 10th Anniversary of ICARDA’s full engagement with NARS of the CAC region. He paid tribute to all individuals and institutions who played key role in enabling the program to take its present shape.

Message from Dr. Thomas Lumpkin
Director General
AVRDC

Dear colleagues!

AVRDC - The World Vegetable Center is pleased to join the CGIAR’s sustainable agricultural development program for Central Asia and the Caucasus. The vegetable sector of CAC has not recovered from the difficulties caused by the collapse of the Soviet Union but is now poised for growth. Globalization, trade liberalization and the increased demand for vegetables in South Asia, Middle East and Europe are creating new market opportunities for CAC farmers. Further, development of the vegetable sector is expected to bring more jobs and higher incomes in this impoverished region.

Although poor economically, CAC has a rich bounty of natural resources. The region is the center of origin for many important vegetable crops, including onion, spinach, carrot and melons. Opportunities for germplasm collection and improvement are vast and will be pursued through this development program.

AVRDC has recently sponsored two workshops for vegetable scientists in the region. We are impressed with the intellectual resources and the national agricultural research systems (NARS) in CAC. Unfortunately, their salaries and R&D budgets are very low. It’s evident that the national scientists have experienced a technology lag over the past decade and they need to become updated with new developments in vegetable science and information technology. Further complicating matters is the emergence of many new smallholdings from the break up of state-run collective farms. Fresh approaches are needed to serve this new clientele, who currently grow most of the vegetables in the region.

Our goals in the CAC are to work with the NARS to identify priority needs and then develop vegetable systems through collaborative R&D programs. We have just completed a successful workshop in Tashkent where priorities were identified. These priorities include the promotion of underutilized vegetable crops to diversify cropping systems, organization of regional variety trials, development of low-cost technologies for the improvement of vegetable production systems, including protected production systems, management and control of root and disease problems, and the improvement of seed production systems. We are in the process of formalizing a regional network to develop synergies among the NARS and to generate new alliances among international research institutes and donor agencies.

These activities reflect AVRDC’s global expansion in outreach programs. As the world’s only international center focused on vegetables, we will try to support any impoverished region that calls for our expertise and technologies. We look forward to working with the CGIAR, NARS, development organizations and interested donors to improve the livelihoods of people in CAC region.

Thomas Lumpkin
The CGIAR program has made tremendous progress and the agricultural research is starting to receive priority. "We are pleased that all the national governments in the region are now placing more emphasis on agricultural research for development," Prof. Dr. El-Beltagy said.

Prof. Dr. El-Beltagy reiterated that the CG centers have decided to continue working together to support the on-going program on development of agricultural research systems in the CAC region. He also noted that due to emerging global challenges, the CGIAR Consortium needs to keep pace through effective collaboration and innovative partnerships. "By expanding partnerships and adopting a programmatic approach to research, the CGIAR centers have the ability to respond to changes in the external environment," he said. Prof. Dr. El-Beltagy also said that the priorities of the program now need to be adjusted within the framework of the new priorities developed by the Science Council. Finally, he thanked the donor community and the NARS for their continued support to the CAC program.

On behalf of the World Bank, Dr Juergen Voegele, Chairman of the Executive Committee, said that the Bank is satisfied with the progress made so far and appreciated the new partnership with two new centers. He called for a re-thinking of priorities of the program to keep them in tune with the changing needs of the region. He said that the World Bank is committed to continued support to the CAC region.

Dr. Raj Paroda, Head, Program Facilitation Unit made his annual presentation entitled "CGIAR Program for CAC: Harnessing the fruits of partnership". He outlined the major achievements of the program, which include: development and release of 12 improved crop varieties, improved agronomic practices, activities on increasing water-use efficiency, improved livestock production practices, development of a number of research networks within the region, and NARS capacity building. He was happy to inform the participants that since the last Program Steering Committee meeting, the number of partners of the Consortium has increased as two international centers, AVRDC and ICBA, have also joined. Dr. Paroda also briefed about the follow up on the Issyk-kul Declaration, emphasizing that policy makers are being catalyzed for strengthening agricultural research in the region. He also outlined the future strategy for the CGIAR Program for CAC, emphasizing the importance of scaling-up the collaborative activities and knowledge sharing. Finally, Dr. Raj Paroda thanked all partners in the Consortium for excellent cooperation and hoped for further strengthening of research activities.

During the meeting, country status reports on agricultural research were presented by all the NARS representatives. Also, reports on on-going collaborative activities with the various CG centers were presented. These included: field crop genetic resources; germplasm enhancement; diversification; integrated natural resources management; water and crop management; feed and livestock management; wheat, groundnut, potato and rice improvement; strengthening vegetable research; and new initiatives on biosaline agriculture.
PRESENTATION OF PLAQUES ON A DECADE OF PARTNERSHIP

Acad. Gani Kaliev, former President, Academy of Agricultural Sciences, Kazakhstan

Acad. Bobo Sanginov, former President, Academy of Agricultural Sciences, Tajikistan

Acad. Jamin Akimaliev, Director, RI of Agriculture, Kyrgyzstan

Dr. Asad Musaev, Director General, Agrarian Science Center, Azerbaijan

Dr. Ashir Saparmuradov, Head, Science Department of MoA, Turkmenistan

Dr. Suren Beniwal, former Head, PFU-CGIAR for CAC

Dr. Mekhlis Saleimeno, Assistant Regional Coordinator, ICARDA- CAC

Dr. Zakir Khalikulov, Consultant-Scientist, PFU-CGIAR for CAC
A regional traveling workshop on “Winter wheat improvement, seed production and cultivation technologies” was jointly organized by GTZ-CIMMYT Regional Seed Network Project, ICARDA and Washington State University (WSU) from 5-13 June, 2005 covering Tajikistan, Uzbekistan and Kazakhstan. The objective of the workshop was to review the progress made by the winter wheat breeding programs in these countries and to demonstrate seed production and cultivation technologies under both irrigated and rainfed conditions. Participants included 35 scientists from all five Central Asian countries as well as breeders, pathologists and agronomists from Iran, Turkey and USA, and experts from CIMMYT and ICARDA. The participants traveled over 2000 km following the route Tashkent-Khodjent-Djizak-Samarkand-Shymkent-Taraz-Almaty. All the research institutions and production farms visited demonstrated much higher capacity building and improved germplasm management, compared to the previous traveling workshops. It was obvious that the regional network for winter wheat improvement is working well and the cooperation among ICARDA, CIMMYT, Turkey and WSU has produced good results. Several varieties are now being released and multiplied and some of them are gaining wide popularity with the farmers.
Triticale, the first man made crop, has been produced as a result of wheat and rye crossing. Having high biomass and superior baking quality, and being resistant to lodging and diseases, triticale is grown as both food and fodder crop. CIMMYT supplied triticale germplasm to Uzbekistan, Kazakhstan, Tajikistan and Kyrgyzstan. In Uzbekistan, scientists of the Research Institute of Plant Industry (UzRIPI), which has more than 750 accessions of triticale in its genebank, are carrying out activities on development of drought, heat and salt resistant varieties of this crop. Good progress has already been achieved on development of new early maturing varieties of triticale. 

Based on agro-ecological trials, 12 accessions of triticale have been identified to be the most suitable for the local conditions. Some of the new accessions are 12-16 days early maturing, which is almost similar to wheat. The selected accessions have also demonstrated high level of resistance to soil salinity. According to the request made to CIMMYT, seeds of new triticale varieties have been provided to other countries in the region for testing. Excellent performance of two triticale varieties in Kyrgyzstan has led to their submission to the State Variety Testing Commission (SVTC) in 2002. As a result, these were released in December, 2004 under the names “Alesha” and “Miscim”. Average yield of these varieties is 6.0-6.5 t/ha, which is about 20-25% higher that that of the standard check.

In Uzbekistan, two early maturing varieties of triticale, namely “Norman” and “Farkhad” have also been selected. In 2000, both were officially submitted to SVTC for testing in different agro-climatic conditions and their release is expected in the near future.

NEW CHICKPEA VARIETY RELEASED IN AZERBAIJAN

A new chickpea variety Narmin (FLIP 95-65) has recently been released by the Azerbaijan State Variety Testing Commission (SVTC). This variety was selected from ICARDA nurseries using direct selection. The plants are semi-erect type with a height of 55-60 cm. The variety is suitable for mechanical harvesting, as the first pod branching is about 22-25 cm above the ground. Vegetation period of Narmin variety is about 160-165 days, which is about a week shorter that that of the standard variety AzNIIZ 303. This is a high-yielding variety (1.8-2.3 t/ha) with protein content around 23.7%. Being resistant to ascochyta blight and tolerant to cold, variety Narmin is recommended for winter sowing. Presently, it is grown by farmers in Jalilabad, Lerik, Yardymli, Lenkoran and Gobustan districts of Azerbaijan. Primary seed production of the Narmin variety has been initiated at a seed production farm in Jalilabad, whereas studies on its adaptability have also been taken up in Nakhichevan Autonomous Republic.
Research Highlights

FIELD DAYS ORGANIZED ON FOOD LEGUMES

Participants visiting field trials at Krasny Vodopad breeding station

CARDA specialists on food legumes, Drs. Rajendra Malhotra and Ashutosh Sarker, visited Tajikistan, Uzbekistan and Kazakhstan recently from 15-25 June, 2005. The objective of their visit was to participate in the field days, field visits and selection of genetic materials at various research sites.

A successful Field Day was organized by Tajik Research Institute of Farming (TRIF), where about 130 participants including more than 60 farmers attended the event. Promising chickpea lines, including ILC 3279, which is at pre-release stage, FLIP 97-149C and FLIP 98-131C, as well as lentil lines, ILL 6037 and ILL 1005, were demonstrated to the farmers. The crops were excellent, and the farmers showed keen interest to grow these new varieties.

A similar field day was organized at Krasny Vodopad breeding station, which was attended by 20 farmers and scientists. Farmers were shown promising varieties of chickpea (FLIP-94-25C-Zhanalyk) and lentil (ILL 6434). Visits to the farmers’ fields were also organized to demonstrate two lentil and nine chickpea advanced lines. It is worth mentioning that this has been the first lentil crop grown by a farmer in Southern Kazakhstan. The farmers showed great interest in lentil cultivation.

Both Dr. Malhotra and Dr. Sarker have laid emphasis on further seed multiplication of promising lines and their release in CAC countries. Also, in future more farmer’s field demonstrations are proposed to be conducted to assess performance of food legumes and to motivate the farmers to cultivate these crops.

(Source: Drs. Rajendra Malhotra and Ashutosh Sarker, ICARDA, Aleppo)

POTATO

ADVANCED BREEDING AND SELECTION TECHNOLOGIES

Given the limited infrastructure for tissue culture present in the CAC region, apart from a very few exceptions, CIP has decided to address a breeding and selection strategy that will be concentrated on true seed families for local clonal selection. This would allow local NARS to work with better adapted germplasm materials having a larger amount of diversity.

Tajikistan has been considered to be the main focus for TS (True Seed) family selection. In this respect, 40 TS families of 200 seed each have been sown in two locations, Faizabad and Qonchi during May. The clonal selection will be made under strict isolation conditions in order to increase healthy sets of tuber families to be shared with other NARS partners in the region.

Germplasm evaluation is being carried out for TPS (True Potato Seed) families to develop adapted, disease resistant materials that can be multiplied locally up to generations F1C2 or F1C3. In Azerbaijan, Tajikistan, Turkmenistan and Uzbekistan, 19 TPS families were distributed during 2004 and same are being tested presently. In Georgia, the evaluation by CARE International is of 7 TPS families. In Uzbekistan, TPS harvest is expected at the beginning of July, 2005.

Germplasm evaluation also includes in-vitro advanced clones, having the combination of heat tolerance, high iron content and resistance to viruses X, Y, and PLRV. These in-vitro clones will be rapidly multiplied to have sufficient quantity to undertake field trials. In this respect, a total of 208 in-vitro plantlets (two plantlets per clone) have already been distributed in Uzbekistan, Kazakhstan, Armenia and Tajikistan.

(Source: Dr. Carlo Carli, CIP-Tashkent)

TPS families sown in nethouse in Faizabad district, Tajikistan
**INTEGRATED CROP MANAGEMENT**

An aphid-proof screen has been purchased to build two screenhouses in Tashkent and Tbilisi. Once installed, it will allow to cover an area of about 900 m². Work is expected to start at the end of June, 2005.

One ELISA kit to test about 2,000 seed potato samples against 6 main potato viruses (PVX, PVS, PVY, PLRV, PVA, PVM) was supplied to the Biotechnology Laboratory of the Tashkent State Agrarian University.

**IPM WORKSHOP ON CEREAL DISEASES IN AZERBAIJAN**

During the workshop, trap nurseries were evaluated at Absheron (virulence on Yr6 and Yr 7 observed), Ter-Ter (virulence on Yr6, Yr7, and Yr9 observed), and Jalilabad (virulence on Yr6, 7, 17, and 18 observed). High incidence of tan spot and Septoria nodorum was recorded at most of the farmers’ fields. The participants were shown different ways of disease sampling and have discussed molecular approaches with Mr. M. Hovmoller and Mr. R. Sommerhalder. Dr. Yahyaoui felt happy with good support of Dr. Musaev, Director General, Agrarian Sciences Center of Azerbaijan, a team of young in pathologists has been formed. For the last three years, all of them have been continuously involved in disease evaluation and surveys. This group will be further trained and some of them will be encouraged to pursue their graduate studies.

(See: Drs. Amor Yahyaoui and Mustafa El-Bohssini, ICARDA, Aleppo)

**PLANNING WORKSHOP ON IPM-CRSP**

An Integrated Pest Management Collaborative Research Support Program (IPM-CRSP) Planning Meeting was held in Tashkent from 4-6 May, 2005. Organized by Michigan State University, the meeting involved participants from various agricultural research institutions from Kyrgyzstan, Tajikistan and Uzbekistan, scientists from Michigan State University, University of California-Davis and Virginia Technical University as well as representatives of ICARDA, CIP and AVRDC. Also representatives of private institutions and NGOs participated. ICARDA was represented by Drs. Amor Yahyaoui, Mustapha El-Bohssini and Bitore Djumakhanov.

The first day of the meeting was devoted to the presentations by different institutions on their respective IPM activities. Presentation on behalf of IPM-ICARDA was entitled “Current IPM activities and future prospects”. During the second day, working sessions on various IPM related issues were organized. Following discussions and priority settings by participating NARS, the IPM project will focus on three strategic crops, namely wheat, potato, and tomato.

In addition to the IPM CRSP project development, a concept note on “Management of wheat yellow rust and Sunn pest in Uzbekistan” has been developed jointly by the scientists of the Uzbek Research Institute of Genetics (UzRIG), Tashkent and Drs. Amor Yahyaoui and Mustapha Bohssini. The concept note has been submitted by the UzRIG for USDA funding under the International Science and Technology Centre program (Ukraine). The project will involve three Research Institutes (Genetics, Plant Protection, and Farming), ICARDA, USDA-ARS, Washington State University, University of Vermont, and Michigan State University.

(See: Dmes. Amor Yahyaoui and Mustafa El-Bohssini, ICARDA, Aleppo)
**SUNN PEST COLLECTION IN UZBEKISTAN**

A sunn pest collection mission was undertaken in Uzbekistan from 7-8 May by Dr. M. Bohssini. During the trip, regular stops were made along the road from Tashkent to Samarkand. As in previous years, sunn pest and cereal leaf beetle infestations were reported to be high. However, the cereal leaf beetle infestation depended greatly on the type of wheat cultivars planted. Sunn pest adults were collected from two regions, Jizzakh and Samarkand and will be used in a genetic study aiming at variability of sunn pest populations in West and Central Asia. Dr. Galia Djarmukhamedova from the Plant Protection Research Institute in Kazakhstan also participated.

(Source: Drs. Amor Yahyaoui and Mustafa El-Bohssini, ICARDA, Aleppo)

**DISEASE ASSESSMENT IN UZBEKISTAN AND TAJIKISTAN**

During their stay in Uzbekistan, Drs. Amor Yahyaoui and Mustapha Bohssini visited some experimental sites to evaluate disease nurseries. They assisted the NARS scientists in evaluation of wheat lines for yellow rust resistance and also saw the seed multiplication plots.

While visiting the trials established by Gulistan University in Syrdaria Province, high infestation of yellow rust was observed under natural conditions. High infection by septoria tritici was also reported on most of the plants, with the exception of only few lines, which showed resistance. Preliminary observations have revealed that the septoria pathotypes observed in Uzbekistan differ greatly from those observed in West Asia and North Africa. In this connection, it was decided to establish a permanent site for screening for septoria resistance at Gulistan University and to undertake detailed studies on the virulence spectrum of the Uzbek septoria in collaboration with the scientists of the University.

Drs. A. Yahyaoui and M. Bohssini, accompanied by Dr. Bitore Djumakhanov, ICARDA-CAC, also visited Tajikistan, where high infestation of tan spot was observed. After having interacted with Dr. Eshonova Zebuniso, Wheat Breeder and other national collaborators from Tajikistan, it was decided to establish a screening nursery for tan spot as well as yellow rust at six experimental stations.

(Source: Drs. Amor Yahyaoui and Mustafa El-Bohssini, ICARDA, Aleppo)

**NEW FAO-TCP LAUNCHED IN UZBEKISTAN**

A new FAO-TCP project on “Enhanced productivity of cotton-wheat systems through adoption of conservation agriculture practices” has been launched in Uzbekistan. The project will be implemented jointly by FAO, the Ministry of Agriculture and Water Management (MoAWM) of Uzbekistan and CIMMYT (as a consulting organization) during the period 2005-2006. The main goal of the project is to introduce conservation agriculture practices (zero/minimum tillage and bed-planting) for the cotton-wheat production system in Uzbekistan. Scientists from Tashkent Institute of Irrigation and Melioration (TIIM) are actively involved in the project implementation.

The project activities will be carried out at seven demonstration sites on farmers’ fields in Tashkent and Syrdaria Provinces.

As a first step, a seminar on conservation agriculture/ no-till and bed-planting technologies for crop production was held at the TIIM, Tashkent as well as at the project farm TANO, Upchirchik district, Tashkent Province from 20-21 April, 2005. In all, more than 60 participants attended, including farmers from Tashkent and Syrdaria Provinces as well as representatives of the Uzbekistan Farmers Association, MoAWM, international centers and organizations. Experts and scientists from FAO, Brazil, Uzbekistan, Australia and Kazakhstan made presentations on bed-planting systems, zero-till technologies and equipment. Demonstrations of seeders for direct sowing, knife-rollers and sprayers were also organized. The farmers were also trained on express-methods of soil quality assessment.

(Source: Dr. Marat Karabayev, CIMMYT-Almaty)
STRENGTHENING OF NARS

RAISED BED PLANTING WORKSHOP HELD

A workshop on “Raised bed planting technology” was organized in Yangiyul, Tashkent Province on 8 June, 2005 as an activity under the ADB funded project on “Improving rural livelihoods through efficient on-farm water and soil fertility management in Central Asia”. The objective of the workshop was to share experience gained while testing and adjusting the newly imported raised bed planters, manufactured by DASHMESH Company in India. The decision to purchase these machines was taken after the traveling workshop of senior scientists to India, which took place in September, 2004. During the workshop, scientists from CAC visited Kisan Mela (Farmers’ Fair), organized by the Punjab Agricultural University (Ludhiana) and got acquainted with agricultural machinery and equipment, including DASHMESH bed-planters. In January, 2005, these machines were procured for Kazakhstan, Kyrgyzstan and Uzbekistan for testing under on-farm conditions, which started in early March, 2005. The workshop brought together experts from the Uzbek Institute of Agricultural Mechanization and the Kazakh Research Institute of Water Management (KazRIWM), Taraz. Dr. Alexander Kalashnikov, leading scientist from KazRIWM has been working on raised bed planting technology for more than five years and provided useful suggestions with regard to needed modifications of bed planter to be used in Kazakhstan and Uzbekistan. Dr. Nurlan, Consultant-Engineer for the FAO-TCP project in Karakalpakstan also shared his experience of working with another model of Indian raised bed planter. Drs. M. Suleimenov and A. Nurbekov represented ICARDA-CAC at the workshop. The scientists from both Kazakhstan and Uzbekistan found the new raised bed plantes to be good, with some adjustments to suit local conditions.

LIVELIHOOD ANALYSIS UNDERWAY

Socio-economic research activities under the ADB project on Water and Soil Fertility Management are currently focused on conducting livelihood analysis of rural people, engaged in farming activities in Kazakhstan, Kyrgyzstan and Uzbekistan. The first hand information so collected will be used to assess the impact of application of project technologies on farmers’ livelihoods. Furthermore, analysis will provide baseline data covering evaluation of livelihood assets such as natural, physical, financial, social and human resources.

The overall concept of research methodology is based on DFID’s framework on Sustainable Livelihood Approach. The methodology for livelihood analysis was earlier developed in collaboration with socio-economists from all participating countries. The framework for research approach was built on the basis of comprehensive information obtained from Participatory Rural Appraisals (PRA) undertaken by the Project during 2004. Also the socio-economists were provided orientation trainings for conducting farm level surveys, basics of survey data management and collection of primary data through farmers in a participatory approach by Dr. Aden Aw-Hassan, Senior Economist, ICARDA Headquarters.

Meetings/Workshops/Conferences Organized

MEETING WITH SPEAKER OF KARAKALPAKSTAN

During his visit to the region, Dr. Raj Paroda had a very fruitful meeting with the Speaker of Karakalpakstan Parliament H.E. Mr. Musa Erniyazov and the Governor of Chimbay District Mr. Maksetbay Shankhiyev. He briefed them about the TCP activities and collaboration of ICARDA scientists for various on-going activities on sustainable agriculture. H.E. Mr. Erniyazov expressed great interest in the project activities with special emphasis on zero tillage technologies and requested for more details on conservation agriculture. He assured of his full cooperation to FAO and ICARDA for the implementation of TCP project, which he thought was very useful for the resource poor farmers of Karakalpakstan.
VEGETABLE EXPERTS MEET IN TASHKENT

The workshop on "Improved Income and Nutrition in Central Asia and the Caucasus through Enhanced Market- and Trade-oriented Vegetable Systems Research and Development" was held in Tashkent, Uzbekistan, from 25 to 27 April 2005. Its objective was to review the status of vegetable production, consumption and research, and discuss the most effective means of sharing human and technical resources to enhance the role of vegetables in Central Asia and the Caucasus (CAC).

The workshop was organized by AVRDC-The World Vegetable Center with logistical assistance from the Program Facilitation Unit (PFU) of the CGIAR Program for CAC, and with the support of the Asian Development Bank (ADB), Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), Japan International Cooperation Agency (JICA), and the Taiwan Ministry of Foreign Affairs (MOFA). Dr. George Kuo, AVRDC Director for International Cooperation, and Dr. Ravza Mavlyanova, AVRDC Regional Coordinator for CAC, were the conveners.

Dr. Thomas A. Lumpkin, AVRDC Director General and Dr. Raj Paroda, Head, PFU, presided the opening session, in which Dr. Abdushukur A. Khanazarov, Deputy Minister of Agriculture and Water Resources, Republic of Uzbekistan welcomed the participants, the representatives of ADB, JICA, MOFA and PFU. He voiced for a stronger cooperation in vegetable systems research and development in the CAC region.

This workshop brought together policymakers and research managers from all eight CAC countries, as well as representatives of international, regional and non-governmental organizations. In total, there were 80 participants from 61 organizations representing 16 countries. Two representatives from each CAC country reported on the economic and social contexts of vegetable systems, and the status of R&D efforts in their respective countries. Additional speakers from within and outside the CAC region touched on market-oriented production systems, seed sector development, germplasm and biodiversity, pest management and safety, and post-harvest handling and processing. These papers served as basis to develop increased cooperation among scientists from within and outside the CAC region.

The presentations in the workshop revealed that the availability of vegetables in the region ranges from 75 kg to 225 kg per capita per annum, but vegetable consumption is largely limited to only a few vegetables such as tomato, cabbage, onion, melons, and cucumber. Strong interest was expressed in developing the vegetable sector for export markets. Most vegetables are grown in peri-urban areas and the availability of vegetables is still highly seasonal. The centrally-planned agricultural R&D system, especially for the seed supply and post-harvest handling, has become malfunctioned and the private sector has not replaced the public sector during the transition period.

In a discussion session, CAC participants resolved to formalize a network for vegetable systems R&D in the region. The network is considered to be an effective means to foster partnerships in tackling the problems of regional importance. It will also help to develop collaborative linkages and to reinforce the quality of research programs. The following themes were identified as potential projects for joint action:

- Introduction and testing of non-traditional and less-utilized vegetable crops to diversify the existing cropping systems
- Organization of coordinated regional trials of promising varieties of vegetable and melon crops
- Adoption of modern, low-cost technologies for the improvement of existing vegetable production systems
- Development of geographic information systems for monitoring major insect pests and diseases of vegetable crops
- Development of integrated crop management for tomato and cucumber for both open field and protective shelter systems
- Development of standardized good agricultural practices to ensure quality and safe products of vegetable crops
- Improvement of germplasm collection, exchange and management that leads to better conservation and utilization of indigenous vegetable and melon crops
- Enhanced use of indigenous germplasm in the varietal improvement program for a wider adaptation of vegetable crops to environments that are unique in the region
- Line selection for the development of open-pollinated (OP) and hybrid varieties of vegetable and melon crops
- Improvement of the existing seed production systems for OP and hybrid varieties of major vegetable and melon crops
- Policy and strategy development analyses to promote value-added, post-harvest processing and marketing potentials

The workshop proceedings in both English and Russian languages will be published in December 2005. These proceedings will serve as a useful document to generate broad alliances among research institutes and donor agencies to support the implementation of projects.

For more information, please contact Dr. George Kuo (e-mail: gkuo@avrdc.org) and Dr. Ravza Mavlyanova (e-mail: r.mavlyanova@cgiar.org.uz).

(Source: Dr. George Kuo and Dr. Ravza Mavlyanova)
**VISIT OF DIRECTOR GENERAL, IWMI**

Prof. Frank Rijsberman, Director General, IWMI visited Tashkent, Uzbekistan from 21-25 May, 2005. Along with Ms. Alexandra Clemmet, a researcher, and Ms. Sanjini De Silva, Head of Knowledge Sharing Group, the objective of the visit was to discuss various issues related to IWMI activities in Central Asia. Prof. F. Rijsberman made an informative presentation on IWMI vision and strategy in water resource management before the staff of PFU-CGIAR and Regional offices of IWMI, ICARDA, IPGRI, CIP and AVRDC. He emphasized the importance of increasing water productivity and the need for devising new technologies for improving water use efficiency both at the macro and micro level. He was pleased that the new ADB project on "Bright Spots" has enabled IWMI, ICARDA and ICBA to work together, and there could be opportunities for inter-program linkages, such as work on Karkheh River Basin, supported by the Challenge Program for Water and Food, as well as the proposed research activities in Amudaria River Basin. Also he was pleased to announce the recent approval by SDC for the third phase of the Integrated Water Resource Management (IWRM) project in Fergana Valley (US $ 2.4 million). It would provide opportunities to strengthen on-going activities in the region. Prof. Frank Rijsberman was appreciative of facilitation role provided by PFU under the leadership of Dr. Raj Paroda. He also hinted at expansion of IWMI activities in the region and introduced Dr. Mathri as new Manager of the IWRM Project in Fergana Valley, who would also take over as Head of IWMI Office in Central Asia effective 1 September, 2005.

**CIMMYT PROGRAM DIRECTOR VISITS CENTRAL ASIA**

During his visit, Prof. Rijsberman also met with Dr. A. Khanazarov, Deputy Minister of Agriculture and Water Management and Director General of the Uzbek Scientific-Production Center for Agriculture, who appreciated the role of IWMI, since water management is a high priority for increasing crop productivity as well as ensuring crop diversification. Prof. Rijsberman assured him of his best possible support in strengthening research on water related aspects in Uzbekistan. He also met with Prof. Victor Dukhovniy, SIC-ICWC and discussed the progress of IWRM-FV project as well as implementation of its new phase.

(Source: Mr. Iskander Abdullaev, IWMI-Tashkent)

**WORKSHOP ON WATER PRODUCTIVITY**

A high-level consultative workshop on "Assessment of Water Productivity at River Basin Level" was held at ICARDA Headquarters, Aleppo, Syria from 13-15 April, 2005. More than 50 scientists and experts from around the world participated in the workshop, which was organized within the framework of the project on "Improving On-Farm Water Productivity in Karkheh River Basin," funded by the Challenge Program on Water and Food (CPWF). The project is spearheaded by ICARDA, working in partnership with the national program in Iran, four CG centers and other institutions.

The workshop aimed at developing a framework for the assessment of water productivity in agriculture at the river basin level. The methodology will be used at the Karkheh, Euphrates and Amudaria river basins and other CPWF basins. Participants included the Global Coordinator Dr. Jonathan Woolley; the CA Coordinator Dr. David Molden; the Karkheh Basin Leader and ICARDA Board Member Dr. Abbas Keshavarz, senior researchers from the three river basins; and several prominent scientists from advanced research institutes and CWANA NARS. Dr. Rakhimjan Ikramov, Uzbekistan and Dr. Eziz Khankuliev, Turkmenistan represented the countries of Amudaria river basin and actively participated in the development of basin level assessment methodologies.

(Source: Dr. Alexey Morgounov, CIMMYT-Almaty)
Plant genetic resource conservation is gathering momentum in Central Asia and the Caucuses. Since 1999 conservation capacity development in the region has been supported by the Australian Center for International Agricultural Research (ACIAR). These projects have enabled human resource development, infrastructure upgrades and plant collection missions in the CAC countries. Recently, the Global Crop Diversity Trust (GCDT), whose aim is to support ex-situ conservation of the crops covered by the international Treaty on Plant Genetic Resources for Food and Agriculture (PGRFA), has provided support for further capacity building in the region. Two of these initiatives, being coordinated by ICARDA and PFU in Tashkent, are designed to facilitate the completion of national accession level inventories of ex-situ collections and the establishment of databases. The overall objective is that each national program will have a PGR data sharing platform in place that will facilitate the management, utilization and exchange of PGR at both national and regional level.

A practical hands-on PGR data management Training course was organized from 26-30 May, 2005 in Tashkent, Uzbekistan. Thirteen scientists from Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan participated, beside four resource persons. In the opening session, the participants were addressed by Dr. Raj Paroda, Regional Coordinator, ICARDA-CAC, and Head, PFU. He emphasized on the importance of the PGR data management and desired National Programs to develop needed capabilities. Mr. Jan Konopka from ICARDA headquarters ed the workshop in cooperation with scientists from the region, who were previously trained through the ACIAR project. These are: Ms. Natalya Rukhkyan (Armenia), Ms. Tamara Jinjikhadze (Georgia), Mr. Afig Mamedov (Azerbaijan) and Mr. Faizulla Abdullaev (Uzbekistan).

It is envisaged that the participants trained in this workshop will disseminate the database package to institutes holding ex-situ collections in their countries and train other institute scientists for managing the data associated with their respective crop collections.

(Source: Dr. Kenneth Street, ICARDA, Aleppo)
A workshop of the FAO-TCP project on “Sustainable agricultural practices in the drought affected region of Karakalpakstan” was held on 13-14 April in Nukus. It was organized jointly by FAO, ICARDA, and the Central Asian Research Institute of Irrigation (SANIIRI), and attended by about 32 participants, including ten farmers involved in the project, local scientists and administrators from Karakalpakstan. From FAO, three senior experts, Dr. T. Friedrich, Dr. G. Munoz and Dr. J. Benites attended, whereas Dr. Raj Paroda, Regional Coordinator, ICARDA-CAC, Dr. Mekhlis Suleimenov, Assistant Regional Coordinator, ICARDA-CAC and Dr. Aziz Nurbekov, Project Officer represented ICARDA. The workshop was chaired by Dr. Mekhlis Suleimenov, whereas Dr. Raj Paroda delivered Inaugural Address. Mr. Bazarbay Priyarov, Deputy Governor of Chimbay District welcomed the participants.

FOO experts made three presentations: Dr. T. Friedrich on world agricultural practices on zero tillage technologies in irrigated agriculture, Dr. G. Munoz on new improved water saving technologies for permanent beds and recommendations for management of salinity affected soils, and Dr. J. Benites on management and improvement of soil fertility. Five papers were also presented by the National Consultants on various aspects of the project activities. On the following day, FAO technical officers demonstrated in the field work on no-till planters imported from Brazil and India, the methodology of rapid soil quality assessment and methodology of irrigation scheme assessment.

PLANNING MEETING ON BRIGHT SPOTS PROJECT

As we informed in our previous issues, an ADB funded project “Enabling communities in the Aral Sea Basin to combat land and water resource degradation through the creation of ‘Bright spots’” was launched in January, 2005. The project is being implemented jointly by IWMI, ICARDA, and ICBA in close collaboration with NARS in Kazakhstan, Turkmenistan and Uzbekistan. According to the decision taken in the First Steering Committee meeting, a National Planning workshop was organized from 11-13 May, 2005 in Tashkent to finalize and fine-tune work plan and the activities for 2005.

In the Opening Session, the participants were addressed by Dr. Abdushukur Khanazarov, Deputy Minister of Agriculture and Water Management, Uzbekistan, Dr. Raj Paroda, Head, PFU-CGIAR for CAC and Mr. Mehmood Ul Hassan, Head, IWMI-Tashkent. Dr. Andrew Noble, IWMI-Bangkok made presentation on salinity issues on irrigated lands in the world and introduced the concept of “Bright spots”, and highlighted the possibility of their replication on large areas in the Central Asia.

During the plenary session, National coordinators from Mr. Roziev (Turkmenistan), Dr. Bezborodov (Uzbekistan) and Dr. Ibatulin (Kazakhstan) made presentations on activities planned in their countries. Also presentations on new strategies and approaches in water and salinity management were made by the scientists from Central Asian Research Institute of Irrigation (SANIIRI) and Research Institute of Water Problems. Mr. M. Ul Hassan made presentation on replicability of project results and how to plan impact oriented research. He emphasized that new technologies should be developed based on farmers’ needs. Other scientists from IWMI-Tashkent, Ms. Nargiza Nizamedinkhodjaeva and Mr. Murat Yakubov also made presentations relating to impact assessment and user perception, respectively. As an outcome, a detailed work plan for 2005 was developed and principal investigators for each activity were identified.

(Source: Mr. Iskander Abdullaev, IWMI-Tashkent)
PARTICIPATION IN UZBEKISTAN CONFERENCE

A National Conference on “Concepts of farm development and adoption of new policy regulations” was organized on 3 June, 2005 in Tashkent by the Senate Committee on Agriculture, Water Resources and Environment under the Supreme Council of the Republic of Uzbekistan, Ministry of Agriculture and Water Management, Uzbek Scientific Production Center for Agriculture and Uzbek Research Institute of Market Reforms. More than 100 policy makers, farmers and representatives of selected international organizations including ICARDA participated. The Conference was opened by His Excellency Mr. G. Aliev, Chairman of the Senate Committee on Agriculture, Water Resources and Environment under the Supreme Council of the Republic of Uzbekistan. He emphasized the need for development of appropriate agricultural policies that would provide the Uzbek farmers with the access to credits and help them generate better income. Other speakers informed about the steps taken by the Government to provide favorable conditions for the Uzbek farmers, such as supply of agricultural inputs, reduction of tax paid by farmers, etc.

Dr. Raj Paroda, Regional Coordinator, ICARDA-CAC and Head, PFU-CGIAR made presentation entitled “New technologies for improving farmers’ productivity”. He highlighted the achievements under the collaborative program in Uzbekistan, including development of promising varieties of cereal and legume crops as well as new technologies related to water saving, conservation tillage and crop diversification that have already been adopted by the Uzbek farmers. He also dwelt upon the efforts undertaken on seed production of improved varieties. Dr. Paroda emphasized that to ensure sustainable agricultural growth, policy makers need to provide full support to the agricultural sector and to farmers. He stressed that no Green Revolution in India would have been possible without the strong support provided for agricultural research and development. The presentation was very well received and generated considerable interest during the discussion. His Excellency Mr. Aliev desired to organize a separate meeting with Senators to explore the possibilities of linking research results of the CGIAR Program in Uzbekistan with development initiatives.

KAZAKH AGRARIAN UNIVERSITY HONORED DR. PARODA

From 29 May to 1 June, 2005, Dr. Raj Paroda, Regional Coordinator, ICARDA-CAC and Head, PFU-CGIAR visited Almaty, Kazakhstan to review the progress made under the ADB funded project “Improving rural livelihoods through efficient on-farm water and soil fertility management in Central Asia”. He met with the scientists involved in the activities in Sorbulak site, where treated wastewater has been tested for irrigation of poplar, ash and mulberry trees as well as crops such as alfalfa and Jerusalem artichoke. The results of the five-year trials have shown that treated wastewater can be used for irrigation of tree plantations and fodder crops, thus helping farmers generate more income and prevent environmental pollution. Analyses of water, soil and plants have revealed that accumulation of heavy metals does not exceed the maximum threshold values. Dr. Paroda also visited the Kazakh Research Institute of Soil Sciences and Kazakh Scientific-Production Center of Soil and Crop Management (KazSPCSCM), where he met with the Directors, Drs. A. Saparov and S. Kenenbaev, respectively. Scientists of the KazSPCSCM, involved in the ADB project activities on conservation tillage and crop diversification, showed their on-farm trials being conducted for almost 4 years. The results have amply demonstrated the economic advantage of disking and zero till technologies as well as good potential for introduction of food legumes into crop rotations in southeastern Kazakhstan.

On 31 May, Dr. Paroda visited the Kazakh National Agrarian University, where he delivered a lecture on “CGIAR Program for sustainable agricultural development in Central Asia and the Caucasus” before an impressive gathering of over 200 faculty members and students as well as scientists from other research institutions. Dr. Týlektýs Yespolov, Rector announced the resolution of the Science Council of the University to confer on Dr. Paroda an Honorary Professorship degree. The degree was awarded to him in view of his valuable contributions in the field of agriculture and strengthening agricultural research in Kazakhstan. The lecture was very well received and many students expressed desire to undertake post-graduate program at ICARDA. The Rector also declared that the President of Kazakhstan has announced recently 3,000 student fellowships for training of young scientists in different fields, majority of which will be for different fields of agriculture. Hence, he would like to have closer linkages with ICARDA.
Human Resource Development

TRAINING ON PRA IN KAZAKHSTAN

A training course on Participatory Rural Appraisal (PRA) tools, effective communication skills and interviewing was conducted by IWMI at the Kazakh Research Institute of Water Management (KazRIWM) in Taraz from 13-16 June, 2005. The training was organized under the ADB-funded project on “Enabling communities in the Aral Sea Basin to combat land and water resource degradation through the creation of ‘Bright’ spots” and involved about 20 participants, including staff and graduate students of KazRIWM specialized in socio-economics. Most of the trainees are expected to conduct interviews of farmers, representing «bright spots» and «dark spots». In this context, the key objective had been to train the participants on theory and practical application of PRA tools and methods, and pre-test them at the farm level to develop and adjust a questionnaire according to local needs and economic conditions. The participants have also learnt about the methods of effective communication and interviewing.

(Source: Mr. Iskander Abdullaev, IWMI-Tashkent)

Miscellaneous News

UNU-MA-ICARDA WORKSHOP PROCEEDINGS PUBLISHED

Proceedings of a Joint United Nations University (UNU)-Millennium Ecosystem Assessment (MA)-ICARDA International Workshop “Challenges for drylands in the new millennium - A cross-cutting approach for assessment”, organized earlier by ICARDA-PFU in Tashkent, Uzbekistan from 10-15 August, 2003, has recently been published. The proceedings was edited by Drs. Zafar Adeel, David Clancy and Annette Dubreuil. As was earlier reported, the workshop focused on sustainable drylands development by assessing the potential of drylands’ ecosystems’ goods and services to support such development. The workshop also addressed desertification as an expression of human-induced impairment of the provision of ecosystem goods and services. The key recommendations focusing on broader issues of interest to the drylands scientific community are as follows:

It is critically important to develop credible, consistent and scientifically-based estimates of the extent of desertification. This is particularly challenging because a reliable baseline global estimate is not readily available. Such estimates are extremely valuable in streamlining the scientific discussion on drylands while facilitating the prioritizing of resource allocation and actions. It is important to focus efforts on management approaches and policies that reduce vulnerability of the drylands peoples. To state the obvious, such approaches should fit within the sustainable development paradigm. There should be research efforts undertaken to better understand how drylands societies are and will be impacted by climate variability on annual to decadal scales and global warming, which are key elements of vulnerability. Development of capacity - human, institutional, and technological - must be central to these vulnerability and poverty reduction approaches.

The relationship between biodiversity and provisioning of ecosystem services in drylands has emerged as a critical scientific question. This relates to the definition of biological diversity as well as the role such diversity plays in provisioning of ecosystem services and whether these may be impacted if diversity is increased or decreased. New efforts should be focused on development of science and management research projects that quantify the linkage between biodiversity and water in drylands; for example, the notion of ecological water demand was found to be a pertinent research issue. It was amply evident during the discussions that provision of ecosystem goods and services in drylands are directly linked to those in other systems (including cultivated, urban, inland-water, coastal, island and mountain systems). While many of these interlinked aspects are well-known, an overall integrated picture of these correlations and their drivers is still missing. Further research is needed on many institutional aspects for drylands development that are not thoroughly addressed at present. These include elimination of perverse subsidies - that is, subsidies that lead to non-sustainable use of water and other drylands resources, and negatively impact provisioning of goods and ecosystem services. Identification and evaluation of land tenure approaches that are locally effective and acceptable is another challenge for the drylands researchers and policymakers. Evaluation of the effects of the various trade regimes and “external” factors on desertification and land degradation is needed; the trade regimes may include global trade, unfair trade practices and trade of endangered and/or indigenous species. In such a dialogue, due consideration must be given to newer concepts of food provisioning that revolve around virtual water trade - in the form of crop imports -to drylands areas that face acute water shortages.
Dr. Hearth Manthrilake joined IWMI Regional office in Tashkent as Manager of the Integrated Water Resource Management (IWRM) project in Fergana Valley on 1 May, 2005. His experience in dealing with water related issues started back in 1973, as a Civil Engineering student, at the construction sites (irrigation schemes, hydro power stations, dams and reservoir) of the former Soviet Union in Moldova, Ukraine, Tajikistan, Siberia and Georgia.

Ms. Sumbula Mukhammadieva and Mr. Marat Abdullaev have recently joined the team of PFU-CGIAR for CAC. Sumbula has been appointed as Secretary of AVRDC Regional Office in Tashkent, whereas Marat will work in the capacity of Interpreter/Translator for CIP Liaison Office in CAC.

Dr. Manthrilake’s has extensive experience of working with various development projects, such as Mahaweli Development Board (MDB), and Environment and Forest Conservation Division (EFCD). He managed projects funded by various donors, including ODA/DFID and GTZ, which have been adjudged as best projects in the South Asian portfolio of the respective donors.

Staff of PFU-CGIAR for CAC as well as his colleagues from IWMI and ICARDA Regional offices wish him all the success in his new appointment.

Dr. Akmal Karimov, NPO in the ADB-ICARDA Project on Water and Soil Fertility Management has recently moved to another ADB Project on Bright Spots, which is implemented by IWMI in collaboration with ICARDA and ICBA. In his new capacity of Technical Coordinator, he will be responsible for technical aspects of the project, including development and implementation of research programs, coordination with NARS and International organizations, conducting studies and preparation of workshops.

Staff of PFU-CGIAR in CAC congratulate Dr. Karimov and wish him all the success in his new assignment.

Dr. Akmal Akramkhanov has recently joined CIMMYT as Post Doctoral Fellow in Conservation Agriculture. He has got his Master's Degree from Massey University, New Zealand and recently graduated from ZEF Doctoral Program. Dr. Akmal will be based in Astana, Northern Kazakhstan. His major tasks will include development of weed control strategies in conservation agriculture, integration of GIS and remote sensing in inventory and monitoring of areas under zero-till, and assisting in establishment of demonstration plots for direct drilling for pasture regeneration.

Staff of PFU-CGIAR in CAC congratulate Dr. Akramkhanov and wish him all the success in his new challenging position.

Congratulations on your newly appointed position.

Dr. Akmal Karimov joins new project.

Dr. Makhfurat Amanova, Head of Oil Crops Department, Uzbek Research Institute of Plant Industry (UzRIPI) has won the International Fund for Agricultural Research (IFAR) Fellowship of US$ 10,000 under the 2005 Professional Development Program (IFAR Small Grants). In collaboration with Dr. Shyam Higam, Groundnut Breeder of ICRISAT, she will conduct research on “Development/introduction of new groundnut varieties suitable for Uzbekistan and their seed multiplication”.

Staff of PFU-CGIAR in CAC congratulate Dr. Amanova and wish her all the success in the proposed research project.

Dr. Akmal Akramkhanov has recently joined CIMMYT as Post Doctoral Fellow in Conservation Agriculture. He has got his Master's Degree from Massey University, New Zealand and recently graduated from ZEF Doctoral Program. Dr. Akmal will be based in Astana, Northern Kazakhstan. His major tasks will include development of weed control strategies in conservation agriculture, integration of GIS and remote sensing in inventory and monitoring of areas under zero-till, and assisting in establishment of demonstration plots for direct drilling for pasture regeneration.

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