



CAC NEWS

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in Central Asia and the Caucasus (CAC)

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Consortium
Members



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DONOR SUPPORT MEETING ON CAC PROGRAM AT AGM'06

A special meeting on the CGIAR Program for Central Asia and the Caucasus (CAC) was held during CGIAR AGM 2006 in the afternoon of 4 December. The meeting, co-sponsored by the World Bank, IFAD, USAID and ICARDA, was participated by representatives of various donor organizations, CG Centers as Consortium partners, and CGIAR Science Council. Dr. Guido Gryseels, Chair, ICARDA BOT, Dr. James G. Ryan from the Science Council, Dr. Douglas W. Wholey from IFAD, Dr. Dana G. Dalrymple from USAID, Dr. Carl-Gustaf Thornstrom representing Sida, Dr. Henri Carsalade, President, Agropolis International, Dr. Karim Maredia, MSU, Dr. Richard R. Harwood, MSU, were among the various distinguished participants.

Dr Mahmoud Solh, Chairman CAC Task Force for CAC, chaired the meeting. In his opening remarks, Dr Solh thanked the donors and the CAC-Consortium members for their support to the collaborative program and praised the significant achievements made in a short time. He also acknowledged Dr. Paroda's visionary leadership in strengthening partnerships and attracting donor attention to



Meeting in the progress

Message from Dr. William Dar, Director General, ICRISAT and Co-Chairman, Steering Committee

Dear Colleagues!

Greetings from ICRISAT! As Co-Chair of the CGIAR Collaborative Program for CAC, I am very happy to share some of my views with you through the CAC News. The CGIAR Collaborative Program for Sustainable Agricultural Development in Central Asia and the Caucasus began its activities in the region in 1998. A consortium of CG centers (CIMMYT, CIP, IFPRI, IPGRI, ICARDA, ILRI, IWMI, and ICRISAT) in partnership with NARS, formulated the research and development agenda to arrest the decline in agricultural productivity in the region, joined later by other centers and organizations.



Strategic issues identified for research and development included productivity of agricultural systems, natural resource conservation and management, conservation and evaluation of genetic resources and biodiversity, socioeconomic and public policy research and strengthening national programs. ICRISAT is very proud of its association with the program since its inception. It contributed significantly to the 'Germplasm enhancement for diversification and intensification of agricultural production' project of the program. It revived and catalyzed groundnut research and development efforts in the region and played a significant role in capacity building in groundnut breeding and seed production methodologies. ICRISAT is a firm believer in 'Science with a Human Face', meaning it is devoted to the cause of the poor farmer.

Besides organizing a regional groundnut workshop in 1999 to evaluate the state of groundnut production and its future requirement in the region, it also organized a regional training program in groundnut breeding and seed production in 2004. These efforts bore fruits when ICGV86115 as 'Salomat' and ICGV94088 as 'Mumtoz' were released in Uzbekistan and several other promising breeding lines were identified in other countries in the region that await release.

Other ICRISAT mandated crops, chickpea, sorghum and pear millet, can play a significant role in crop diversification in the region which till date remains largely wheat-based. Dual-purpose varieties of groundnut, chickpea, pearl millet and sorghum can provide human food and nutritional security as well as fodder for the livestock.

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Important Events

MESSAGE *(Continued from page 1)*

Agricultural research and development in the region remains under-funded. Beside policy changes and institutional reforms, more resources are needed to upgrade research facilities and skill development and rehabilitate agriculture on a sound footing in the region. I am happy to note that more and more research and development organizations are coming together to work for small farmers in the region. A concept note titled, 'Shifting inequality trend in countries under transition through research partnership for sustainable agriculture in CAC region' has been

submitted recently for funding under the Challenge Program.

The Program Facilitation Unit (PFU) has played a crucial role in bringing various partners and NARS together and facilitating their activities in the region. There is no substitute for partnership and power and the benefits of such alliances are realized by all.

I wish you success in your efforts in transforming agriculture and other associated activities in the region

DONOR SUPPORT MEETING *(Continued from page 1)*

promote the program in the region. He also informed the program partners about Dr Paroda's departure from the Program by end of March, 2007, and wished him happiness in his future endeavors.

Dr. Raj Paroda, Regional Coordinator, ICARDA-CAC and Head, CGIAR PFU, made a comprehensive presentation on the achievements and future aspirations of the program. He highlighted how the program in the region is contributing and gaining increased support from international partners. His presentation was well received.

Dr. Kamiljon Akramov from IFPRI, in his presentation highlighted the major challenges facing CAC region. He stressed upon need for crop diversification, more effective regional cooperation and capacity building in policy research. He also informed about a new three-year IFPRI-BMZ project in Kyrgyzstan for socio-economic studies.

Dr. Carl-Gustaf Thornstrom, representing Sida, informed about increased support for CAC from Sweden. The decision, likely to be approved by Christmas, would provide \$25 million to support activities in the field of plant breeding, gene banks and seed production.

Dr. James G. Ryan, Science Council, was impressed by the depth of the program and the progress made. He felt that challenges regarding policy research for economies in transition are real to be addressed for which a Challenge Program would be a good option.

Dr. Richard R. Harwood, MSU, stressed that the proposed Challenge Program idea should emphasize that the national structures available are no longer relevant and capable of addressing current challenges for which research planning and management scheme will have to be expanded. In the Challenge Program, the possible linkages with other stakeholders and how inter-center cooperation can add value to achieve better outscaling of available technologies through policy intervention be properly explained.

Dr. Karim Maredia of MSU mentioned that in order to strengthen the program, USAID recently supported a Collaborative support program for Integrated Pest Management

in Central Asia (IPM-CRSP). The project is designed to foster development of a comprehensive IPM initiative, using an ecologically-based and multidisciplinary systems approach. Michigan State University, the University of California, and ICARDA serve as host institutions for implementing this program.

Dr. Henri Carsalade, Agropolis, informed about his visit to the CAC region. He was impressed by challenges and opportunities of the region which should draw attention of donor community. He was impressed by achievements of the Program and was convinced that being a sensitive region, CAC needed support of international scientific community. He felt that problems of salinity and toxicity levels are the emerging challenges to be addressed on priority.

IFAD and other donors were pleased with the progress and all felt that CAC Challenge Program will help in rebuilding the R&D system in CAC region, which has great potential for quick impact and visibility towards achieving MDGs. Hence, a Challenge Program for economies in transition appears to be fully justified.



Audience is listening with interest

CGIAR JOINS FAO PGR ACCESS TREATY

World leaders in agricultural research signed agreements on 16 October 2006 that guarantee longterm access to some of the world's most important collections of agricultural biodiversity, at the same time requiring commercial users to share benefits with the global community.

In a ceremony timed to take place on World Food Day, with its theme of Investing in Agriculture for Food Security, 11 centres of the Consultative Group on International Agricultural Research (CGIAR) placed all their ex-situ (genebank) collections under the International Treaty on Plant Genetic Resources for Food and Agriculture, now ratified by 105 countries. "This really is an investment in food security," said Dr Emile Frison, Director General of Bioversity International. "The genetic diversity created in the past by farmers and researchers

is the foundation of improvements to meet the challenges of the future". "Unless we meet those challenges," Frison added, "there will be no food security."

Dr Mahmoud Solh, Director General, ICARDA, said that the new agreement would "allow breeders and other researchers to tap the collections for solutions to the most pressing problems, such as drought, desertification, and food and nutritional security."

ICARDA holds more than 20% (over 132,000 accessions) of the 600,000 accessions held in the genebanks of the centers supported by the CGIAR. These accessions include wild relatives and landraces of crops and are a rich source of genes to meet the challenges of both biotic and abiotic stresses, including climate change.

Center directors warmly welcome the agreements

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CGIAR JOINS PGR TREATY *(Continued from page 2)*

and "commit themselves to supporting and implementing the Treaty", said the Alliance Executive of the CGIAR in a statement issued on the occasion. The statement sets out the Centers'

common understanding of certain provisions of the Agreements and indicates some actions that the Centers will implement.

CAC PARTICIPANTS IN APAARI - GFAR MEETINGS IN INDIA



CAC representatives with Dr. Mohan Saxena at the meeting

Two major events of the Asia-Pacific Association of Agricultural Research Institutions (APAARI) and Global Forum for Agricultural Research (GFAR) were held in New Delhi, India, between 6-11 November, 2006. These events were attended by various donor representatives, senior managers of NARS, international scientific organizations, representatives of CSOs and private sector, which facilitated taking some important decisions that are to benefit farmers and rural communities worldwide

The 9th APAARI General Assembly was held on 6-7 November in which over 100 delegates representing NARS from 20 countries, 15 CGIAR centers, other regional and international organizations, NGOs, farmer organizations, the private sector, and donor agencies participated. During the event, recommendations were offered to policy makers, regional and international bodies, NARS, and other stakeholders, on ways to create an enabling policy environment

to promote and accelerate LFM; build partnerships; and upscale and outscale agricultural innovations for LFM. The General Assembly also discussed to have representation of CGIAR, GFAR and CSOs on its Executive Committee.

Two-day "Expert Consultation on Agricultural Innovations: Linking Farmers to Market" focused on marketing issues in the context of rapid economic diversification in the Asia-Pacific region. The issue is not just finding markets but also looking at the entire value chain, and making farming a remunerative business.

The GFAR conference on "Re-orienting Agricultural Research to Meet the Millennium Development Goals" was inaugurated by H.E. the President of India, Dr. A.P.J. Abdul Kalam, beside participation of a large number of senior representatives of CGIAR Consortium for CAC: Drs. Mahmoud Solh, DG, ICARDA, Raj Paroda, Head, CGIAR PFU, Mohan Saxena, ex-ADG, ICARDA; Dr Masa Iwanaga, DG, CIMMYT; Dr William Dar, DG, ICRISAT; Dr Emile Frison, DG, Bioversity International and several others. CAC region was represented by a strong group of ten senior research managers, Rectors, NGOs and farmers from six countries.

In the conference, three sub-themes were addressed: (i) New paradigms for generation of and access to research results, (ii) Innovations in institutional arrangements, (iii) Technologies for emerging societal needs. In addition to discussions in plenary, there were nine working groups covering specific aspects of each sub-theme. Participants from CAC countries also decided to organize either regional or national conferences on similar subject.

Conference participants adopted "GFAR Conference 2006: Delhi Declaration", in which they restated their commitment towards Millennium Development Goals and highlighted areas in which work is to be further intensified. Full version of the declaration is available online at the address: www.egfar.org/egfar/gfar2006/proceedings/Delhi_Declaration.pdf

MEETING FOR START OF CACILM

Representatives of five Central Asian countries and several development partners met in Almaty, Kazakhstan, on 16 November, 2006, to launch the Central Asian Countries Initiative for Land Management (CACILM).

CACILM is a 10-year program with an expected financing of US\$1.4 billion (funding committed up to the end of 2008 is approximately \$155 million), with the Asian Development Bank as lead agency, co-funded by the Global Environment Facility and other agencies. ICARDA is an important partner in the program, which aims to reverse land degradation, through sustainable land management, in Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan where the livelihoods of over 20 million people in rural areas are threatened due to overgrazing, soil erosion, salinity, and desertification. Being a member of the Strategic Partnership Agreement for Implementation of UNCCD in the

Central Asia Sub-region, ICARDA is responsible for the Sustainable Land Management research subcomponent under the CACILM Multi-country Framework Support Project.

ICARDA was represented at the meeting by Dr William Erskine, ADG Research, Acad. Mekhlis Suleimenov, Consultant, ICARDA-CAC, and Ms Ilona Kononenko, Grants Management Officer. Dr Erskine presented ICARDA's vision on the SLM research program. He emphasized that the program was developed based on the gaps identified by the NFPs and indicated the need for broader involvement of various national partners, including research institutions, NGOs, universities, the private sector and others. Representatives of the Central Asian countries expressed satisfaction over ICARDA being the lead Center for SLM research. They suggested that the Center play a more pro-active role within the National Programming Frameworks.

(Source: Week At ICARDA)

EXTENSION OF ADB SOIL AND WATER PROJECT

On 22 November, 2006 Asian Bank for Development (ADB) notified its approval of ICARDA's proposal to extend the Soil and Water Management Project (RETA 6136) on a no-cost basis for another seven months, until 31 July,

2007. This decision would allow more efficient technology testing and transfer.

At the end, the Project will have completed three years data, including those on winter wheat planted in October, 2006

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ADB SOIL AND WATER PROJECT *(Continued from page 3)*

to be harvested in June, 2007. In addition, this will enable the NARS researchers and the project scientists to analyze experimental results and come out with scientifically justified recommendations for farmers and policy makers on sustainable

management of soil and water resources. Moreover, additional seven months of no-cost extension period will help in linking on-going technologies with the new CACILM program now being implemented in the Central Asian countries.

Research Highlights: Germplasm Enhancement

WHEAT AND BARLEY

WHEAT VARIETIES PRE-RELEASED

The State Variety Testing Commission (SVTC) of Uzbekistan has included wheat varieties Durдона and Saidaziz into the pre-release list. The two promising wheat varieties were selected out of total 48 tested, whose results were reviewed by SVTC during the recently held Annual Meeting. Durдона and Saidaziz have been selected as promising high yielding varieties, with good grain quality and disease resistance from international nurseries.

The Saidaziz variety was selected by the Tashkent Branch of Andijan Research Institute of Grain in 2002, whereas Durдона was selected by scientists of the same institution stationed in Andijan also in 2002.



Wheat germplasm enhancement



Dr. Jamin Akimaliev visits barley trials conducted by Dr. Bessonova

BARLEY VARIETY RELEASED IN KYRGYZSTAN

The State Variety Testing Committee (SVTC) of the Republic of Kyrgyzstan has officially released a new barley variety named Adel.

This high yielding variety was selected from among the ICARDA nurseries by Kyrgyz barley breeder, Dr Tamara Bessonova and submitted to the SVTC in 2002 as one of the promising lines. Adel, which has high resistance to diseases and it is also early in maturity.

FOOD LEGUMES

CHICKPEA BECOMING POPULAR

Crop diversification through introduction of food legumes in the CAC region is becoming more and more popular. In Kazakhstan, farmers have increased area under chickpea, while Uzbek breeders have submitted new varieties to the State Variety Testing Commission for final testing and release. Two such new varieties of chickpea named as: Malhotra (FLIP 98-197C) and Halima (FLIP 98-183C) have been submitted to the SVTC by Prof. H. Atabaeva. These varieties, selected from ICARDA breeding lines, are the result of trials performed in saline soils of Mirzachul region. During last three years, these have shown good yield potential and salinity tolerance.



Chickpea improved lines in Kazakhstan

POTATO

POTATO GERmplasm ENHANCEMENT

Research on the use of True Potato Seed (TPS) technology, undertaken by CIP, has produced good results. Experiments were undertaken at the medium-elevated area (1600 m. asl.) at Pschem, Bostalnik District in Tashkent province. The main aim was to produce cost-effective disease-free potato planting material that would be readily available to the resource-poor farmers.

The experiments included: (i) study of survival rates of TPS rooted seedlings and (ii) evaluation of their performance once transplanted in the field. TPS seedlings were raised from the traditional and advanced nursery methods different in terms of seedling density: under advanced method, it is 166 seedlings/m², and under traditional method it is 204 seedlings/m². Techniques for potato seed production tested

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Research Highlights

POTATO GERMLASM ENHANCEMENT *(Continued from page 4)*

included an original variant to produce rooted seedlings from TPS materials under nursery conditions.

The harvesting was done after 111 days from transplanting, on 22 October. A conclusion was that the rooted seedlings produced in the traditional way had less chances of survival mainly due to two reasons: (i) the rooted seedlings produced traditionally have almost bare roots once they are taken out of the nursery, and (ii) the rooted seedlings are particularly sensitive to the intense solar radiation. The new method has the advantage of producing stronger seedlings, with substrate intimately attached to the rooting system, thus reducing the transplanting shocks and ensuring prompt recovery. In particular, rooted seedlings of TPS family LT-8 x TS-15, produced according to the advanced method, yielded better than those with traditional method.

It, therefore, became evident that the production of seedling tubers is the cheapest alternative though a certain percentage of segregation is present in the progeny which makes planting material less uniform than the minitubers obtained through clonal multiplication. Yet, the TPS technology is quite simple and can be adopted by smallhold farmers who are familiar with vegetable growing and live in the remote areas. At the same time, it is more labour-consuming, compared with

conventional seed potato technique. For this purpose, fortunately in CAC countries, family labor could be employed gainfully to save high cost of potato seed. The only problem is about duration of the growing cycle of 151 days (from sowing till harvesting of seedling tubers). This could become an obstacle in the diffusion of TPS technology and has to be resolved.

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



TPS trial

VEGETABLES

PROMISING VARIETIES



Evaluation of promising mungbean variety

Introduction and testing of promising vegetable varieties, along with formalization of the regional vegetable network, and capacity building activities have become major priorities for the AVRDC Regional Office in Tashkent.

The varietal trials were conducted in six countries under various soil and climatic conditions. The evaluation involved 21 promising varieties of vegetable soybean (6),

tomato (7), sweet pepper (4) and hot pepper (4). NARS involved in the trials include Research Institute of Vegetable Growing and Lankaran Experimental Station (Azerbaijan), Kazakh Research Institute of Potato and Vegetable Farming, Turkmenistan Research Institute of Crop Husbandry, and Tashkent State Agrarian University, Mamun Academy and the Research Institute of Plant Industry (RIPI) in Uzbekistan. All promising varieties are early maturing, high-yielding, with better quality and lodging resistance that are suitable for two crop rotations.

The selected promising varieties include vegetable soybean (AGS423 and AGS425), tomato (CLN 1466 EA and CLN 2498 E), sweet pepper (0037-7645 and 99462192), and hot pepper (9955-15 and 0337-7069). Seeds of these varieties were multiplied for further work. One hundred accessions of improved varieties of 5 vegetable crops were introduced by the Scientific Center of Vegetable & Industrial Crops of Armenia, and 107 accessions of 9 vegetable species were introduced by the Research Institute of Plant Industry of Uzbekistan.

State Varietal Testing Commission (SVTC) of Uzbekistan has identified two varieties of mungbean (Marjon and Zilola) and one variety of vegetable soybean (Universal) as promising. Vegetable soybean variety Ilkhom was included into State Variety Register and approved for release in 2007.

(Source: Dr. R. Mavlyanova, AVRDC - Tashkent)

RICE

NEWS ON THE RICE NETWORK

Results of the Regional Varietal Trial are being analyzed to identify the most promising varieties on regional basis for the first time. The regional trial was conducted by the NARS of five countries (Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan), and coordinated by the Uzbek Rice Research Institute with facilitation role of CGIAR-PFU.

Selection of promising varieties has been accomplished by Uzbek and Kazakh breeders, based on the

data on ripening, yield, lodging resistance and other traits. Among tested varieties, Mustaqillik, Istiqbol, Kenchai Mestniy have been found to be high yielding and varieties Marjan and Kuban-3 were early maturity. Most of the varieties have also been found to be resistant to lodging. Work will be continued as varieties Istiqbol, Istiqbol and Kenchai Mestniy have been selected for crossing purpose during the next crop season.

IPM

BARLEY VARIETY RESISTANT TO LOOSE SMUT

A new variety of barley has shown good resistance to loose smut during the trials undertaken in Azerbaijan. The evaluation was done by Ms. Hagigat Hashimova, barley breeder working at the Ter Ter experimental station. It has been selected from ICARDA entry 20 (85M1) from IBWFYT-1996/97 trial and named as Qarabakh-33. Over the last three years, this variety has outyielded the local variety Qarabakh-7 by an average of 12-15%.



Barley trial evaluated by Ms. Hashimova

Natural Resource Management

RESEARCH ON ROCK PHOSPHATE IN TAJIKISTAN

Usage of raw ground rock phosphate as fertilizer was identified as a viable opportunity by technology review undertaken for the ADB-funded Project on "Improving Rural Livelihoods through Efficient On-farm Soil and Water Management" held from 5-7 November, 2006 in Tajikistan.

Low availability and high cost of commercial fertilizers traditionally represented a serious constraint to agricultural development in CAC countries. To address this problem, a number of treatments were evaluated, involving the use of locally available rock phosphate as a much cheaper alternative to traditional commercial fertilizers. In 2004-2006, a research was undertaken at Ziroatkor farm, Dushanbe province, to study carry-over effect in alfalfa sown after cotton of ground rock phosphate applied earlier for cotton.

The research outcome indicated that the average

yields of alfalfa under 140 kg/ha of superphosphate and rock phosphate with similar active phosphate content, were 20.3 t/ha and 19.9 t/ha, respectively. At the same time, average cost-benefit ratios (CBRs), comprised 1.9 and 5.2 accordingly, which means that for every dollar invested, the farmers could get USD 1.9 of total income if they apply industrial phosphorus fertilizer, or USD 5.2 if they apply rock phosphate.

These calculations indicate that there will be considerable benefit to agriculture in Tajikistan if the application of rock phosphate is upscaled in large areas. While presently mining of rock phosphate is done by local entrepreneurs on small scale, its price could be further reduced with large scale industrial extraction. Crop-wise research has shown that it is possible to apply rock phosphate fertilizer in cotton, winter wheat and maize.

RAISED BED PLANTERS FOR TAJIKISTAN



Bed planters being supplied

On 2nd November, 2006 four raised bed planters have been supplied to Tajikistan under the joint Tajik Agrarian University - Turkish International Cooperation Agency (TICA) Project on "Promotion of wheat bed planting technology in Tajikistan". The project was approved in July, 2006 and its goal is to promote sustainable management of natural resources in Tajikistan through research on raised bed planting of wheat under irrigated conditions. Of these, two are 4-bed and two are 2-bed planters to be tested on medium-size farms with more powerful tractors and small-scale farms with less powered tractors, respectively.

Along with the planters, 2 tons of wheat seed of currently released local, and some international varieties, and 2 tons of DAP fertilizer have been made available at the experimental sites.

RICE-WHEAT ROTATION FOR SALINITY MANAGEMENT

Research on introduction of rice in the wheat-based system in Karakalpakstan is being undertaken under the ADB-funded "Bright Spots" project as a measure to address high soil salinity. This problem becomes of increasingly high importance in the area, as less and less water is available for irrigation as well as for leaching of soil in the coming years.

Adverse effect of soil salinity on crop yields, becomes of an increasing concern to the government trying to achieve food security by increased production of wheat and cotton. Alternately, rice could be reintroduced into some areas in rotation with winter wheat, assisting in the leaching of soluble salts from the root zone. This could also provide additional income to farmers of the area, where the only irrigation water

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Rice planted after wheat

RICE-WHEAT ROTATION *(Continued from page 6)*

source is Amudarya river with soluble salt content ranging from 1100 to 1400 mg/L1.

The research was carried out on the farm 'Kizyl Uzyak', in Chimbay district, Karakalpakstan, in an area of 3 ha. Experiments were established to investigate three issues: (1) effectiveness of rice-wheat rotation vs. rice-fallow and wheat-fallow; (2) advantage of zero-tillage technology vs. traditional tillage in wheat in the rice-wheat system, and (3) comparison of

precision land leveling vs. no leveling in wheat in the rice-wheat systems. So far, rice-wheat system produced higher yield (up 6 tons/hectare), as shown during the harvesting on 2 November.

Another objective of the research was to demonstrate possibility of using irrigation water in rice for soil leaching and advanced rice transplanting technology out-scaled from the Bright Spot in Khorezm.

PHOSPHOGYPSUM OUT-SCALING IN SOUTHERN KAZAKHSTAN



Farmer examining his field prior to PG application

Phosphogypsum (PG) application technology for remediation of high-magnesium soils, developed under the ADB funded Soil and Water Management Project, was successfully out-scaled on 109 ha area in Southern Kazakhstan during November-December period of 2006.

In all, 19 farmers enthusiastically participated in this activity by contributing 30% of the total out-scaling costs, the

remaining 70% was provided by ICARDA through two ADB-funded Bright Spots and Soil and Water Management Projects.

As the initial step for out-scaling, the amount of magnesium in soil exchangeable sites in Old Ikan village, the target area, was determined by reconnaissance mapping of irrigated lands and analysis of soil samples from the farmers' fields. The magnesium content in 1.0 m depth fluctuated in the range of 30.62-38.53.

The second stage involved the organization and identification of logistic options for the out-scaling activity. This activity was coordinated by the National Water Management Institute based in Taraz, Kazakhstan. In total, 408 tons of PG was delivered to the farmers, with the PG application rates ranging between 2-8 t/ha.

Important guidance in agronomic practices for application of PG was actively provided by the NARS team and ICARDA scientists to the farmers during all stages of PG out-scaling.

Earlier, the cost benefit analysis of PG has revealed that this technology giving higher crop yields provides net benefits over the traditional practice without PG application. The proposed out-scaling activity is the first step for a large scale dissemination of PG application in high-magnesium contaminated soils in Southern Kazakhstan.

Genetic Resource Conservation

NEW GENE BANK ESTABLISHED IN KRASNIY VODOPAD

A functional small new Gene Bank facility has come up at Krasny Vodopad Breeding Station in Southern Kazakhstan. It is an outcome of collaboration between South West Scientific Production Center, Kazakhstan, ICARDA-CAC and CGIAR PFU.

On the 15th Anniversary of Independence of Kazakhstan, this Gene Bank was inaugurated by Prof. Abdurahman Ombaev, Director General, South West Scientific Production Center, and Dr. Raj Paroda, Head, PFU and Regional Coordinator, ICARDA. Beside crop breeders and scientists of the Center, present were Acad. Mekhlis Suleimenov, Dr. Bitore Djumakhanov of ICARDA and the government officials of Saryagash Province as well as the national media. In his opening speech, Prof. Ombaev emphasized importance of the Gene Bank. He appreciated the initiative and support provided by ICARDA and PFU for necessary materials and equipment - plastic bottles, storage shelves, tables, electronic balance, refrigerator, computer, etc. Dr Raj Paroda highlighted the importance of Gene Banks for conserving valuable genetic resources for future generations. Crop breeders were extremely pleased with this facility and have already started conserving about 250 of the total 2000 valuable



Opening of the Gene Bank

indigenous collections of cereals and legumes. They also assured Dr. Paroda to continue taking good care of this facility. Dr. Ombaev announced a collective decision to name this Gene Bank after Dr. Raj Paroda.

GENEBANK IN TAJIKISTAN

On October 25, 2006, Dr. Raj Paroda, Head, and Dr. Zakir Khalikulov, Consultant, CGIAR PFU in CAC, accompanied by Dr. Tolib Bukhoriev, Director, Tajik Crop Husbandry Institute (TCHI), visited the Gene Bank established

at the Institute and had a meeting with its staff. They were able to see visible results achieved by the team as over 1175 accessions of cereals, food and forage legumes, fodder crops and their wild relatives have been procured and stored by now in

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GENE BANK IN TAJIKISTAN *(Continued from page 7)*



Dr. Paroda examines Gene Bank's collection

the Gene Bank.

Earlier, in September, 2002, Gene Bank in Tajikistan was established to conserve valuable genetic resources seeking help of ICARDA, IPGRI, GCDT and others. Over the years, through active support of PFU-CGIAR and ICARDA, this PGR Center secured 10,000 seed containers, electronic weighing scale, storage shelves, and cooling system. During 2005-2006, under a new project "Improving the facilities on Gene Banks in the CAC Region" funded by the Global Crop Diversity Trust (GCDT), PFU-CGIAR provided a dehumidifier, one moisture meter, one germinator and a standby generator.

Dr. Paroda was pleased to see the progress made under the leadership of Acad. Tolib Nabiev, President, Tajik Academy of Agricultural Science, Dr. Tolib Bukhoriev, and Ms. Zebiniso Muminshaeva, Director In Charge of the Gene Bank.

Meetings / Workshops / Conferences

IWMI PARTICIPATES IN CGIAR-CSO FORUM



IWMI-CAC representatives

Four representatives from IWMI Central Asia were invited for CGIAR - CSO forum, namely, Ikbal Yusupova, IWMI CA, Janibek Kamilov, Director of Japalak WUA (Water User's Association, Kyrgyzstan, IWRM-Ferghana project partner), Khabibjon Kushiev, Gulistan State University (Bright Spots project, Uzbekistan NARES partner), Tursunboy Avezov, Galaba farm Learning Alliance leader, (Bright spots project, CBO partner, Uzbekistan). They shared their experience on the collaboration between the CGIAR centers and the achievements to date with other stakeholders, and learnt a lot from others during the four-days event.

Throughout most of November, a diverse group of researchers and development professionals kept up a continuous stream of informative and constructive messages in the CGIAR's first facilitated online dialogue about its partnerships with civil society organizations, or CSOs. Referred to as a "Virtual Conversation," the dialogue was the positive prelude to a day-long, face-to-face Forum involving CSOs, Members of the CGIAR, staff of the Centers and Challenge Programs it supports and others at the CGIAR Annual General Meeting (AGM06) in early December.

Nearly 160 people registered for the conversation, and about 65 posted more than 200 messages in English, French and Spanish. All messages received in the latter two languages were translated into English.

Many of those engaged in the Virtual Conversation had been invited to take part in the Innovation Marketplace, another event at AGM06 designed to allow CSO representatives and their CGIAR partners to share insights and experiences from their collaborative work across the developing world. The Virtual Conversation gave them an opportunity to get to know one another in advance, through virtual introductions, and to exchange information about their work. This encompassed a wide range of topics, such as crop improvement, land management, biodiversity conservation, organic farming, enterprise development, farmer participatory research and the use of new information and communications technologies (ICTs) for rural development.

FOURTH INTERNATIONAL CONFERENCE ON NO-TILL AGRICULTURE

Acad. M. Suleimenov, Consultant, ICARDA CAC, participated in the 4th International Workshop on "No-Till in Sustainable Agriculture", organized by Agrosoyuz, a no-till equipment manufacturer, on 27-30 September 2006 in Dnepropetrovsk, Ukraine. The conference was attended by more than 400 participants including farmers, agricultural experts, representatives of grain production systems and the private sector from Canada, Kazakhstan, Russia, the Ukraine and USA. During the workshop, Dr. M. Suleimenov made a presentation on "Zero tillage and crop diversification in Northern Kazakhstan". He informed the participants about the results achieved under the conservation tillage component of the ADB-funded Soil and Water Management Project in Northern Kazakhstan. The workshop was extremely useful for the exchange of views and experiences on no-till agriculture and no-till equipments. Participating farmers were especially enthusiastic about efficiency of no-till technology in terms of saving time, labor, and fuel. In addition, perspectives and

potential of crop diversification were discussed. A similar workshop was planned in Kazakhstan in the end of July 2007.



Acad. Suleimenov discusses about no-till equipment

PRESIDENT OF AGROPOLIS VISITS CAC

From 14 - 20 November, CGIAR PFU and ICARDA-CAC office in Tashkent was visited by Dr. Henri Carsalade, President, Agropolis, when he and Mrs. Carsalade were on a private visit. The aim of his visit was to meet, beside management and staff of ICARDA-CAC and other CG Centers, the national agricultural research authorities, government officials and scientists.

In Uzbekistan, Dr. Carsalade visited Uzbek Scientific Production Center of Agriculture in Tashkent, Uzbek Research Institute of Plant Industry and the national Gene Bank of Uzbekistan organized under this Institute. He was impressed by the high level of trust and support that the national authorities and scientific community expressed in favor of ICARDA and to the matured leadership of Dr Paroda. He believed that activities undertaken by CGIAR were among the most recognizable international answers after the collapse of the former USSR research system in Central Asia. Dr. Carsalade also admitted the relevance of the Consortium. He said it is a cost effective organisational solution, open to partners beyond CGIAR, operating with efficiency in a difficult environment. He has seen that CAC has more than doubled its activity during the last 3 or 4 years; clearly this is due, in particular, to its leadership.

Dr Carsalade commented on his impressions saying that: "Uzbekistan and the Central Asian countries are facing enormous problems of an international relevance. They can be summarised in 2 aspects related to each other: 1) the way out of the extreme specialization of the agricultural sector, a heritage of the ex-USSR economy, in a context, and 2) enormous



Dr. Carsalade meeting with CG scientists

environmental problems. Beyond the necessary reconstruction of national agricultural systems in the 8 countries of the CAC, long term problems like increasing salinity of soils aggravated by soils water and food toxicity remain outstanding and this justify more international interest. In the context of the global warming some of the actual situations met today in Central Asia, prefigure the environmental and agricultural future of many places in the world". Dr. Carsalade believed that these problems shall attract more international attention and was ready to support the highly relevant activities of ICARDA and CGIAR in Central Asia. He was happy that ICARDA is so well known in the region.

CONFERENCE ON BIOSALINE AGRICULTURE



Participants of the conference

International Conference on Biosaline Agriculture and High Salinity Tolerance and the First International Symposium on Sabkha Management were held from 3-8 November, 2006 in Tunis, Tunisia. These events were organized by the Laboratory

of Plant Adaptation to Abiotic stresses (LAPSA) and Center of Biotechnology, Ecopark of Borj-Cédria, jointly with several international organizations and academic institutions, including ICBA, IDB, UNESCO, ISHU and others. ICBA-CAC was represented by Dr. Kristina Toderich, ICBA scientist located in Tashkent office.

The conference was attended by more than 150 scientists and researchers who shared their latest findings on salt tolerant plant genes, proteins and potential for biotechnology, sabkha management, possibilities for sustainable halophyte utilization, physiological and biochemical investigations of plant salt tolerance, and improving crop salt tolerance. Dr. Kristina Toderich, jointly with Drs. E. A. Juylova, A. R. Rabbimov, S. Ismail, L. Gismatullina, and T. Yunusov, young scientists of the Samarkand Branch of the Academy of Sciences of Uzbekistan, delivered a lecture in the Plenary Session on the Inventory and Germplasm Evaluation of Phylogenetic Resources of Halophytes of Central Asia.

FIELD DAY ON CONSERVATION AGRICULTURE

A farmers' field day was organized by ICARDA-CAC under FAO TCP project on "Sustainable agricultural practices in the drought affected region of Karakalpakstan" on 12 October, 2006, in Chimbay district. The major goal of the event was to facilitate demonstration, experience sharing and discussion of zero till and bed planting practices, soil fertility improvement as well as the new machines for conservation agriculture.

The field day was attended by 55 participants including local government officials, international organizations representatives, scientists and farmers. Participating institutions included 37 farms of the Chimbay district, Karakalpak Research Institute of Farming, Nukus Branch of Uzbek Research Institute of Rice, Central Asian Research Institute of Irrigation (SANIIRI), Nukus Branch of SANIIRI, and

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Field day in progress

FIELD DAY ON CONSERVATION AGRICULTURE *(Continued from page 9)*

Nukus Branch of Tashkent State Agrarian University.

The event was opened by Mr. Makhmed Shankliev, Governor of Chimbay district, who welcomed the participants and assured his full support to the project. He felt that the work being done is important in view of expected shortage of available water in the region. Acad. Mekhlis Suleimenov, Consultant, ICARDA-CAC, gave an overview of the current situation in the area of conservation agriculture, highlighting advantages it provides, including saving of labor and fuel, reduced soil erosion, increased soil fertility, etc.

During the field day, specific aspects of conservational agriculture practices were covered, including: a) using bed

planting for less seed and irrigation rates, higher yield and fertilizer economy, proper land leveling being important efficiency factor; b) disking before planting under zero till technology to control weeds; c) modified boom sprayers shall be used to apply herbicides necessary under minimum or zero tillage. Additionally, a practical training course in Visual Soil Assessment was conducted to help farmers determine soil fertility and, correspondingly, better manage their land. The farmers found this training very useful as they were keen to adopt conservation agriculture practices to reduce tillage costs and increase yields.

PARTICIPATION IN ASIAN SEED CONGRESS



Inauguration of the congress

Dr. Ravza Mavlyanova, scientist from the World Vegetable Center (AVRDC) in CAC, attended Asian Seed Congress in Kuala Lumpur, Malaysia, from 12 - 16 November,

2006. The Congress was organized jointly by the Asia Pacific Seed Association and the Malaysian Agricultural Research and Development Institute MARDI. More than 700 delegates and guests from 39 countries participated. Among them were scientists and academicians, policy-makers and government officials, as well as private sector managers representing the seed industry.

Dr. Mavlyanova, along with other scientists of AVRDC, participated in the Special Interest Group Meetings where she made a presentation on the Center's on-going projects in CAC region. Her presentation was met with much interest by the audience and the CAC region was proposed as potential partner for seed development.

Among the other topics highlighted during the Congress were international trade and quarantine, intellectual property rights, seed industry in Asia Pacific, public and private partnership in seed industry, latest trends in seed technology and value addition.

(Source: Dr. Ravza Mavlyanova, AVRDC - Tashkent)

CONFERENCE ON INDIGENOUS VEGETABLES AND LEGUMES

The First International Conference on Indigenous Vegetables and Legumes was organized jointly by the World Vegetable Center (AVRDC), Bioversity International, ICRISAT and the International Society for Horticultural Science (ISHS) at ICRISAT, Hyderabad, India, from 12 - 15 December, 2006. This conference aimed at building awareness of the important role of indigenous vegetables and legumes in achieving food security, food diversity, and nutrition and health improvement.

The Conference was attended by more than 220 scientists working on indigenous vegetables and legumes. Dr.

Mangala Rai, Director General, ICAR; Dr. William Dar, Director General, ICRISAT; Dr Thomas Lumpkin, Director General, AVRDC; and Dr. Emile Frison, Director General, Bioversity International, were among the distinguished participants. Eminent agricultural scientist Dr. M.S. Swaminathan was invited as the Chief Guest. Central Asia and the Caucasus region was represented by Dr. Ravza Mavlyanova AVRDC scientist in Tashkent. She made a presentation entitled "Regional strategies and policy issues for indigenous vegetables in Central Asia and the Caucasus".

(Source: Dr. Ravza Mavlyanova, AVRDC - Tashkent)

Human Resource Development

REGIONAL TRAINING FOR THE WATER USERS ASSOCIATION

A training on "Water distribution and performance indicators" was organized by IWMI-CAC in Tashkent, Uzbekistan on 15-24 December, 2006. Training was organized for WUA management, technical staff and WMO staff from Sogd Province of Tadjikistan, Fergana and Andijan Provinces of Uzbekistan and Osh Province of Kyrgyzstan, as well as IWMI SMID team.

It focused on existing water distribution problems in WUA, complexity of water distribution under the new conditions, and possible solutions. Establishing water user groups and introduction into time based water distribution was also elaborated. A performance assessment session was included into the training, covering the following aspects: why WUAs need water management performance; what are equity, reliability, timelines and sensitivity indicators; how to conduct performance assessment, roles and responsibilities of the staff, data requirements and protocols, interpretation of performance



Trainees of the course

results and converting them into decision making. Training

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TRAINING FOR WATER USERS ASSOCIATIONS *(Continued from page 10)*

employed various interactive methodologies, including: field case study, focus group presentations, water distribution

calculations, role playing and practical application planning.

ENGLISH TRAINING FOR YOUNG SCIENTISTS

A three month intensive English training started from 11 December 2006 in Tashkent under the aegis of the CGIAR Collaborative Research Program for Sustainable Agricultural Development in CAC. The course is being attended by 20 young scientists from Azerbaijan, Kazakhstan,

Kyrgyzstan, Tajikistan and Uzbekistan. Scientists from Armenia, Georgia and Turkmenistan were also invited but for some reasons they were not able to attend. They will study English language five days a week (from 08:30 AM to 15:00 PM) and the intensive course will be completed on 11 March, 2007.

TRAINING ON PROJECT PROPOSAL WRITING



Participants of the training

A training workshop on "Planning and writing successful proposals" was held at AVRDC HQ in Taiwan from 15-17 November, 2006. Dr. Karine Malgrand delivered theoretical and practical training. CAC region was represented

by Dr. Ravza Mavlyanova from AVRDC office in Tashkent, Uzbekistan.

The workshop covered important elements of a successful project proposal preparation, namely: concept notes versus proposals, the format, participatory planning approaches and motivation, problem analysis, etc. Special attention was paid to defining project goal, purpose, objective, outputs & intermediate products, beneficiaries, target groups, partners, and collaborators. Composition of the work plan, budget, fund raising and its objectives, financing schemes and identification of funding opportunities were also elaborated.

Miscellaneous Information

PROJECTS IN THE PIPELINE

In order to have continued support and sustainability of CGIAR Program for CAC, the PFU and all Consortium partners have taken appropriate initiatives to prepare some new projects, which are at different stages of their development. Details are given below for information of our NARS partners.

Challenge Program on Economies in Transition: Developing Sustainable Agricultural production in Central Asia and the Caucasus. CGIAR PFU, together with the Consortium Partners in CAC region have developed a Concept Note for a new Challenge Program that intends to contribute to the overall development goal and the CGIAR mission of increasing food security and improving livelihoods in the CAC countries. The immediate purpose is to assist the national programs in development of appropriate policies and generation and adaptation of production and resource management technologies for increased productivity and sustainability of agriculture, especially in the context of an emerging paradigm shift from farm workers to small size private farmers. Presently, the Concept Note is being reviewed by the CGIAR Science Council.

Project Proposal on Sustainable livestock and rangeland biodiversity management to combat natural resource degradation and improve rural community livelihoods in Kazakhstan, Turkmenistan and Uzbekistan has been finalized and submitted for funding. The project was endorsed by the governments and UNCCD focal points in these countries. Immediate objective of this project is to identify processes leading to ecosystem degradation, assess the potential use of biodiversity for new production and market environments, and develop options for improved market-oriented, income generating sustainable rangeland and livestock production management involving local communities.

Project on Crop Diversification with Food Legumes for Improving Income and Nutrition of the Rural Poor, and sustainable productivity of cereal-based cropping systems in South and Central Asia has been jointly developed and submitted for IFAD funding by ICRISAT, ICARDA, AVRDC and APAARI. The project covers Bangladesh, Pakistan, Tajikistan and Uzbekistan and will promote farmers participatory varietal

selection of legumes and their production technologies, enhance adoption of improved integrated crop management (ICM) practices, establish community- and village-based seed production of legumes in the target countries, catalyze adoption of improved legume varieties, enhance partners capacity in technology development and dissemination for the greater inclusion of legumes for crop diversification programs, as well as promote agricultural research and technology development cooperation among APAARI member countries.

CACILM Multicountry Partnership Framework Support Project has been endorsed by GEF and approved by the ADB for funding under the first phase of the CACILM. ICARDA is the lead center for the Sustainable Land Management Research Component under this project. Inception activities are to launch by early March, 2007.

Project proposal on Sustainability of Wheat and Rice on Saline Lands of the Aral Sea Basin has been jointly developed by IWMI, ICARDA and IRRI. This Project addresses the adverse effects of salinity-induced soil degradation in the Aral Sea Basin, by identifying the appropriate options and conditions to increase income of the resource-poor farmers through effective management of salt-prone land and water resources in the rice-wheat production systems of lower Aral Sea Basin. A comprehensive assessment of existing cropping systems, appropriate water saving technologies, soil and agronomic management strategies and key policy requirements would be developed, along with improvement of national agricultural research capacities and extension services. IWMI, being the lead Center, is approaching possible donors for its funding.

Project Note on Conservation Agriculture for Sustainable Land Management in Central Asia is being jointly developed by ICARDA and CIMMYT. The main objective of this project would be to improve irrigated and rainfed farming systems by integrating conservation agriculture into land management practices, with the overall goal of achieving improved soil fertility, food security and improvement of rural livelihoods in CAC region. Currently, this project proposal is under development.

NAME OF IPGRI CHANGED

International Plant Genetic Resources Institute, one of the partners of the CGIAR Program for CAC, has now a new name - "Bioversity International". The new name is intended to reflect the Institute's new strategy which is aimed at benefiting people by means of research in the area of biodiversity.



According to Dr. Emile Frison, Director General, Bioversity International, the new name integrates three basic concepts central to the institute, these, essentially are: "biodiversity", "university" which evokes nature's immensity and scientific nature of the organization, and "International" which signifies worldwide impact of institute's efforts.

Assuming the new name, the Institute has also taken a new logo. More detailed information on its meaning, as well as other information on Bioversity International is available at their new web site: <http://www.bioversityinternational.org>

WORKSHOP ON

FOREST GENETIC RESOURCES

Bioversity International and BFW (Federal Research and Training Centre for Forests, Natural Hazards and Landscape, Austria), are pleased to announce a two-week training workshop on "Conservation and Management of Forest Genetic Resources".

This training workshop aims at providing a common background on forest genetic resources to graduate students and young scientists and will address the urgent needs and challenges in forest ecosystems.

The two-week training workshop will take place in Tashkent, Uzbekistan from 12 to 25 August 2007 and will be held in Russian. It will cover topics including: (i) forest biodiversity; (ii) genetic diversity; (iii) evolutionary genetics in forest tree populations; (iv) spatial pattern of genetic diversity and its sampling; (v) in situ conservation; (vi) ex situ conservation; (vii) case studies on regional issues. Lectures will be given by eminent scientists and experts.

For details, contact: Bioversity-Tashkent@cgiar.org

Future Events

CACAARI MEETING ON RESEARCH NEED ASSESSMENT

A regional meeting is being organized jointly by CACAARI - GFAR - ICARDA to have research need assessment for the CAC region and evolve a strategy to address existing research gaps that need priority attention by all stakeholders involved. The meeting will be held in Tashkent from 7-9 March, 2007. It will be attended by NARS Heads, senior agricultural experts from the region and representatives of ICARDA, GFAR and other CG Centers working in the region.

Dr. Mahmoud Solh, Director General, ICARDA, will open this meeting. This will be his first visit to the region after assuming his new position

10th CGIAR SC MEETING

The 10th Steering Committee Meeting of the CGIAR Program for CAC and ICARDA Regional Coordination Meeting will be held from 29-31 May, 2007 in Dushanbe, Tajikistan. The Tajik Academy of Agricultural Sciences and the Ministry of Agriculture will host these events.

CAC RICE NETWORK MEETING

Dr. Robert S. Zeigler, Director General, IRRI, will visit Tashkent for the first time early in February, 2007, to have a meeting with all CAC Rice Network scientists.

The agenda will include review of previous collaboration, results of regional rice trial and planning for future rice research in the region.

Staff Changes

UNEP-GEF PROJECT COORDINATOR



Dr. Muhabbat Turdieva, Bioversity International office in Tashkent, has been appointed as Regional Coordinator for UNEP-GEF project on "In-situ/On-farm conservation and use of agro-biodiversity in CA" effective 1 December, 2006. Earlier, Dr. Turdieva was responsible for facilitating activities of the Plant Genetic Resources Network in CAC region.

Staff of PFU-CGIAR for CAC congratulate Dr. Turdieva and wish all the success in her new assignment.

NEW PROJECT ADMINISTRATIVE ASSISTANT FOR PFU

Starting 1 December, 2006, Mr. Alisher Mirzabaev, previously, Socio-economist in the ADB - funded "Water and Soil Management" and "Bright Spots" projects, has been appointed as Project Administrative Assistant in PFU office. He will also continue working for both the ADB projects. In this position, he replaced Ms. Ilona Kononenko who has joined ICARDA HQ as Grants Manager. Colleagues wish him success in his new assignment.



NEW SECRETARY IN ICARDA-CAC

Mrs. Nargiza Abutalipova has recently joined ICARDA-CAC office as new Secretary. Previously, she worked as Office Manager in USAID funded projects and for the last 6 years she was providing secretarial and translation services to ICARDA-CAC on temporary basis. Staff of ICARDA-CAC wish Ms. Abutalipova all the success in her new assignment.



NEW SOCIOECONOMIST FOR THE LIVESTOCK PROJECT



Mr. Nariman Nishanov has joined as Professional Officer on Socioeconomics for the new IFAD/ICARDA project on "Community Action in Integrated and Market Oriented Feed-Livestock Production in Central Asia and South Asia", from 23 October, 2006.

Previously, he worked in the GEF/UNDP project on "Establishment of the Nuratau-Kyzylkum Biosphere Reserve as a Model for Biodiversity Conservation in Uzbekistan". Staff of PFU-CGIAR for CAC wish him all the success in his endeavors.

