CAC NEWS

CGIAR Collaborative Research Program for Sustainable Agricultural Development in Central Asia and the Caucasus (CAC)

No. 18 October-December, 2003

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IN THIS ISSUE:

APPRECIATION FROM THE UZBEK MINISTER

A message of appreciation of the CGIAR Program in Central Asia and the Caucasus was sent by HE Prof. Abduvohid Juraev, Minister of Agriculture and Water Management of the Republic of Uzbekistan to the Chairman, CGIAR and same was displayed in the foyer during Annual General Meeting held in Nairobi, Kenya from 29-30 October, 2003.

Message from Dr. Hubert Zandstra

Co-Chairperson, CGIAR Program Steering Committee

Dear colleagues,

It is great honor to become more directly involved in the CAC activities as Co-Chairman of the CGIAR Program Steering Committee. This important Consortium of ten Future Harvest Centers and eight countries is an outstanding example of the way the CGIAR can respond to regional needs and opportunities. The consortium's work on commodity and natural resources topics is in fact a prototype of the eco-regional approach to agricultural research for development.

The Program Facilitation Unit (PFU), under the inspired leadership of Dr. Raj Paroda has made the work of the Centers more efficient and allows a better linkage among center activities and between these and the needs of National Programs.

The International Potato Center (CIP) is pleased to see the recognition of research on potato seed systems and variety improvement and the demand for Natural Resources Management research tools for application to Mountain Conditions. CIP foresees the CAC consortium as an effective way to implement activities of the CGIAR's Global Mountain Program (GMP) by member centers to address serious land and water resources issues in the mountain watersheds of the region.

The CAC program has made a lot of progress during its short existence. It has drawn Future Harvest Centers together in a region where our presence had not been possible in the past. I urge our donor members and investors in the CAC to increase their support for this important work, support that will most certainly allow rapid progress and high returns in the Central Asia and the Caucasus region.

Dr. Hubert Zandstra, Director General
International Potato Center (CIP)

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Research Highlights

GERMPLASM ENHANCEMENT

WHEAT

NEW DEMONSTRATION SITES IN AZERBAIJAN

Preparing for on-farm trial in Goyunbinasi village

In fall 2003, CIMMYT established two demonstration sites in Evlakh and Goranboy districts of Azerbaijan to promote advanced cereal varieties and improved crop management practices for increasing yields and enhancing competitiveness of field crop production in saline areas of Central Azerbaijan. This initiative was supported by GTZ.

Each of the sites consists of one-hectare plot sown to winter cereals and two-hectare plot under alfalfa. The winter cereal demonstration plot includes varieties of bread wheat (Azametly-95, Nurlu-99, Lutescense-85, Akinji-84 and Krasota), durum wheat (Barakatly-95 and Garabag), triticale (Samur and Shirvan) and barley (Garabag-22). Breeders of the Azerbaijan Research Institute of Farming (ARIF) provided their assistance to select the varieties for planting and to purchase the seed. They have also established wheat variety trials, for which twenty advanced varieties were planted on 5-m^2 plots in three replications. The alfalfa field will demonstrate improved practices of alfalfa management, including its inter-planting with barley, increased yield of hay and frequency of haying through soil fertility management and irrigation, and improved seed production practices. In spring, three advanced maize varieties will be planted on one-hectare plots at both sites.

In close collaboration with Ganja Agrobusiness Association, fifty farmers have been selected in both districts. They will participate in two training courses, which will address the issues of improved crop management practices and farmers' group establishment and management. The farmers will be involved in participatory evaluation of the planted varieties and crop management practices and will receive seed of the identified promising varieties.

(Source: Dr. David Bedoshvili, CIMMYT-the Caucasus)

PERFORMANCE OF IMPROVED VARIETIES IN GEORGIA

During 2002-2003 cropping season, the wheat crop in Georgia experienced drought in winter and early spring, which affected negatively wheat pproduction. Cool weather in late spring and early summer favored the development of common bunt, whereas excessive rainfall in July delayed harvest of winter wheat. All these factors have led to a decrease in the country-average yield of winter wheat, which according to the Georgian Ministry of Food and Agriculture did not exceed 2.5 t/ha.

Despite unfavorable weather conditions, winter wheat variety Mtskheta-1 selected from Turkey-CIMMYT-ICARDA nursery and released in 2002, was among the top five highest yielding varieties in the trials conducted by the Georgian State Commission for Protecting Plant Breeding Achievements (GSCPPBA). Mtskheta-1 yielded, on an average, more than 4.5 t/ha on a 20-ha field at Khornabuji farm, Alazani valley in East Georgia. The collaborating farmer Mr. J. Khatiashvili, who sold almost 70 tons of Mtskheta-1 seed in fall 2003, says that this variety has earned solid reputation among the farmers of the neighboring area.

Mtskheta-1 was overyielded by another winter wheat variety Prinia selected from Turkey-CIMMYT-ICARDA nursery . It was tested by the Georgian Research Institute of Farming (GRIF) and was found to be disease resistant and having high gluten content. The breeders of the GRIF strive hard to select varieties combining high yield and high grain quality traits. Among those that met strict criteria of the GRIF breeding program and were included in the replicated yield trials are Turango/Chil//Frtl, OR791432/Vee#3.2//Milan, Trap#1/Bow//Pfau/3/Milan, and Prinia/Star.

Another CIMMYT-intorduced variety Dagdash, with an average yield of at least 3.0 t/ha, proved to be resistant to common bunt and well-adapted to the dryland areas of southern Georgia. Though it has low bread-baking quality and can not be used in tandyrs due to low stickiness, the farmers found it to be acceptable for producing hearth bread.

(Source: Dr. David Bedoshvili, CIMMYT-the Caucasus)

BARLEY

NEW VARIETY SUBMITTED TO SVTC

On 14 October, 2003, by the decision of the Scientific Council of the Krasniy Vodopad Breeding Station (KVBS), Kazakhstan, a new winter barley variety “Zhibek zholy” (“Silk road”) was officially submitted to the State Variety Testing Commission. This decision was based on the outstanding performance of this variety, which had been earlier selected from IBCB-WT-99 ICARDA nursery. During the last four years, “Zhibek zholy” variety outyielded the standard check (variety Bereke-54) by almost 34%, providing stable yield even under unfavorable weather conditions. Having its TKW of 52 g, it is resistant to logging, drought and diseases. This highly promising variety has been identified, thanks to the joint efforts of the research team of the KVBS under the leadership of Dr. B. Ortaev and ICARDA scientists.

Dr. B. Ortaev showing the new barley variety

LEGUMES

CHICKPEA IN KAZAKHSTAN

During recent years, the scientists of Krasniy Vodopad Breeding Station received more than 1000 accessions of different agricultural crops from ICARDA, including chickpea. Currently, a number of accessions from ICARDA's collection have been identified as promising, including FLIP 94-25C, FLIP 95-2C, FLIP 97-52C and FLIP 98-130C. They meet most of the farmers' requirements such as high yield, white grain color, large seed size, cold resistance, etc. All these lines have erect plant type suitable for mechanical harvesting.

Presently, chickpea is more profitable than wheat, whereas its production technology is almost similar to that of wheat production. Taking into account that farmlands are privatized in Kazakhstan, farmers are free to decide which crop to grow. Keeping the land under fallow, as it had been practiced earlier to improve soil structure, is no more expedient, and therefore, chickpea has a good potential in Kazakhstan. Farmers have already started realizing a two-way advantage of growing chickpea: firstly, to increase their income, and secondly, to improve the soil fertility.

However, chickpea has never been used in the Kazakh food diet and the market for this crop does not exist in the country. In this context, there is a need to take advantage of chickpea market in neighboring Uzbekistan or other countries of the region to be available to the farmers of Kazakhstan. Also, there are likely opportunities for introduction of chickpea into food habit of Kazakh people.

To familiarize farmers, managers of large farms and policy makers of the southern Kazakhstan with a new crop and its production technology, a number of "Field days" have been organized by the scientists of the Krasniy Vodopad Breeding Station in collaboration with ICARDA. The participants observed the experimental fields of new chickpea varieties. They were impressed by the good performance of the crop and uncomplicated production technology, for which the same machinery, used for cereal production, is acceptable. The scientists also informed the participants about the importance of chickpea . Many farmers have requested for the seeds of these new chickpea lines . Also, they have inquired about possible market opportunities for chickpea.

Participants visiting the chickpea field

Based on the farmers' suggestions, it was decided to study the new selected lines considering two sowing dates, in fall on plain areas with average annual precipitation rate being 350-400 mm and in winter in foothill areas, with average annual precipitation rate being 600-650 mm. In fall of 2003, 500 kg of seed of FLIP 94-52C was sown on an area of 3.5 ha on a field of one of the collaborating farmers.

According to the statement of the collaborating farmers, who are now growing chickpea on their fields, wide-scale production of this crop may contribute to attaining "Green Revolution" in Kazakhstan. To do this, socio-economists and policy makers need to explore market opportunities for chickpea.

INTEGRATED PEST MANAGEMENT

STATUS OF YELLOW RUST IN CAC

Yellow rust (*Puccinia striiformis fsp.tritici*) disease continues to be a significant threat to wheat production in the Caucasus and Central Asia. In CAC countries, a great diversity in yellow rust population is evolving due to changes in the environment and wheat production systems. Yellow rust epidemics and significant yield losses have been observed in Central Asia and the Caucasus over the past four years (1999-2003).

In Uzbekistan, over 50% of the wheat area has been sprayed with fungicides in 2002 for yellow rust control, and the yield loss could have reached up to 40% in Kyrgyzstan and southern Kazakhstan. Pathogenic variation is the underlying cause of the elusive rust resistance. Emerging new races coupled with changes in the environment lead to break down of resistance and virulence for most wheat cultivars grown in Western and Central Asia. Breeding for qualitative type of resistance is a widely adopted method, hence varieties developed in this way became susceptible after few years of cultivation at large scale because of the adaptive changes in virulence by the pathogen.

Known resistant genes to yellow rust ("Yr" genes) were evaluated for their effectiveness against stripe rust (*Puccinia striiformis*) in five countries in Central Asia (Uzbekistan, Kyrgyzstan, Tajikistan, and Kazakhstan), and in Azerbaijan in the Caucasus. Table 1 shows the relative effectiveness of known resistance genes in CAC. Virulence on Yr1 and Yr 17 has spread rapidly in Central Asia. The Yr5 resistance has shown high level resistance at all sites and over the past five years but has not been exploited yet in the breeding programs. The wheat varieties currently grown in CAC were tested at about 15 different sites over the past 2-4 years (Table 2). Effective resistance sources were identified in the CIMMYT/ICARDA germplasm. Most currently grown varieties have shown high levels of susceptibility to yellow rust at all testing sites.

While the diversity of the pathogen population creates problems, there are ways to manage rust diseases in CAC countries such as effective deployment of resistance sources and use of durable resistance in an Integrated Regional Cereal Rusts Management Program. Farmers will benefit from the concerted effort to reduce the inherent and quasi-annual impact of diseases on the cereal production and the recurrent heavy yield losses in the region. Durable resistance could be developed and made available to small farmers that can't adjust to rapid turn over of varieties. Breeding for disease resistance in CAC could be achieved using broad base resistance that could be facilitated by: 1) Adequate measures for gene deployment across the region, 2) Use of molecular markers to follow the flow and the build up resistance factors in the breeding programs' germplasm, 3) Use of markers to monitor the virulence factors in the yellow rust population, and 4) Adequate maintenance of diversity level in the breeding programs to stabilize resistance to yellow rust and possibly to other foliar diseases.

Table 1. Relative effectiveness of known Resistance Genes

Defeated Resistance Genes:
Yr7, Yr6, Yr A, Yr 8, Yr 18, Yr2, Yr 27, Yr 9, "Yr A, Yr 18", "Yr6+Yr7", Yr 2, Yr 18
Partially Effective Resistance Genes (Risky Genes):
Yr1, Yr 17, "Yr6+APR", APR, Yr9^{+}, Yr 7+, Yr6^{+}, "Yr8,Yr18", YrSD, YrSU
Effective Resistance Genes (under exploited):
Yr3V, Yr10, Yr5, Yr 4+, 3N, CV, SP, "Yr2,Yr11,Yr 25", Yr 15

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Table 2. Resistant/ susceptible wheat cultivars in CWAC

Susceptible varieties to yellow rust at all testing sites in CWAC:
Mirbashir 128, Pirshahin, Seri 82, Sardari, Steklovidnaya 24, Zhetysu, Opaks 26, Progress, Kiyal, Spartanka, Yuna, Skifyanka, Sanzar 4, Sanzar 8, Tarragui
Resistant varieties to yellow at all testing sites in CWAC:
Cham 4, Cham 6, Ulugbek 600, SUPER KAUZ1, BUCK BUCK2, Karakylchyk 23, Azametli 95, Bohouth 64 , Sultan 953
Resistant varieties to yellow rust in Central Asia:
Alamout, Sabalan, advanced breeding lines (20 accessions)
Resistant varieties in Western Asia:
Gobustan, Bakht, advance breeding lines (20 accessions)

(Source: Dr. Amor Yahyaoui, ICARDA, Aleppo)

Yellow rust incidence in Kazakhstan

NATURAL RESOURCE CONSERVATION AND MANAGEMENT

ADB PROJECT ACTIVITIES IN GOLODNAYA STEPPE

WATER USE EFFICIENCY IN WHEAT

About 40% of irrigated area under winter wheat in Uzbekistan is kept fallow during July-October. This land could profitably be used to grow other crops. However, due to shortage of irrigation water for cotton during summer months, growing of second crop is restricted. To utilize the available land more efficiently and to allow farmers generating additional income, water-saving technologies are urgently needed. In this context, improved irrigation technologies were tested by the scientists of SANIIRI and the Uzbek Research Institute of Cotton Growing during the no-cost extension period of the ADB funded project on Soil and Water management, being implemented by ICARDA

Research activities, initiated in fall of 2002 in different zones of Uzbekistan (Fergana, Tashkent, Syr-Darya and Surkhan-Darya Provinces), focused on increasing water use efficiency in double cropping systems. In the experiments, early maturing varieties of winter wheat, Chilaki and Sanzar-8, as well as some traditional varieties were sown after cotton harvest.

In Kushman-ota farm, Syr-Darya Province, improved sprinkler irrigation technique was used against the traditional furrow irrigation on a 2.0 ha area. Treatments included sprinkler irrigation in raised beds and furrows after ploughing and harrowing; sprinkler irrigation in normal field after ploughing and harrowing; furrow irrigation of winter wheat sown in standing cotton; and furrow irrigation in normal field after ploughing and harrowing.

The data indicated that there was no significant difference in yield of winter wheat under sprinkler (4.6 t/ha) and furrow irrigations (4.7 t/ha). However, irrigation rates under sprinkler system (1,200 m^3/ha) were three times less as compared to those under furrow irrigation (3,732 m^3/ha). Consequently, water use efficiency under sprinkler irrigation exceeded that under furrow irrigation by almost 25-30 %. Thus, research results revealed that sprinkler irrigation technology can help in saving considerable amount of irrigation water that would allow farmers to grow a second crop. This experiment has been repeated in 2003 and results will be reported after wheat harvest of the current season.

USE OF POLYETHYLENE FILM IN COTTON

Use of polyethylene film

Furrow irrigation is a commonly used practice for most of the crops grown in Golodnaya steppe, a vast area of about 1 million ha in Uzbekistan. This practice often leads to inevitable processes of irrigation erosion, excessive evaporation from soil surface, and washing out of nutrients from the fertile soil layer. Scientists of the Syr-Darya branch of the Uzbek Research Institute of Cotton Growing have been working for the last thirty years to solve this problem. Recently, a solution has been found using black polyethylene perforated film (License of the Republic of Uzbekistan 3458). This technology was tested during 2001-2002, under the "On-farm soil and water management for sustainable agricultural production systems in Central Asia" project, funded by ADB at the Boykozon benchmark site for sugar beet production. It eliminated the irrigation erosion, saved about 24% of irrigation water and increased yield of sugar beet by about 17 %.

In 2003, testing of black polyethylene perforated film was done in cotton and groundnut on saline soil in Golodnaya steppe. The experiment included three treatments: 100% of soil surface covered with polyethylene film, 50% of soil surface covered with polyethylene film and control (traditional irrigation).

The results have revealed that use of 1-m wide black polyethylene perforated film considerably reduced evaporation losses and increased water productivity. The total saving of irrigation water was about 22%. It also significantly increased cotton yield, which under the two polyethylene treatments was 5.0 t/ha (45% increase) and 4.7 t/ha (34%

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Cotton grown using polyethylene film

increase). Compared to 3.5 t/ha under control, respectively. Yield increase was mainly due to enhanced soil microbial activity, significant weed reduction, and better root development. The technology also minimized soil disturbance during the growing season and reduced fuel and labor input costs, as it significantly eliminates the need for inter-row cultivation, which is applied up to ten times under traditional practices. Economic feasibility assessment indicated that this technology can generate considerable income for the farmers, while cost associated with procurement of polyethylene film (around US$ 80,000) can be easily compensated with income from 40% of yield gain.

Presently, the studies are being conducted on dynamics of agrochemical and agrophysical properties of soil, groundwater table and salinization, soil biological activity, concentration of gases in soil, etc. This will allow assessing the effect of natural and anthropogenic factors on agricultural crop yield and soil fertility. In addition, in 2004 the new variety of groundnut "Mumtoz" will be made available by the Uzbek Research Institute of Plant Industry for testing in Golodnaya steppe. The new variety was earlier supplied to the institute by ICRISAT and has been submitted to the States Commission for variety testing.

(Source: Dr. German Bezborodov, UzRICG)

BEST PRACTICES FOR WATER CONSERVATION

The Scientific Information Center of Interstate Commission on Water Coordination (SIC-ICWC) and IWMI have been working together to identify best water conservation practices implemented by water users in the Amu-Darya and Syr-Darya river in order to bring positive change to water resources management in Central Asia.

Researchers from SIC-ICWC and IWMI sought to identify and evaluate the best land and water conservation methods reported to be used in practice by either individual farmers, agricultural enterprises (cooperatives, collective farms, and private farms), or water management units. Candidate methods were expected to be cost-effective, simple to apply, locally appropriate, and readily adopted by farmers and water managers to achieve improvements in water management and agricultural performance. During the field study, eight water management organizations, seven water users associations, twelve cooperative and eighteen private farms from all over Central Asia participated in the project. From our research, it is apparent that many farmers have developed appropriate practices that provide models of alternate management techniques that are applicable in many locations in the basins (SIC-ICWC 2003).

A number of field practices increasing water productivity were found. These included alternate furrow irrigation; use of shorter furrows; re-use of drainage water; improved field leveling; irrigation at night; and partial rehabilitation of irrigation-drainage infrastructure. Water users at the field, farm and local water management organization levels have developed indigenous technologies and methods that are helping them overcome water shortages, manage soil salinity and water pollution. It shows that people of the region are capable of handling crisis.

Adoption of water conservation practices has several potential benefits at field, farm and system levels. Better water management can help the individual water user increase yields and income; and reduce water fees. At farm and system level, increased control over water helps minimize water logging and salinity and reduce incidence of water spills and damage to infrastructure. In the areas studied, water productivity increased by 10-20% over the past three years (2001-2003) yielding benefits to both farmers and system operators.

The study found that in the Syr-Darya basin, there are financial, moral/religious, administrative/technical, and yield incentives that encourage users to adopt water conservation methods. In field surveys by IWMI, about 30% of water users stated moral or religious reasons for adoption of water conservation. Further, 20% reacted to the introduction of water delivery service fees. Administrative and technical reasons were quoted by another 30% of users as reasons for adopting better water management practices.

(Source: Mr. M. Ul-Hassan, IWMI-Tashkent)

Alternate dry irrigation in the Fergana Province

IMPROVING SOIL AND WATER MANAGEMENT THROUGH WUA

In response to the requests from the Ministry of Agriculture and Water Management of Uzbekistan (MAWM), IWMI and ICARDA initiated a small scale project in Karakalpakstan entitled "Support to Institutional Reforms and WUA establishment in Karakalpakstan region of Uzbekistan" in September, 2002.

Initial studies conducted in Water User Association "Jambul", identified a number of constraints for the successful implementation of organizational changes. Specifically, the WUAs were established based on the existing administrative boundaries of former collective farms. Most of these were not single hydrological units that has made water management more complex for the new managers. Furthermore, the procedures used to form the WUA were quite top-down and led to a feeling that they did not own the WUAs and considered these as purely water supply entity. The WUAs have also been found to have only weak democratic principles of governance.

It was concluded that the major reason for under performance of the newly formed WUAs was the lack of understanding of the principles of WUA by both district authorities and farmers. Specific findings included:

1. Diversity in the social structure of WUA members increases the potential for conflict over land and water use issues. Social mobilization and team building activities are essential prerequisites to assist farmers to overcome conflicts within the WUA.
2. Canal infrastructure should be cleaned and essential rehabilitation done as a first condition for successful adoption of WUA management.
3. Land management and crop diversification are critical issues. Water logging and salinity are recognized as major threats to sustainable agriculture. Sunflower, vegetables and other crops are good alternatives to the cotton-wheat system. However, an effective agricultural extension system is necessary to provide advice to farmers on a regular basis as they adopt new practices.
4. Preparation of manuals for the development of WUA has already been done by the Uzbek Government. However, there is a lack of adequate training on WUA principles for farmers and water managers.
5. Financial and logistic support for newly created WUAs is crucial for successful on-farm water management in future.

The initial findings in WUA "Jambul" and experience gained through the Integrated Water Resources Management project in the Fergana Valley, led IWMI to recommend the WUA "Jambul" to be reorganized along hydrological boundaries as WUA "Keneges". Presently, field work is being continued to support the transformation of irrigated agriculture in Karakalpakstan.

(Source: Mr. M. Ul-Hassan, IWMI-Tashkent)

Strengthening of NARS

STUDY TOUR TO USA AND CANADA

Under the FAO-Kazakhstan-CIMMYT Technical Cooperation Programme on "Conservation Agriculture for Sustainable Crop Production in Northern Kazakhstan", a delegation from Kazakhstan visited the U.S.A. and Canada from 9-21 October, 2003. The delegation consisted of Dr. Muratbek Karabayev**,** Project Leader, CIMMYT, Mr. Arman Evniyev, Director of the Farming Department, Ministry of Agriculture of the Republic of Kazakhstan and Mr. Auezkhan Darinov, Head, Daryn Farm and Vice-President, Farmers' Union of Kazakhstan.

In the United States, the group visited the Washington State University (WSU), Pullman and the Idaho State University (ISU), Moscow city to get acquainted with the research activities relating to direct seeding technology in wheat and other crops. Dr. Kimberly Campbell, who organized the program of the visit, introduced the Kazakh delegation to the overall activities in the universities and arranged their meeting with the members and students of agricultural and economic faculties. Through several visits to experimental and private production farms in Washington and Idaho states, the visitors from Kazakhstan were pleased to learn success stories of long-term use of direct seeding and zero tillage technologies. It is already a well established fact that under hilly landscape conditions, they are effective to prevent water and wind erosion. In all, more than 25% of land in these two states is cultivated under no-till.

In Canada, the visit of the Kazakh delegation was facilitated by Prof. Ahmet Mermut of the Saskatchewan University, Saskatoon, who familiarized them with the activities at his university. The visitors met with the staff and students of the agricultural and mechanization and machinery engineering faculties to discuss the issues relating to conservation agriculture in Canada and Kazakhstan. The Kazakh delegation also had an interesting tour to a farm owned by Prof. Jeff Schoenau of the Saskatchewan University to see large-scale experiments on direct seeding, crop rotation etc. They also visited Flexicoil and Morris, leading manufacturing companies of agricultural machinery in Canada, where they got acquainted with the most advanced equipment and machinery for application of zero tillage practices. During the visit, the group had an opportunity to observe various soil climatic conditions and agro-landscapes of Saskatchewan, which are similar to those of northern Kazakhstan. Through interactions with their colleagues from Canada, they found many common areas of interest and exchanged their ideas as to how to move forward in strengthening the collaboration between agricultural scientists and farmers of the two countries. As an outcome of the visit, it was suggested to develop a joint project proposal on conservation agriculture and crop production.

(Source: Dr. Muratbek Karabayev, CIMMYT-Kazakhstan)

CAC REGIONAL FORUM PARTICIPATES IN GFAR

Dr. Sherali Nurmatov, Chairman of the CAC Association of Agricultural Research Institutions (CACAARI) and Deputy Minister of Agriculture and Water Management of the Republic of Uzbekistan and Dr. Asanbek Ajibekov, Director General, Center of Agrarian Sciences and Consulting Services of the Kyrgyz Republic and Executive Secretary, CACAARI visited Nairobi, Kenya from 25-27 October, 2003 to attend the 13th GFAR Steering Committee Meeting.

At the NARS Sub-Committee Meeting on 25 October, 2003, Dr. Nurmatov made a presentation on the activities undertaken by the CAC Regional Forum. He made a brief overview on the region, highlighting the most important issues for agricultural development and the priorities in agricultural research identified by the NARS of the eight countries. He also stated that the CAC Regional Forum was established recently to promote the development of national agricultural research systems in the region through facilitation of intra-regional, inter-institutional and international cooperation that would contribute to sustainable agricultural development. Dr. Nurmatov informed the participants about the future activities of the CAC Regional Forum and requested GFAR Secretariat to provide all necessary support, so that CACAARI becomes as strong as other Regional Fora namely, APAARI and AARINENA.

Delegates from CAC region participating in the meeting

EVALUATION AND PLANNING WORKSHOP ON TCP

Participants of the TCP workshop

An evaluation and planning workshop of the FAO-Kazakhstan-CIMMYT TCP on "Conservation Agriculture for Sustainable Crop Production in Northern Kazakhstan" was held in Almaty, Kazakhstan, from 1-2 December, 2003. The workshop, organized jointly by FAO and CIMMYT-Kazakhstan office, was attended by 24 participants, including Dr. T. Bachmann, FAO, collaborating farmers, local project experts as well as representatives of the Ministry of Agriculture (MoA) of Kazakhstan, CIMMYT, Kazakh National Academy of Sciences, etc.

The meeting was opened by Dr. T. Bachmann, who welcomed the workshop participants and briefed them about the FAO TCP program, emphasizing on the importance of conservation agriculture (CA) technologies for development of the agrarian sector. During the opening session, the participants were also welcomed by Acad. K. Yelimesov, Director, Science Department, MoA, Mr. A. Evniyev, Director, Farming Department, MoA and Dr. A. Morgounov, CIMMYT - CAC.

Both the representatives of the MoA appreciated the efforts undertaken by FAO and CIMMYT in Kazakhstan to address the

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issues of food security and agricultural growth being the highest priority for the Republic.

Dr. M. Karabayev, CIMMYT Representative in Kazakhstan and TCP Project Leader, presented general overview of the progress achieved under the project during 2003. He emphasized that the results of testing conservation agriculture/ no till practices have demonstrated their high potential for development of sustainable cereal production system in northern Kazakhstan. He also highlighted that modified engineering implements such as seeders and sprayers, which were designed, manufactured and tested under the project, performed well and, taking into account their low cost, can be recommended to the farmers in Central Asia. The general project overview was followed by detailed presentations made by four local project experts and collaborating farmers, who also expressed their satisfaction with the results of the project. They particularly highlighted the importance of training activities such as courses, seminars and field days for wider extension of improved technologies.

It was also decided to create a website on "Conservation agriculture in Eurasia" in both Russian and English, under the financial support by FAO, CIMMYT and ICARDA. The workshop participants also agreed to start the necessary procedure for establishing a Conservation Agriculture/ Direct Seeding Association.

They also suggested initiating development of project proposals on "Getting the Diversified Cropping and Resource-Saving Agricultural Systems Adopted for the Northern Kazakhstan" and "Diversified Water- and Recourse-Saving Agricultural Systems for Irrigated Land in Southern Kazakhstan".

(Source: Dr. Alexey Morgounov, CIMMYT-Almaty)

ADB SENIOR OFFICIAL VISITS TASHKENT OFFICE

Dr. M. Tusneem being explained role of CAC Consortium

Dr. Muhammad Tusneem, Director General, East and Central Asia Department, Asian Development Bank (ADB) visited ICARDA - CAC office. He congratulated Dr. Raj Paroda and the staff on having got the approval of the second phase of the Soil and Water Management project from ADB and hoped that the outputs of the project would contribute to improved livelihoods of resource-poor farmers of Central Asia and Azerbaijan. He also emphasized the importance of strengthening collaboration with ADB development projects in the region. Dr. Raj Paroda made a brief presentation on the achievements under the first phase of the ADB funded project indicating that first steps on building the collaboration with ADB development oriented projects have already been taken in Uzbekistan and Tajikistan. He also expressed his appreciation of Dr. Tusneem's support and valuable guidance during the development of the second phase project proposal.

Other issues discussed during the meeting included the possibility of getting ADB involved in the Mountain Agriculture project as an Executing Agency, of which Dr. Tusneem was quite supportive. Also options of organizing a Regional Workshop on Agriculture and Natural Resources Research in Central Asia with support of the ADB special RETA were discussed.

IFAD REVIEW MISSION

At the conclusion of the Integrated Feed and Livestock Management project, International Fund for Agricultural Development (IFAD) management commissioned a team of independent scientists (Drs. Mark Rweyemamu and Chulun Togtohyn) to undertake a review of the activities and achievements of the project. The Review Team visited Kazakhstan, Kyrgyzstan and Uzbekistan from 26 September to 6 October 2003. In each country, the Team met with the participating NARS scientists and visited one or two farms that had participated in the project. The Team was accompanied by Drs. Luis Iniguez and Aden Aw-Hassan from ICARDA Headquarters and Dr. Mekhlis Suleimenov and Ms. Madina Musaeva from the ICARDA Regional Office in Tashkent. The Team also attended a Regional Conference on Policies and Technology Options for Livestock Development in Central Asia and the Caucasus, during which the NARS scientists presented summaries of their main findings.

The Review Team (RT) has stated that the project has made an impressive progress by generating results of practical importance, which should be used by IFAD for identifying investment opportunities in Central Asia. The RT emphasized that the findings under the socio-economic component of the project have identified potential technologies for at least community-based pilot development investments, including development of rural advisory services and farmer training programs, development of marketing systems for inputs and outputs, small agricultural industries, sustainable credit systems, development of dairy sheep, etc. The RT was impressed by the quality of presentations (12 papers of original work) by NARS scientists at the Regional Conference on Policies and Technology Options, including those by two young scientists developed through the capacity building activities of the project. The presentations demonstrated that the research programme of the project is in full dynamic swing and is in its exponential phase. The RT strongly recommended to IFAD a favorite consideration of a Technical Assistance Grant (TAG) for a successor project. The team also emphasized that the second phase of the project should continue to encourage NARS scientists to collaborate with pro-poor livestock extension services through promotion of prime models, strengthening sustainable livelihoods, improving education system and linkage between science and development, especially with national development programs such as “Aul Development” in Kazakhstan. Finally, the RT recommended that provision be made within the TAG for the new project, which would allow the other CIS countries, namely Tajikistan and the Caucasian countries (Armenia, Azerbaijan and Georgia), to participate in key training activities. In light of these observations, ICARDA is submitting now a revised project to IFAD for funding during 2004.

IFAD Review Team meeting Kazakh scientists and farmers

Meetings/Workshops/Conferences Organized

MEETING AT THE UZBEK INSTITUTE OF MARKET REFORMS

A meeting on "Problems of sustainable development of agriculture under the market conditions" was held in Tashkent from 21-22 October, 2003. It was organized by the Ministry of Agriculture and Water Management of the Republic of Uzbekistan, the Uzbek Scientific Production Center for Agriculture and the Uzbek Institute of Market Reforms. In all, more than 160 participants, including high officials from the President and Prime-Minister Administration and different Ministries, representatives of international organizations and local research institutes, attended the meeting.

During the inaugural session, the participants were welcomed by Dr. Sherali Nurmatov, Deputy Minister of Agriculture and Water Management of the Republic of Uzbekistan and Director General of the Uzbek Scientific Production Center for Agriculture. Dr. Rasulmat Khusanov, Director of the Uzbek Institute of Market Reforms made a presentation entitled "Main direction of sustainable agricultural development in Uzbekistan", in which he highlighted major challenges in agriculture in Uzbekistan. While outlining the strategy to address the issues in agriculture development, he emphasized the importance of adoption of new technologies for crop diversification and efficient soil and water use. Dr. Khusanov also stressed that using the experience of other countries would help in development of sustainable agricultural system in Uzbekistan.

Dr. Raj Paroda, Head, PFU-CGIAR for CAC and Regional Coordinator, ICARDA also participated in the meeting and made a presentation on "CGIAR Program towards sustainable agriculture in Uzbekistan". He briefed the participants about the major activities of the CGIAR Program in Uzbekistan that address the issues of varietal improvement, genetic resource conservation, natural resource management and human capacity building. He emphasized the importance of catalyzing the policy makers to support national agricultural research system, stressing that such support had been the major element of success of the Green Revolution in India. Dr. Paroda cited the message of the former Prime Minister of India Mrs. Indira Gandhi: "No nation can live with pride unless it has the capacity to feed its people" and congratulated the Uzbek Government as well as scientists and farmers of Uzbekistan for having attained food security in the country and record yields in 2002 and 2003. He also assured the Uzbek Government of CGIAR support for agricultural reforms in the country and hoped for further strengthening of collaboration between NARS of Uzbekistan and International Agricultural Research Centers (IARCs).

As an outcome of the meeting, a Resolution outlining the strategy of agricultural development in Uzbekistan was adopted.

(Source: Dr. Eleonora Gaziyantz, UzSPCA)

Dr. Sherali Nurmatov addressing the participants of the meeting

IPGRI MEETING

Third International Steering Committee (ISC) meeting for the PDF B phase of the UNEP-GEF project on 'In Situ/On-farm Conservation of Agrobiodiversity in Central Asia' was held from 13-15 October, 2003 at the Uzbek Botanical Gardens in Tashkent. Representatives from Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan as well as from international institutions such as IPGRI, ICARDA, UNEP-GEF and the regional consultants of the PDF B phase participated in the meeting. The main objective was to discuss the outputs of the PDF B phase and to revise all documents that are to be included into the full project proposal.

Dr. R. Paroda, Head, CGIAR-PFU for CAC and Regional Coordinator, ICARDA in his opening speech welcomed the participants and congratulated them with the achievements under the PDF B phase. He emphasized on the importance of GEF and IPGRI's role in conservation of agro-biodiversity in Central Asia.

Dr. G. Ayad, Regional Director, IPGRI-CWANA office, Dr. D. Jarvis, Senior Scientist, IPGRI, Dr. M. Sakalian, UNEP-GEF Task Manager; Acad. A. Abdukarimov, Chairman, ISC and the National Coordinator of Uzbekistan; Dr. O. Ashurmetov, Director, RPC 'Botany' also addressed the participants. Dr. M. Sakalian congratulated the participants for their efforts to achieve impressive outputs under the PDF B phase and assured of UNEP-GEF support for the full project.

Ms. S. Karryeva, Regional Coordinator of the PDF B phase made an overview of the project, which was fallowed by the reports of the national coordinators. Presentations were also made by the Regional Consultants, Dr. K. Baymetov, Dr. K. Turgunbayev and Dr. M. Malki.

The participants revised and discussed the components of the full project, including establishment of the information and communication network on agro-biodiversity management, full project logframe matrix, monitoring and evaluation plan, budget, timeframe and work plan. They also discussed the procedures required for the submission of the project proposal to the GEF Council.

The third ISC Meeting has successfully achieved its objectives. All the comments made by the ISC members will be included in the finalized full project proposal, which is expected to be submitted to the UNEP-GEF Secretariat in March, 2004.

(Source: Shirin Karryeva, IPGRI-Tashkent)

Participants of the meeting

PROF. DR. EL-BELTAGY PARTICIPATES IN APAARI CONSULTAITON

Prof. Dr. El-Beltagy addressing the participants

The Asia Pacific Association of Agricultural Research Institutions (APAARI) had recently organized an Expert Consultation Meeting on Strengthening Regional Agricultural Information System: Role of ICT in ARD and Status of Regional Research Networks and Consortia at the Asian Institute of Technology, Bangkok, Thailand. Beside NARS leaders from more than 20 countries of the Asia Pacific region, delegates from CG Centers and international organizations, such as FAO, GFAR, AVRDC, UN ESCAP, etc. as well as those from the Regional Fora representing CWANA (AARINENA) and Sub-Saharan Africa (FARA) participated in the meeting.

Prof. Dr. Adel El-Beltagy, Director General, ICARDA attended the meeting and also Chaired the Plenary Session. While addressing the delegates, he emphasized on the importance of global partnership for Agricultural Research for Development (ARD) and assured of his cooperation in strengthening ICT Network in the Asia Pacific region. He stated that ICARDA is committed to work with Regional Fora and the Global Forum on Agricultural Research (GFAR). In particular, he was pleased to have had a strong working relationship with APAARI, AARINENA and CAC Regional Forum. In all, seventy delegates participated in the meeting, which decided to strengthen both Asia Pacific Agricultural Research Information System (APARIS) and the Asia Pacific Consortium on Agricultural Biotechnology (APCoAB), beside strengthening of various networks. Prof. Dr. El-Beltagy assured of ICARDA's full support to the Cereal and Legume Asia Network (CLAN), being coordinated by ICRISAT, so that work on lentil and mungbean, through partnership with ICARDA and AVRDC, respectively, could also be supported. Dr. Raj Paroda, Executive Secretary, APAARI was instrumental in organizing this successful meeting.

REGIONAL PGR MEETING HELD

A Regional PGR Coordination Meeting for Central Asia and the Caucasus was held from 8-11 December, 2003 in Tashkent. The Meeting was attended by 29 representatives of PGR Units from eight CAC countries as well as Genetic Resource scientists from ICARDA, Australia and CGIAR-PFU Office. Dr. Sherali Nurmatov, Deputy Minister of Agriculture and Water Resources and Director General of the Uzbek Scientific Production Center for Agriculture, inaugurated the meeting and assured of his Government's full support to PGR activities in the region. Dr. Raj Paroda, Regional Coordinator, ICARDA-CAC and Head, PFU-CGIAR chaired the Inauguration Session. In his address to the participants, he emphasized on the importance of strengthening plant genetic resource conservation activities. He was happy that the Governments of CAC countries are being catalyzed to support the establishment of National Gene Banks.

Presentation of annual report was made by Dr. Ken Street, ACIAR Project Coordinator, ICARDA and Dr. Zakir Khalikulov, Consultant-Scientist, CGIAR-PFU. Representatives from all the eight countries presented their country status reports. Dr. Mackay, Curator, Australian winter cereals collection made presentation entitled "Plant genetic resources in Australia".

The participants agreed to complete the inventory of ICARDA's mandate crops by the end of April, 2004. Also PGR Web-page will become functional by early 2004. The workplan for the year 2004 was also discussed and finalized.

Participants of the meeting

SAMARKAND STATE UNIVERSITY HONORS DR. PARODA

Discussion with the Rector, SSU

In recognition of his meritorious contributions in the field of agricultural research and development, Dr. Raj Paroda, Head, PFU-CGIAR and Regional Coordinator, ICARDA was awarded a diploma for the Honorary Professorship of the prestigious Samarkand State University (SSU). Official ceremony of diploma presentation was held on 15 December, 2003 at the Samarkand State University, during which Dr. Rustam Kholmuradov, Rector presented the Honorary Professorship diploma to Dr. Raj Paroda before an impressive gathering of the University Scientific Council.

Dr. Raj Paroda also had a meeting with Dr. Rustam Kholmuradov to discuss the possibilities of future collaboration in view of existing MOA between ICARDA and the SSU. It was agreed that possible areas could be carbon sequestration, range rehabilitation, plant protection, biotechnology and microbiology. Dr. Kholmuradov desired to have ICARDA's support to strengthen agricultural research for development in Samarkand Province.

Dr. Raj Paroda also gave a lecture entitled "Achievements of the CGIAR Program for Sustainable Agriculture in CAC region" to the Faculty and post-graduate students, which was very well received.

TWO ICARDA SENIOR SCIENTISTS HONORED IN INDIA

An honorary doctorate degree was conferred on Dr. Mohan C. Saxena, Assistant Director General (At Large) and Dr. Raj Paroda, Head, PFU-CGIAR for CAC and Regional Coordinator, ICARDA, on 14 November, 2003 by the Sardar Vallabh Bhai Patel University of Agriculture and Technology (SVBPUAT), based in Meerut, Uttar Pradesh, India, during an impressive first convocation attended by more than 500 people. The honor recognizes the contributions of Drs. Saxena and Paroda to agricultural research and development in developing countries, particularly India.

Both Drs. Saxena and Paroda had had a distinguished record of leading agricultural research in India for alleviating rural poverty and improving the livelihoods of the poor, before they joined ICARDA. They said they both felt honored by the recognition by SVBPUAT, and thanked the Chancellor Honorable Governor of Uttar Pradesh, who is the Chancellor of the University, the Vice-Chancellor and the Academic Council for this recognition.

Convocation ceremony

Human Resource Development

FIFTY YEARS ANNIVERSARY OF VIRGIN LANDS CAMPAIGN

The development of so called virgin lands in steppe regions of Kazakhstan as well as in many regions of Russia started in March, 1954. As a result, just in initial three years, 42 million hectares of grasslands were ploughed up, including 25 million ha in Kazakhstan. To do this, thousands of tractors alongside with tens of thousands of young people were moved to Kazakhstan during spring 1954. As a result, the increase in area sown to spring wheat in Kazakhstan roughly equalled the total combined wheat area of Canada and Australia. Along with fertile black and chestnut soils that were favorable for growing high quality grain, light textured sandy soils, prone to wind erosion, were also brought under cultivation. In order to prevent soil erosion, soil conservation practices were developed by the scientists headed by Academician A. Barayev.

Scientific conference "Development of virgin and fallow lands: history and present" was held in Astana, Kazakhstan from 4-6 December, 2003 at the Kazakh Agricultural University named after S. Seyfullin. The conference, attended by about 400 scientists, farmers and agricultural specialists, was opened by the Deputy Prime Minister, Minister of Agriculture HE Prof. Akhmetzhan Esimov. The opening address was delivered by the Governor of Akmola Province Mr. Sergey Kulagin. Eight presentations were made during the plenary session, including papers of Acads. G. Kaliyev and M. Suleimenov, Drs. M. Gendelman and Z. Kaskarbayev. Four scientific sessions devoted to soil and water management, livestock production and animal health, agricultural engineering and post-harvest technologies as well as socio-economic issues of rural areas were organized. In all, more than 330 papers were presented by the participants of the conference. The paper by Acad. M. Suleimenov on ICARDA's work on conservation tillage received wide appreciation.

Plenary Session

IWRM IN FERGANA VALLEY

The overall objectives of the SDC-funded project on Integrated Water Resources Management (IWRM) in the Fergana Valley, implemented by ICWC-SIC and IWMI are to contribute to more secure livelihoods, increased environmental sustainability, and greater social harmony and to support rural restructuring in Central Asian countries through improved effectiveness of water resources management. ICWC-SIC and IWMI are introducing and pilot testing IWRM and participatory management institutions in Fergana valley; and are demonstrating practical options to increase water and land productivity at all levels of the water management system.

- During the recent General Constituent Assemblies of Canal Water Committees (CWCs) held in all the three pilot canals, located in the South Fergana Canal (Uzbekistan), Khojabakirgansai Canal (Tajikistan) and Aravan-Akbura Canal (Kyrgyzstan), members of the Boards, Revision Commissions and the CWC Chairmen were elected. The Assemblies, attended by water managers, hydro-technicians, delegates of agricultural water users, local authorities, representatives from the Nature Protection Organizations and NGOs, were chaired by the national project coordinators in each of the countries. After deliberations on the proposed drafts of CWC statutes, amendments relevant to each of the Republics were incorporated and the statues were approved.

- In November, 2003, training workshops on "Legal issues, discussions and development of appropriate mechanisms of conflict resolution" were held in each of the pilot Water Users Associations (WUAs) in the three countries. In all, more than 130 participants, including members of the WUA Dispute Resolution and Auditing Commissions and other interested members of the WUA Councils and General Assemblies, were trained. All the participants reported well on the workshop outcomes, particularly appreciating useful and interesting discussions held.

- Social Mobilization and Institutional Development (SMID) activities are being continued at all pilot sites. During September-December 2003, 228 awareness-building meetings were organized with the participation of 3,016 water users. These meetings were used by the SMID teams to inform participants about water sector reforms, the purpose of WUA creation using hydrological boundaries and the new roles, rights and responsibilities of WUA employees and water users. The meetings were also used to update members about IWRM-Fergana Valley project activities and also to distribute leaflets explaining the objectives of WUAs in local languages.

(Source: Mr. M. Ul Hassan, IWMI-Tashkent)

Miscellaneous News

ADB APPROVES SECOND PHASE OF THE PROJECT

ADB Board has recently approved a regional technical assistance (RETA) grant for the second phase of the project on Soil and Water Management. The new project entitled "Improving rural livelihoods through efficient on-farm water and soil fertility management" will be implemented by ICARDA in close collaboration with NARS in five countries of Central Asia and in Azerbaijan. It will be based on the achievements under the first phase with greater emphasis on demonstration and technology transfer activities. The ADB funding for this three-year RETA will be US$ 1.0 million. Along with the ICARDA project proposal, the other two proposals from CGIAR Centers were also approved. These were the projects submitted by the International Rice Research Institute (IRRI) and World Fish Center (WFC).

In a special ADB press release, Ms. Pratima Dayal, ADB Senior Agriculture Specialist stated that "projects have been chosen for their sound design, innovation, and relevance to emerging priorities in agriculture in Asia". She also stressed that the development and dissemination of technologies in these projects are expected to make an important contribution to improving Asia's agriculture and natural resources, and alleviating poverty. "There is a need to support and catalyze innovations in technology, disseminate successes, build capacity among farmers and national research and extension systems, and support public policies to boost growth in agriculture".

(Source: ADB Press Release)

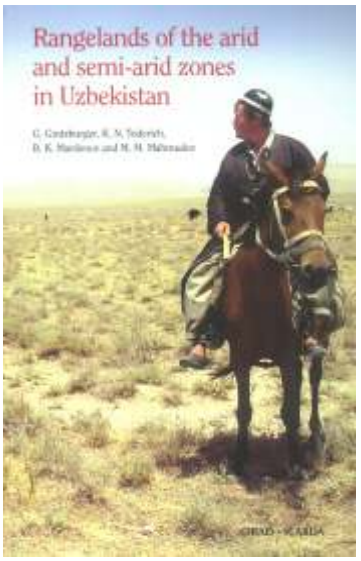
AVRDC PROPOSES TO JOIN THE CAC CONSORTIUM

Dr. Raj Paroda, Head, PFU-CGIAR for CAC was invited by the Asian Vegetable Research and Development Center (AVRDC) to participate in the 2003 Internal Review and Planning Workshop. AVRDC is an international not-for-profit organization committed to alleviating poverty and improving diets through research, development and training with its headquarters in Taiwan, the Republic of China. The Center is a world leader in collection, evaluation and conservation of indigenous vegetables. Its mission is to enhance the nutritional well-being and raise the incomes of poor people in rural and urban areas of developing countries through improved varieties and methods of vegetable production, marketing, and distribution, which take into account the need to preserve the quality of the environment.

During the workshop, Dr. Paroda made a presentation entitled "Opportunities for AVRDC in Central Asia", in which he made an overview of the status of vegetable production in the region. He emphasized that the region is the center of origin of large number of vegetables and fruits, such as onion, spinach, coriander, the Asian subspecies of carrot and turnip and a secondary center of origin for melons and pumpkin as well as some leafy vegetables. He also underlined that in Central Asia there is an urgent need for introduction and testing of high yielding varieties and hybrids of vegetables as well as for training of scientists and farmers on new low-cost production and post-harvest technologies. Dr. Paroda indicated that AVRDC could obviously play an important role by joining the CGIAR Consortium for CAC to address aspects such as collection and conservation of genetic resources, germplasm enhancement, human resource development and research partnership to ensure sustainable agriculture in the region. The presentation was well received by the participants of the workshop. They also strongly supported the idea of AVRDC to join forces with the CGIAR Consortium for CAC.

Following the workshop, a communication from Dr. Thomas A. Lumpkin, Director General, AVRDC has been addressed to Prof. Dr. Adel El-Beltagy, Chairman, CDC Task Force for CAC regarding the membership of the Consortium. AVRDC is also planning to recruit a vegetable scientist to initiate research activities in the CAC region starting 2004.

BOOK ON RANGELANDS RELEASED



The book on "Rangelands of the Arid and Semiarid Zones in Uzbekistan" published by CIRAD (Center for International Cooperation in Agronomy Research for Development)-ICARDA is now available. Dr. Gus Gintzburger started writing the book when he was working as Range Specialist at ICARDA in the USDA funded project and has finished recently the publication working at CIRAD, France. The book was attempted with the support of Drs. K. Toederich and B. Mardonov, scientists of the Department of Desert Ecology Research (Samarkand Division of the Academy of Science, Uzbekistan) and Dr. M. Mahmudov of the Uzbek Institute of Karakul Sheep Breeding and Desert Ecology .

This abundantly illustrated book (560 color photos, 9 maps, 20 tables and 14 figures) presents a panorama of the biodiversity, climatology and flora of the arid zones of Uzbekistan and describes around 150 dominant range species, with their ecology, utilization and range rehabilitation techniques with reference to other Mediterranean arid and semi-arid zones of the world. It also describes the location, the particular ecology and the specific flora and fauna of the natural reserves and national parks of Uzbekistan.

This book should contribute to a better understanding of these challenging arid environments and towards the conservation and rational use of their fragile and unique natural resource. It should also provide a valuable resource and reference to livestock owners, range managers, pastoralists, ecologists, seed collectors, veterinarians, extension officers and national and international decision-makers in developing a sustainable management strategy for the Middle and Central Asian rangeland.

For those willing to purchase the book, Order Form is available at the CGIAR-PFU office in Tashkent or request could be made directly to CIRAD at e-mail: librairie@cirad.fr

FUTURE EVENTS

INTERNATIONAL CAUCASIAN CONFERENCE

International Caucasian Conference on Cereals and Food Legumes will be held in Tbilisi, Georgia from 14-17 June, 2004. The Conference is organized by the Ministry of Agriculture and Food of the Republic of Georgia, Georgian Academy of Agricultural Sciences (GAAS), CIMMYT, ICARDA and the Washington State University (WSU). For more information, please contact Dr. David Bedoshvili, CIMMYT-Tbilisi at his e-mail address: cimmyt@caucasus.net

Pre-registration form is also available in PGU-CGIAR office in

CGIAR AGM 2004

The CGIAR's next Annual General Meeting (AGM) will be held in Mexico from 25-29 October, 2004. Following the AGMs held in Asia (Philippines, 2002) and Africa (Kenya, 2003), the 2004 meeting will enable members and stakeholders to interact with CGIAR partners in Latin America and observe, first-hand, the work of another key center CIMMYT. The decision on the venue of AGM04 was made following consultations with Co-sponsors and other members.

ASIAN SEED CONGRESS 2004

Asian Seed Congress 2004, organized by the Asia and Pacific Seed Association (APSA) will be held in Seoul, Korea from 13-17 September, 2003. The Congress will be hosted by the Korean Seed Association. All interested may contact APSA Secretariat by e-mail address: apsa@apsaseed.com or visit web site: www.apsaseed.com.

MEETING ON ARID AND OASES CROPPING

An International Meeting on "Arid and Oases Cropping: Ways for Sustainable Development in Aria Areas" will be held in Djerba, Tunisia from 22-25 November, 2004. The meeting is organized by Institut des Regions Arides (the Institute of Arid Regions) and the Ministry of Higher Education, Scientific Research and Technology, Tunisia. For further information, please contact Prof. Ali Ferchichi by e-mail address: ferchichi.ali@ira.rnrt.tn.

INTERNATIONAL CONFERENCE ON WATER

An International Conference on Water Demand Management will be held in Dead Sea, Jordan from 30 May-3 June, 2004. The Conference is organized under the patronage of H.M. King Abdullah II by the Ministry of Water and Irrigation of the Hashemite Kingdom of Jordan with funding provided by the United States Agency for International Development (USAID). All interested are invited to visit web-site: Www.wdm2004.org

HAPPY NEW YEAR!

The Editorial Committee wishes to all our partners from the CGIAR and Central Asia and the Caucasus all the success in their endeavours for increased productivity, household food security, reduced poverty and sustainability of our natural resources!

NOW AVAILABLE FROM INTERNET

GENDER AND DEVELOPMENT WEBSITE AT ADB

Gender and Development Website at Asian Development Bank
The Gender and Development web site at the Asian Development Bank (ADB) addresses gender issues in the region. Through this valuable online resource, ADB empowers women by providing case studies; best practices; special programs; country briefing reports; news; and events related to agriculture, education, health, resettlement, etc. For more information, visit: http:/www.adb.org/Gender/default.asp

AGRICULTURE KNOWLEDGE AND INFORMATION SYSTEMS (AKIS)

AKIS is a database linking people and institutions that generate, transfer and utilize agricultural knowledge and information for better farming and improved livelihoods. For more information, visit http://Inweb18.worldbank.org/ESSD/ardext.nsf/26ByDocName/AKISResearchExtension.

IMPORTANT ANNOUNCEMENT

GLOBAL TRUST NAME CHANGED

The Global Conservation Trust has changed its name to the Global Crop Diversity Trust. The change, which was made for legal and trademark reasons, took effect on 1 September, 2003. The Trust's web site, startwithaseed.org has been updated to reflect this change.

ACAD. VALERIAN METREVELI PASSED AWAY

The CGIAR Consortium for CAC expresses great sorrow on the sad demise of Academician Valerian Metreveli, President of the Georgian Academy of Agricultural Sciences. Academician Metreveli was a prominent scientist and great leader whom members of the international scientific community would always remember. His contributions in agricultural development in Georgia had indeed been enormous. In him, the scientific community has lost a great leader and his loss will be irreplaceable.

Prof. Dr. Adel-El-Beltagy, Director General, ICARDA has sent his heart-felt condolences to Mrs. Metreveli and the members of the Georgian Academy of Agricultural Sciences to bear this loss with fortitude.

We pray Almighty to give peace to the departed soul and enough courage to the bereaved family.

Editorial Committee: R.S. Paroda, M. Suleimenov, A. Morgounov, M. Ul-Hassan, M. Turdieva, Z. Khalikulov, I. Kononenko

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