IN THIS ISSUE:

- Message from Prof. A. Satybalidin, DG of NACAR
- News on CGIAR/CAC-NARS Collaborative Research Activities
  - Productivity of Agricultural Systems
    - Germplasm enhancement
    - Livestock production systems and integrated feed/livestock management
  - Conservation and Evaluation of Genetic Resources
  - Natural Resource Conservation and Management
  - National Research Organization and Management
- Meetings/Workshops/Conferences Organized
- Human Resources Development
- Program Publications
- Miscellaneous News
- Forthcoming Events

Message from Prof. A. Satybalidin
Director General of NACAR

Dear colleagues,

Collaboration between National Agricultural Research Systems (NARSes) of Central Asia & the Caucasus and the CGIAR started in 1995. There are a number of large research projects being currently implemented in the region. An establishment of the CGIAR Program on Central Asia and the Caucasus in 1998 served as a good incentive for further development of this collaboration.

The CGIAR Collaborative Research Program for Sustainable Agricultural Development in Central Asia and the Caucasus unites efforts of the CGIAR, NARSs and CG Centers targeted to overall improvement of agricultural production. The Program is based on the five "themes": (i) productivity of agricultural systems; (ii) natural resources conservation and management; (iii) conservation and evaluation of genetic resources and biodiversity; (iv) socio-economic and policy research; and (v) strengthening national programs.

The projects on "Integrated Food and Livestock Production in the Steppes of Central Asia" supported by IPAD and "On-farm Soil and Water Management for Sustainable Agricultural Systems in Central Asia" supported by the Asian Development Bank are being successfully implemented within the frameworks of these "themes". I would like to make a special mention of the projects dealing with cereals and legumes improvement. New high-yielding varieties developed in collaboration with International Centers ICARDA and CIMMYT have been submitted to the official State Variety Testing Commission and planted in on-farm plots. Besides this, many promising lines of food and feed legumes were selected in different countries of the region. All this has contributed to the adoption of the "State Program on Conservation, Use and Development of Agricultural Genepool of Plants, Animals and Microorganisms in Kazakhstan". This Program is supported by the Government of the Republic of Kazakhstan through a grant of $US 2 million provided to NACAR annually.

Also, I would like to mention about significant contribution of CG Centers in organization of training courses on English language, computer data management, traveling workshops, and assistance to National scientific institutions in participation in international conferences and meetings, as well as in publications. I am very pleased to see a positive movement in these directions. The Fourth PSC Meeting of the CGIAR Program will take place in Almaty on 4-6 June 2001. I believe that the Program stakeholders will resolve crucial issues related to agricultural research and development, and will join our efforts for creation of a new society in the 21st century. If we put our efforts together, our chances of success will be greater.

Prof. Azimkhan Satybalidin
Director General of NACAR, Kazakhstan

Two Important Program Meetings in June

The CGIAR Program for CAC will be organizing two important meetings in June of this year. These are the Fourth Program Steering Committee (PSC) Meeting in Almaty, Kazakhstan, 4-6 June, and the Fund-raising Meeting in Issyk-Kul, Kyrgyzstan, 8 June.

The Fourth PSC Meeting will be hosted by the National Academic Center of Agricultural Research (NACAR) of Kazakhstan, and Prof. Azimkhan Satybalidin, Director General of NACAR and Member of the PSC from Kazakhstan, will be the Focal Point for this Meeting. The Meeting will be attended by the members of the PSC from the eight NARS of CAC, major Program donors, and representatives of the CGIAR and its Centers, who will discuss the Program progress during the 2000/2001 season and approve the plan of work and budget for the 2001/2002 season.

The Fund-raising Meeting will be hosted by the Government of Kyrgyzstan. Academician Jamin Akmaliev, President of the Kyrgyz Agrarian Academy, and Mr. Djakshlyyk Satiev, Head of Agro-Industrial Complex Department of the Prime Ministers' Office, have been nominated as the two Focal Points for the arrangements of this Meeting. The meeting will be attended by the Ministers of Agriculture, Planning and Finance, the Heads of the NARSs of the eight countries of Central Asia and the Caucasus, donors represented in the CAC region, and representatives of the CGIAR and its Centers which are participating in the Program.

The Program stakeholders are invited to attend these Meetings and requested to contribute to their success.

Issued quarterly by: The CGIAR Program Facilitation Unit, ICARDA Regional Office for CAC, PO. 4564, Tashkent 700000, Uzbekistan
Tel.: (+998 71) 137-52-59  Fax: (+998 71) 120-71-25  E-mail: PPU-Tashkent@cgiar.org.uz
News on Collaborative Research Activities
Productivity of Agricultural Systems
News on Germplasm Enhancement

WHEAT

On-Farm Trials/Demonstration Plots in CAC Countries

Wheat breeders of CAC countries in collaboration with scientists from international centers CIMMYT and ICARDA have developed many promising varieties for multiplication and introduction into practice. During the last 3-5 years a large volume of breeding material, including thousands of fixed lines from the International Winter Wheat Improvement Program (IWWIP) of Turkey/CIMMYT/ICARDA based in Turkey, has been tested in CAC countries by the national wheat programs under both irrigated and rainfed conditions. Many outstanding early-maturing lines with resistance to diseases and improved grain quality have been identified. Some of them have out-yielded the standard check varieties by 11-40% and thus were submitted for the official state yield trials (“Dostlik” in Uzbekistan; “Ani-326” in Armenia; “Mtshetis-1” in Georgia; “Guncha” in Turkmenistan; and “Tacica” in Tajikistan).

Now, the most urgent task is to speed up their seed multiplication and propagation through farmers' participatory activities. It means that farmers or representatives of big farms should actively participate in evaluation and multiplication of the selected crop lines as candidates for release. The ICARDA/CIMMYT initiative on organization of large-scale on-farm trials and demonstration plots is becoming very popular in the region for fast introduction of the new varieties of wheat, barley, and other crops. Also, it serves good purpose in transferring of the advanced technologies for crop cultivation.

In Uzbekistan, farmers, local specialists, and representatives of ICARDA have greatly contributed to laying out of the on-farm trials/demonstration plots for the 2000/2001 crop season at 27 locations of 12 different regions of the country. Good seedling emergence was established at the majority of testing sites, which promises a better crop and results. Also, field days are planned at most of the sites for farmers and representatives from development agencies associated with these on-farm trials/demonstrations. The other countries in CAC region have also organized on-farm trials/demonstrations. These include: Armenia (2 sites), Georgia (4 sites), Azerbaijan (4 sites), Kyrgyzstan (2 sites), Tajikistan (3 sites), and Turkmenistan (2 sites).

On-farm trials/demonstrations in Kazakhstan

Through the project “Improving productivity, sustainability and profitability of wheat sector in Kazakhstan”, funded by the World Bank IDF grant and implemented by the National Academic Center of Agricultural Research (NACAR) and CIMMYT, it has been possible to conduct on a wide-scale on-farm trials and demonstrations in the country during the 2000/2001 season. The objective of this component of the grant was to build the capacity and establish a reliable mechanism of technology transfer through direct demonstrations on farmers’ fields. The project activities were conducted in five regions of the country, which in addition aimed to make linkages between the research institutions developing the improved technology, individual farmers and the administrative regions. The year 2000/2001 is the third and the last season of the project implementation and this will allow to draw some conclusions and summarize the results.

A two-fold methodology of on-farm activities was adopted: large plot multi-factorial trials were established by the researchers together with farmers, and simultaneously a number of simple trials were established by the farmers themselves who were provided the necessary inputs and training. This approach turned out to be very successful. The more elaborate trials demonstrated in detail the advantages of different technology components (variety, seeding rate, fertilizer, preceding crop, crop protection measures) and were used for conducting regional field days and seminars, while the simpler trials concentrated mainly on better varieties and served as an efficient mechanism of variety promotion at the village level.

The institutes involved in the project (R. Williams Kazakh Agric. Research Inst. of Farming, Krasnovodopad Breeding Station, A. Barayev Kazakh Research Inst. of Cereals, Central Kazakhstan ARI, Karabalyk Agric. Research Station) expanded the activities every year as they saw the benefit of directly dealing with the farmers who requested their seeds and services. On the other hand, farmers benefitted from adopting technologies which provided higher wheat yields and more importantly higher profits. Example of the successfully adopted technologies for southern Kazakhstan is a combination of better winter wheat varieties with lower seeding rates and moderate fertilizer application. During the project duration, the cooperation between CIMMYT and the institutions involved in the project has increased significantly resulting into establishment of new projects and activities.

CAC NEWS January-March 2001
Winter and Spring Wheat Program of CIMMYT - Mexico Catering to the CAC Region

The Bread Wheat Improvement Program of CIMMYT (Dr. R. Trehowian) established special area at CAANO (Cd. Obregon) and Toluca stations where additional light is provided to imitate the high latitude environment of northern Kazakhstan and Siberia. The work conducted here is a core of shuttle breeding program to develop spring wheat germplasm with drought tolerance and disease resistance for northern Kazakhstan. Around 400 crosses are made annually including Kazakh/Siberian varieties as one parent and Mexican/Canadian germplasm as the second parent. At present, the progenies of the first crosses reached the F5 stage having been subjected to selection pressure against diseases. The first set of the selected lines was sent to three locations in northern Kazakhstan and Siberia for testing under target conditions. The best lines selected in summer 2001 will be shuttled back to Mexico to initiate the second round of crosses and selections. The variation in the plant type of F3-F4 germplasm originating from CIMMYT x Kazakh crosses appears to match the target conditions and hopefully will be efficiently utilized in the region.

The Durum Wheat Breeding Program (Dr. W. Pfeiffer) initiated similar activities at a smaller scale, and the material has reached F3 generation. Similarly, F4 or F5 lines will be shuttled to northern Kazakhstan and Siberia.

Wheat Pathology Group (Dr. R. Singh) collaborates closely with the region in monitoring leaf and yellow rust as well as providing methodology support. Broader evaluation of regional germplasm for Mexican races of rusts is anticipated.

The End-use Quality Laboratory (Dr. J. Pena) collaborates with the Quality Laboratory at Kazakh Research Institute of Farming and conducts some analysis of the samples from the region to assist in evaluation of the bread-making parameters of the new varieties and breeding lines. This activity will expand during the next year based on complementarity of the two laboratories. It was also agreed that an expert from a laboratory in Almaty would attend a special nine-week training course in wheat quality in Mexico in summer 2001.

The Wheat Physiology Group (Dr. M. Reynolds) prioritizes issues related to drought tolerance in northern Kazakhstan. However, before developing a realistic work plan better technical information should be obtained to identify the needs, targets and methodology.

The Wheat Training Program (Dr. R. Villareal) indicated that the number of training positions for the CAC region will remain at the same level in 2002 and recommended that efforts should be made to accelerate study of English as an essential requirement for the CIMMYT wheat scientists for attending the course in Mexico.

The Economics Program (Director Dr. P. Fingali) plans to expand its activities in the region during 2001 and the economist assigned to the region (Dr. Erica Meng) will be conducting wheat sector study in at least three countries.

The Applied Biotechnology Center (Director Dr. D. Hoisington) plans to visit Kazakhstan in June to learn about the current situation, and the possibility and priorities of collaboration with the region.

In general, it is clear that many headquarter-based research programs incorporated the priorities of CAC region into their research agenda and there is good possibility for strengthening and expansion of existing collaboration between CIMMYT and the CAC countries.

Evaluation of Cereals for Cold Tolerance

Severe frosts (~20-30°C) caused leaf damage in susceptible varieties of wheat in Uzbekistan in the 2000/2001 season. The new winter wheat variety "Dostlik" performed well at all the testing sites. In Karakalpakistan, winter cereals were ranked for cold tolerance in the following descending order: bread wheat varieties "Krasnovodopadskaya 25" (highest score-5), "Polovchanka" (4), "Dostlik" (4), "Yngiaul" (4), "Gayrat" (4), "Sanzar-8" (4), "Aral-96" (4); durum wheat "Ferrigineum-1" (3); winter barley "Maviono" (4), "Kyzylkurgan" (3), "Guluiiz" (3). Thus, a little late planting this season facilitated cold tolerance evaluation in on-farm trials and demonstration plots.
Regional Network on Wheat Variety Promotion and Seed Production

The project, which is funded by the GTZ (Germany) and implemented by CIMMYT, started in December 2000, aims to establish technically efficient and economically sustainable mechanisms of variety promotion and seed production in the chain "research institution-seed farm-administrative region" utilizing experience in each country. The project involves three countries: Kazakhstan, Tajikistan and Uzbekistan. The activities of the project mainly concentrate on field multiplication/promotion of the best available wheat varieties and supply of necessary machinery/equipment, but the issues of training and economic analysis also play extremely important role. The first three months of the year 2001 were devoted to detailed project planning for each country and implementation of a number of field activities. The institutions and target rayons were identified for two countries: in Kazakhstan: Kazakh Research Institute of Farming (Merke region and Dzhambyl regions), Krasnovodopad Breeding Station (Sary Agach region); in Tajikistan: Tajik Research Institute of Agriculture (TRIA) (Hissar region), Vakhsh Branch of the TRIA (Kurgan region), and Kulyab Branch of the TRIA (Dangara rayon); in Uzbekistan: three research institutions - Uzbek Research Institute of Grain and its branches in Tashkent and Galla-Aral are currently identifying the target regions. Field trips and surveys have been conducted in each country. Essential machinery and equipment for early generation seed production and breeding is being manufactured in Dushanbe, Tajikistan. By September 2001 each country will have a work plan for establishing linkages with the farms and regions. The project also anticipates establishment of official uniform wheat variety testing in three countries which was abandoned in early 1990s.

Activities on Yellow Rust Resistance in Wheat

In January, the Institute of Genetics in Tashkent, Uzbekistan, conducted a crossing program on wheat in the greenhouse. This work is done in the frameworks of an informal cooperation between several research institutes in Kazakhstan and Uzbekistan mediated by CIMMYT. The objective of the cooperation and crosses is to study the genetics of yellow rust resistance in wheat and to combine the effective genes in adapted background. The crosses made in the greenhouse in Tashkent also prove that despite the difficult situation in agricultural research in the region, it is still possible to obtain two generations of wheat in one year and accelerate the research and breeding programs.

Similarly, work on the virulence of the yellow rust pathogen is progressing well with assistance from ICARDA in collaboration with Plant Breeding Institute, Cobbitty, Australia. For this, a set of isogenic wheat lines have been planted in different countries. Efforts are in progress to train a wheat pathologist in this work and strengthen the facilities at the Institute of Genetics and Experimental Biology in Tashkent for this work.

Spring and Facultative Wheat Found Promising in Tajikistan

Usually winters in the valleys of Tajikistan are rather mild and germplasm with moderate resistance to cold temperatures is suitable to the local environments. Thus, spring and facultative type of cereal crops have shown some evident advantages in comparison with the pure winter types. Therefore, the new released wheat varieties by the Tajik Research Institute of Agriculture (TRIA), viz., bread wheat “Navruz”, durum wheat “Baxt”, and promising variety “Sharora” are biologically spring. They performed very well when planted in autumn.

The advantage of spring types is one reason for encouraging performance of ICARDA/CIMMYT spring wheat varieties Sham 4, Sham 6, and Bocro 4 in the Vaksh Valley of southern Tajikistan during the last two crop seasons. Original seeds of these varieties have been provided by ICARDA Headquarters to the TRIA-Vaksh Branch for seed multiplication.

It should be highlighted that the joint efforts of the collaborative wheat improvement program of Tajikistan-ICARDA-CIMMYT have resulted in identification of some new promising varieties such as “Tacica” (named after Tajikistan, CIMMYT and ICARDA), “Norman”, and “President”, which have been submitted for the official state yield trials. Their parallel testing through on-farm trials and demonstration plots at four locations this season will facilitate identification of the most suitable one(s) for effective seed multiplication.
BARLEY

New Promising Lines of Spring Barley in Kazakhstan

In Kazakhstan, spring barley is grown on a vast area of about 4 million ha. Therefore, introduction of productive and reliable varieties could bring a remarkable practical impact. The restoration and development of new germplasm is the most urgent task to meet demands of private sector, land-lease holders, farmers, and still operating state farms, which urgently need new varieties suitable for different agronomic environments. The joint efforts of the collaborative barley program between ICARDA and the breeding centers in Kazakhstan resulted in the identification of the unique germplasm, which proved very adaptive to the local environments. Some of them were classified as a source of valuable characters and used in the crossing program. The advanced material, which will be multiplied in 1-2 years for on-farm trials and demonstration plots, has been developed at the Kazakh Research Institute of Grain Production, Shortandy, northern Kazakhstan. During the last seasons three outstanding lines of spring barley have performed exceptionally well: Mraq/M 54- 247/Mips/Be, WI 1298/ Emir/3/ Arr/Esp- /Alger/Ceres, and RWA-M S3. The new lines performed especially well in 1998/1999, which was very favorable for spring barley and out-yielded a local standard check "Tselinniy 30" due to high resistance to diseases (Helminthosporium and stem rust) during heading stage. Even in the 1999/2000 crop season, which was characterized by drought and heat during the grain filling stage, these lines performed better than the local standard check. They are considered as good candidates for on-farm trials and demonstration plots. Their seed multiplication is now underway.

Accent on Salt- and Drought-tolerant Barley

In the Karakalpakstan Republic in Uzbekistan, the devastating soil salinization is a bad example of man-made ecological catastrophe with very sad consequences for people, animals, and plants. Because of lack of water in the region, there is an urgent need to re-orient all agricultural production with accent on crops and varieties with high efficiency for water use and tolerance to prevailing stress factors, including salinity. As a follow-up the request of the NARS, the ICARDA-CAC Tashkent Office has managed to initiate seed production of facultative barley variety "Unumly-Arpa", which originated from the Syrian local landraces, and is presently considered to be the most salt- and drought-tolerant barley cultivar. Thus, 300 kg of super-elite seeds of this variety were delivered to the Karakalpakstan Research Institute of Agriculture to help them take up its quick seed multiplication and help in its dissemination among farmers.

Severe soil salinity in Karakalpakstan (Uzbekistan)

New Promising Variety of Winter Barley in Kyrgyzstan

The joint efforts of the collaborative barley program between ICARDA and the Breeding Program of the Kyrgyz Agrarian Academy in Kyrgyzstan, resulted in the identification of several new promising lines of spring and winter barley, very adaptive to local environments. Some of them were used in the crossing program as a source of valuable characters. Three early ripening lines are now under seed multiplication and have good perspective for inclusion in the on-farm trials and demonstration plots and the official state yield trials. Among them, the best one (MV- 46/Mazurka/3/Roho//Alger/Ceres) out-yielded the standard check variety by 31% during the two-year testing in the advanced yield trials (average grain yield was 5420 kg/ha, compared to 4110 kg/ha of the check). The new variety also ripens 15 days earlier than the check. It is a two-row barley with plump attractive grain with a 1000-kernel weight of 50.3 g. The new variety after seed multiplication will be evaluated in a wide range of environments for its adaptation and yield potential. Also, its malting and brewing grain quality will be analyzed. Farmers in the country are in urgent need of such a variety as cultivation of high grain quality varieties is considered economically profitable.
FOOD AND FEED LEGUMES

Promising Food and Feed Legume Varieties Identified in Kazakhstan

Legumes in Kazakhstan could become important in diversification of crop production as tremendous potential exists to increase areas under these crops, especially in northern Kazakhstan. Here, the previous crop technology, based on fallow land and cereals monoculture, has already exhausted and thus necessitated for more effective alternatives. At least one crop of legumes in a new crop rotation could help to restore soil fertility, and to increase feed and protein production. Therefore, ICARDA legume breeders in collaboration with the local scientists, paid more attention to this Region. During the two last crop seasons, many ICARDA legume lines were tested at the Kazakh Research Institute of Grain Production (KRIGP), Shortandy. The most promising lines of chickpea viz., FLIP 95-46 [grain yield of 3010 kg/ha], ILC 482 [3170 kg/ha], FLIP 82-150 [2840 kg/ha], and ILC 32-79 [2750 kg/ha] are under seed multiplication for further testing through the on-farm trials and demonstration plots. In lentil also, three promising lines are now available: ILL 6037, ILL 4605, ILL 4400.

In southern Kazakhstan, the last season (1999/2000) was more typical and yields of 1-2 t/ha were common for these environments. The local chickpea check variety Kamila yielded 1650 kg/ha, whereas the best ICARDA chickpea lines out-yielded this variety by 10-17%: viz., FLIP 97-137 [1940 kg/ha], FLIP 97-186 [1860 kg/ha] and FLIP 88-85C [1780 kg/ha]. Line FLIP 88-85C has a broad adaptation in the CAC region as it has also performed well in Azerbaijan, Uzbekistan, and Georgia. Chickpea line FLIP 97-137C maintained its superiority on the basis of 2-year results, and is also resistant to Ascochyta blight and tall in growth habit. These two lines have good perspectives for fast seed multiplication and testing on the farmers’ fields.

The yield of best lentil lines ILL 6037, ILL 4605, ILL 5582, ILL 6434 ranged from 710 kg/ha to 900 kg/ha (ILL 6037 was the best).

Now, farmers are also keen in strengthening the feed base for livestock. In lathyrus, new promising lines were identified: 505, 536, and 554 with yields of 1460 kg/ha, 1490 kg/ha, and 1600 kg/ha, respectively. In vetch, three new lines 2491, 2626, and 2003 out-yielded the standard check by 17-29 % and produced 1000 kg/ha, 1060 kg/ha, and 1100 kg/ha, respectively. Their seed multiplication now is planned in order to start evaluation of these lines for green mass productivity.

Some promising chickpea lines at the research plots of KRIGP, Shortandy, Kazakhstan

Dates of Planting Important in Food Legumes in CAC

Testing of ICARDA food and forage legumes nurseries in the CAC Region has shown the suitability of some lines for direct use on farmers’ fields after seed multiplication. Another very important way to increase productivity is technology modification. These crops are traditionally planted in spring in the CAC region. However, the data from yield trials have clearly demonstrated the importance of a proper planting date. Early planting in spring in cool areas and autumn planting in milder environments have considerably increased yield of chickpea and lentil. For example, yields of the best chickpea lines in autumn planting in Azerbaijan were 1680-2010 kg/ha compared with only 954 kg/ha in the spring planting. The same correlation was observed for lentil: yield of line ILL 6037 in autumn planting was 1600 kg/ha versus 710 kg/ha in the spring planting. In Georgia, the standard check variety of lentil Apsherom-69 in spring planting produced only 420 kg/ha, whereas an ICARDA line ILL 8069 sown in autumn provided 2050 kg/ha. In chickpea, the standard check variety in spring planting gave 1350 kg/ha, whereas an ICARDA line FLIP 88-85C planted in autumn produced 2100 kg/ha.

In Uzbekistan, in a very dry season, seed yield ranged between 700-800 kg/ha for winter chickpea and 400-490 kg/ha for the spring chickpea. Thus, some modification of technology with accent on autumn planting in mild environments is a significant resource to increase legumes productivity and production in some areas. For this, breeders have to pay more attention to cold and disease tolerance of the breeding material.
Food and Feed Legumes Show Promise Even in a Dry Season

The food and feed legumes have a great potential in the farming systems of all the countries in the CAC. Considering this, their evaluation was initiated in all the eight CAC countries with the help of ICARDA’s Legumes Program. Although the last season (1999/2000) was a dry crop season in many regions in the CAC countries it provided an excellent opportunity to evaluate the plasticity, broad and narrow adaptation of the improved germplasm of food and feed legumes (chickpea, lentil and vetch), which were selected during the previous favorable season.

Uzbekistan, a leading producer of chickpea in the CAC Region, also has the strongest research program in CAC. Here, chickpea and vetch are the two most important legume crops. A large number of chickpea lines from ICARDA nurseries were evaluated in 1999/2000 crop season. Grain yields ranged between 700-800 kg/ha for winter (autumn-planted) chickpea, and 400-490 kg/ha for the spring-planted chickpea. Four promising lines of chickpea were identified, viz., FLIP 88-85, FLIP 95-52, FLIP 95-55, FLIP 97-99C, which were considered superior lines and selected for seed increase and for further large-scale testing. The new germplasm because of its suitability is becoming dominant in the chickpea nurseries. For the year 2001 the volume of ICARDA breeding material in yield trials will reach 65%.

POTATO

Potato Germplasm for CAC

Based on the needs of the CAC countries, the International Potato Center (CIP) started sharing relevant potato germplasm with CAC countries. Thus, a shipment of improved potato germplasm was sent to Armenia, Georgia and Azerbaijan. Each country has received a set of around 20 cultivars carrying resistances to late blight and virus diseases. Shipments have been made as in vitro plantlets or green-house-grown minitubers. Also, preparations have been started for a one-month specialized training of two potato scientists, one each from Armenia and Azerbaijan, at CIP during September-October of this year. The training will receive emphasis on potato micro-propagation, disease detection and germplasm evaluation.

GROUNDNUT

Improved ICRISAT Groundnut Germplasm in CAC

The International Crop Research Institute for the Semi-Arid Tropics (ICRISAT) has been sharing the improved groundnut germplasm with CAC countries since 1999. The early-maturing, and disease/drought/heat-tolerant germplasm suitable for spring planting was sent to Armenia, Azerbaijan, Kyrgyzstan, Tajikistan, and Uzbekistan based on the request of the groundnut breeders of these countries, who have received a long-term training in groundnut improvement at ICRISAT headquarters at Patancheru (near Hyderabad) in India. ICRISAT has also sent on a special request to Uzbekistan very early-maturing material for summer (June) planting after barley harvesting under irrigated situation.

The collaborating scientists have reported that the material will be planted in their respective countries in April. Later, this material, as done in the past two seasons, would be jointly evaluated by the NARS groundnut breeders together with ICRISAT’s groundnut scientists. Also, the manuscript on “Groundnut (Arachis hypogaea) in Central Asia and the Caucasus: Outlook for Future” is in the final stage of preparation at ICRISAT, and will be available soon.
TRITICALE

Triticale has good potential in dry areas in the CAC countries. Considering this, the triticale breeding program of CIMMYT mainly targets winter wheat regions in CAC where there is need for forage and there are soil problems. The data from Azerbaijan and Uzbekistan showed that Mexican germplasm is well adapted to local conditions. The plans for promotion of selected triticale lines in the region were discussed with the CAC countries. The flow of triticale germplasm from Mexico to the region will be expanded.

The crop is also being tested as a feed crop by ICARDA in collaboration with the Uzbekistan NARS at the Boykozon farm (in Tashkent region). The varieties tested have performed well and are now receiving attention for seed production.

Progress on Crop Diversification

The agricultural research managers and the national program scientists have lately realized the need for crop diversification to provide cotton- and cereal-based sustainable cropping systems and avoid harmful consequences of monoculture, which has been dominant in the CAC region in the past. Food and forage legumes have shown a great potential and importance in the farming systems in all the eight countries in Central Asia and the Caucasus, where these crops have been recently tested. These crops because of their nitrogen fixing ability can also considerably contribute to the improvement of soil fertility. Also, the revival of the livestock sector is inevitably connected with increasing animal of feed production. In collaboration with the Germplasm Program of ICARDA the distribution of different international nurseries of food legumes (chickpea and lentil) and forage legumes (vetch and lathyrus) was facilitated to the national programs in Kazakhstan, Uzbekistan, Tajikistan, and Turkmenistan as per their request. Also, in Uzbekistan, Kyrgyzstan and Kazakhstan the program of crop diversification has included testing of sunflower varieties: super early, early, and medium in maturity. The seed requests of some regions in Kazakhstan and Uzbekistan for soyabean, flax, and cruciferous oil bearing-crops, seed-rape and mustard have been met by the ICARDA-CAC Tashkent Office.

Livestock Production Systems and Integrated Feed/Livestock Production

Results from Socio-economic Surveys

Socioeconomic studies were carried out to have in-depth assessment and monitoring of the current situation of livestock production systems in Uzbekistan. The results indicated that the majority of the livestock during the transition period moved from large state farms to households. The analysis of these farms in the Tashkent area of Uzbekistan has shown that the most households (40%) have very small livestock operations, usually consisting of 2-3 cattle including one cow. These farms are characterized with low livestock productivity because of poor feed supply, management and the associated high cost of production. The larger is the livestock operation the better is the livestock productivity and management, resulting in better economical efficiency. However, the situation was observed to be different in the southern part of the country, where the households had larger number of livestock with 46% of them having 6-10 cattle and 15-20 sheep per household. These farms are also much better off economically. However, the small households have existed in spite of their low efficiency because of they are essentially subsistence farms, which are also involved in other agricultural activities to augment their income.

The assessment of market potential and market constraints showed that households marketed their livestock products as a rule to middleman/middle women and got rather low prices. Only meat and milk and milk products are marketable commodities for households.
The Causes of Range Degradation

Range degradation is a common phenomenon in Central Asia. A systematic study on this aspect was initiated by the Uzbek State Land Use Institute to study the status of land and range degradation at the Boykozon (in Tashkent region) and Nurata sites (Bukhara region). The study was conducted as an activity of the IFAD-supported Project on “Integrated feed and livestock production in the steppes of Central Asia”. The study also obtained soil and vegetation maps of both the farms, data from soil and vegetation surveys conducted 10 years ago, and looked at trends during the recent period. It has been concluded that moving of livestock from the large state-owned flocks to small flocks owned by individuals brought to aggravation of range degradation around villages.

Livestock Feeding during Winter Months is Crucial in CAC

Karakul sheep is an important asset to the sheep owners in the rangelands of Uzbekistan. In recent years, a sharp decrease in the productivity of Karakul sheep, especially in the winter period has been observed. Main reasons for this are considered to be a fall in the productivity of rangelands (< 0.3 ton of dry matter per ha) and the failure of the sheep owners to provide additional feed, particularly during the winter period. With this in mind, a research activity was initiated at a Karakul sheep farm in Nurata region of Uzbekistan by the Uzbek Institute of Karakul Sheep and the Ecology of Deserts, Samarkand, and ICARDA under the IFAD-supported project on the “Integrated feed and livestock production in the steppes of Central Asia”. This was to help the Karakul farmers to strengthen the production base by using the technology of processing and utilization of rangeland feed and by-products of agricultural crops cultivated on rain-fed and irrigated lands. It was also expected that these efforts within the Project will be connected with an early weaning and fattening of lambs in order to lessen the pasture over-grazing in rangelands.

The work conducted on livestock feeding during winter months has shown some very useful results. The barn feeding of the aged culled ewes in the critical winter period resulted in significant gain in their live weights, and thus increased the meat productivity and animal carcass. This practice also reduced mortality in ewes by 12% and increased the profit of farmers by about 50%. From these results, it was clear that: (i) arranging of barn feeding of old Karakul ewes in the critical period of rangeland grazing (winter season) allowed not only to eliminate loss of sheep, but to considerably increase their live weight, (ii) as a result of the barn feeding in winter the animals reached the normal standards in weight and could be profitably used for selling for meat. These results were shared with the sheep farmers during a field workshop in 2000. Initial reports now indicate good response of farmers for this recommendation.

Feed Block Technology Introduced in Uzbekistan

Feed blocks are commonly used as feed during winter in West Asia. They allow the use of available feed resources more efficiently. During a Travel Workshop to West Asia in 2000, selected livestock scientists and farmers from Central Asia were exposed to this technology. As a follow-up of the workshop observations, scientists of the Uzbek Research Institute of Karakul Sheep and the Ecology of Deserts (URIKSED) locally designed and fabricated an instrument to make feed blocks, and successfully tested them in a short-term experiment. Later, they demonstrated them to farmers during a workshop in Nurata (Bukhara region) in February 2001. In addition, Dr. N. Bobokulov, the leading scientist in sheep feeding at URIKSED, went to Aleppo, Syria for one month in April-May for a study visit to work in the Feed Laboratory at Tel-Hadya and gain experience in practical aspects of livestock feeding including feed block technology.
Milking of Karakul Sheep Ewes

In Uzbekistan, like in other countries of Central Asia, sheep ewes almost have not been milked since the times of the World War II. In July 2000, several scientists and farmers of the four countries of Central Asia participated in a Traveling Workshop to West Asia. During this trip they had opportunities to see how farmers in Jordan, Syria and Turkey milked sheep ewes, processed this milk, and made it a profitable business. After returning from this trip, Prof. S. Yusupov, the Director of the Uzbek Research Institute of Karakul Sheep & Ecology of Deserts in Samarkand, and Dr. L. Iniguez, ICARDA’s Project Coordinator of the IFAD-supported project in Central Asia, decided to include into the project an activity on sheep milking. Together with milk production issues Prof. Yusupov fabricated and introduced a simple milking technology (an iron cage to keep sheep in a stationary position), based on what he observed in Turkey. This technology is planned to be demonstrated to sheep farmers during a workshop in Nurata on 10 April, 2001.

A New Project on “Improving Feed Resources in the Caucasus”

In the transition period, there has been a reduced output of livestock feed in Central Asia and the Caucasus. This resulted in reduced number of livestock with cooperative farms and the private owners. Considering this, the livestock scientists of the Caucasus identified this as a priority area of research. Based on this, ICARDA and ILRI launched a new 1-year project on “Improving feed resources in the Caucasus”. The project’s overall objective is to identify and target technologies for feed production and utilization in crop-livestock systems, in order to improve productivity and natural resources management.

The project was implemented in October 2000 with the organization of a meeting of stakeholders, and to identify sites for on-farm activities. Each country agreed to conduct detailed surveys and documentation of feeding practices at the farm level, with different scenarios ranging from individuals to farm associations, from subsistence to commercial levels of operation. A second study will be undertaken in each country to analyze and document all commodity-oriented feed technologies that have been developed and were in use during the Soviet-era, and their applicability in the changing production circumstances.

A meeting of the focal points of the project from the three Caucasian countries with the project coordinators, Dr. M. Bounejmate of ICARDA and Dr. Mohammed Saleem of ILRI, was held in Aleppo from 20-23 January to validate results of the assessment of the current situation of feed resources in the region.

Conservation and Evaluation of Genetic Resources

A PDF Grant for a New Project on Crop Wild Relatives

The one-year Inter-Regional UNEP/GEF PDF B project on “In situ Conservation of Crop Wild Relatives Through Enhanced Information Management & Field Application” in the framework of sub-Program on “Sustainable Management and Use of Natural Resources” is initiating country-driven activities to develop a full project. The main objective of the project, which will be developed through the PDF B activities, is to have safe and effective conservation of crop wild relatives and their increased availability for crop improvement in Armenia, Bolivia, Madagascar, Sri Lanka and Uzbekistan. This will be through (i) the use of the available information on crop wild relatives which is relevant to the needs of the partner countries, (ii) the initiation of the design of an information system suitable for the support of conservation of crop wild relatives, and (iii) the development and design of GEF project to strengthen the conservation and use of crop wild relatives.
Breed Characterization of Small Ruminants in Progress

The Central Asia and the Caucasus is the center of origin and diversity of small ruminants, sheep and goats. Some specialized breeds of sheep and goats have emerged as a result of natural and need-based directed selection of pastoralists and populations. It is estimated that today there are about 30 indigenous breeds of small ruminants in the region, in addition to the various improved breeds.

Considering the importance of this subject, ICARDA and five NARS of the CA countries, with financial support from USDA and IFAD, started a project in 1998/99 to characterize the breeds of small ruminants both at the farm level and at research farms. The work in the three countries of the Caucasus is now being carried out in collaboration with ILRI with financial support from the Systemwide Livestock Program (SLP). This work is coordinated by Dr. L. Iniguez, ICARDA's Small Ruminants Specialist.

Among the breeds characterized are Gissar sheep from Tajikistan and Uzbekistan, different Karakul strains from Kazakhstan, Turkmenistan and Uzbekistan, goat breeds for cashmere and mohair from Kazakhstan and Kyrgyzstan, and sheep and goat breeds with milk production potential from the Caucasus. A Regional workshop on Breed Characterization is planned for the three Caucasus countries by ICARDA, ILRI and Georgia in Tbilisi on 27-29 June, 2001.

Natural Resource Conservation and Management

Alternate Furrow Irrigation Method Promising in Kazakhstan

An alternate furrow irrigation experiment in Arys-Turkestan canal area in Kazakhstan

An alternate furrow irrigation method has been tested at the farm of the ARMAN Production Cooperative Society of Arys-Turkestan irrigated area of Kazakhstan since the 1999/2000 season. Research results during this period showed that the technology decreased soil pressing, development of denitrification processes and leaching out of mobile forms of NPK. Optimization of irrigation management with alternate irrigation decreased technological losses of irrigation water on surface run-off by three times, filtration by 10-15 %, and increased moisture accumulation in the soil by 15-20 %.

The technology of alternate furrow irrigation with discrete jet was technological sound, and it improved labor conditions of irrigator, decreased irrigating rates by 20-30 % and decreased load on the drainage system by 40 %. Importantly, all these positive effects did not adversely affect the crop yield compared with the local standard method of irrigation.

The Bed-furrow Irrigation System to be Promoted

The agronomy group of CIMMYT (Dr. K. Sayre) promotes bed-furrow irrigation system with elements of conservation technology and in some cases zero tillage. These technologies are applicable to irrigated lowland of Central Asia and the Caucasus, where presently the wheat- and cotton-based cropping systems are common. Training of the local scientists from the region in Mexico will be the first step for introduction of this technology in the region. The training will start in May 2001.
Utilizing Saline Water for Irrigation of Windbreak Forest Strips

In some regions of Uzbekistan wind erosion is known to cause sufficient damage to agriculture. For example, cotton seedlings in some years are damaged two to three times in the spring in central and eastern Fergana Valley. This sometimes forces replanting of some fields. The use of “windbreak forest strips” appears a good option for preventing such wind erosion. Since water is usually in shortage in this area, saline water can be used for irrigation of the windbreak forest strips.

At the “Dustlik” farm of Besharyk district of Fergana region, a new research activity was initiated jointly by the Uzbek Research Institute of Cotton Growing and ICARDA in the fall of 2000.

Three fields were selected for the work. Both the old strips and four newly-planted windbreak strips in different combinations of California poplar, mulberry, pomegranate, almond, fig and pistachio have been used. First irrigation of the strips was begun at soil moisture at 65% of field water holding capacity. For the new forest strips surface water was used, whereas, the low salinized drainage flow was used for the old strips.

Land Terracing Found Useful in Tajikistan

Reclamation of steep slopes with terracing is one of the priorities to protect the soils from water erosion and to increase food production in the mountainous regions of Tajikistan. Fixed-site experiments were established in Faizabad region (65 km southeast from Dushanbe) under the ADB/ICARDA-supported project on “On-farm Soil and Water Management for Sustainable Agricultural Systems in Central Asia” to develop ways of increasing soil fertility of terraced and eroded soils along with effective use of soil moisture. The results from last year experiments demonstrated that mulching and terracing contributed, during dry years, to effective soil moisture utilization and significant increase in soil fertility. The experimental site is being closely monitored by Dr. Sanginboy Sanginov, Director of the Tajik Research Institute of Soil Science, Dushanbe, and the National Coordinator of the project in Tajikistan.

National Research Organization and Management

A study to map the current agricultural innovation system in Azerbaijan, using graph-theoretic concepts was recently completed by ISNAR in Azerbaijan. The primary objectives of the study were to describe the system, identify the areas to be strengthened, and offer options to improve the working of the system. The study intended to be descriptive rather than prescriptive. The key observations suggest that the essential elements of the system are at an embryonic stage, and significant accomplishments in policy making, research, education, and credit institutions are yet to come. In particular, efforts should be placed on the formation of public policy, science and technology institutions and organizations, and on the development of links through intermediary organizations between the public and private components of the system. At present, the public component is under construction, lacking sectoral priorities, clear organizational mandates and objectives, qualified human resources, physical and financial resources, and motivation to initiate interactions with the private sector. The private component, however, is attracted to activities of international organizations. The public and private components are isolated and have limited basis for interaction.
A Project on Azerbaijan Agricultural Research Reform and Competitive Grant System Started

A CIMMYT team consisting of Drs. George Varughese (Leader), P. Wall and A. Morgounov worked in Azerbaijan, 28 January to 17 February 2001, providing assistance in establishing the Competitive Grant System (CGS). The aim of the project is to establish a system for funding the priority research/extension projects based on competition. The project started in November 2000 and since then a substantial progress has been made. The objective of this visit was identification of priority areas and developing the guidelines for preparation of the projects for the field crops. The team worked very closely with the CGS Secretariat headed by Dr. M. Nabiev.

Visits were made to all the institutions involved in technology development and dissemination in Azerbaijan, both public and private. The team and Secretariat made a visit to Gyandjia, where several national research institutes as well as the Azerbaijan Agricultural Academy, the only educational establishment in the country providing university level degree in agriculture, are based. A constraint analysis was conducted for cereals, potato, legumes, cotton, tobacco and maize with participation of the key persons representing research and extension. As a result, more specific priority areas were identified. The possible integration options for project teams were discussed. Training was provided for project preparation.

During the visit, it was clear that in some areas (potato and cotton production) newly emerged private companies could well compete with the research institutes. In the end, the team and the Secretariat Head met with HE Mr. Irshad Aliyev, Minister of Agriculture and Prof. Djalal Aliyev, the Chairman of the Competitive Grant Board. Both of them underlined the importance of this project for agriculture in Azerbaijan and mentioned specific areas where the project could contribute: improving production under salinity, minimal tillage to conserve soil, maize for forage, development of cropping systems for small holdings, etc.

Meetings/Workshops/Conferences Organized
An International Workshop on “Priority Setting for Agricultural Technology and its Dissemination to Farmers”

The workshop was jointly organized in Antalya, Turkey from 22-26 January 2001 by the Ministry of Agriculture and Rural Affairs (MARA) of Turkey, the International Maize and Wheat Improvement Center (CIMMYT), the Program Facilitation Unit (PFU-Tashkent) of the CGIAR Program for CAC and the World Bank under the aegis of the World Bank’s “Regional Initiative on Reforming Agricultural Knowledge System in Countries of Europe and Central Asia”. The objective of the workshop was to provide understanding and to improve the working knowledge of the priority setting processes, strengthening the capacity of countries of the region in planning program budget, and monitoring research and extensions programs in order to improve the overall performance of the agricultural sectors. Dr. Derek Byerlee (World Bank) was the main workshop resource person. Dr. Jitendra Srivastava of ECSSD of the World Bank was the main coordinator of this course.

Sixty participants from Eastern Europe and Central Asia and the Caucasus regions attended the workshop. The participants from Azerbaijan, Georgia, Kazakhstan, and Uzbekistan represented the CAC Region. The PFUCGIAR (Tashkent) and CIMMYT Office in Almaty supported participants from Kazakhstan and Uzbekistan in attending the workshop.

Participants of the workshop in Antalya, Turkey
Planning Meeting of the GTZ-CIMMYT Project on Wheat Variety Promotion and Seed Production in Kazakhstan

A sub-regional project on “Wheat variety promotion and Seed production”, funded by GTZ, was initiated in November 2000. A planning meeting of the project was organized in Almaty on 24 February to develop a work plan for Kazakhstan for 2001. The meeting was attended by the directors of the institutes and seed farms from Almaty and southern Kazakhstan Region, and chaired by the NACAR’s Deputy Director General Dr. B. Sadyk. The activities for March-June were identified, and a work plan was developed.

Workshop on CO₂ Flux Measurements in Central Asia

Work on the carbon dioxide sequestration has been carried out in the Kurnab range of Uzbekistan jointly by Uzbekistan, USDA/ARS and ICARDA since 1997. In 1999, the University of California at Davis joined this activity as a part of their project supported by GL-CRSP. To take a stock of the progress made and to plan future activities a workshop on CO₂ flux measurement was held on 9 March 2001 at the Institute of Karakul Sheep Breeding and Ecology of Deserts, Samarkand, Uzbekistan. The workshop was attended by scientists from ICARDA, Kazakhstan, Turkmenistan, USDA, and Uzbekistan. Drs. Nick Saliendra of the USDA/ARS, Logan, Utah, USA, and Dr. Mukhtor Nasyrov of Samarkand State University were the two main organizers of this workshop.

An Information Management Workshop

The Second Information Management Workshop was organized by IPRGI at FAO, Rome, 26-30 March 2001 in the framework of Activity 4 of the PDF B “Plant and hold three workshops to prepare initial design of an electronic database and information system for crop wild relatives”. Constraints, issues and expectations for conservation of crop wild relatives in the partner countries were discussed at the Workshop. As a result, a work plan for developing a framework proposal for the national management system was discussed and agreed. Dr Alvina Avagyan from the Scientific Center of Soil Science and Agrochemistry of Armenia, and Dr. Ravza Mavlyanova from the Research Institute of Plant Industry in Tashkent, Uzbekistan, represented CAC at the Workshop.

Human Resources Development

Participation of CAC Scientists in Training Courses/Study Visits

Wheat Improvement Training in Mexico

Ten participants from Central Asia and Caucasus went to Mexico to attend the Wheat Improvement Training 6-month course conducted annually from mid-February to mid-August. The course is on-hand experience combining theoretical lectures with practical training in breeding and related subjects. The trainees work three months in the state of Sonora in Northwest Mexico in winter wheat cycle and three months in Central Mexico near Mexico City. The course is conducted with a generous support from the Mathie Family Foundation of the United States of America.
Human Resources Development

Development of Software for Wheat Breeding

Mr. S. Konopkin from Krasnodar Agricultural Research Institute, visited the CIMMYT Office in Almaty to develop software for wheat breeding programs. The commercial software products available at present are all based on English language, costly and require special training. The objective of Mr. Konopkin’s work was to develop simple software for small or medium size wheat breeding programs which would be able to develop the catalogue of crosses, automatically advance the selected lines to the next generation, write the selection history, prepare the field books and provide statistical tools at the yield trial level. A 10-day stay in Almaty allowed Mr. Konopkin to make the first version of the software, which was later checked with the wheat breeding program at the Kazakh Institute of Farming in Almalybak. The new software is simple and based on the well-known program “Excel” available in every PC. However, some training and explanation is needed before starting the use of this program.

A Regional Training Course On Analytical Methods of Soil, Plant and Water Analysis Organized

The regional training course was jointly organized by the Tajik Research Institute of Soil Science in Dushanbe, Tajikistan and ICARDA in Dushanbe from 11 to 20 of March 2001. Twelve scientists from Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan attended the course. During the course, lectures on evaluation of EC and pH of water, soil and soil solution; soil water extract analysis; evaluation of organic matter, phosphates, potassium and nitrogen content in soil, water and plants; plant tissue diagnostics; microelements and heavy metals content in soil and plants were delivered. The participants appreciated the efforts of the course organizers and considered it as very useful. The participants suggested that another course on heavy metals detection be organized in the region in future.

English Training Courses Completed

Two intensive English language training courses were completed; one in Tashkent, Uzbekistan, and the other in Dushanbe, Tajikistan. The course in Tashkent, organized for the collaborating scientists from Uzbekistan and Kazakhstan, was started on 1 November 2000 and was completed on 28 February 2001. Dr. S. Nurmatov, new Director General of the Uzbek Scientific Production Center of Agriculture (UzSPCA), and Dr. S. Beniwal, Head of CGIAR-PFU, attended the closing ceremony to congratulate participants and present them certificates. A total of 32 scientists from Uzbekistan and one scientist from Kazakhstan received certificates for completing the course, which was organized at three levels (Beginners, level II and level III).

In the training course in Dushanbe, 30 young scientists received the English training. The closing ceremony was attended by Acad. Bobo Sanginov, President of the Tajik Academy of Agricultural Sciences, and Dr. S. Beniwal, who distributed certificates of completion to the participants. The course was supported from the ADB-supported project funds.
A Regional Training Course on Irrigation Scheduling and Monitoring Techniques Organized

A regional training course on "Irrigation Scheduling and Monitoring Techniques" was organized in Tashkent, 26-31 March 2001. The course was jointly organized by the Central Asian Irrigation Research Institute (SANIIRI), Tashkent, Uzbekistan, and ICARDA under the aegis of the ADB-supported project “On-farm Soil and Water Management for Sustainable Agricultural Systems in Central Asia”. The main objective of the course was to expose scientists to improved technologies of irrigation scheduling and monitoring technology.

The course was attended by 12 young specialists from CAC countries; one each from Azerbaijan and Armenia, two each from Kazakhstan, Kyrgyz Republic, and Turkmenistan, and four from Uzbekistan. Local and International experts delivered lectures on irrigation scheduling for different crops and irrigation techniques, and estimation of crop water requirements.

The course participants also visited the experimental sites of the Uzbekistan/ICARDA collaborative activities in Kholodnya steppe and at Boykozon, where they saw different water and soil conservation and monitoring technologies, which are being evaluated.

Three National Workshops Organized on Sheep Flock Management for Farmers

Three National Workshops were organized on sheep flock management, one each in Kazakhstan, Kyrgyzstan and Uzbekistan on 14, 16 and 27 February, respectively, under the IFAD-supported project on "Integrated feed and livestock production in the steppes of Central Asia". They were basically directed towards the training of livestock farmers in these countries. The major topic of the workshops was management of sheep flocks before and during the lambing period. Scientists presented recommendations on livestock feeding, management and animal disease control. In Uzbekistan, presentations were also made by three farmers themselves who shared their experiences on winter lambing, use of ewe-lambs in the first year of their birth, and on breeding big size lambs. Each of the three workshops was attended by 10-20 farmers, who were mostly small private farmers, as well as by livestock specialists and local agricultural administrators. The workshop in Kyrgyzstan was held at the barn of a farm. All the three National Workshops were found very useful by the farmers and the local administrators. The farmers enjoyed sharing their experiences and learning from the scientists and from one another.

Program Publications

Proceedings of the Workshop on “Conservation Tillage: A Viable Option for Sustainable Agriculture in Eurasia”

The long-awaited Proceedings of Conversation Tillage Conference in Shortandy in September 1999 have been finally published. The conference was jointly organized and supported by NACAR, FAO, CIMMYT and ICARDA. It was the first international conference in the region devoted specifically to conservation tillage, which was attended by the world leading experts in the subject. The publication is in English and consists of 39 papers numbering 194 pages. The book is available from CIMMYT office in Almaty and ICARDA office in Tashkent.
A Catalogue on Melon Prepared

A catalogue on melon has been prepared by the staff of the Uzbek Research Institute of Plant Industry in Tashkent. The morphologic and gustatory traits of 106 local varieties of melons grown in Uzbekistan are described in the catalogue in Uzbek, Russian and English languages. These include 21 early-ripening, six early-mid-ripening, 46 mid-ripening and 37 late-ripening varieties.

IPGRI Newsletter No. 22 for Central & West Asia and North Africa

The No. 22 Newsletter, which is published in English, was translated and published into Russian. The following articles on plant diversity and its study and conservation activities in Central Asia were published in this Newsletter:

- S. Padulosi. Joining hands to safeguard and promote the use of pomegranate species in CWANA.
- Asirmukhammed Saparmuradov (Turkmen Experimental Station on Plant Genetic Resources, Gary Gala, Turkmenistan). The Turkmen Experimental Station on Plant Genetic Resources.
- Khamidulla Khasanov, Uzbek Research Institute of Plant Industry, Tashkent, Uzbekistan. Alycha.

Miscellaneous News

Agreement Signed Between Georgia and CIMMYT

The Georgian Academy of Agricultural Sciences and CIMMYT signed an agreement on February 12 to expand the collaboration in wheat and maize research. The two sides agreed to have exchange of the germplasm, joint research and training programs and seek funding for the priority programs. The Agreement anticipates establishment of a sub-regional CIMMYT Office in Tbilisi for the Caucasus. The Office will serve the three Caucasian countries: Armenia, Azerbaijan and Georgia and will be part of the CIMMYT Program for Central Asia and Caucasus. The presence of CIMMYT Office in Tbilisi will facilitate communication and joint activities in the region.

Farewell to Dr. Gnanathurai of ADB

Dr. Gnanathurai, the Resident Representative of ADB in Tashkent, was given a farewell dinner by the PFU/ICARDA-CAC on the occasion of his leaving Tashkent for Manila. It must be mentioned that Dr. Gnanathurai, while in Tashkent, provided excellent support to the S&W-CA project and its activities. He will take over as an Assistant Chief Economist at ADB Headquarters in Manila. Thank you Dr. Gnanathurai and best wishes to you in your new assignment.

At the same time, we very much welcome Dr. Peter Darjes, the new Resident Representative of ADB in Tashkent, and look forward to our association with him for our joint project on On-farm soil and water management in Central Asia.
Congratulations

Dr. Sanjaya Rajaram, a Distinguished Scientist and the Director of Wheat Program at CIMMYT, and the CIMMYT Focal Point for the CAC Program, received Padma Shri Award by the Government of India. This award is the third highest honor granted to civilians in India. It recognizes a person's contributions to scientific research and development and to the society in general. The award was presented to Dr. Rajaram in March in New Delhi. Our heartiest congratulations to him for this distinction.

Acad. Bobo Sanginov, a member of the Steering Committee of the CGIAR-CAC Program from Tajikistan, was reelected as the President of Tajik Academy of Agricultural Sciences. PFU congratulates Acad. Sanginov for this achievement and honor and wish him every success in his work. The Program looks forward to continue working with him in future as well.

Acad. Jamin Akimaliev, President of the Kyrgyz Agrarian Academy, was recently re-elected as its President for a second 5-year term. Our congratulations to Acad. Akimaliev, who is the Kyrgyz Focal point in the CGIAR-CAC Program. We look forward to working with him in future as well.

Dr. Akmukhammed Durdyev, who was till now Head of the Main Scientific and Technical Department (MSTD) of the MAWM of Turkmenistan, was appointed as the Chairman of the Association of "Turkmen-cotton", effective from 1 February 2001. The PFU congratulates Dr. Durdyev on his new appointment and promotion as the position is equivalent to a Minister, and wishes him well. We also take this opportunity to thanks him for his excellent support and cooperation and contributions to the CGIAR-CAC Program activities in Turkmenistan.

In his place, Dr. Ilmurad Meredov has been appointed as the new Head of the MSTD in MAWM of Turkmenistan. We wish him well and look forward to working with him.

Dr. Sherali Nurmatov, Director of the Cotton Growing Institute in Tashkent, has been appointed as the new Director General of the Uzbek Scientific Production Center of Agriculture (UzSPCA) and a Deputy Minister In-charge of Research in the Ministry of Agriculture and Water Resources (MAWR) of Uzbekistan. The PFU congratulates Dr. Nurmatov on this appointment and wish him every success in his work.

We also would like to put on record the excellent support and cooperation that the outgoing Director General of UzSPCA, Prof. Najmetdin Mahmudkhodjaev provided to the CGIAR-CAC Program and its activities in Uzbekistan. He has taken over as the Head of the Cereals Department in UzSPCA.

Dr. Victor Dragavtsev, Director General of the Vavilov Institute of Plant Genetic Resources in St. Petersburg, Russia, was elected as the Fellow of the Russian Academy of Agricultural Sciences in February of this year for his profession achievements. We send our heartiest congratulations to Academician Dragavtsev for this high professional recognition of his work, and wish him much more success in his endeavors in future. We also appreciate the cooperation of this Institute in CGIAR-CAC Program activities.

Forthcoming Events

Training Workshops

1-8 May  Traveling workshop for soil and water management in West Asia (Jordan, Syria and Turkey) ICARDA/West Asia
2-5 May  Epidemiological research methodologies for animal diseases (Almaty, Kaz) ILRI/ICARDA/Kaz
21-25 May  Feeding strategies for livestock production in the dry areas (Samarkand, Uzb) ICARDA/Uzb
28 May- 2 June  Socioeconomic methodologies in livestock and soil and water management research (Ashgabat, Tur) ICARDA/Tur
Miscellaneous News

7-11 June Marginal water for agricultural production (Almaty, Kaz)
ICARDA/Kaz
Traveling workshop on crop diversification and tillage
(Almaty, Kaz, Bishkek, Kyr)
ICARDA/Kaz/Kyr
12-15 June Production of forage for rainfed and irrigated lands
(Bishkek, Kyr)
ICARDA/Kyr
9-12 July Terracing on sloping lands (Dushanbe, Taj)
ICARDA/Taj
27-29 June Breed characterization of small ruminants in the
Caucasus (Tbilisi, Geo)
ICARDA/ILRI/Geo

Planning/Coordination Meetings

August National planning meetings of the IFAD-IIFL-CA and
ADB-S&W-CA projects
ICARDA/CA-NARS
End August Regional planning and coordination meetings of the
IFAD-IIFL-CA and ADB-S&W-CA projects
ICARDA/CA-NARS
17-20 Sep CAC/ICARDA Regional Planning and Coordination
Meeting (Dushanbe, Taj)
ICARDA/CAC
21 Sep PSC Meeting of the ADB-S&W-CA Project (Dushanbe)
ICARDA/Taj/ADB
23-24 Sep PSC Meeting of the IFAD-S&W-CA Project (Ashgabat)
ICARDA/Tur/IFAD

Note from Editors

Dear Readers,

We are happy to produce the No. 7 Issue of the CAC Newsletter. This issue, like the past
issues, contains news about the activities of the CGIAR Collaborative Program for
Sustainable Agricultural Development in Central Asia and the Caucasus.

It is heartening to note that the activities of the Program have gradually increased, and
now there is more emphasis on the technology transfer activities. This is reflected in the news
items under the theme on "Productivity of Agricultural Systems". Also, it is good to note that
the training activities in the Program have considerably increased.

From this issue, we have also included a new heading on Forthcoming Events of the
Program to keep our readers informed of the future Program activities.

We take this opportunity to express our sincere appreciation to collaborating scientists
from the CAC and CG Centers for contributing news items for the Newsletter. In future, we
indeed would like to include more news on the activities of our donors.

Your suggestions to improve the Newsletter and its contents are always welcome. We
send our best wishes to our stakeholders and readers for 2001.

The Editorial Committee:
Dr. S. Beniwal, Chief Editor
Dr. Z. Khalikulov, Editor
Ms. M. Turdieva, Editor
Ms. E. Solodennikova, Technical Editor