



CAC NEWS

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Consortium
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ADB - funded 'Soil and Water' Project Successfully Completed

ADB-funded project on "Improving Rural Livelihoods through Efficient On-Farm Water and Soil Fertility Management in Central Asia" (RETA 6136) has been successfully completed in August, 2007. This project was implemented in Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan. A number of new technologies such as for amelioration of magnesium rich sodic soils, water-wise cost effective technologies, bio-drainage for control of ground water table, conjunctive use of saline and drainage effluents, resource conserving zero till technology, etc have been developed and transferred to the farmers for wide adoption. The implementation of the project in farmer participatory mode helped in raising the farmers' awareness and hands-on technology development and transfer processes.

Zero till technology tested in Kazakhstan, Tajikistan, Turkmenistan and Uzbekistan gave very promising results and it now occupies close to 100,000 ha in the rainfed winter wheat systems in Southern Kazakhstan. The availability of good prototypes of planters in other countries is the only bottleneck that needs to be removed to result in significant benefits to farmers in other Central Asian countries. The safflower production technology has spread to more than 70,000 ha in Southern Kazakhstan. Raised bed systems tested extensively in Azerbaijan and southern Kazakhstan allowed seed saving by almost 50% while improving the productivity of winter wheat.

The research conducted on irrigation methods in flat and sloping lands has clearly brought out that surface mulching combined with alternate furrow irrigation and/or cutback irrigation not only increases water use efficiency by 30-50%, but also improves the cotton productivity by 15-24%. Micro-furrow irrigation technology researched in Tajikistan not only reduced soil erosion by 80% in sloping lands (up to 10% slopes), but also improved the water use efficiency in cotton by nearly 30% and yield by 20%. The average net benefit of growing cotton using micro-furrow irrigation is 43% higher than the traditional irrigation system.

Message from Acad. Jamin Akimaliev, Director, Scientific Research Institute of Agriculture of Kyrgyzstan

Dear colleagues,

First of all, I would like to use this opportunity to extend my heartfelt greetings to you through the CAC Newsletter. Over time, this newsletter has become a tribune for all the stakeholders of the CGIAR Program for Central Asia and the Caucasus. I feel honored to speak about the recent advances in agricultural science in Kyrgyzstan.



I am happy to say that collaborative researches on germplasm improvement have led to development of high yielding stress-resistant varieties of wheat (Djamin, Zubkov, Azibrosh and Almira), barley (Adel) and chickpea (Rafat) in Kyrgyzstan. These varieties are now being multiplied for a wider farmer adoption under the SLM-R project. Collection missions organized in 2006 added as many as 266 entries of grain and legume crops to our existing germplasm collections of 1,240 accessions. Germplasm documentation in the national database will now ensure its accelerated use by national, regional and international partners.

Kyrgyzstan has joined the multi-country initiative on sustainable land management in Central Asia (CACILM). I am sure that CACILM would give a new impetus to research on management of natural resources, crucial for improved livelihoods of millions of the rural poor who depend on them. I believe that sustainable land management research (SLM-R) will succeed in enhancing the productivity of natural resource base and help reversing land degradation processes in the region.

Integrated Pest Management research conducted jointly with ICARDA and Michigan State University (MSU) has led to identification of mass rearing protocols for the beneficial insects. These IPM researches are gradually resulting in more promising outputs on the field scale.

Capacity building in the NARS has always been a high priority for all the CAC countries. Farmer participatory researches on crop, soil and water management, farmer field schools on IPM, training programs including on English language, seminars, workshops, thematic consultations on priority setting, socioeconomic and policy researches conducted jointly with CAC Consortium partners are benefiting the national programs immensely.

I believe that these joint endeavors led by the CGIAR CAC Consortium bring us closer to our common dream of efficient and environmentally sustainable agriculture. I wish to thank all the Consortium partners, the national governments and the international donor community for their whole-hearted support in contributing to better livelihoods through accelerated rural development.

Acad. Jamin Akimaliev

Important Events

ADB - funded 'Soil and Water' Project Successfully Completed (Continued from page 1)

The new resource conserving technologies reduce the tillage and crop establishment costs, save in fuel and labor, and result in timely planting of the crops. The zero till technology induced cost reduction and yield enhancing effects amount to more than

USD 40 per ha, suggesting a saving of nearly 4 million USD from 100 thousand hectares of zero till wheat in Southern Kazakhstan alone.

Regional and Steering Committee Meetings of the Livestock Project



Participants of the Regional and Steering Committee meetings

The First Regional Workshop and Steering Committee Meeting of the ICARDA-IFAD project on "Community Action in Integrated and Market Oriented Feed-Livestock Production in Central and South Asia" were organized from 12-13 September 2007 in Issyk-Kul, Kyrgyzstan. The events were attended by scientists, research administrators, donor representatives and experts from Central Asian countries and Pakistan. During the meeting, the participants reviewed the project activities, shared their experiences and presented the results of the Project. In addition, they also assessed and compared livestock research approaches in Central and South Asia in order to plan future Project activities.

Dr. Raj Paroda, ADG, International Cooperation, ICARDA,

emphasized that rangeland management research in the project should be linked in a manner that it provides technical backstopping for the CACILM initiatives. While assuring ICARDA's continuous support, he underlined the need for traveling workshops to promote, disseminate and project the outputs of the livestock research programs.

Dr. Carla de Gregorio, Grants Coordinator, Asia and the Pacific Division, IFAD, strongly emphasized on the need for transferring new technologies to rural smallholders, especially to women who are involved in processing and marketing of livestock products. She agreed with Dr. Paroda that capacity building of NARS for conducting participatory researches is a must, especially considering the absence of vibrant extensions systems in the region, particularly so for the livestock production.

Dr. Liba Brent, International Consultant, University of Wisconsin, described ways and means to add value to local processing of goat fibers by women in Tajikistan. Dr. Barbara Rischkowsky, Project Coordinator, ICARDA, apprised the workshop participants on the status and listed the milestones for the project as under:

- National Planning Workshops for the second year will be organized in October 2008;
- Project Review Mission by IFAD independent consultant will be carried out in early March, 2008;
- Second Regional Workshop and Steering Committee Meeting will be hosted by Pakistan in November 2008, wherein at least one policy maker from each participating country will be invited.

CACILM Project SLM-R Launched in Central Asia

The activities of the Sustainable Land Management Research Project, implemented by ICARDA under the CACILM Multi-country Partnership Framework, are currently actively underway.

During the Project Inception Workshop organized on 2-4 July, 2007 in Tashkent, Uzbekistan, the technical program of the project was outlined, research sites were selected, the national coordinators of the project were assigned, and budgetary allocations per country/site and research theme were agreed. As a follow-up to the workshop, technical programs for each of the identified sites have been finalized, except for Tajikistan. In addition, agreements for the implementation of the SLM-R project have been signed with all the national partners as per the Grant Agreement # TA 6357 signed between ICARDA and ADB. The first installments of funds have also been released to the national coordinators to immediately initiate the works. Dr. Raj Gupta, Manager, SLM-R project, has already circulated a vision

document to serve as Research Prospectus for sustainable land management for inputs of the national partners and fine-tuning.

Procurement process of need-based farm implements and research equipment for monitoring salinity, soil moisture, NDVI (biomass), and laser assisted precision land leveling for improvement of water use efficiency is already underway. The research sites are being characterized in GIS framework for inclusion in the Research Prospectus. An independent NGO "Agri-business and Entrepreneurship" has been sub-contracted to conduct the socioeconomic and policy advocacy component of the SLM-R Project under ICARDA's technical guidance. The technical program developed will address varied issues as indicated in the table below (Table 1).

Need-based trainings have been identified for the scientists, technicians and the farmers, which will be conducted as soon as the equipment/implements reach the research sites.

Table 1. Issues to be addressed by the SLM-R technical program

Kazakhstan	Kyrgyzstan	Turkmenistan	Uzbekistan
Salinity and low water productivity in rice-wheat systems, Re-use of drainage waters, wind erosion, biomass production, germplasm use for abiotic stresses, tillage and crop establishment	Shallow soils and fertility, salinity, high water table, re-use of drainage waters, irrigation-induced erosion, residue management, seed production and crop diversification	Tillage and crop establishment, residue management, surface cover on steep slopes, salinity management, and crop diversification and intensification, improving water productivity	Leaching methods, conjunctive use of water, germplasm for abiotic stresses, fodder for livestock, and animal nutrition in desert areas, water-wise technologies, and crop diversification using resource conserving technology (RCT) platforms

Note: Technical program for Tajikistan is yet to be finalized.