

Final Workshop Report¹

Assessing and Designing Strategies to Strengthen Regional Plant Breeding and Associated Biotechnology Capacity in the Caucasus²

Tbilisi, Georgia – 21-22 February 2007

The 20 participants of the regional workshop represented the three Caucasus countries namely Armenia, Azerbaijan and Georgia. The event also was attended by representatives from the CGIAR Centres (CIMMYT and ICARDA), as well as a scientist from Turkey, who carried out the plant breeding and associated biotechnology in his country.

To set the scenario for the discussion six oral presentations were organized:

- Assessment of the National Plant Breeding and Associated Biotechnology Capacity Worldwide: Focus on Caucasus – Mr. Elcio P. Guimaraes
- ICARDA/CIMMYT's Crop Improvement Strategy for the Caucasus – Mr. Alexei Morgounov
- Turkey Plant Breeding and Associated Biotechnology Capacity Assessment – Mr. Nusret Zencirci
- Azerbaijan Plant Breeding and Associated Biotechnology Capacity Assessment – Mr. Javanshir Talai
- Georgia Plant Breeding and Associated Biotechnology Capacity Assessment – Mr. David Bedoshvili
- Armenia Plant Breeding and Associated Biotechnology Capacity Assessment – Ms. Armine Amyan

The process of arriving at a consensus on national and regional priorities started with a presentation summarizing the list of issues highlighted by the participants during the three national workshops (Azerbaijan, Georgia and Armenia). The participants were asked to revise the long list and come up with four or five major issues; after a general discussion the countries agreed on seven subjects. The next step was to prioritize them, which was done by constructing a table with the three countries on top and the list of topics as rows. Through assigning 1 (least important), 2 or 3 (most important) crosses to each topic the participants ranked the topics, in addition they indicated if the subjects were to be dealt at regional and/or national. According to the group two were truly regional and five were seen as country and/or regional level.

In the sequence there are the seven major issues in order of priority and the activities proposed by the group to tackle them. Unfortunately it was not possible to attribute

¹ This report was prepared by Elcio P. Guimaraes (FAO) and David Bedoshvili and Alexei Morgounov (ICARDA/CIMMYT) on 28 February 2007.

² Some information on biotechnology was obtained from the Proceedings of the FAO/UNESCO subregional workshop on "Agricultural Biotechnology and Biosafety for Food Security and Rural Development in the Caucasus Region and Moldova". This event was held in Yerevan, Armenia, 3-6 November 2003.

responsibilities for implementing the proposed activities; nonetheless they represent a clear prioritized demand from the region and it is an excellent guide to donors' investments in use of plant genetic resources through plant breeding in the region.

1) Capacity building on plant breeding

Ranked as the first priority at the regional level the scope of capacity building goes from short-term training on specific breeding techniques to improving the educational level of the scientists to MSc or PhD degrees. The proposed activities are:

- To facilitate in-country plant breeding education to bachelor students in the Agrarian Universities since these students sometimes perform field work (in association with senior plant breeders);
- To assist countries in educating at international level their scientists through providing opportunities for MSc degrees on plant breeding;
- To make possible the realization of short-term training courses on specific subjects focusing on effective breeding methods and considering the particularities of each crop and region;
- To stimulate international organizations and/or neighboring countries to organize regional and international short-term training courses including the participation of international specialists;
- To assist nations through in-country language training (English) to overcome barrier on communication and allowing access to scientific knowledge;
- To take advantage of Turkey's offer to provide short-term plant breeding training for scientists from the Caucasus region;
- To identify in the region or neighboring countries universities with strong MSc degree plant breeding programmes to educate breeders from the region.

2) Information and networking

Access to information, mechanisms to exchange national and regional information, and facilities to promote the first two were selected as the second most important regional priority to help strengthening the countries capacity to use plant genetic resources. The main activities proposed are listed as:

- To assist each country in the region to establish a national information system on plant genetic resources connecting the genebanks, the Research Institutes and the Agrarian Universities;
- To stimulate international organizations and/or neighboring countries to organize regional and international conferences facilitating information exchange among genebank managers and breeders, as well as bringing the advances in the areas achieved worldwide;
- To stimulate international organizations and/or neighboring countries to organize regional conferences to discuss efficient mechanisms for information access and exchange in the region;
- To indicate the needs for providing technical and operational facilities to facilitate information access and to promote data exchange at national and regional levels;
- To help subscribing to an agricultural research journal in Russian and other foreign sources of technical plant genetic resources publications;
- To help developing web-sites in the national Research Institutes that are dealing with plant genetic resources and also a common site for the region;
- To produce a plant breeding newsletter in Russian language and/or translate the PBN-L news published by FAO and Cornell University to Russian.

3) Seed systems

The group was very strong about having the issue of lack of seed production and distribution system at the national levels ranked very high. There was a full agreement that for short-

term and direct impact to production and farmers seeds are highly relevant. The proposed activities maybe carried out at the national or regional levels:

- To promote the establishment of seed growers' association with the responsibility to produce high quality seeds;
- To provide technical support and technology to better seed production through information exchange (technical meetings);
- To indicate to the local government and the donor's community that the lack of equipment (machineries) is the highest limiting factor for production of quality seeds;
- To stimulate the local governments to develop and implement adequate policies supporting seed production in the countries.

4) Support to breeding programmes

Breeding activities rely primarily on external support, thus it falls lock in not having long-term support and planning.

- To provide small equipment (machinery) to support breeding activities since all activities are done by hand;
- To strengthen linkages with international breeding research communities, including the CGIAR centres;
- To make efforts to include national PGRFA as parents on the breeding programmes and not only rely on foreign materials;
- To work with the Governments to enhance support to breeding communities including genebank managers and biotechnologists;
- To promote regional breeding programmes for crops with regional importance, such as wheat.

5) Policy and awareness

Participants were very excited about the idea of raising awareness regarding the importance of PGRFA conservation and use, however, they were skeptical about the response of the policy-makers to it. It was stressed that messages coming from outside echoes strongly in the policy-makers than internal dialogues.

- To prepare and have a strategy to disseminate PGRFA information materials to policy-makers and civil society showing the contribution and the importance of PGRFA;
- To have a dialogue with governments stimulating them to join the International Treaty on PGRFA;
- To organize workshops showing international experiences in drafting laws regarding PGRFA conservation and use, including seed systems;
- To organize workshops on international experiences on mechanisms that promote sustainable use of PGRFA, such as breeders' right, IPRs, etc;
- To promote exchange of visits of policy-makers from the region to other countries to learn experiences elsewhere regarding PGRFA conservation and use;
- To promote regulations to introduce breeders' rights and other mechanisms to collect royalties

6) Research and education

This topic relates to the interaction between the Research Institutes and the Agrarian Universities with special emphasis on mechanisms to strengthen the linkages between them.

- To have in place mechanisms to promote the development of joint research projects and value this interaction;
- To have formal mechanisms that stimulate training of Agrarian University students at the Research Institutes;
- To provide opportunities for hand-on student training at the Research Institutes;
- To open chairs for researchers at the Agricultural Universities and vice-versa;
- To prepare educational films to educate students

7) Breeding and biotechnology

The participants valued the role of biotechnology tools can play to support breeding and conservation activities, however they indicated that the linkages between these two groups are almost inexistent. The proposed following activities are related to how this relationship can be strengthened.

- To develop formal mechanisms to promote joint planning of activities;
- To give priority for biotechnology projects which proposes joint biotechnology/ breeding activities;
- To organize joint workshops of breeders and biotechnologists to facilitate communication and to provide better understanding of the needs and capacity to deliver from both groups;
- To establish a national coordinating body for breeding and biotechnology research.