

Code: TCP/KAZ/3202 (D)

Title: STRENGTHENING THE PLANT BIOTECHNOLOGY CAPACITY FOR SUSTAINABLE UTILIZATION OF PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

Country: Kazakhstan

Starting date: March 2008

Expiring date: February 2011

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PROJECT SUMMARY

In 2005, in partnership with CIMMYT and ICARDA, FAO made an assessment of breeding, plant genetic resources for food and agriculture (PGRFA) and related biotechnology capacities in the Central Asian countries. In 2006, a national consultation and a regional workshop were held in Almaty, Kazakhstan, to outline strategies to strengthen national and regional capacities in effective utilization of PGRFA through breeding and biotechnology.

One of the main needs identified in the region is a very weak linkage between biotechnology, breeding and PGRFA programmes. In comparison with other Central Asian countries, Kazakhstan has well developed biotechnology and breeding systems, as well as rich collections of Plant Genetic Resources (PGR). However, presently, these research sectors are developing independently, with no close interaction. The new methodologies and achievements in the area of biotechnology usually do not leave laboratory premises. Breeders use almost no biotechnologies in their work. Application of the methods of biotechnology and molecular biology for characterization, evaluation and utilization of PGR is rudimentary.

The proposed project aims at improving the effectiveness of PGR utilization for breeding through wide application of biotechnology tools/methods. The project includes the following components (outcomes):

- training of breeders, PGR specialists and biotechnologists on the modern approaches in breeding, PGR use and biotechnology that increase their interaction effectiveness in germplasm improvement and development of new varieties (human resources development);
- adoption of world's state-of-the-art advanced biotechnologies for breeding and PGRFA practices in Kazakhstan (technologies transfer);
- strengthening national and international linkages, facilitation of information exchange in application of biotechnology for breeding and PGR characterization, provision of the necessary required technical backstopping.

Expected outputs:

- up to twenty plant breeders, biotechnologists and PGR specialists from Kazakhstan trained in application of conventional and modern methods of pre-breeding, breeding and biotechnology through short- and medium-term courses;
- modern methods of pre-breeding, breeding and biotechnology are introduced and utilized in Kazakhstan;
- publications prepared and distributed to Kazakhstan scientists in local language related to plant breeding, applied biotechnology and PGR characterization. A mechanism in place to facilitate communication and information exchange;
- laboratory facilities upgraded.

The project of two-year duration will be implemented by the National Biotechnology Centre, Ministry of Education and Science of the Republic of Kazakhstan.

National Counterparts

Ministry of Education and Science

Funding Source

Technical Cooperation Programme

Budget

USD 395 000