



Food and Agriculture
Organization of the
United Nations



The International Treaty
ON PLANT GENETIC RESOURCES
FOR FOOD AND AGRICULTURE

Report on the implementation of the Programme of Work on Sustainable Use of PGRFA and Supporting Initiatives

Note by the Secretary

This document presents the Report on the implementation of the Programme of Work on Sustainable Use of PGRFA and Supporting Initiatives submitted by Jordan 22 November 2018.

The submission is presented in the form and language in which it was received.

University of Jordan, Dr. Abdullat

Breeding activities at the University of Jordan are considering different plant genetic resources such as landraces and crop wild relatives for the development of elite material with improved resilience to different abiotic stresses including drought and salinity. This led to the development of high yield and stable wheat and barley varieties that show high degree of tolerance to different stresses.

Several local and international funded projects related to characterization of Jordanian wheat and barley landraces were funded. Great genetic variations were detected in both targeted species that can be used for the benefits of local and regional farmers. Furthermore, several projects related to in vitro cryopreservation using tissue culture systems are ongoing that resulted in establishing efficient ex-situ conservation systems for several endangered plant species.

Jordanian barley and wheat landraces showing improved resilience to different abiotic stresses were introduced into local breeding programs to produce elite material with enhanced productivity under dry areas. Advanced yield trials are currently ongoing for most promising lines and are currently ongoing in collaboration with NARC.

Incorporating wild relatives and landraces in national breeding programs to produce new varieties to be used by local farmers is a mean to broaden the genetic diversity in targeted crops.

Projects related to characterization of Jordanian barley and wheat landraces under local environments identified genotypes with improved adaptation to such environments and genetic basis of resilience were unlocked.

Promoting the collection and conservation of exotic genetic material in Jordan is an important issue at the University levels. Such material is characterized and recommended to breeding programs in the region.

National Agricultural Research Center (NARC)/ Dr. Hajjaj:

- 1) Participatory plant breeding (PPB) still sunning at farmer fields.
- 2) Through evolutionary plant breeding (EPB) the farmer go to the field and select spike and NARC multiplied it then this material provide PPB program, in another hand this spike carry the name of farmer who is selected this spike.
- 3) From old project we inter Wheat and Barley landraces in PPB .
- 4) Old Project:
 - a) Access and Benefit Sharing from Genetic Resources and Traditional Knowledge in Jordan and granted from IDRC: 2008 - 2011
 - b) Project Title: Use of genetic resources to establish a multi country program of evolutionary-participatory plant breeding (included Jordan, Syria, and Iran) and granted from Treaty 2012-2014
 - C) " Use of genetic diversity and Evolutionary Plant Breeding for enhanced farmer resilience to climate change, sustainable crop productivity, and nutrition under rainfed conditions and granted from IFAD: 2018-2021

Other activities related:

- a) Awareness about farmer's rights
- b) Training how to face the climate change impact through different breeding program
- c) Awareness of the difficulties faced by women to access good and relevant seed and of the best strategies to facilitate their access to the varieties they co-developed with the EPPB and PPB program

National Agricultural Research Center (NARC)/ Dr. Abulaila:

Mapping current and future habitats of crop wild relatives (vegetable and fruit trees) under different climate change scenarios (phase one)

Promoting cultivation and utilization of local landraces of vegetables with aided small projects of added values and marketing for the products to local and outside markets.

National Agricultural Research Center (NARC)/ Eng. Khateeb:

Conventional wheat Breeding in its beginnings depends on selection of high-yielding landraces adapted to dry land conditions that include Haurani Nawawi, Haurani27, F8 and Safra Maan. There is many improved varieties now in the program their parents are those landraces.

Many landraces entered the wheat participatory breeding approach under the name of *Triticum turgidum* ssp. and had a number only with no names and were evaluated compared to the certified checks and had shown a superiority over the checks, that qualified them to reach the large scale stage.