National PGRFA Inventory of Serbia

Ministry of Agriculture and Environmental protection
Directorate for National Reference Laboratories
Plant Gene Bank

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EURISCO meeting
Tirana, Albania 19-21 may 2015
Current situation

- National Gene Bank activated in 2015
- Institutes and universities are main collection-holders (over 20,000 acc)
- National legislation is under preparation
- Subsidies for PGR conservation and sustainable use under the Ministry for Agriculture and Environmental Protection (Law on subsidies in Agriculture and Rural Development)
PGR status

- Genetic erosion of PGRFA is evident, due to:
  - Monocropping (maize, wheat)
  - Domination of foreign varieties and hybrids
  - Globalization of agriculture and market
- National collection is temporarily stored at +4C
- Accessions in National collection are in urgent need for regeneration and multiplication after 15 years
- Facilities for Gene bank provided: mid term +4C and long term -20C
- Equipment purchased
- Incomplete Inventory, documentation, characterization and evaluation
- National Gene bank is a part of National Complex of Reference Laboratories – Ministry of Agriculture and Environmental Protection
International Legal Framework

- Serbia has ratified a number of international conventions that related to PGR
- As a candidate for EU member state, follows the EU legislation on PGR,
- In the phase of harmonization with EU PGR directives
- CBD ratified (2001)
- ITPGRFA signed (2001), ratified (2013)
- Nagoya Protocol signed (2011)
National Legal Framework

- New Strategy for Agriculture and Rural Development adopted in 2014
- National Programme for conservation and Sustainable Use of PGRFA in Serbia has been prepared with the support of FAO TCP Project (ready for adoption by the Government in 2015)
- Draft Law on PGRFA Management prepared, (to be adopted by the Parliament until the end of 2015)
- National PGRFA Committee established
Plant Gene Bank

- Gene Bank equipment purchased with the help of two international projects:
  - SEEDNET (South East European Development Network for Plant Genetic Resources)
  - FAO TCP ("Support to the National PGRFA Programme")
National PGRFA Collection

- Transferred to the National Plant Gene Bank - April 2015
- Mid-term conservation on +4C
- Facilities for lon –term on -20C in place

- 4238 accessions from 249 species:
  - Cereals 2983 acc. (7 species)
  - Industrial Crops 367 acc. (6 species)
  - Vegetables 214 acc. (11 species)
  - Fodder Crops 285 acc. (9 species)
  - Medicinal and Aromatic Plants 389 acc. (216 species)
Institutions collection-holders

Responsible for: ex-situ and in-situ conservation, regeneration, multiplication, inventory, documentation

- Institute for field crops and vegetables, Novi Sad (cereals, maize, vegetables, industrial plants, fodder crops, MAP)
- Maize research institute Zemun Polje, (maize, sorghum)
- Institute for vine production and viticulture Niš
- Institute for fruits production Čačak
- Institut for fodder crops Kruševac
- Institute for vegetable crops, Smederevska Palanka
- Faculty of Agriculture, Belgrade (fruits and vitis)
- Faculty of Agriculture, Novi Sad (fruit and vitis)
- Faculty of Agriculture, Kragujevac, Čačak
- Institute for medicinal plants research, Beograd
- Institute for small grain cereals, Kragujevac
- Institute for biological research, Belgrade (in vitro collections)
- Center for agriculture and technological research Zaječar (cereals, maize, fodder crops, industrial crops)
- Center for potato research, Guća (duplicates from National collection)
- Center for Sugar Beet, Aleksinac
- Center for Tobacco, Niš
- Ministry for Agriculture and Environmental Protection-Plant Gene Bank
Maize Gene Bank
Institute for Maize Zemun Polje

- 2,238 local varieties
- 1,081 introduced varieties
- 23 introduced composites
- 237 introduced synthetics
- 2,287 introduced and domestic inbred lines
- Total 5,866 accessions
Fruit and Vitis collections

- Institute for Fruit Production Čačak (1223 genotypes)
- Faculty of Agriculture Beograd – Radmilovac (425 landraces of fruits and 550 Vitis genotypes)
- Faculty of Agriculture Novi Sad – Rimski Šančevi (1250 genotypes of fruits)
- Faculty of Agriculture Novi Sad - Sremski Karlovci (210 Vitis genotypes)
- Center for Vine production and Viticulture Niš (195 Vitis genotypes)
Wild Sunflower collection
Novi Sad
The National Inventory Focal Point is responsible for the compilation of data and management of the National Inventory of PGRFA.

Other data sources are known and data have to be obtained from PGRFA holding institutions (mostly held in books, excel sheets, access).

Official agreements between National Inventory Focal Point and holding institutions are made.

Contact persons for PGR documentation are recently appointed by each institution.

IPGRI/FAO MCPDL are the basis for the data structure.

Mode and period of sending data is to be agreed.

New data have to be compiled and transferred in relevant structure, step by step.

The National Inventory will cover important national ex situ collections and working collections.

Information and documentation unit in the Gene Bank - needs:
- Server
- Data base management software
- IT person
Documentation

Documentation in the Maize Gene Bank is made as a set of information about each genotype.

Germlasm characterization in Maize Gene Bank is made on basis of minimum MCPDL descriptors (IPGRI/FAO), based on botanical characterization of populations (Anderson and Cutter) and also on breeder's needs.
EURISCO

- All accessions from National Gene Bank Collection are already sent to EURISCO (near to 5000 entries)

- EURISCO National Focal Point from 2009

- EURISCO Data Sharing Agreement is sent in procedure for signature
ECDB Maize

- Serbia is the holder of European Crop Data Base for Maize

- Responsible person: Data Base Manager

  Dr Violeta Andjelkovic,
  Head of Maize Gene Bank
  Institute for Maize “Zemun Polje”- Belgrade
THANK YOU!