

WP 1

Creation of core collections and seed multiplication

Progress report for Y2

15 – 16 June 2020
2nd annual online meeting



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PARTNERS:

NPPC (18)	- NARODNE POL'NOHOSPODARSKE A POTRAVINARSKE CENTRUM
KIS (1)	- KMETIJSKI INSTITUT SLOVENIJE
BOKU (2)	- UNIVERSITAET FUER BODENKULTUR WIEN
CRI (3)	- VYZKUMNY USTAV ROSTLINNE VYROBY VVI
IFVC (4)	- INSTITUT ZA RATARSTVO I POVRTARSTVO
NARDI (5)	- INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE AGRICOLA FUNDULEA
MTA-ATK (6)	- MAGYAR TUDOMANYOS AKADEMIA AGRARTUDOMANYI KUTATOKOZPONT
SEL (9)	- SELGEN AS
IHAR (14)	- INSTYTUT HODOWLI I AKLIMATYZACJI ROSLIN – PIB
UP (15)	- PANNON EGYETEM
PRO-BIO (16)	- PRO-BIO OBCHODNI SPOLECNOST SRO
RGA (19)	- RGA, RAZISKOVALNA GENETIKA IN AGROKEMIJA, DOO
GS (21)	- POSLOVNI SISTEM GLOBAL SEED DOO CURUG
WSU (25)	- WASHINGTON STATE UNIVERSIT



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TASK1.1 Results achieved

TASK1.1 Identification of wheat, potato, soybean and buckwheat genetic material

Implementation of **Task 1.1 was completed:**

- ✓ the WP1 list of 172 genotypes of winter wheat and 93 genotypes of durum wheat, 197 genotypes of potato, 332 soybeans, and 200 of genotypes buckwheat
- ✓ updated in March (M23) with respect to the description of valuable traits of the respective germplasm
- ✓ **processing list of each species inventory collection** by EURISCO and Multi-crop Passport Descriptors with the MCPD V.2 (D1.1):

- ✓ ACCENAME - accession name
- ✓ ORIGCTY - country of origin (ISO 3166-1 code of the country)
- ✓ INSTCODE+ACCENUMB - institute code and accession number
- ✓ BREDCODE - breeding institute code (<http://www.fao.org/wiews/en/>)
- ✓ SAMPSTAT - biological status of accession
- ✓ COLLSRC - collecting/acquisition source
- ✓ STORAGE - type of germplasm storage
- ✓ ACCEURL - accession URL field



TASK1.1 Results achieved

TASK1.1 Identification of wheat, potato, soybean and buckwheat genetic material

- The inventory for each target crop **will be linked the website of the information system**



➤ Task 1.3:

Establish an information portal for genotypic and phenotypic characterization data of the core collections (months 49-60);

Responsible partner: KIS (Task leader: Vladimir Meglič)

Partners involved: CRI, IFVC, BOKU, NPPC

- **GENOTYPIC AND PHENOTYPIC DATA ON THE COLLECTIONS GATHERED DURING THE PROJECT WILL BE OF CONSIDERABLE INTEREST TO PLANT BREEDERS, FARMERS, AND RESEARCH SCIENTISTS.**
- **FRIENDLY INFORMATION PORTAL WILL BE ESTABLISHED TO MAKE THE C&E DATA**
- **AND ENSURE INTEGRATION WITH OTHER RELEVANT PGRFA PORTALS I.E. EURISCO, GBIS/I, ETC**



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TASK1.2 Results achieved

TASK1.2: Multiplication of genetic resources for further evaluation

KIS - WHEAT, POTATO

**BOKU - WHEAT,
SOYBEAN**

CRI - BUCKWHEAT

IFVC - WHEAT, SOYBEAN

SEL - WHEAT

IHAR - POTATO

PRO BIO - WHEAT

**NARDI - WHEAT,
SOYBEAN**

NPPC - WHEAT

GS -

WSU -



The seed of all wheat, potato, soybean, and buckwheat varieties are multiplied in all countries for the need for phenotyping trials next year to be carried out in WPs 2-6.



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The Standard Material Transfer Agreement (SMTA)

According to the GA project, all material distributed between partners will be covered by a signed standard material transfer agreement (SMTA).

Plant genetic resources for food and agriculture under development means material derived from the material, and hence distinct from it, that is not yet ready for commercialization and which the developer intends to further develop or to transfer to another person or entity for further development. The period of development for the plant genetic resources for food and agriculture under development shall be deemed to have ceased when those resources are commercialized as a product.



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The Standard Material Transfer Agreement (SMTA)

The two international instruments that govern the access to genetic resources are the ITPGRFA and the CBD

- ✓ access and benefit sharing under CBD are according to its Nagoya Protocol
- ✓ access to PGRFA, in the multilateral system of the International Treaty, has to be accompanied by an SMTA

- ❑ the recipients should comply with the relevant provisions of the ITPGRFA or the CBD and an MTA should be signed by the authorized person in the country of collecting, according to national laws for access to genetic resources of the country
- ❑ when required by the providing country, the access should be subject to the prior informed consent of the country
- ❑ phytosanitary regulations and any other import requirements must be sought from the relevant national authority of the receiving country



The Standard Material Transfer Agreement (SMTA)

What is MTA?

A material transfer agreement (MTA) is the legal contract between a provider and a recipient that sets out the terms and conditions under which plant genetic resources are transferred.

Different types of MTA:

- ✓ The standard material transfer agreement (SMTA)
- ✓ Additional conditions for PGRFA under development
- ✓ Other MTAs

What is the SMTA?

- The standard material transfer agreement) SMTA is a commercial contract drafted through international negotiations.
- It's not perfect, but it's all we have and we have to make it work.
- The SMTA looks complicated, but in fact the obligations are quite simple and not too onerous.



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The Standard Material Transfer Agreement (SMTA)

Obligations of the provider

- ✓ To make material under the multilateral system available expeditiously and free of charge
- ✓ To do so under the SMTA
- ✓ To list the material provided in the SMTA annex
- ✓ To inform the Treaty's governing body about the SMTAs entered into
 - ✓ *The governing body has adopted a schedule and requirements for reporting.*

Rights of the recipient

- ✓ Recipient can use the material for research, or for breeding or training.
- ✓ Recipient can develop new PGRFA products from the material and can protect them and commercialize them.
- ✓ But recipient cannot use materials for other purposes or for uses outside food and agriculture.



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The Standard Material Transfer Agreement (SMTA)

Obligations of the recipient

- ✓ **Not to take out IPRs over the material accessed from the multilateral system that restrict its availability to others**
- ✓ **To make available to the multilateral system non-confidential information resulting from research and development on the material**
- ✓ **To make a mandatory payment to the multilateral system if the recipient . . .**
 - ✓ develops a new PGRFA product derived from the material and
 - ✓ commercializes the new product and
 - ✓ restricts the availability of the new product to others for further research or breeding
- ✓ **If further availability is not restricted, then payments are voluntary**



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Types of restrictions that trigger mandatory payments

- ✓ Patents of the US type that restrict availability for research or breeding
- ✓ Technological restrictions like genetic use restriction technologies (GURTs)
- ✓ Contractual or licence restrictions
 - Plant breeder's rights would not as a general rule trigger mandatory payments*

Types of payment schemes

- ✓ **Normal payment scheme**
 - ✓ 1.1% of gross sales less 30% (i.e., 0.77%)
- ✓ **Alternative payment scheme**
 - ✓ 0.5% of all sales of PGRFA of same crop
 - ✓ Payable whether or not availability of new products is restricted
 - ✓ Option for period of 10 years renewable
 - ✓ Exercise of option must be notified to the Treaty's governing body



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The Standard Material Transfer Agreement (SMTA)

Methods of acceptance

- ✓ **SMTA allows for three methods of acceptance:**
 - ✓ **Signature**
 - ✓ **'Click-wrap' acceptance for internet orders**
 - ✓ **'Shrink-wrap' acceptance (current practice)**
- ✓ **Importance of 'click-wrap' form of acceptance**
- ✓ **FAO and Bioversity are developing appropriate software**

PGRFA under development

- ✓ **Basically, breeders' lines in process of development**
- ✓ **PGRFA under development to be available at discretion of developer during period of development**
- ✓ **If PGRFA are made available, must be under the terms of the SMTA**
- ✓ **Transfer can be subject to additional conditions, including payment of monetary consideration (This does not count as commercialization triggering mandatory benefit sharing.)**



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The Standard Material Transfer Agreement (SMTA)

Third-party beneficiary

- ✓ **Benefits under SMTA flow to multilateral system not to individual providers**
- ✓ **Providers have little incentive to enforce benefit-sharing obligations**
- ✓ **Multilateral system is the third-party beneficiary under the SMTA**
- ✓ **SMTA gives FAO the right enforce third-party beneficiary rights**
 - ✓ **Arbitration**
 - ✓ **Provides solution to problems of compliance**

What is the experience with the SMTA to date?

- ✓ **Please, contact with NFP in your country:**

<http://www.fao.org/plant-treaty/countries/membership/en/>

<http://www.fao.org/plant-treaty/countries/national-focal-points/en/>

<http://www.fao.org/plant-treaty/notifications/en/>

<http://www.fao.org/plant-treaty/countries/status-of-contributions/en/>



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Additional conditions for PGRFA under development

- ✓ Conditions are additional to those of SMTA
- ✓ Examples could include
 - ✓ methods of making information available or
 - ✓ obligation to report information on material back to provider
- ✓ Model additional conditions now being developed

Extension of SMTA to cover transfer of non-Annex 1 material held by CG centres

- ✓ MTAs adopted under 1994 in trust agreements with FAO
- ✓ Amended by FAO Commission in 2004
- ✓ View of CG centres: just use the same SMTA
- ✓ At 2nd session, governing body authorized CG centres to use SMTA with explanatory footnotes for non-Annex 1 material collected before the Treaty's entry into force



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Conclusions

- ✓ The SMTA could be simpler, but at least it is simpler than the other alternative.
- ✓ We need to gain experience of any problems with the SMTA and then improve its implementation.
- ✓ We need to do our best to make the SMTA and the multilateral system work

See: <http://ecobreed.eu/intranet/541-2/>

- ✓ Download for partners project ECOBREED



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Plan for Y3

- ✓ continued of the multiplied accessions of each species (PM 36)
 - ✓ for WP 2
 - ✓ for WP 3
 - ✓ for WP 4
 - ✓ for WP 5
 - ✓ for WP 6
- ✓ to end of the April 2021
- ✓ processing from passport data and results from the genotypic and phenotypic experiments (WP2- WP6) for Task 1.3
- ✓ selection and preparation of biological material for crop phenotyping in WP 7 (Contract of Work with PSI)
- ✓ dissemination activities
- ✓ exploitation activities
- ✓ demonstration events
- ✓ project communication



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Thank you very much for your attention



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