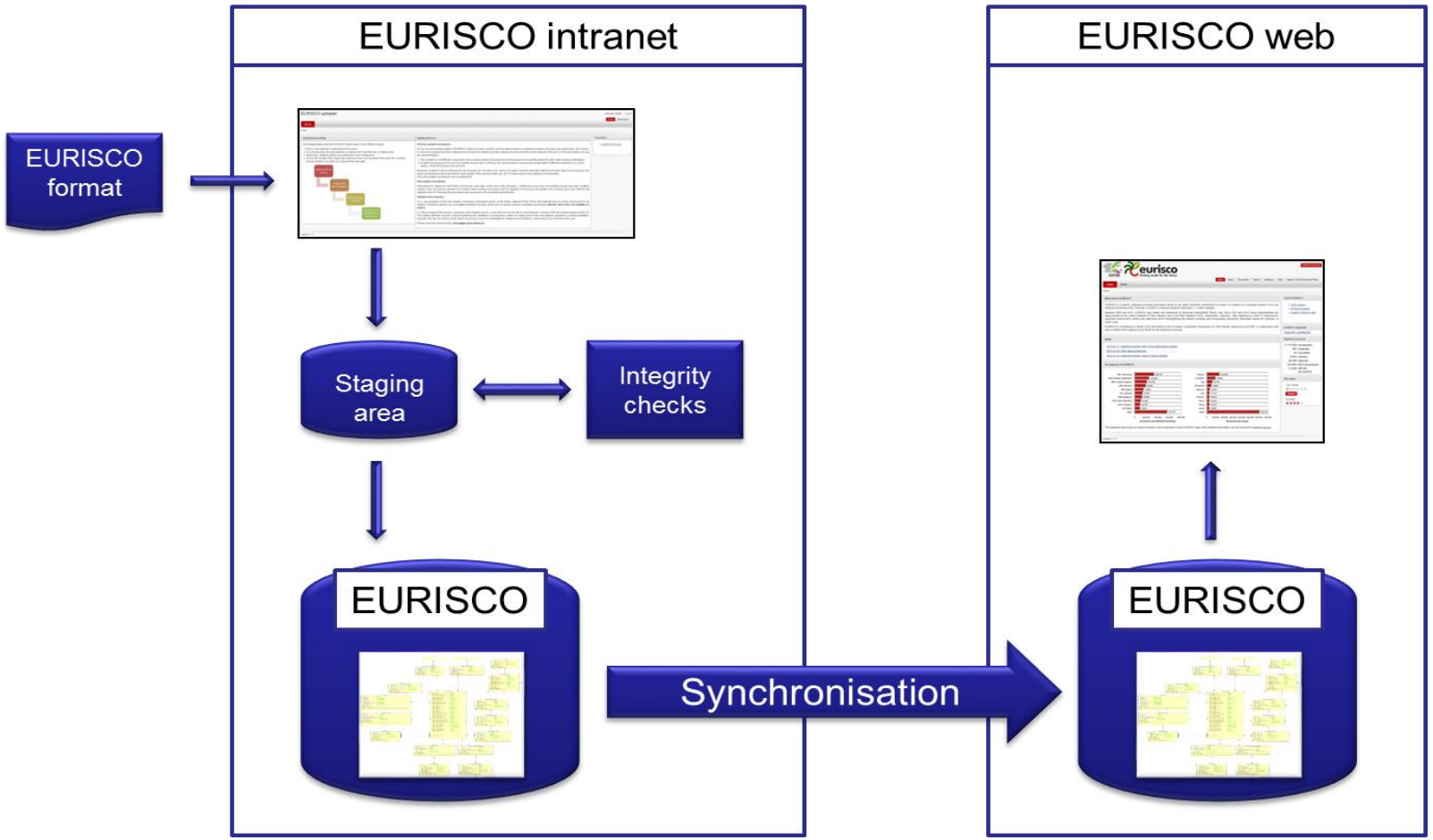
Stephan Weise, Ludmila Papoušková, Jan Svensson, Kjell-Åke Lundblad

# GRIN-Global x EURISCO

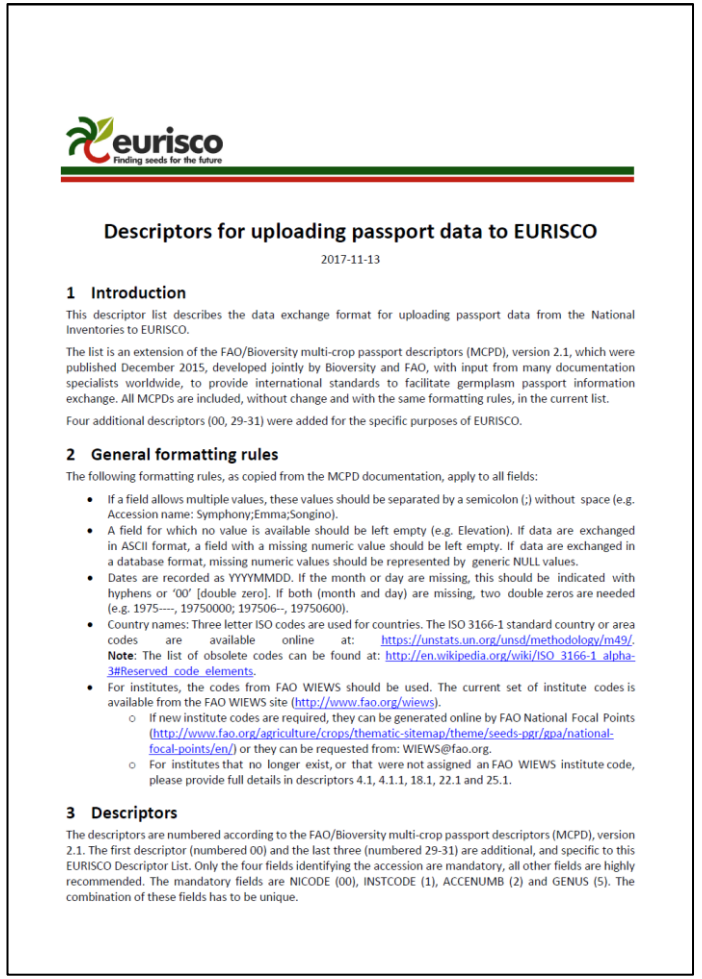
GRIN-Global Workshop 2021 for European Genebanks (GRIN-Global II)
18-21 October 2022, Prague, Czech Republic

# General upload procedure of EURISCO



# Prerequisite

- Provision of passport data using the EURISCO-MCPD format as of November 2017
  - MCPD v2.1
  - Four additional descriptors
    - NICODE
    - ACCEURL
    - AEGISSTAT
    - HISTORIC



eurisco
Finding seeds for the future

**Descriptors for uploading passport data to EURISCO**

2017-11-13

**1 Introduction**

This descriptor list describes the data exchange format for uploading passport data from the National Inventories to EURISCO.

The list is an extension of the FAO/Bioversity multi-crop passport descriptors (MCPD), version 2.1, which were published December 2015, developed jointly by Bioversity and FAO, with input from many documentation specialists worldwide, to provide international standards to facilitate germplasm passport information exchange. All MCPDs are included, without change and with the same formatting rules, in the current list.

Four additional descriptors (00, 29-31) were added for the specific purposes of EURISCO.

**2 General formatting rules**

The following formatting rules, as copied from the MCPD documentation, apply to all fields:

- If a field allows multiple values, these values should be separated by a semicolon (;) without space (e.g. Accession name: Symphony;Emma;Songino).
- A field for which no value is available should be left empty (e.g. Elevation). If data are exchanged in ASCII format, a field with a missing numeric value should be left empty. If data are exchanged in a database format, missing numeric values should be represented by generic NULL values.
- Dates are recorded as YYYYMMDD. If the month or day are missing, this should be indicated with hyphens or '00' [double zero]. If both (month and day) are missing, two double zeros are needed (e.g. 1975----, 19750000; 197506--, 19750600).
- Country names: Three letter ISO codes are used for countries. The ISO 3166-1 standard country or area codes are available online at: https://unstats.un.org/unsd/methodology/m49/. **Note**: The list of obsolete codes can be found at: http://en.wikipedia.org/wiki/ISO_3166-1_alpha-3#Reserved_code_elements.
- For institutes, the codes from FAO WIEWS should be used. The current set of institute codes is available from the FAO WIEWS site (http://www.fao.org/wiews).
  - If new institute codes are required, they can be generated online by FAO National Focal Points (http://www.fao.org/agriculture/crops/thematic-sitemap/theme/seeds-pgr/gpa/national-focal-points/en/) or they can be requested from: WIEWS@fao.org.
  - For institutes that no longer exist, or that were not assigned an FAO WIEWS institute code, please provide full details in descriptors 4.1, 4.1.1, 18.1, 22.1 and 25.1.

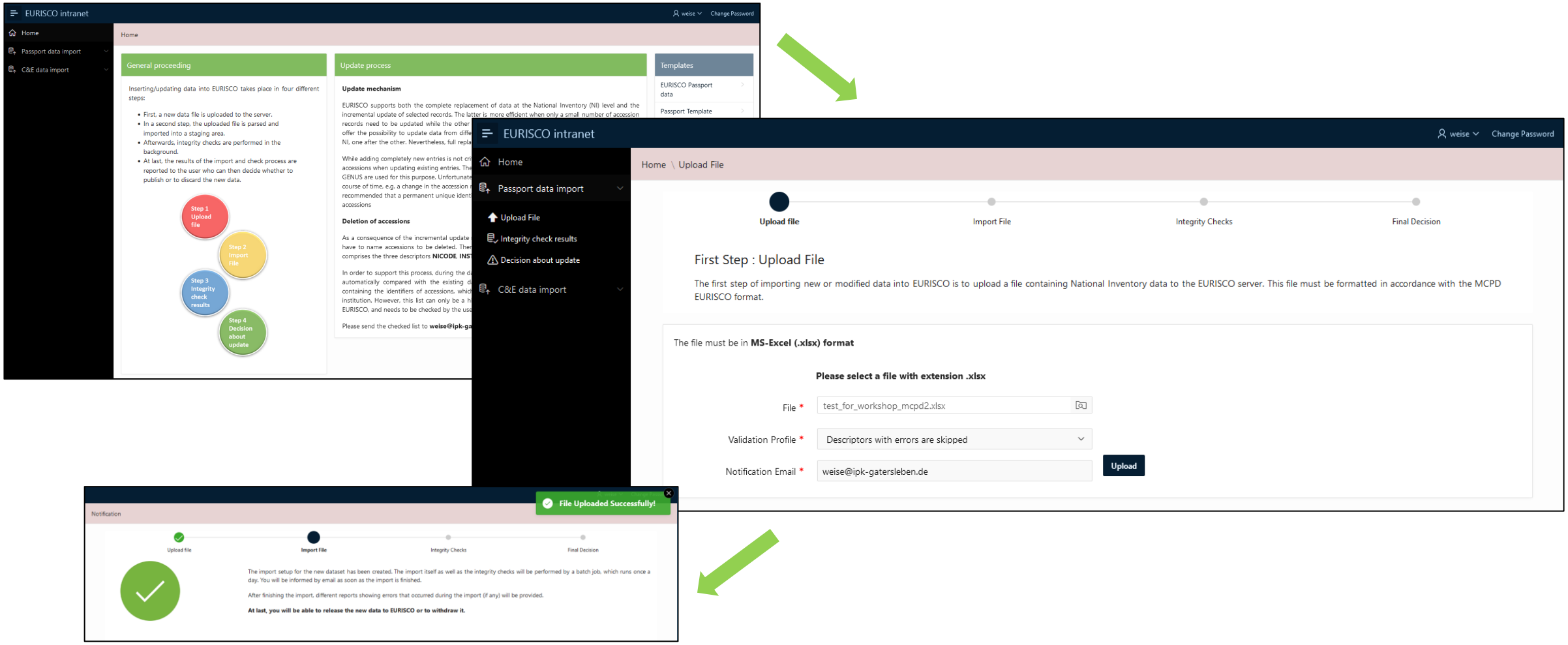
**3 Descriptors**

The descriptors are numbered according to the FAO/Bioversity multi-crop passport descriptors (MCPD), version 2.1. The first descriptor (numbered 00) and the last three (numbered 29-31) are additional, and specific to this EURISCO Descriptor List. Only the four fields identifying the accession are mandatory, all other fields are highly recommended. The mandatory fields are NICODE (00), INSTCODE (1), ACCENUMB (2) and GENUS (5). The combination of these fields has to be unique.

# Data exchange

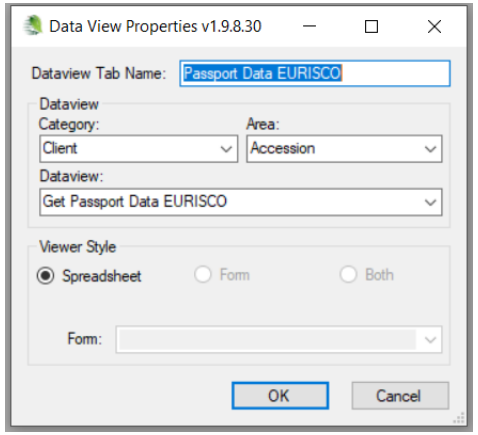
- Data could be provided by reporting function in GG
- MS-Excel file
- Upload via the EURISCO intranet

# Data exchange



# MCPD_ Report from GG (GRIN Czech/GeNBIS)

GRIN Czech: new Data View: Passport Data EURISCO



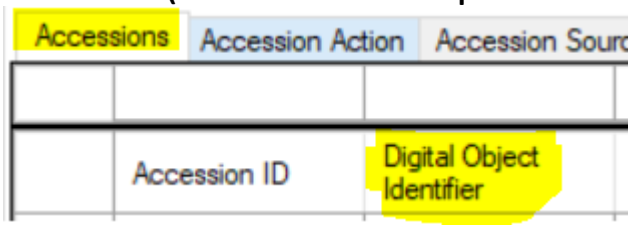

order_request | Web Order Request Attach | web_order_request_item | Web Cooperator | Web User Cart Item | Web User Cart | Passport Data EURISCO | Genetic Annotation | Genetic Marker | Genetic Marker Citation | Genetic Observation | Genetic Observation Data | Method Citation | Accession Inventory Group Map | Accession Inventory Group

| Accession ID | nicode | puid | instcode | ACCENUMB | collnumb | collcode | collname | collinstaddress | collmissid | Genus | Species | Species Authority | Subspecies | Subspecies Authority | cropname | accename | acqdate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6459 | CZE | | CZE122 | 01C0106055 | 2/80901 | | | Turkey | TUR-89 | Triticum | monococcum | L. | aegilopoides | (Link) Thell. | winter wheat | T. boeoticum..(Al... | 1996---- |
| 7327 | CZE | | CZE122 | 01C0106924 | | | | | | Triticum | aestivum | L. | aestivum | | winter wheat | Bohemia | 2007---- |
| 41851 | CZE | | CZE122 | 09H5700207 | | | | | | Lactuca | sativa | L. | | | head lettuce | Bohemia | 1964---- |
| 50348 | CZE | | CZE031 | 10F0700159 | | | | | | Pyrus | communis | L. | | | pear | Bohemica | 1992---- |

# MCPD_ Report from GG (GRIN Czech /GeNBIS)

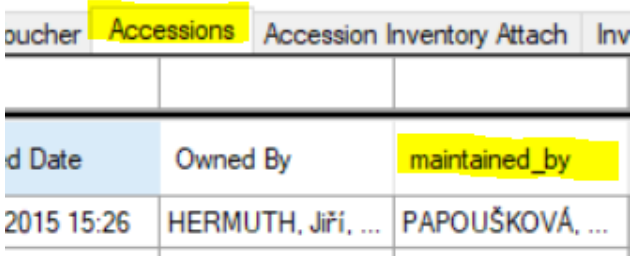
00. **NICODE** (National Inventory Code) = constant, e.g. CZE

0. **PUID** (Persistent unique identifier) = accession.DOI




1. **INSTCODE** (Institute code) = FAO WIEWS code of the institute where the accession is maintained;
usually it is the institute of the owner of the accession

GRIN Czech: centralized storage of seeds, new column: accession.maintained_by → cooperator.acronym of relevant person (new column in cooperator)



# MCPD_ Report from GG (GRIN Czech/GeNBIS)

2. **ACCENUMB** (Accession number) = accession.number_part_2

GRIN Czech: accession.number_part_1

Accessions | Accession Action | Accession Source | Accession Source Cooperator | Accession Inventory Nam

| | Accession ID | Digital Object Identifier | Accession Prefix | Accession Number | Accession Suffix |
|---|---|---|---|---|---|
| | 6015 | | 01C0105610 | | |

3. **COLLNUMB** (Collecting number) = accession_inventory_name.plant_name for category= collector identifier

ccessions | Accession Action | Accession Source | Accession Source Cooperator | Accession Inventory Name | Accession IPF

| | Accession Inventory Name ID | Accession | Inventory | Category | Name | Name Rank |
|---|---|---|---|---|---|---|
| | 589172 | 01C0104086 | 01C0104086 ** | Collector identifier | E392 | 10 |

4. **COLLCODE** (Collecting institute code) = FAO WIEWS code of the institute collecting the sample

GRIN Czech: cooperator.acronym

Accession Action | Accession Source | Accession Source Cooperator | Accession Inventory Name | Accession IPR | Accession Pedigree | Accession Inventory Voucher | Acce

| | Accession Source Map ID | Accession Source | Cooperator |
|---|---|---|---|
| | 403906 | 01C0104086 COLLECTED 06/26/1988 | CZE122, , Crop Research Institute, Prague, Gene Bank, Drnovská 507, Praha 6, , Czech Republic |

ntory Attach | Inventory | Cooperator | Inventory Maintenance Policy | Inventory Action | Inventory Secure

| st ime | Job | Organization Abbreviation | acronym | Organization |
|---|---|---|---|---|
| | | CSKRUZYNE | CZE122 | Crop Research Institute, Prague, Gene Bank |

# MCPD_ Report from GG (GRIN Czech/GeNBIS)

4.1. **COLLNAME** (Collecting institute name) = cooperator.organization

4.1.1. **COLLINSTADDRESS** (Collecting institute address) = cooperator.address_line1, line_2, line_3, city, geography

Both should be used only if COLLCODE cannot be filled because the FAO WIEWS code for this institute is not available

| ACCENUMB | collnumb | collcode | collname | collinstaddress |
|---|---|---|---|---|
| 01C2100520 | E228 | CZE122 | | |

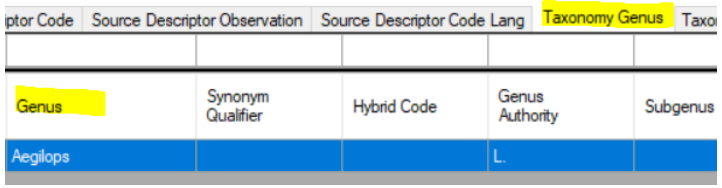
4. 2. **COLLMISSID** (Collecting mission identifier) = Source_descriptor_code_lang. title

| Web User Cart Item | Site | Geography | Crop | Crop Trait | Crop Trait Code | Crop Trait Observation | Crop Trait Lang | Crop Trait Code Lang | Source Descriptor Code Lang | Crop Trait Observat |
|---|---|---|---|---|---|---|---|---|---|---|

| | Source Descriptor Code Lang ID | Descriptor | Code | Language | Title | Description |
|---|---|---|---|---|---|---|
| | 1624 | EXPEDITION | SUNHOL-86 | English | SUNHOL-86 | Collections in the Azerbaidžanu - 1986 - Holubec V. |

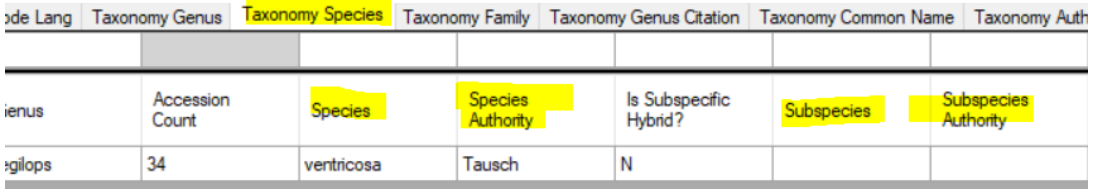
# MCPD_ Report from GG (GRIN Czech/GeNBIS)

5. **GENUS** (Genus) = taxonomy_genus.genus_name



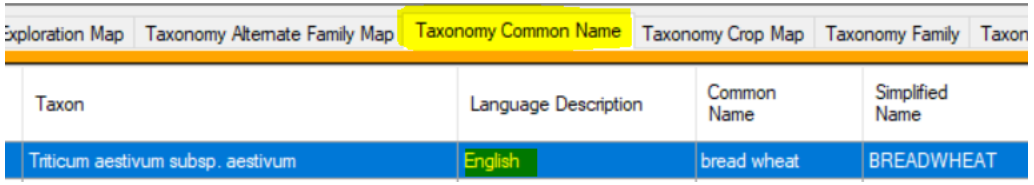
| ptor Code | Source Descriptor Observation | Source Descriptor Code Lang | Taxonomy Genus | Taxo |
|---|---|---|---|---|
| | | | | |
| Genus | Synonym Qualifier | Hybrid Code | Genus Authority | Subgenus |
| Aegilops | | | L. | |

6. **SPECIES** (Species) = taxonomy_species.species_name
7. **SPAUTHOR** (Species authority) = taxonomy_species.species_authority
8. **SUBTAXA** (Subtaxon) = taxonomy_species.subspecies_name
9. **SUBTAUTHOR** (Subtaxon authority) = taxonomy_species.subspecies_authority



| ode Lang | Taxonomy Genus | Taxonomy Species | Taxonomy Family | Taxonomy Genus Citation | Taxonomy Common Name | Taxonomy Auth |
|---|---|---|---|---|---|---|
| | | | | | | |
| enus | Accession Count | Species | Species Authority | Is Subspecific Hybrid? | Subspecies | Subspecies Authority |
| egilops | 34 | ventricosa | Tausch | N | | |

10. **CROPNAME**(Common crop name) = taxonomy_common _name.name for language_description=English



| xploration Map | Taxonomy Alternate Family Map | Taxonomy Common Name | Taxonomy Crop Map | Taxonomy Family | Taxon |
|---|---|---|---|---|---|
| | | | | | |
| Taxon | Language Description | Common Name | Simplified Name | | |
| Triticum aestivum subsp. aestivum | English | bread wheat | BREADWHEAT | | |

# MCPD_ Report from GG (GRIN Czech/GeNBIS)

11. **ACCENAME** (Accession name) = accession_inventory_name.plant_name; rank = min

ion | Accession Inventory Annotation | Accession Inventory Attach | Name Group | Accession Inventory Name | Accession IPR | Accession Pedigree | Accession Inventory Voucher | Accession

| Accession | Inventory | Category | Name | Name Rank |
|---|---|---|---|---|
| 01C0106924 | 01C0106924 ** | Cultivar name | Bohemia | 1 |
| 01C0106924 | 01C0106924 ** | National name | Bohemia | 30 |
| 01C0106924 | 01C0106924 ** | Other or unclassified name | SG-U 8077 | 50 |
| 01C0106924 | 01C0106924 ** | Full taxon | Triticum aestivum var. lutescens | 200 |

12. **ACQDATE** (Acquisition date) = accession.initial_received_date

13. **ORIGCTY** (Country of origin) = accession_source.geography_id for source_type_code=origin

ession Action | Accession Source | Accession Source Cooperator | Accession Inventory Name | Accession IPR | Accession Ped

| | Accession | Source Type | Source Date Format | Source Date | Geography | Is |
|---|---|---|---|---|---|---|
| | 01C2100520 | Origin | dd/mm/yyyy | | Azerbaijan | Y |

For collecting samples (14.-16.):

14. **COLLSITE** (Location of collecting site) = accession_source.collector_verbatim_locality

15.1. **DECLATITUDE** (Latitude of collecting site, decimal) = accession_source.lat_str (new column in GRIN Czech)

# MCPD_ Report from GG (GRIN Czech/GeNBIS)

15.2. **LATITUDE** (Latitude of collecting site) = accession_source.latitude

15.3. **DECLONGITUDE** (Longitude of collecting site, decimal) = accession_source.long_str (new column in GRIN Czech)

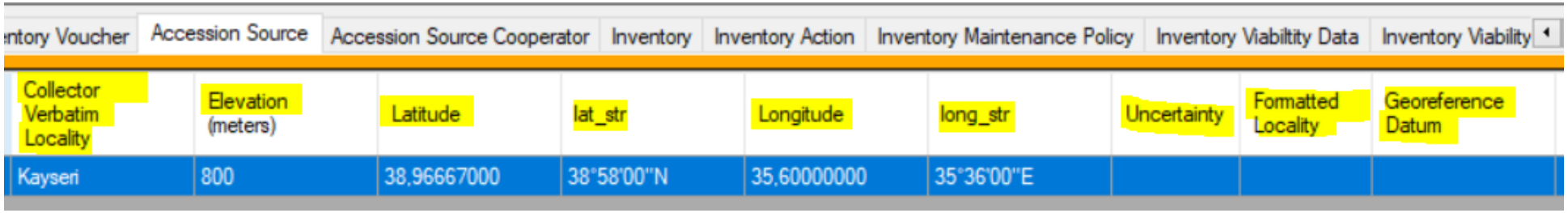
15.4. **LONGITUDE** (Longitude of collecting site) = accession_source.longitude

15.5. **COORDUNCERT** (Coordinate uncertainty) = no records in GRIN Czech

15.6. **COORDDATUM** (Coordinate datum) = no records in GRIN Czech

15.7. **GEOREFERMETH** (Georeferencing method) = no records in GRIN Czech

16. **ELEVATION** (Elevation) = accession_source.elevation_meters



ntory Voucher | Accession Source | Accession Source Cooperator | Inventory | Inventory Action | Inventory Maintenance Policy | Inventory Viabiltity Data | Inventory Viability

| Collector Verbatim Locality | Elevation (meters) | Latitude | lat_str | Longitude | long_str | Uncertainty | Formatted Locality | Georeference Datum |
|---|---|---|---|---|---|---|---|---|
| Kayseri | 800 | 38,96667000 | 38°58'00"N | 35,60000000 | 35°36'00"E | | | |

# MCPD_ Report from GG (GRIN Czech/GeNBIS)

17. **COLLDATE** (Collecting date of sample) = accession_source.source_date (collected)

18. **BREDCODE** (Breeding institute code) = FAO WIEWS code of the institute breeding (developing) the sample

GRIN Czech: cooperator.acronym *for breeder (developer) in accession_source*

18.1. **BREDNAME** (Breeding institute name) = cooperator.organization *for breeder in accession_source*

19. **SAMPSTAT** (Biological status of accession) = accession.sampstat (new column in GRIN Czech, derived from Level of Improvement)

Accessions | Accession Action | Accession Inventory Annotation | Ac

| | Life Form | Level Of Improvement | sampstat |
|---|---|---|---|
| | Annual | Wild | 100 |
| | Annual | Advanced/impro... | 500 |
| | Biennial | Wild | 100 |
| | Annual | Traditional cultiva... | 300 |
| | Tree | Advanced/impro... | 500 |

20. **ANCEST** (Ancestral data) = accession_pedigree.description (GRIN Czech)

ion | Accession Inventory Annotation | Accession Inventory Attach | Name Group | Accession Inventory Name | Accession IPR | Accession Pedigree | Accession Inventory Voucher | Accession Sour

| Accession | Male Accession | External Male Accession | Female Accession | External Female Accession | Cross Method | Pedigree Description |
|---|---|---|---|---|---|---|
| 10F0700159 | | | | | (4) crossing | Parizanka/Chameuska |

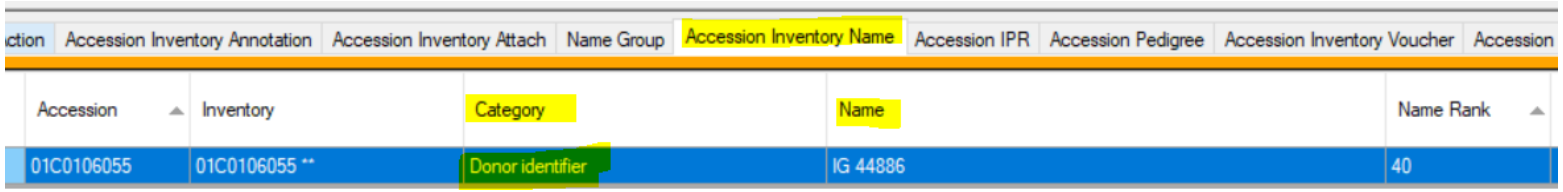
# MCPD_ Report from GG (GRIN Czech/GeNBIS)

21. **COLLSRC** (Collecting/acquisition source) = accession_source.acquisition_source_code
22. **DONORCODE** (Donor institute code) = FAO WIEWS code of the institute donating the sample

    GRIN Czech: cooperator.acronym *for donor in accession_source*

22.1. **DONORNAME** (Donor institute name) = cooperator.organization *for donor in accession_source*

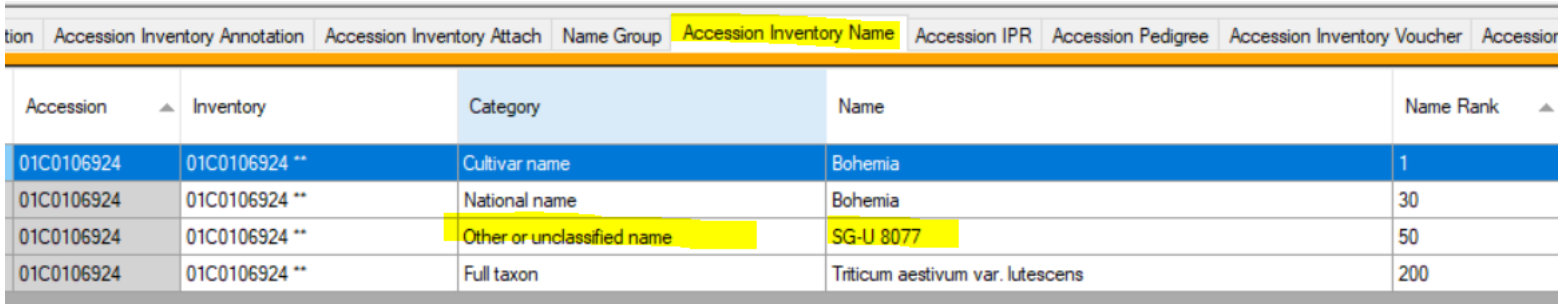
23. **DONORNUMB** (Donor accession number) = accession_inventory_name.plant_name for category= donor



| ction | Accession Inventory Annotation | Accession Inventory Attach | Name Group | Accession Inventory Name | Accession IPR | Accession Pedigree | Accession Inventory Voucher | Accession |
|---|---|---|---|---|---|---|---|---|

| Accession | Inventory | Category | Name | Name Rank |
|---|---|---|---|---|
| 01C0106055 | 01C0106055 ** | Donor identifier | IG 44886 | 40 |

24. **OTHERNUMB** (Other identifiers associated with the accession) = accession_inventory_name.plant_name for category= other



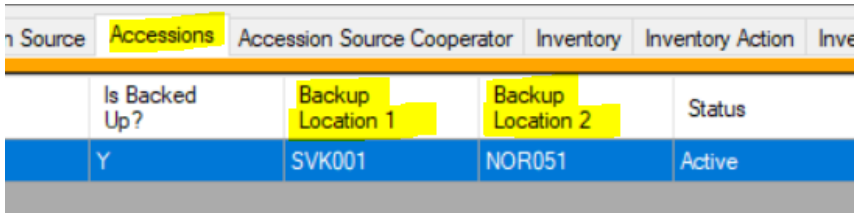
| tion | Accession Inventory Annotation | Accession Inventory Attach | Name Group | Accession Inventory Name | Accession IPR | Accession Pedigree | Accession Inventory Voucher | Accessior |
|---|---|---|---|---|---|---|---|---|

| Accession | Inventory | Category | Name | Name Rank |
|---|---|---|---|---|
| 01C0106924 | 01C0106924 ** | Cultivar name | Bohemia | 1 |
| 01C0106924 | 01C0106924 ** | National name | Bohemia | 30 |
| 01C0106924 | 01C0106924 ** | Other or unclassified name | SG-U 8077 | 50 |
| 01C0106924 | 01C0106924 ** | Full taxon | Triticum aestivum var. lutescens | 200 |

# MCPD_ Report from GG (GRIN Czech/GeNBIS)

25. **DUPLSITE** (Location of safety duplicates) = accession.backup_location1_site_id; accession.backup_location2_site_id

25.1. **DUPLINSTNAME** (Institute maintaining safety duplicates) = code_value_lang.title for code geography_country_code for accession.backup_location1_site_id; accession.backup_location2_site_id

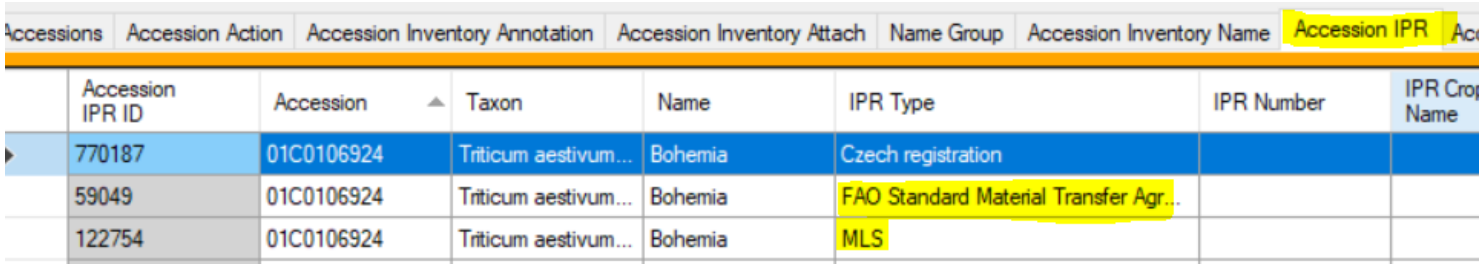


| Source | Accessions | Accession Source Cooperator | Inventory | Inventory Action | Inve |
|---|---|---|---|---|---|

| | Is Backed Up? | Backup Location 1 | Backup Location 2 | Status |
|---|---|---|---|---|
| | Y | SVK001 | NOR051 | Active |

26. **STORAGE** (Type of germplasm storage) = inventory.form_type_code

27. **MLSSTAT** (MLS status of the accession) = MLS=1 → accession_ipr.type_code = MTA-MLS-Utility



| Accessions | Accession Action | Accession Inventory Annotation | Accession Inventory Attach | Name Group | Accession Inventory Name | Accession IPR | Ac |
|---|---|---|---|---|---|---|---|

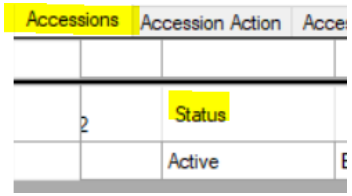
| | Accession IPR ID | Accession | Taxon | Name | IPR Type | IPR Number | IPR Crop Name |
|---|---|---|---|---|---|---|---|
| ▶ | 770187 | 01C0106924 | Triticum aestivum... | Bohemia | Czech registration | | |
| | 59049 | 01C0106924 | Triticum aestivum... | Bohemia | FAO Standard Material Transfer Agr... | | |
| | 122754 | 01C0106924 | Triticum aestivum... | Bohemia | MLS | | |

28. **REMARKS** (Remarks) = accession.note

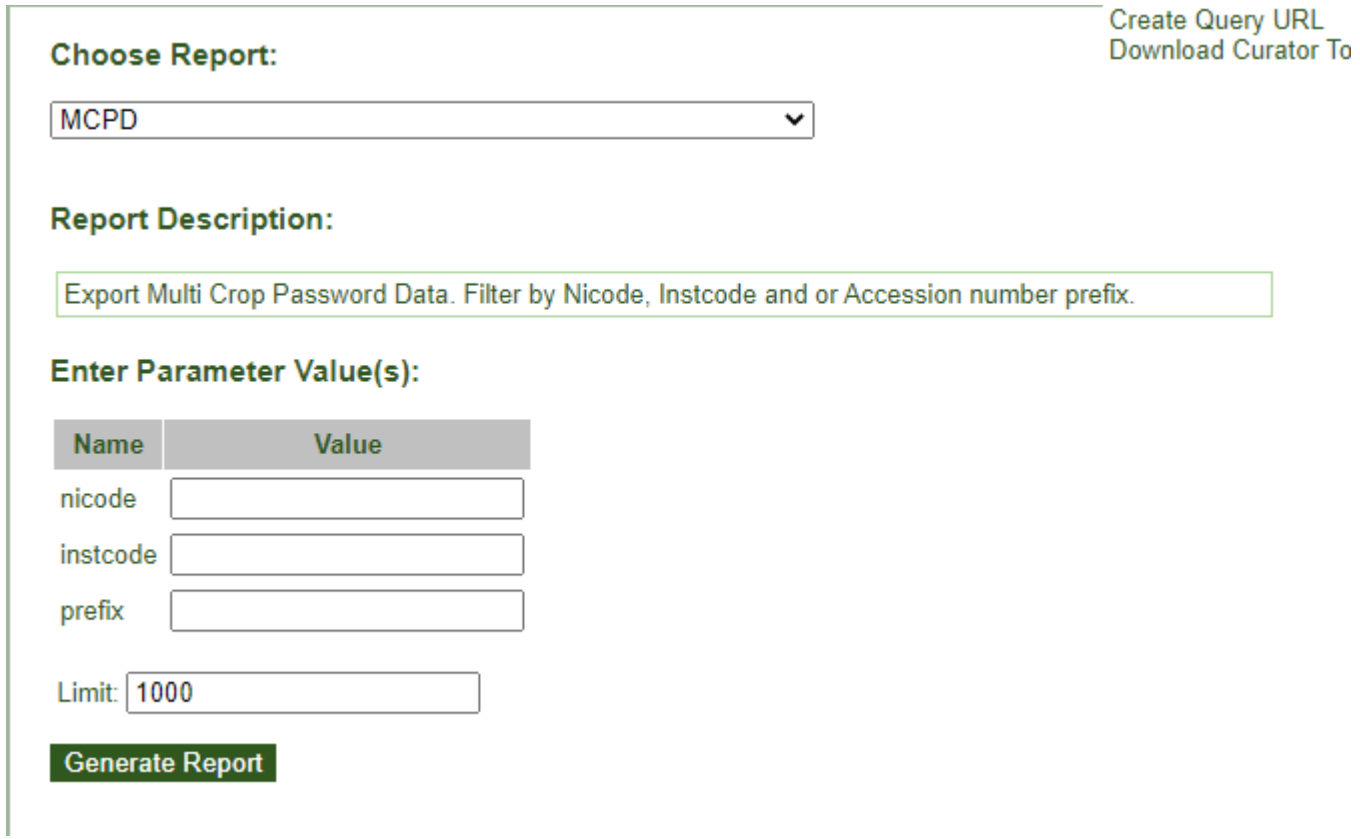
# MCPD_ Report from GG (GRIN Czech/GeNBIS)

29. **ACEURL** (Accession URL) = accession URL in GRIN Czech/GeNBIS
30. **AEGISTAT** (AEGIS status) = AEGIS=1 → accession_ipr.type_code = MTA-AEGIS-Utility (new code in GRIN Czech)

31. **HISTORIC** (Historic accession) = Historic = 0 → accession.status_code = active



# Reporting by NordGen

- Multigenebank data -> NordGen reports NordGen data and National genebanks report their data
- In GENBIS, MCPD data for all accessions is compiled from many tables.
- Since it is a heavy database operation, this is done every night
- GG WEB prepared Form Reports named 'MCPD' is used by NFPs to extract their accessions with simple form filter
- Queried data is exported from GENBIS
- NFP reports to EURISCO.

# Passport report tool as used in GENBIS