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This report describes the activities carried out by IPK in 2018 for hosting and maintaining the European search catalogue for plant genetic resources (EURISCO), and for coordinating the EURISCO network.

# Content



# 1 EURISCO development

In 2018, EURISCO was further developed in accordance with its work plan. The following activities were carried out:

## *1.1 Extension of the intranet support mechanisms for National Inventories (permanent activity)*

### 1.1.1 Feedback on new data exchange format

The necessary modifications in connection with the switch to the new MCPD2-based data exchange format for passport data were widely accepted by the National Inventory Focal Points. In 2018, there was no need for adaptations.

### 1.1.2 Improved taxonomy support

In order to improve the quality of taxonomic data, the EURISCO coordination raised additional funding for the one-year project “EURISCO taxonomy” (May 2017 – April 2018). This project provided a benefit

for both the EURISCO intranet and the public web application. Based on the developments in 2017, the mapping functionalities were extended. In total, they comprise a set of six PL/SQL packages with 60 functions/procedures to map the data provided to EURISCO onto taxonomic repositories. The mapping functionalities were fully integrated into the data integrity checks, which are performed for each upload of a new dataset to the EURISCO intranet. Reports of the mapping results are displayed to the data provider, who can then apply additional filters (Figure 1). The provided taxonomic data is not modified; the mapping results are only suggestions in order to successively improve the data quality of EURISCO. The mappings will provide a tool to the data providers to identify problem cases, such as accepted/non-accepted taxonomic names, typos etc. The final decision remains with the data provider.

The project was funded by ECPGR thanks to a contribution from the German Federal Ministry of Food and Agriculture. A project report for the funding agency was compiled.

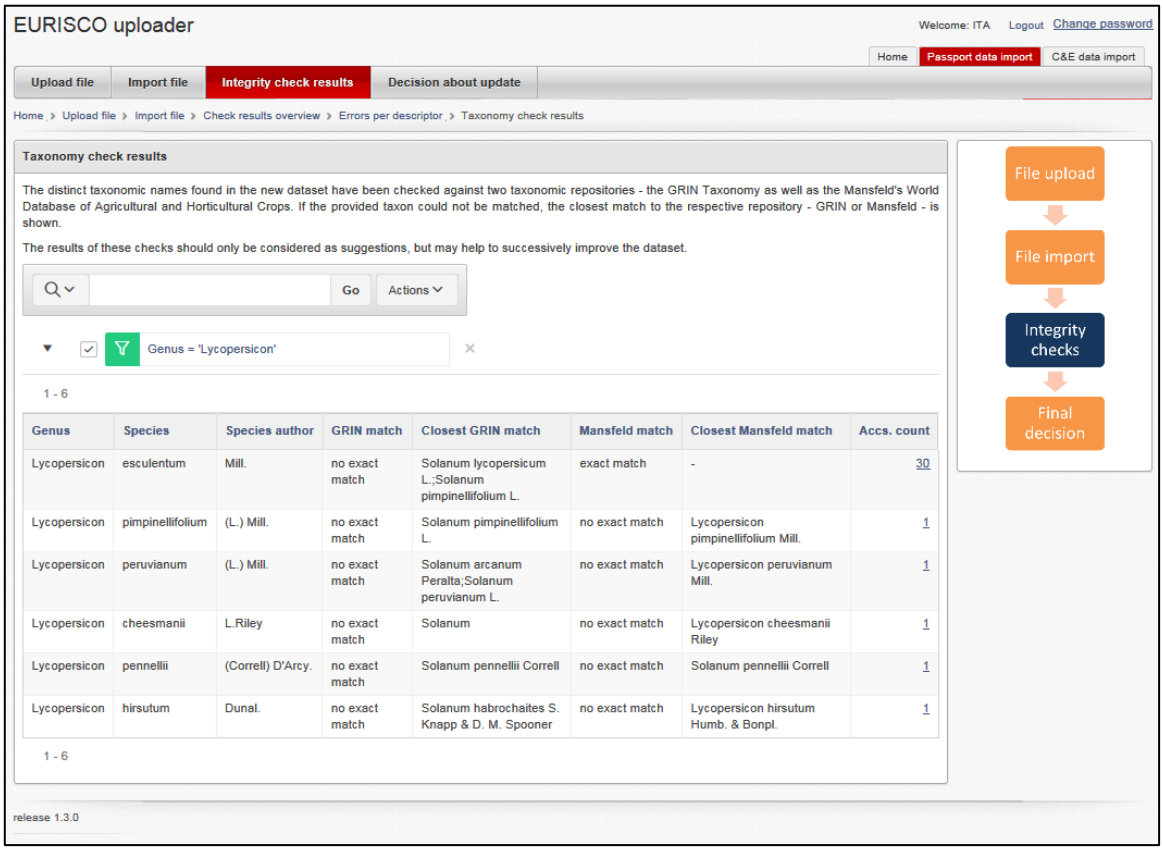


**Figure 1: Report from the EURISCO intranet showing mapping results for data providers.**

### 1.1.3 Update of how-to documents

The how-to documents for uploading data to EURISCO were updated. They now include checks of AEGIS status changes and checks of automatic taxonomy mappings while uploading passport data as well as the additional procedure for uploading phenotypic data. The new versions of the how-to documents are available to the National Focal Points in the EURISCO intranet.

## 1.2 *Extension of functionality of the public EURISCO application (permanent activity)*

### 1.2.1 User feedback and implementation of improvements

Due to capacity constraints, it could only be started with the implementation of additional user requirements obtained from the 2017 user survey. The main emphasis was on improvements of the search and filter possibilities.

The simple search functionalities were reworked. The searches for taxonomy, accession, status and collecting site related fields were separated onto sub pages and visually improved. The underlying reports were completely improved.

The search functionality for phenotypic data was also reworked and the query performance was improved.

Lots of small improvements were implemented.

An interface for improved taxonomic searches was implemented and integrated into the public EURISCO web application (see section 1.1.2). The works in 2018 were based on the first prototype implemented and tested in 2017. The new query interface enables users to search material on taxa via synonyms. While filling the particular input fields, string comparisons are performed with the taxonomic information available in EURISCO and suggestions are presented to the user (Figure 2). After filling the mandatory fields, the user is enabled to explicitly choose whether to search over all available synonyms or to continue with the exact search string only. The results of a taxonomy search are then displayed on a report page. Besides the exact search string, all available synonyms are shown and can be selected/deselected based on the users' preferences (Figure 3). All accessions matching the search criteria are then listed, including the information if there is an exact or non-exact match.

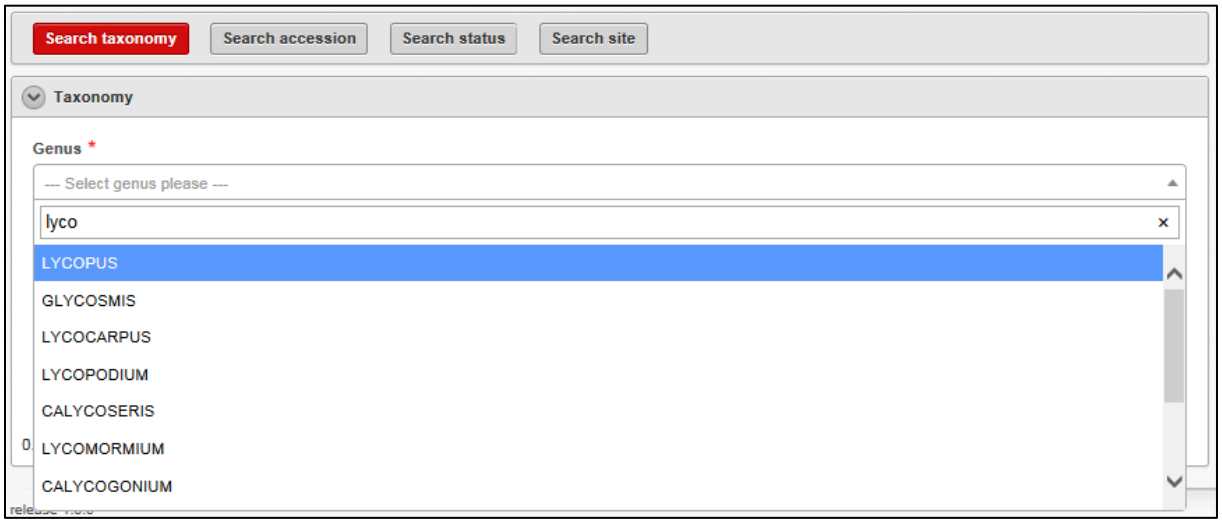


**Figure 2: Screenshot from the EURISCO public web interface showing suggestions while typing.**

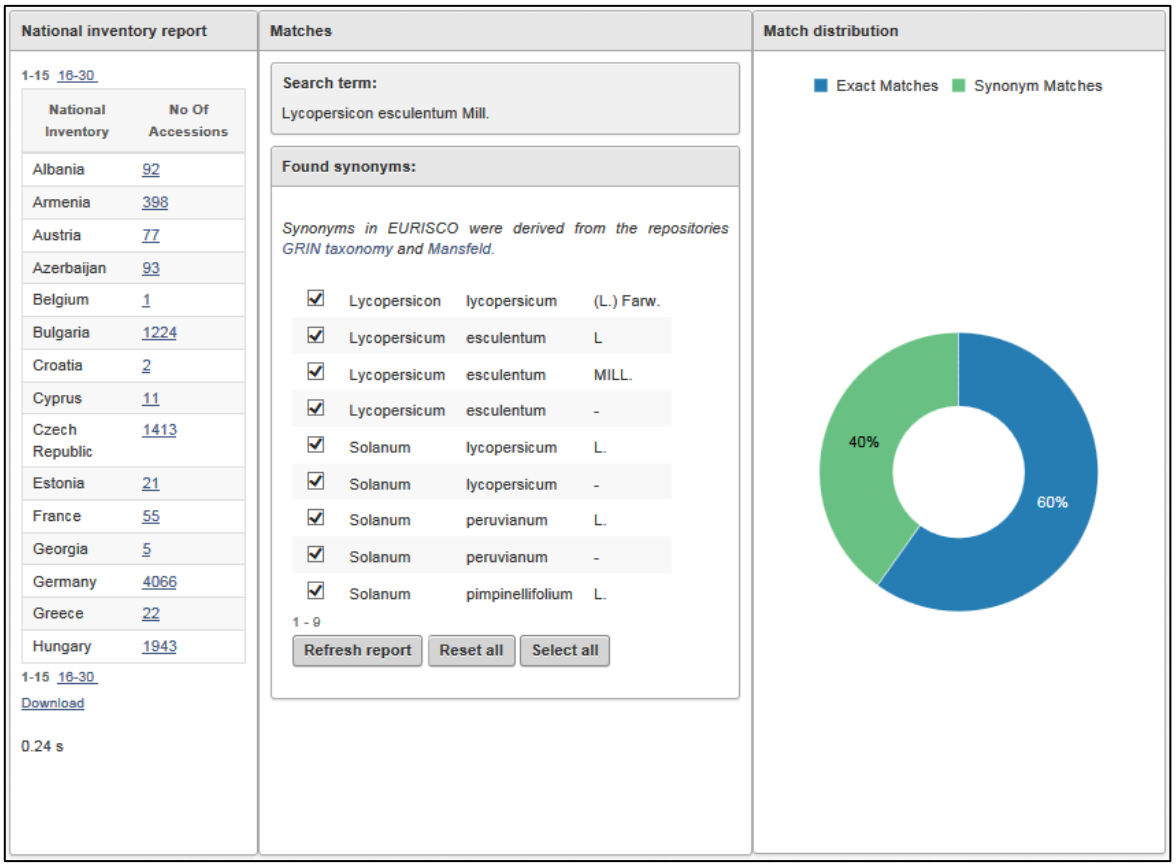


**Figure 3: National Inventory report based on a taxonomy search. Besides the search term, all available synonyms are displayed and can be selected/deselected.**

The improved taxonomic search is not available yet for the advanced search module. This task was scheduled for 2019.

## *1.3 Support for crop portals*

In the frame of the ECPGR Grant Schema Activity ForageDataAccess, the European Poa Database [link] has been developed into a crop portal and is now publicly available. Both passport data and C&E data of Poa accessions from EURISCO are displayed and can be filtered by various criteria.

The intention of this development was to provide a blueprint for a crop portal, which receives its passport and C&E data automatically from EURISCO. It thus allows the Forage WG to focus on crop-specific information without regularly compiling basic data.

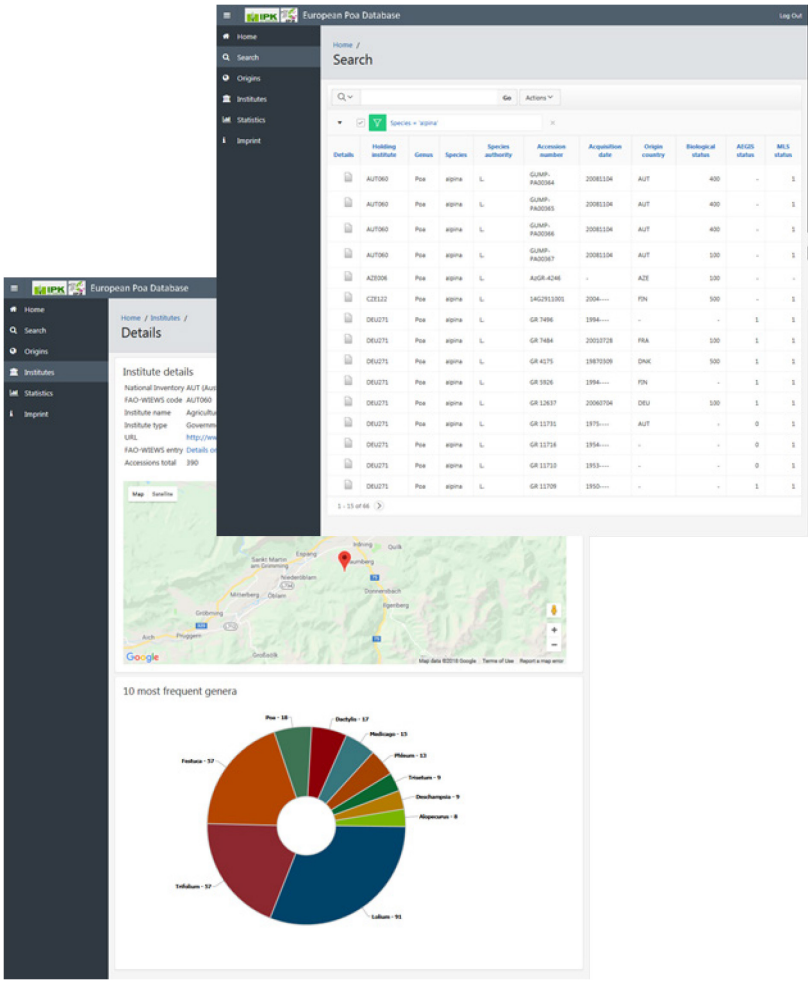


**Figure 4: Screenshots from the reworked European Poa Database.**

### *1.4 Documentation and planning of the next steps*

The developments described in sections 1.1–1.3 were specified and all developments were documented.

# 2 EURISCO coordination

Coordination of the EURISCO network activities was the main focus of the works in 2018.

### *2.1 EURISCO network maintenance and coordination of the EURISCO development*

As a continuous activity, the contact to (potential) EURISCO stakeholders was also intensified in 2018 in order to demonstrate the potentials of this common European approach.

The fourth regional EURISCO training workshop was held in Gatersleben, Germany, 9–11 October 2018. It was organised in collaboration with the Leibniz Institute of Plant Genetics and Crop Plant Research (IPK) and brought together 13 participants. Besides basic training for National Focal Points (NFPs), the focus of the workshop was on increasing the volume of characterisation and evaluation

(C&E) data records in EURISCO as well as on data quality and completeness. The participants mainly comprised newly appointed NFPs who did not participate in a EURISCO workshop before, and NFPs who have C&E data to contribute. The participants expressed their appreciation of the workshop. The presentations given during the workshop can be found at the workshop website. [link]

An presentation on EURISCO was given at the *Genesys Catalogue partners meeting*, 5–7 March 2018, Crop Trust, Bonn, Germany.

Another talk focussed on the role of EURISCO in a European Evaluation Network and was given at the *Private Public Partnerships workshop*, phase II, 27–28 March 2018, Rome, Italy.

A comprehensive EURISCO progress report covering the period of 2014–2018 was compiled for the *15th ECPGR Steering Committee meeting*, 15-17 May 2018, Thessaloniki, Greece. [link] A presentation on EURISCO was given at the workshop.

A Skype presentation about the integration of C&E data into EURISCO was given at the *BETANET meeting* "Improving a cooperation network between actors involved in conservation and utilization of Beta genetic resources", 19–20 June 2018, Venice, Italy. In this connection, a first analysis of the International Database for Beta (IDBB) was performed. The IDDB is the central crop database of the Beta WG, which expressed the wish to integrate this data into EURISCO as a step towards a crop portal (see section 1.3). In principle, it will be feasible to integrate the Beta data; this task will be continued in 2019.

A talk about the challenges of setting up a repository of phenotypic data was given at the *SPNHC+TDWG 2018 conference* "Collections and Data in an Uncertain World", 25th August to 1st September 2018, Dunedin, New Zealand.

A presentation on EURISCO was given at the *ECPGR Workshop for the establishment of a European Evaluation Network (EVA) on wheat/barley*, Berlin, Germany, 27–28 November 2018.

The bi-annual EURISCO newsletter was sent around in October and December 2018, respectively. This is considered very important for providing feedback to the EURISCO users.

In 2018, the update frequency of National Inventory datasets was on a high level again. In total, 40 productive updates of National Inventory datasets were performed, either completely or in parts.

Within the last 12 months, the number of accessions documented in EURISCO increased by 19,314, reaching a total of 1,983,376 accessions from 43 National Inventories and 378 individual holding institutions by 31 December 2018. These accessions represent 6,392 unique genera and 43,445 species, respectively. The number of AEGIS accessions labelled in EURISCO rose to 47,049. In total, the passport data of 596,883 accessions was updated.

During the same period, the number of characterisation and evaluation (C&E) data records rose significantly by 1,668,178, reaching a total of 2,293,141. C&E data are currently available for 81,818 accessions and were provided by seven countries so far.

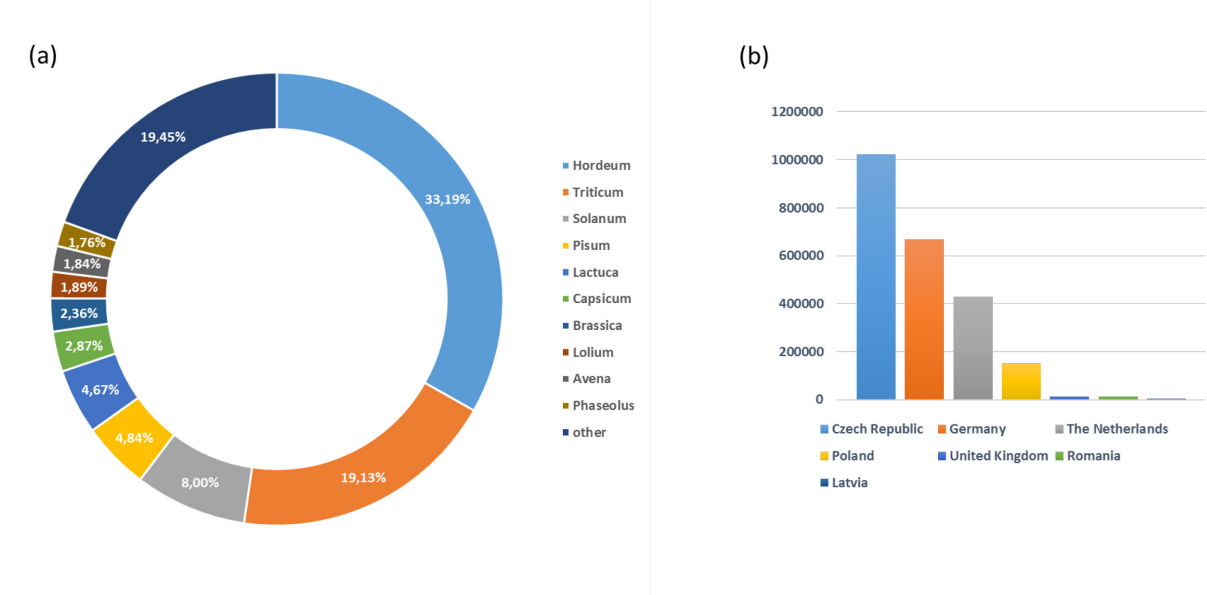


**Figure 5: Overview of C&E data in EURISCO, showing (a) the percentage of C&E data records by genus and (b) the number of records provided by the seven countries.**

Much effort was invested into providing a helpdesk "behind the scenes". Direct, personal communication took place with National Inventory Focal Points and National Coordinators (e.g. support for updates, provision of specific database queries and special data export formats, discussion about future developments).

## *2.2 Participation in project proposals*

The EURISCO coordination provided substantial legwork to the preparation of project proposals (Horizon2020 and others) aiming at acquiring additional funding for developing certain aspects of EURISCO.

The EURISCO coordination finished the project "EURISCO taxonomy" (see sections 1.1.2, 1.2.1).

In addition, the EURISCO coordination was involved in the ongoing projects "EUCLEG" (work package lead) and "Farmer's pride" (task lead).

The EURISCO coordination will support the recently funded ECPGR European Evaluation Network.

The Horizon2020 project "GenRes Bridge – Joining forces for genetic resources and biodiversity management" with participation of the EURISCO coordination was approved and will start in January 2019. GenRes Bridge is a joint project of the three European networks for plant, animal and forest genetic resources (ECPGR, ERFP und EUFORGEN) and will be coordinated by EUFORGEN. The EURISCO coordination will be involved in work package 4 (Enhancing GenRes data delivery).

Further proposals are still under development/evaluation.

In 2018, the EURISCO coordination was involved in three ECPGR Grant Scheme Activities (BETANET, ImprovLoliumCol, ForageDataAccess). Emerging from these activities, several new datasets were provided and will be provided to EURISCO.