

Addressing the data recommendations

Presentation during the Eggplant and Capsicum: Global Conservation Strategies webinar

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Agenda

- 1. Overview of key data recommendations (Capsicum & Eggplant)**
2. EURISCO's role
3. Benefits of having data in Genesys
4. Example: World Vegetable Center



1. Overview of key data recommendations

From the **Capsicum strategy**:

Further efforts are needed to provide **up-to-date** information regarding Capsicum collections through global databases. Fundamental data on collections can be made **more complete**. Enhancing the **availability** of passport and characterization information will also make the collection of greater potential value.”

From the **eggplant strategy**:

“Improve passport data **accuracy and completeness** in the collection holders’ databases to facilitate large-scale gap identification and **screening for duplicates** within and among genebanks.”

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EURISCO's role



In addition to being Europe's central gateway for plant genetic resource data:

- EURISCO is **integrated** with Genesys.
- Data from EURISCO is **included** in Genesys.
- Data in Genesys is **synchronized** with the GLIS DOI registry.
- This synergy ensures efficiency, consistency, and maximum visibility.
- This enables global researchers and breeders to explore, subset, and apply your accession data using an **array of tools** in all these open databases.

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Benefits of having data in Genesys



Once your data is in Genesys via EURISCO, a suite of tools becomes available:

- **Trait Data Querying**
- **Genesys AI** (automatic tagging, smarter search)
- **Climate Search** (match accessions with the climate profiles at their origin)
- **Subsetting Tool** (create subsets based on agro-climatic variables)
- **Similarity search** (to find similar accessions held in different genebanks)
- **Images** and documents can be linked to your accession passport data
- **Visualizations** of your data (in overviews, heat maps, geographic maps, with option to overlay climate maps)
- **Translations of data** (French, Spanish, Portuguese, and more on the way)
- **Reports** on passport data (sent on demand, with **tips** on how to improve completeness and accuracy)
- **Embedded Genesys** (mirrors the data and tools in Genesys on your genebank website without the need to maintain a separate database)

Benefits of having data in Genesys



Report on data completeness and quality

This report generated from passport data in Genesys for our partners. It evaluates the completeness and quality of passport data, and it identifies specific areas for improvement, such as missing taxonomic information, inconsistencies in the geographic data, and gaps in key management data, and provides tailored suggestions to help the genebank enhance the completeness and quality of their passport data.

Validation of geographic data

The geographic validation helps to spot unlikely collecting sites and to determine the probable errors in a coordinate. For this, the Validator uses the coordinates as provided in the passport data and plots them on a reference map of country borders and known bodies of water.

The Validator tool reports four types of issues:

- Incomplete coordinates: Only one of DECLATITUDE or DECLONGITUDE is provided.
- Missing country: ORIGCTY is not provided, but can be derived from coordinates.
- Possible corrections: coordinates do not match ORIGCTY, possibly because of a mistake at data entry.
- Mismatched country: the coordinates are in a country different to ORIGCTY in passport data.
- Coastal coordinates: the coordinates fall in a known body of water, but within a distance of 2000m from the closest land.
- Coordinates in the ocean: the coordinates fall in a known body of water and are over 2000m from the nearest land.

In your 3,899 georeferenced accessions, the Validator found (Fig. 9) 0 accessions where ORIGCTY can be derived from coordinates provided, 79 accessions where coordinates do not match ORIGCTY, but can be corrected with a fix (swap of latitude/longitude, change + to -), 56 accessions where coordinates are in a different country than specified, 6 accessions with coordinates in a known body of water (oceans, lakes), and 0 accessions with coordinates in water, but within 2km of nearest land.

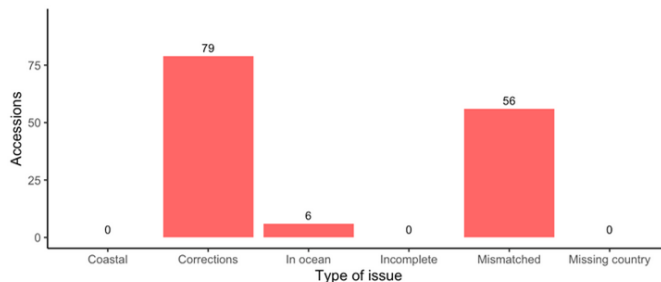


Figure 9: Results of validation of geographic data, indicating the number of accessions affected.

Coordinates can be corrected

Validator found 79 accessions where coordinate data can be corrected to match the country of provenance by swapping the values of latitude and longitude, or by changing the +/- sign of one or both latitude and longitude values.

Table 1: Accessions where coordinates can be corrected to match ORIGCTY.

DOI	ACCENUMB	ORIGCTY	COLLECTOR	DECLATITUDE	DECLONGITUDE	DECLATITUDE	DECLONGITUDE
10.18730/16FHJ=	NGB00757	NGA	Enug...				
10.18730/16GYN=	NGB02154	NGA	OBUDU/CROSS RIVER STATE				
10.18730/16GYR1	NGB02155	NGA	OBUDU/CROSS RIVER STATE				
10.18730/18SZD\$	NGB02194	NGA	OBUDU/OBALINKU, CROSS RIVER STATE	6.669		36.033	3.60333
10.18730/18SZE=	NGB02195	NGA	OBUDU/OBALINKU, CROSS RIVER STATE	6.669		36.033	3.60333
10.18730/18SZFU	NGB02196	NGA	OBUDU/OBALINKU,	6.669		36.033	3.60333

Snapshot of the report on data completeness and quality generated by Genesys, section of geo-data.

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