

EURISCO, the European Search Portal for Plant Genetic Resources

Status quo & planned developments

EURISCO training workshop, 12th to 14th September 2017, Gatersleben

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12 September 2017



INTRODUCTION AND BACKGROUND

Background

- What is EURISCO?
 - European information system for plant genetic resources
 - Search catalogue for *ex situ* collections
 - Accession-level information system
- Purpose
 - Provides passport data and phenotypic data about plant germplasm accessions maintained in Europe
 - Assists in meeting national obligations
 - Food and Agriculture Organization of the United Nations (FAO)
 - Convention on Biological Diversity (CBD)
 - International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)



https://upload.wikimedia.org/wikipedia/commons/8/81/Europe_countries_map_2.png

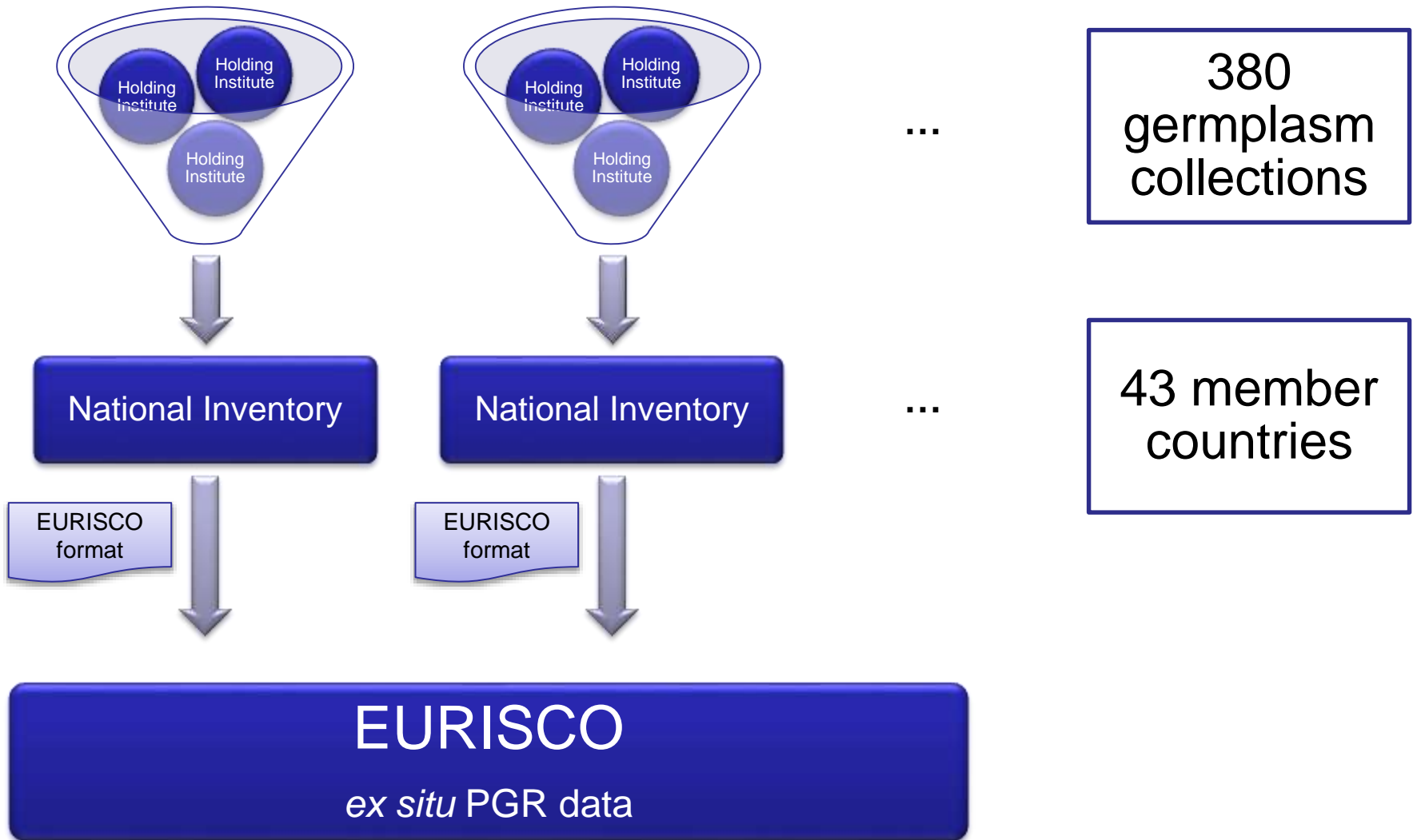
Development

- Started in 1999 (EU project EPGRIS)
- 43 countries involved
(Nordic Countries → NordGen)
- National collections represented by
National Inventories (NIs)
- Network of National Focal Points (NFPs)
links NIs ↔ EURISCO



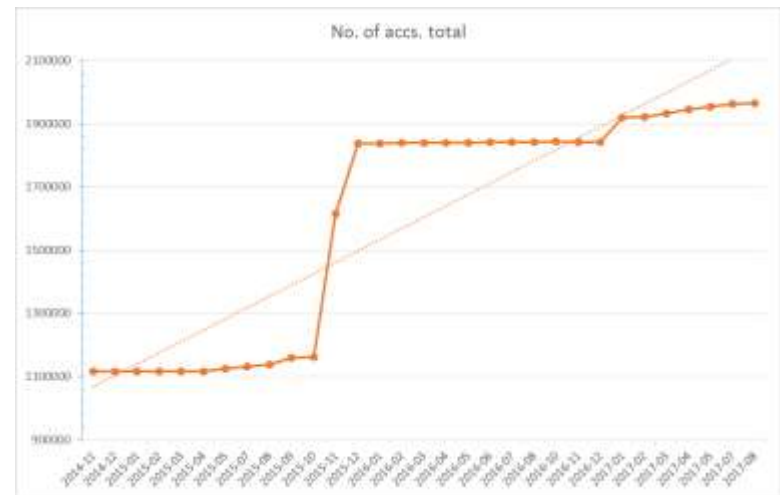
https://upload.wikimedia.org/wikipedia/commons/8/81/Europe_countries_map_2.png

Data flow



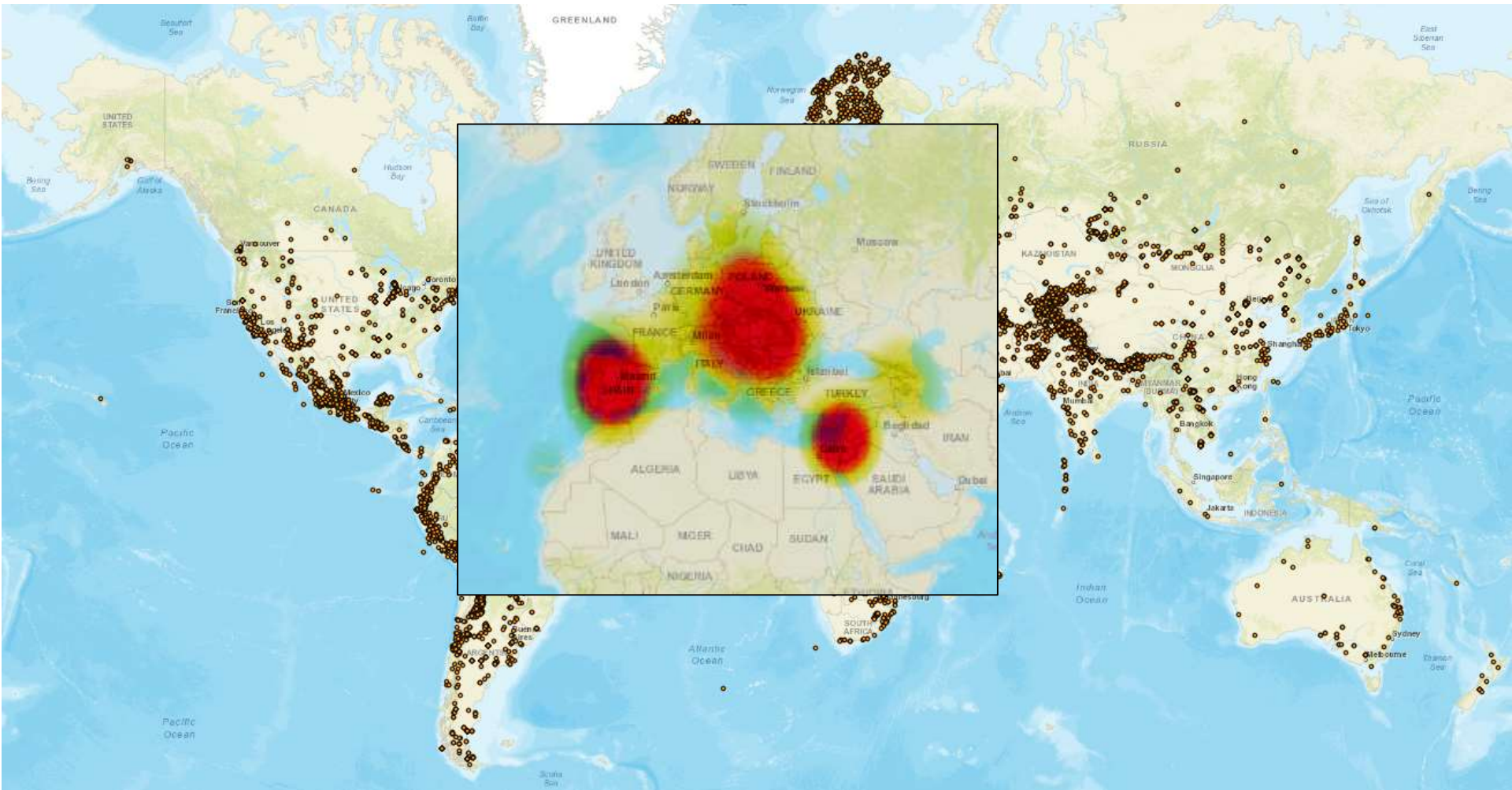
Contents of EURISCO

- 1,964,939 accessions
- 6,315 genera
(including synonyms, spelling variants)
- 42,942 species names
(unique combinations genus + species, including synonyms)
- 413,614 MLS accessions
- 32,791 AEGIS accessions



as of 2017-08-25

Collecting sites



as of 2017-05-31

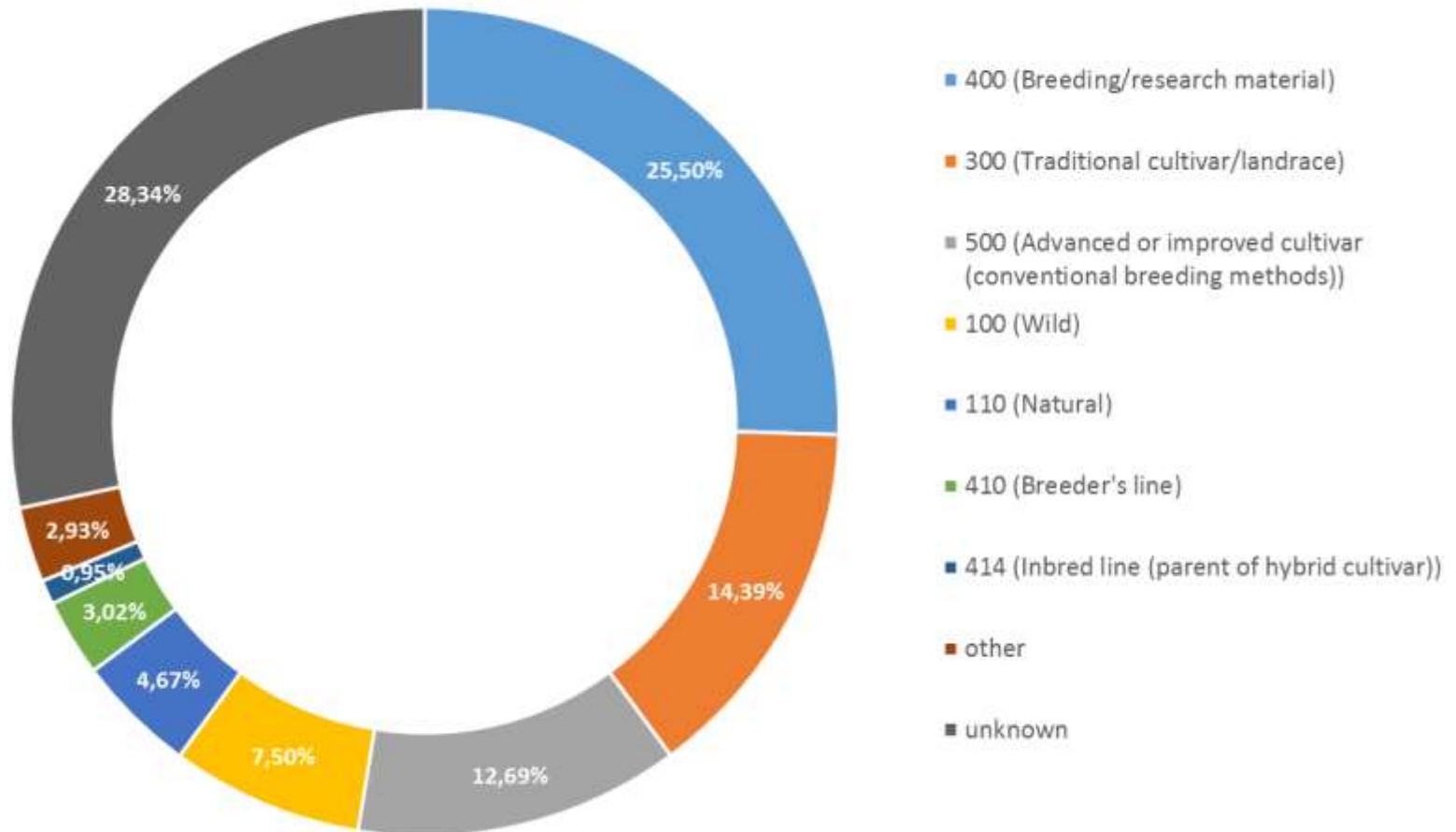
Taxonomic composition

Genus	Species	No. accs.	Total
<i>Arabidopsis</i>	<i>thaliana</i>	681,983	682,191
	others	208	
<i>Triticum</i> (wheat)	<i>aestivum</i>	136,646	188,648
	<i>durum</i>	16,299	
	<i>turgidum</i>	9,502	
	<i>monococcum</i>	3,427	
	<i>spelta</i>	3,090	
	others	19,684	
<i>Hordeum</i> (barley)	<i>vulgare</i>	104,328	123,942
	<i>spontaneum</i>	8,336	
	others	11,278	
<i>Zea</i> (maize)	<i>mays</i>	62,474	62,607
	others	133	
<i>Phaseolus</i> (garden bean)	<i>vulgaris</i>	46,781	52,322
	<i>coccineus</i>	3,048	
	others	2,493	

Genus	Species	No. accs.	Total
<i>Solanum</i> (tomato, potato, eggplant, etc.)	<i>lycopersicum</i>	18,858	51,118
	<i>tuberosum</i>	14,780	
	<i>andigenum</i>	2,814	
	<i>melongena</i>	2,088	
	others	12,578	
<i>Avena</i> (oat)	<i>sativa</i>	33,234	41,279
	<i>sterilis</i>	2,156	
	<i>byzantina</i>	1,958	
	others	3,931	
<i>Malus</i> (apple)	<i>domestica</i>	24,113	31,533
	others	7,420	
<i>Pisum</i> (pea)	<i>sativum</i>	27,309	30,354
	others	3,045	
<i>Vitis</i> (grape)	<i>vinifera</i>	26,079	30,022
	others	3,943	
others			670,923
		Total	1,964,939

as of 2017-08-25

Biological status



as of 2017-08-25

Data quality in EURISCO

- 790,936 accessions with collecting information
 - 105,284 different collecting sites
 - But only 202,587 accessions with coordinates (10% of all accessions; 26% of accessions with collecting information)
- 1,196,297 accessions with donor information
- 1,072,517 accessions with country of origin
 - 24 different geographic regions

as of 2017-08-25

EURISCO HOSTED BY IPK

New EURISCO hosting

- On behalf of the European Cooperative Programme for Plant Genetic Resources (ECPGR)
 - Available online since 2003
 - Bioversity International, Rome, Italy
 - Since April 2014:
 - EURISCO hosted by IPK Gatersleben, Germany
 - New development from scratch



Weise et al. (2017) *Nucleic Acids Research*, 45(D1):D1003-D1008.

Challenges and decisions

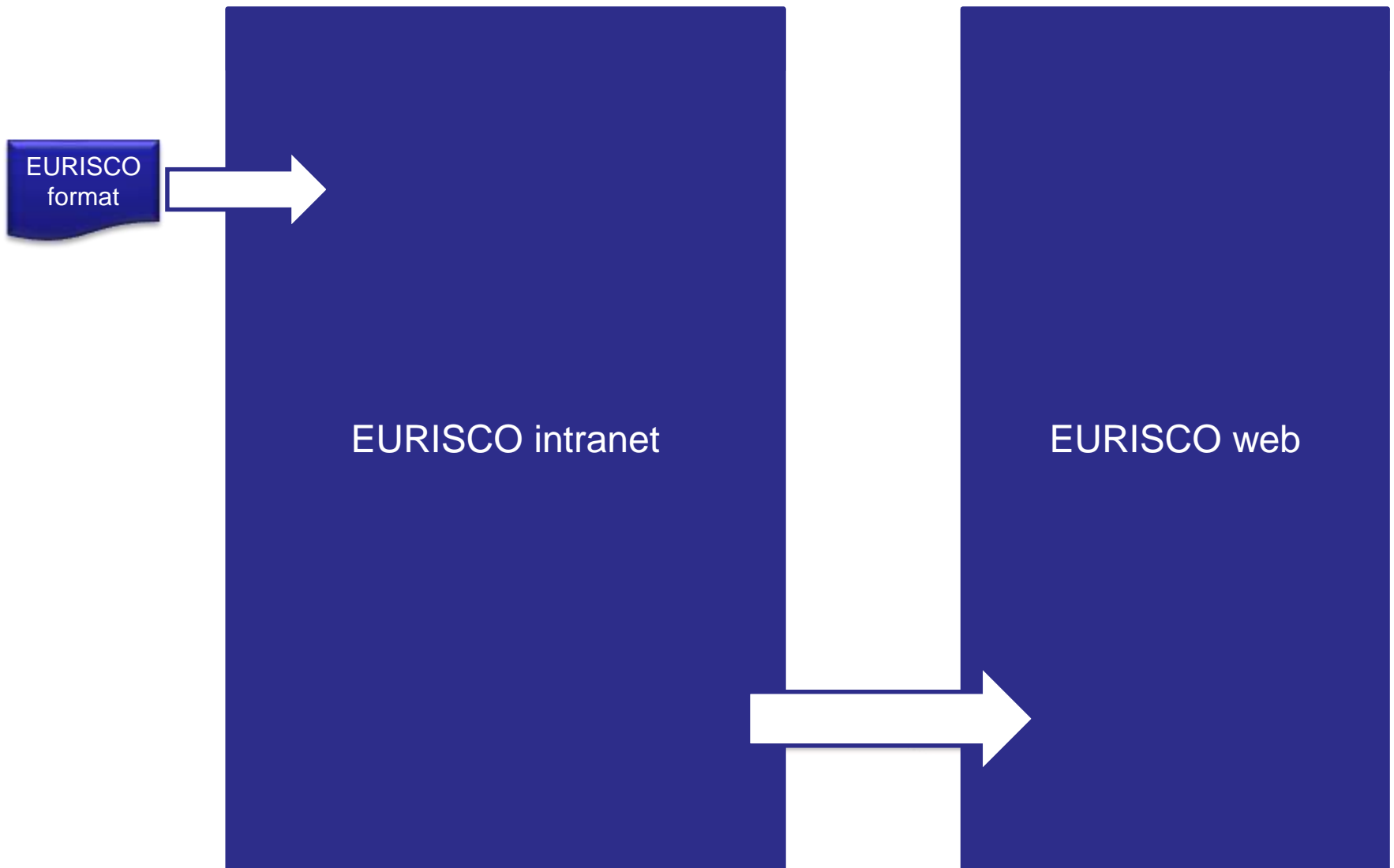
- Challenges faced:
 - Outdated systems
 - Insufficient technical documentation
 - High costs for transfer of as-is status
- Decisions:
 - No transfer of existing solutions
 - New development from scratch

Technical tasks

- Analysis of the former web application
- Reengineering of database schema for web application
- Import (and cleansing) of current data set
 - Migration path MySQL → Oracle RDBMS
- New web application for searching EURISCO data
 - PL/SQL for functionality; APEX for rendering
 - First release with basic functionality published 09/2014
 - Continuously improved
- New web application for updating NI data
 - PL/SQL for functionality; APEX for rendering



New architecture: Overview



New architecture: DB schema features

- EURISCO intranet
 - 50 tables
 - 483 indexes
 - 99 triggers
 - 10 PL/SQL packages
 - 118 function and procedures
 - 27 Java classes
- EURISCO web
 - 40 tables
 - 27 materialised views
 - 584 indexes
 - 6 PL/SQL packages
 - 26 function and procedures
 - In-memory features

EURISCO WEB

Passport data in EURISCO

- Four standard searches:
 - Taxonomy
 - Accession
 - Biological status
 - Collecting site
- Advanced search
- Different user-specific export features

The screenshot displays the EURISCO web interface for a specific accession. The header includes the EURISCO logo and navigation links. The main content area is divided into several sections:

- National inventory:** Shows the accession code FRT091 and the name Portuguese Bank of Plant Germplasm, Braga, Portugal.
- Accession:** Displays the accession number 350814 A and the collecting site code FRT091.
- Taxonomy:** Lists the genus *Brassica*, species *oleracea*, and subspecies *var. capitata*.
- Collecting site:** Provides detailed location information including the collecting number (350814 A), date (2014-03-25), latitude (46.330611), longitude (-7.130556), and elevation (872 meters).

A map of the collecting site in Braga, Portugal, is shown below the site information. The interface also includes a search bar and various navigation options.

Advanced search form

eurisco
Finding seeds for the future

Advanced search

Taxonomy

Genus:

Species:

Species Authority:

Accession

Origin Country:

Other

Biological Status:

Acquisition Source:

Heritage Type:

Acquisition Date From: Acquisition Date To:

MSL Status: HCSO Status:

Site

Latitude From:

Longitude From:

Elevation From: Elevation To:

Collecting Date From: Collecting Date To:

Search | Clear

Taxonomy

Genus

Species

Species Authority

Wild

- 110 (Natural)
- 120 (Semi-natural/wild)
- 130 (Semi-natural/sown)

Weedy

- 200 (Weedy)

Traditional cultivar/landrace

- 300 (Traditional cultivar/landrace)**

Breeding/research material

User specific export – by species

European Commission
Programme for Plant Genetic Resources
ECP/GR **eurisco**
Finding seeds for the future

EURISCO Intranet

Home About Search C&E data Statistics and documents Inprint / Data Protection Policy

Search Advanced search **Export data by species** Export data by National inventory

Home > Search > Download by species

Export EURISCO data by species

Hint: For performance reasons, the accessions from the Nottingham Arabidopsis Stock Centre (GBR140) are excluded from the dynamic export. However, these accessions are of course included in the full EURISCO dump.

Genus *

Species *

National inventory

Filtered values

Rows 5

1 - 5 >

NCODE	BISTCODE	ACCNUMB	GENUS	SPECIES	SPAUTHOR	SUBTAXA	SUBTAUTHOR	CROPNAME	ACCENAME	ACQDATE	ORIGCTY	SAMPSTAT	MLSTAT	AEGISSTAT
POL	POL003	231368	Triticum	araraticum	Jakubc	-	-	-	-	-	-	400	-	-
POL	POL083	231369	Triticum	araraticum	Jakubc	-	-	-	-	-	-	400	-	-
POL	POL003	231370	Triticum	araraticum	Jakubc	-	-	-	-	-	-	400	-	-
POL	POL003	5824	Triticum	araraticum	Jakubc	-	-	wheat	T. ARARATICUM	1992---	SUN	400	-	-
HUN	HUN003	RCAT053457	Triticum	araraticum	Jakubc	-	-	wild wheat	-	19980000	-	-	-	-

1 - 5 >


0.21 s

Download full dataset

Downloading the whole dataset of EURISCO causes a very long page loading time. Thus, for performance reasons data from only one genus can be downloaded at once. A precalculated dump of the whole dataset (in EURISCO format) can be downloaded here:

[EURISCO dump \(MS Access format\)](#)
81.61 MB
Created: 2016-08-26

User specific export – by NI

EURISCO Intranet

[Home](#) [About](#) [Search](#) [C&I data](#) [Statistics and documents](#) [Imprint / Data Protection Policy](#)

[Search](#) [Advanced search](#) [Export data by species](#) [Export data by National Inventory](#)

[Home](#) > [Search](#) > [Download by species](#) > [Download by National Inventory](#)

Export EURISCO data by National Inventory

Hint: For performance reasons, the accessions from the Nottingham Arabidopsis Stock Centre (GBR140) are excluded from the dynamic export. However these accessions are of course included in the full EURISCO dump.

National inventory *

Genus

Filtered values

Rows: Actions:

1 - 5 >

NICODE	INSTCODE	ACCENUMBI	GENUS	SPECIES	SPALITHOR	SUBTAXA	SUBTAUTHOR	CROPNAME	ACCNAME	ACQDATE	ORIGCTY	SAMPSTAT	MLSTAT	AEGISSTAT
FRA	FRA041	P000431	Medicago	litoralis	-	-	-	-	P000431	-	ITA	100	0	-
FRA	FRA041	L000633	Medicago	litoralis	-	-	-	-	L000633	-	GRC	-	0	-
FRA	FRA041	L000336	Medicago	litoralis	-	-	-	-	L000336	-	GRC	-	0	-
FRA	FRA041	P001891	Medicago	litoralis	-	-	-	-	P001891	-	FRA	100	0	-
FRA	FRA041	P000266	Medicago	litoralis	-	-	-	-	P000266	-	FRA	100	0	-

1 - 5 >

0 04 s

Download full dataset

Downloading the whole dataset of EURISCO causes a very long page loading time. Thus, for performance reasons data from only one National Inventory can be downloaded at once. A pre-calculated dump of the whole dataset (in EURISCO format) can be downloaded here.

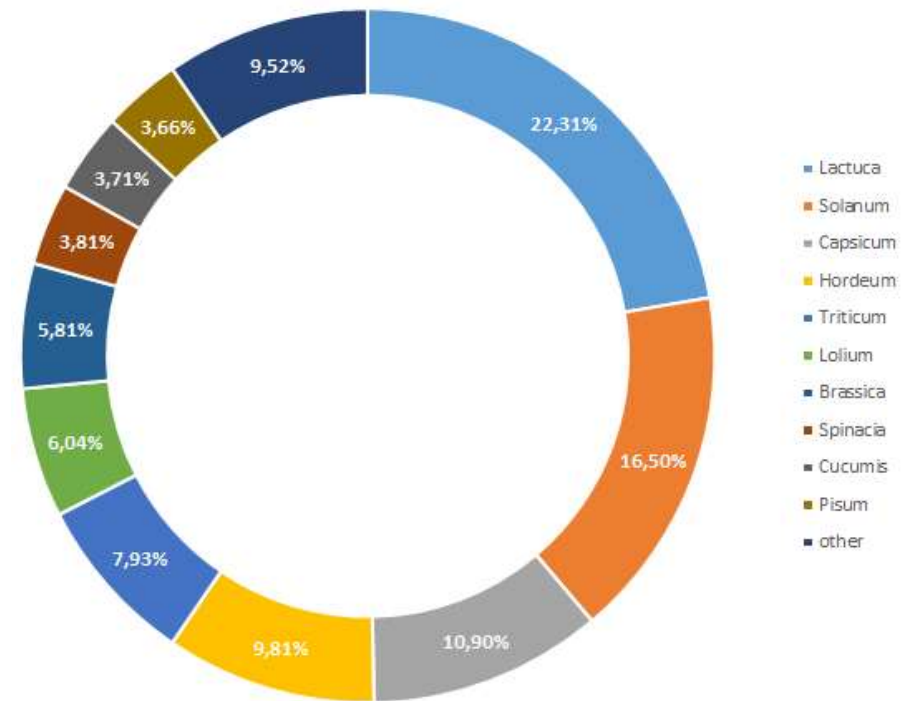
[EURISCO dump \(MS Access format\)](#)
81.61 MB
Created: 2016-08-26

Release 1.2.3

CHARACTERISATION & EVALUATION DATA

C&E data in EURISCO

- Extension available since summer 2016
- Currently, 470,659 records of data from four countries
 - Germany
 - Latvia
 - The Netherlands
 - United Kingdom



C&E data search: Genus

Wizard-based searches for

- Genus
- Species and trait
- Experiment
- Trait

Filter C&E data by genus

Genera * Brassica Allium Hordeum Lactuca
 Capsicum Chondrilla Lactuca
 Cicerbita Cucumis
 Eruca
 Isoetidium
 Linum Lupinus Mycel

Lactuca 195,02
 Solanum 77,643
 Capsicum 30,738
 Triticum 37,386
 Hordeum 32,452
 Brassica 27,355

Show All Scores for selected genera Experiments with selected genera

Apply Scores for selected genera

The report below comprises all scores of the selected genera (from different experiments). Detailed passport information about the respective accessions are given by the provided link. Please search bar below to define filters.

Q Go Actions

1 - 5 of 148367

Experiment Description	Trait Name	Trait Method	NICODE	INSTCODE	Species	ACCENUMB	Score	Score Link	Origin Country	Biological Status	Details
Evaluation (average of tw[...])	Pyrenophora graminea (Stripe)	De na									
Evaluation (average of tw[...])	Yield	pe m2									
Evaluation (average of tw[...])	Spike density	(3= 7=									
Evaluation (average of tw[...])	Growth height	Me inc [...]									
Evaluation (average of tw[...])	Row number	(1= 9= [...]									

Experiments with selected genera

The report below comprises all experiments, which contain at least one (not necessarily all) of the selected genera. When clicking on the link to the traits contained in these experiments, only those traits will be shown, which were used for scoring the selected genera. Please use the search bar below to define filters.

Q Go Rows 5 Actions

1 - 5 of 127

Experiment Description	Dataset Remark	Experiment Start Year	Experiment End Year	Details
Location: Born Wageningen, sandy soil. Sowing date: 12/3/85, harvested 9/8/85.	Phenotypic data CGN	1985	-	contained traits
Location: Born Wageningen, sandy soil. Sowing date: 2/10/85, harvested from 28/7-1/8/1986.	Phenotypic data CGN	1986	-	contained traits
Location: Born Wageningen, sandy soil. Sowing date: 8/4/86, harvested 4/8-15/8/1986.	Phenotypic data CGN	1986	-	contained traits
Location: Emmeloord.	Phenotypic data CGN	1986	-	contained traits
Location: Ulrum.	Phenotypic data CGN	1986	-	contained traits

1 - 5 of 127

2.59 s

C&E data search: Species and trait

Filter C&E data by species and traits

Genus *

Species *

Genus *

Species *

- Lactuca aculeata Boiss.
- Lactuca altaica Fish. & Mey.
- Lactuca biennis (Moench) Fern.
- Lactuca homblei De Wild.
- Lactuca raddeana Maxim
- Lactuca saligna L.
- Lactuca sativa L.
- Lactuca sativa x serriola
- Lactuca serriola L.
- Lactuca tatarica (L.) C. A. Mey.

- Lactuca canadensis L.
- Lactuca dregeana DC.
- Lactuca georgica L.
- Lactuca perennis L.
- Lactuca indica L.
- Lactuca quercina L.**

Traits *

- Leaf blistering (At harvest maturity[...])
- Leaf color intensity ((3=light, 5=medium, 7=dar[...])
- Leaf margin undulation (At harvest maturity[...])
- Leaf shape ((1=narrow elliptic,2=el.,[...])
- Leaf shape ((1=round, 2=ovate, 3=obov[...])**
- Leaf vein prickles ((1=not present, 9=present[...])
- Leaf vein prickles (-[...])
- Leaf venation (At harvest maturity (1= n[...])
- Nasonovia ribisnigri (Resistance to Nasonovia r[...])
- Nitrate content (Mean nitrate content of t[...])
- Pemphigus hursarius ((1=very resistant, 2=resi[...])

- Bolting time (Days from planting to 50%[...])
- Leaf color ((1=yellow, 2=green, 3=gra[...])
- Leaf division (At harvest maturity (1=0,[...])
- Leaf tip shape ((3=rounded, 5=medium roun[...])**

Apply Reset

C&E data search: Experiment

Filter C&E data by experiment

The report below lists all experiments, which contain characterisation & evaluation (C&E) data.

Q Go Rows 10

Experiment Start Year between 1967 and 2012

1 - 10 of 782

Experiment Description
Sowing date = February 2, Planting date = April 17, IVT glasshouse XII, heated soil culture, 2 stems, 4 plants per field, collection no. 567-659, experimentist H. Roelofs and G. Pet, standard = Bruinsma Wonder
Sowing date February 18, Planting date April 8, IVT glasshouse XII, heated, soil culture, 2 stems, 5 plants per field, collection no 444-543, experimentist L. de Groot and G. Pet, standard is Bruinsma Wonder
Sowing date = March 15, Planting date = April 26, IVT glasshouse XII, heated soil culture, 2 stems, 5 plants per field, collection no. 660-762, experimentist L. de Groot and G. Pet, standard is Bruinsma Wonder
Sowing date = February 28, Planting date = April 13, IVT glasshouse XII-IX, heated, soil culture, 2 stems, 5 plants per field, collection no. 763-869, experimentists L. de Groot and G. Pet, standard = Bruinsma Wonder
Sowing date = February 24, Planting date = April 18, IVT glasshouse no. XII, heated, soil culture, 2 stems, 5 plants per field, collection no 871-934, experimentists L. de Groot and G. Pet, standard = Bruinsma Wonder
Sowing date = March 11, Planting date = April 26, IVT glasshouse XII, heated soil culture, 2 stems, 5 plants per field, collection no. 935-981, experimentist L. de Groot and G. Pet, standard = Bruinsma Wonder
Sowing date = March 13, Planting date = May 1, IVT glasshouse II-I, heated, culture, 2 stems, 5 plants per field, collection no. 982-1021, experimentist G. Pet, standard = Bruinsma Wonder
Sowing date = March 20, Planting date = April 28, IVT glasshouse no. II-II, soil culture, 1 stem, 5 plants per field, collection no. 1476-1574, experimentist G. Pet, standard = Sonatine
Sowing date = January 31, Planting date = March 31, IVT Glasshouse no. 12, heated, soil culture, 2 stems, 5 plants per field, collection no. 33-68, experimentist G. Pet, Standard = Claessee
Sowing date = January 29, Planting date = March 28, IVT glasshouse no. 12, heated, soil culture, 2 stems, 5 plants per field, collection no. 1-111, experimentist G. Pet, standard = Claessee

1 - 10 of 782

0.03 s

Filter C&E data by experiment

The report below lists all experiments, which contain characterisation & evaluation (C&E) data. Please use the search bar below to define filters.

< Report View Exclude Null Values < Row 5 of 782 >

Uploader Code	wise
Dataset Remark	Test data CGN
Uploaded At	2015-10-20
Experiment Description	Sowing date = February 24, Planting date = April 18, IVT glasshouse no. XII, heated, soil culture, 2 stems, 5 plants per field, collection no 871-934, experimentists L. de Groot and G. Pet, standard = Bruinsma Wonder
Experiment Start Year	1984
Details	contained traits
Rpt File	Download report file

0.02 s

Traits in selected experiment

Q Go Rows 10 Actions

1 - 10 of 26

Trait Name	Trait Remark	Trait Method	Details
Fruit corrugation	-	(0=smooth, 3=slightly corrugated, 5=medium, 7=corrugated, 9=very corrugated)	scores
Fruit attitude	-	Bruinsma Wonder=7 (1=very drooping, 3=drooping, 5=horizontal, 7=semi-erect, 9=erect)	scores
Flower attitude	-	Bruinsma Wonder=7 (1=very drooping, 3=drooping, 5=horizontal, 7=semi-erect, 9=erect)	scores
Mature fruit color	-	(A=dark red, B=light r, C=orange, D=salmon, E=canary, F=sulphur, G=green, I=brown, J=light orange, K=white, a-b=both in one fruit)	scores
Tobacco mosaic virus	-	determined at natural infection (0=no symptoms, +=symptoms present)	scores
Stem anthocyanin content	-	Bruinsma Wonder=3 (0=absent, 1=very little, 3=little, 5=medium, 7=much, 9=very much)	scores
Fruit ribbing	-	(0=absent, 1=very little, ..., 9=very high)	scores
Flower color	-	(A=white, B=filthy-white, C=light green, D=light purple, E=dark purple, F=yellow, G=white/anthocyanin)	scores
Fruit outerwall thickness	-	Measurement, 9=9mm or more.	scores
Fruit cracking tendency	-	(1=none, 3=slight, 5=medium, 7=medium to severe, 9=severe)	scores

1 - 10 of 26

0.12 s

C&E data search: Trait

Filter C&E data by trait

The report below lists the definitions of all phenotypic traits, which are currently available in EURISCO. Please use the search bar below to define filters.

Rows

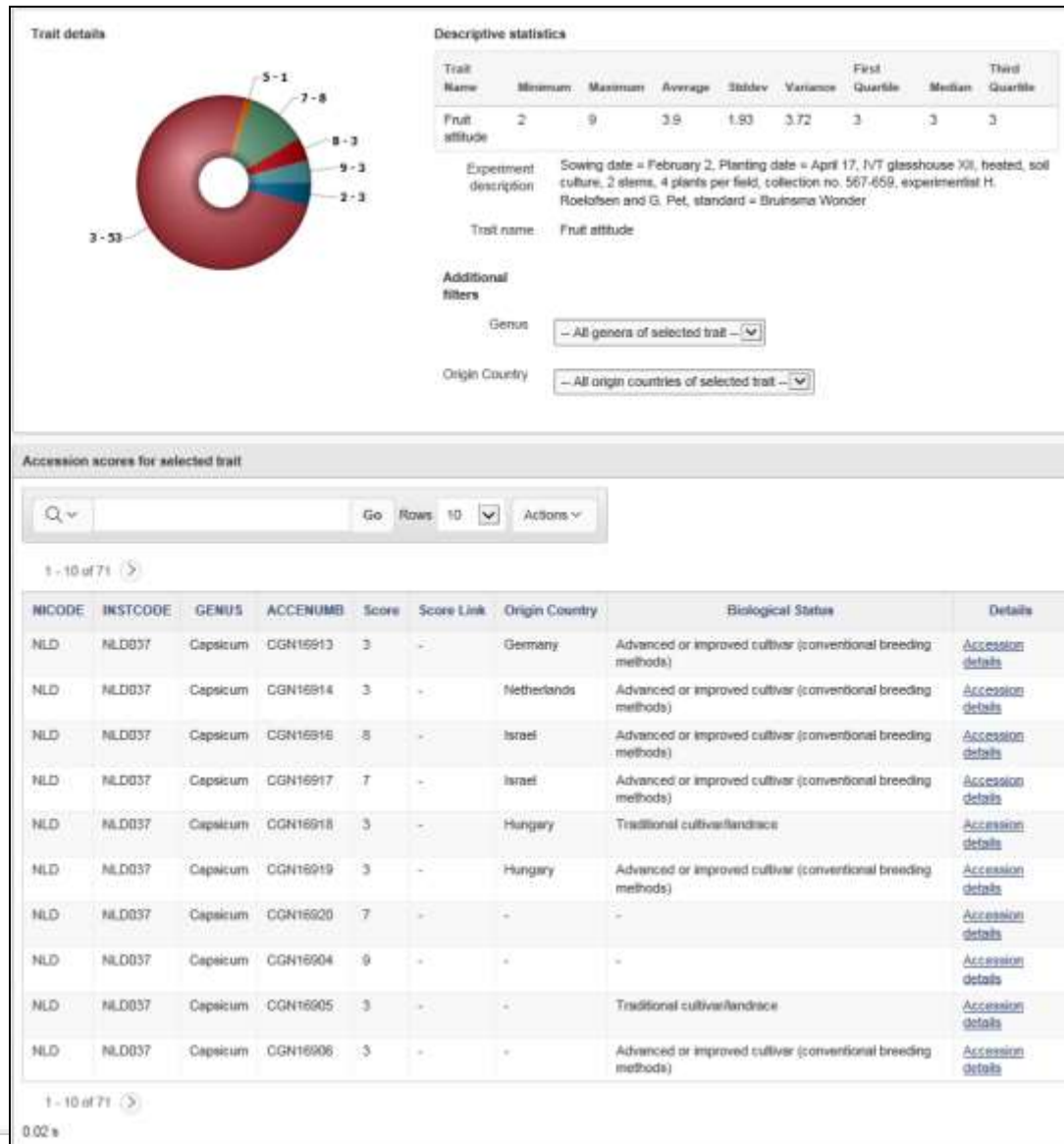
1 - 10 of 1214 >

Trait Name	Trait Remark	Trait Method	Trait Group	Details
Petiole and/or midvein enlargement	-	3=narrow, 5=intermediate,7=enlarged (See IPGRI descriptors Brassica and Raphanus 1990 4.2.27)	C&E data (not further specified)	used by experiment(s)
Siliqua angle	-	1=0°; 2=0-22.5°; 3=22.5°; 4=22.5-45°; 5=45°; 6.45-67.5°; 7=67.5°	C&E data (not further specified)	used by experiment(s)
Leaf anthocyanin content	-	1 = very weak, 3 = weak, 5 = medium, 7 = strong, 9 = very strong	C&E data (not further specified)	used by experiment(s)
Time period until marketable maturity	-	(1=very early, ..., 9=very late)	C&E data (not further specified)	used by experiment(s)
Bremia lactucae	-	Resistance to B. lactucae race BI 5, scale:1 = susceptible, 9 = resistant	C&E data (not further specified)	used by experiment(s)
Bremia lactucae	-	Resistance to B. lactucae race BI 11, scale:1 = susceptible, 9 = resistant	C&E data (not further specified)	used by experiment(s)
Bremia lactucae	-	Resistance to B. lactucae race BI 12, scale:1 = susceptible, 9 = resistant	C&E data (not further specified)	used by experiment(s)
Bremia lactucae	-	Resistance to B. lactucae race BI 14, scale:1 = susceptible, 9 = resistant	C&E data (not further specified)	used by experiment(s)
Leaf anthocyanin distribution	-	1 = localised, 2 = entire	C&E data (not further specified)	used by experiment(s)
Bremia lactucae	-	Resistance to B. lactucae race BI 25, scale:1 = susceptible, 9 = resistant	C&E data (not further specified)	used by experiment(s)

1 - 10 of 1214 >

0.03 s

C&E data search: C&E scores



AEGIS

AEGIS

- AEGIS - A European Genebank Integrated System
- ECPGR initiative for improving the coordination of
 - Conservation and management of PGRFA
 - Access to PGRFA
- Aims:
 - Conservation of genetically unique and important accessions
 - Making materials available for breeding and research
 - Safe long-term conservation (with common agreed standards)
 - Reduction of redundancy
 - Clarification of responsibilities for conservation

AEGIS data in EURISCO

- No physical collection → “virtual” genebank
- AEGIS accessions labelled in EURISCO
 - Including tracking of AEGIS status
- 32,791 AEGIS accessions
- 34 member countries

AEGIS status existing

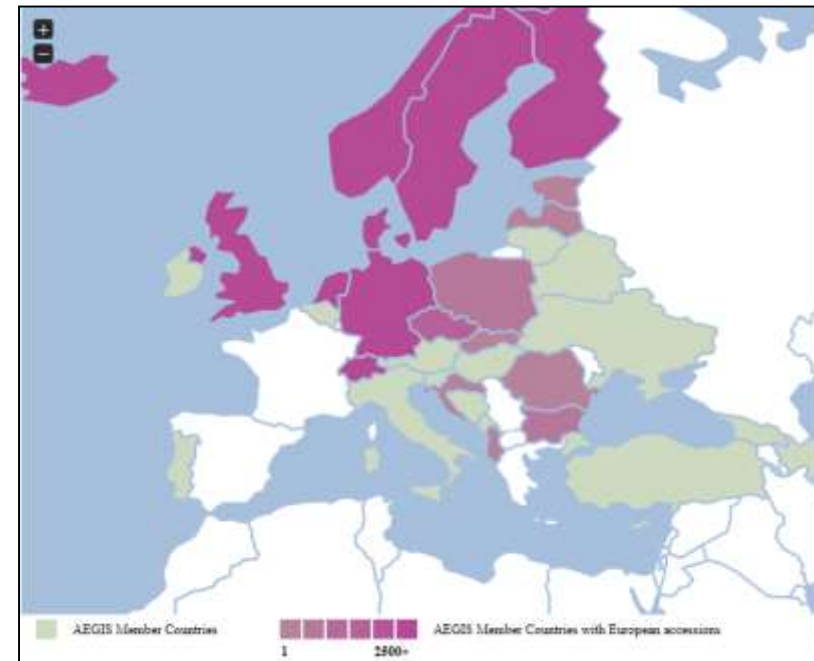
Q Go Actions

1 - 15 >

IBCODE	IBETCODE	AEGISSTAT old	AEGISSTAT current	Change timestamp	DML operation	No of accessions
SVK	SVK001	-	1	2015-08-26	Existing EURISCO accession labelled as part of AEGIS	8 (click for details)
SVK	SVK001	0	1	2015-08-26	Existing EURISCO accession labelled as part of AEGIS	47 (click for details)
LVA	LVA003	0	1	2015-08-10	Existing EURISCO accession labelled as part of AEGIS	52 (click for details)
POL	POL033	-	1	2015-06-02	Existing EURISCO accession labelled as part of AEGIS	149 (click for details)
SVK	SVK001	-	1	2015-05-01	Existing EURISCO accession labelled as part of AEGIS	247 (click for details)
LVA	LVA003	0	1	2015-02-15	Existing EURISCO accession labelled as part of AEGIS	8 (click for details)
ROU	ROM007	-	1	2015-02-02	Existing EURISCO accession labelled as part of AEGIS	198 (click for details)
EST	EST001	0	1	2015-01-12	Existing EURISCO accession labelled as part of AEGIS	55 (click for details)
POL	POL033	-	1	2015-01-11	Existing EURISCO accession labelled as part of AEGIS	150 (click for details)
BGR	BGR001	-	1	2015-12-08	Existing EURISCO accession labelled as part of AEGIS	261 (click for details)
NLD	NLD007	-	-	2015-11-06	Existing AEGIS accession completely removed from EURISCO	8 (click for details)
GBR	GBR015	-	1	2015-10-08	Existing EURISCO accession labelled as part of AEGIS	7 (click for details)
GBR	GBR015	0	1	2015-10-08	Existing EURISCO accession labelled as part of AEGIS	2517 (click for details)
HGB	SWE054	0	1	2015-09-02	Existing EURISCO accession labelled as part of AEGIS	2027 (click for details)
HGB	SWE054	-	1	2015-09-02	Existing EURISCO accession labelled as part of AEGIS	111 (click for details)

1 - 15 >

8/33



as of 2017-08-25

EURISCO INTRANET

EURISCO intranet

- Upload component for National Inventory Focal Points
- Standardised data exchange formats
 - Passport data
 - Phenotypic (characterisation and evaluation) data
- Details will follow during the hands-on sessions

FUTURE OF EURISCO

More data

- Inclusion of additional passport data
 - Support and encouragement of National Focal Points
 - Participation in project proposals

- Inclusion of additional C&E data
 - Currently in prototype phase
 - Request to all National Focal Points to provide available C&E data to EURISCO
 - Participation in ECPGR-funded activities, which foresee the provision of C&E data to EURISCO

Better data

- Increase frequency of updates
 - Avg. age 1.16 years
 - Oldest 10% avg. 4.96 years
(van Hintum 2014)
- Increase completeness of information
 - Often limited information about certain accessions
 - Some descriptors only sparsely populated
- Increase correctness of information

Challenges: Sea food?

▼ Taxonomy

Genus **Medicago**
Species **murex**

▼ Acquisition/storage

Acquisition Source **Roadside**

▼ Collection

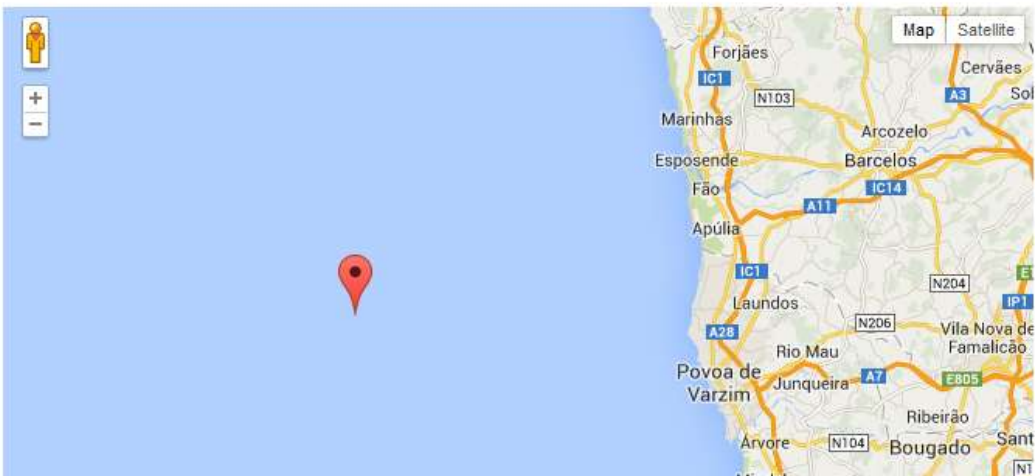
Collecting Institute Code

Collecting Date **1987**

Collecting Latitude **41.4264**

Collecting Longitude **-9.0831**

Collecting Elevation **635**



The map displays a coastal region in the Azores, with a red pin indicating the collection site. The map includes labels for various locations such as Forjães, Marinhãs, Esposende, Fão, Apúlia, Laundos, Povo de Varzim, Rio Mau, Junqueira, Arvore, Mindelo, Arcozelo, Barcelos, Vila Nova de Famalicão, Ribeirão, Bougado, and Sant. Major roads are marked with numbers like IC1, IC14, A11, A28, A7, N103, N204, N206, N104, A3, E805, and E1. The map also features a 'Map' button, a 'Satellite' button, and a person icon.

Challenges: Inconsistencies

Quick Search

Taxonomy | **Accession** | **Status**

Genus:

Genus containing "R.damascena" ✕

- ?? ???? .???? .R.damascena
- R.damascena x R.gallica

Name	Acquisition Date	Details
	01/01/0931	

Collecting Elevation	2053
Collecting Locality	""Shirak, Torosgyugh;near ""

Challenges: Babylonian aspects

Accession Name

nagykallo. 47°52'n, 21°51'e

Accession Na

OMAR

ELMAR

òãë-800

òãë-135

òãë-798

Collecting Locality

, Slobozia Mare, Region Vulcanesti, Slobozia Mare

Collecting Elevation

Collecting Locality

. ●●●●●●●●, ●●●●●●●●●●●●●●●●●●●

Challenges: Taxonomy I

- Synonyms and misspellings
 - Different (or missing) taxonomic opinions by curators of contributing genebanks

- Aim: Improve taxonomic backbone of EURISCO

- Management of taxon synonyms
- Improvement of checks during import



<http://www.ars-grin.gov>



<http://www.catalogueoflife.org>

- *Difficulty: EURISCO is not allowed to modify original data*
 - Instead: Feedback on errors to NFPs

Challenges: Taxonomy II

- Genera in EURISCO
 - In total: 6,338 (6,315 when ignoring case)
 - Amongst these
 - with accepted name: 5,261
 - mapped onto GRIN taxonomy: 709
 - not mapped automatically: 368

as of 2017-08-25

Challenges: Taxonomy III

- Combinations of genus and species in EURISCO

- In total: 43,000 (42,942 when ignoring case)

- Amongst these

- with accepted name: 16,791

- mapped onto GRIN taxonomy: 2,642

- not mapped automatically: 23,567

→ *Not satisfactory*

→ *Gets even worse if considering author names and “infraspecific” level*

as of 2017-08-25

Challenges: Taxonomy IV

- Mapping onto “standards” limited
- Different opinions/traditions exist
- Deep classification including infraspecific levels in many genebanks (esp. Eastern Europe)
 - Better distinctiveness
 - Separate names for different combinations of traits



The Gordian Knot

<http://www.reamedica.com>

Solution strategy

- Data provided to EURISCO cannot be curated actively
 - Focus on user-friendly search functionality instead
 - Internal mapping onto accepted vocabulary (GRIN, CoL, Mansfeld)
 - Extension of searches onto all available synonyms and name variants
 - “Did you mean...?” functionality
- Work in progress (project “EURISCO taxonomy”)

Increase functionality I

- Improve import mechanism for C&E data
 - Additional upload procedure
 - Data upload also by holding institutes
 - Check and approval by NFPs
 - Recently approved by the ECPGR Steering Committee
- Improve public web interface
 - Additional reports and download facilities
 - Extend filter possibilities by additional fields
- Additional means of access
 - Web services (BrAPI implementation)
 - Mobile version

Increase functionality II

- Extend EURISCO for *in situ* data
 - Will be documented in EURISCO
 - Sufficient specification needed
 - Data exchange formats need to be agreed

- Migrate to MCPD v2.1
 - Already implemented
 - Last tests running

Projects

- EURISCO Taxonomy (April 2017 – March 2018)
 - BLE funded
 - Improvement of taxonomic backbone of EURISCO
- EUCLEG (September 2017 – August 2021)
 - H2020 funded
 - Closing of gaps in EURISCO (protein crops)
- Farmer's Pride (beginning of 2018 [36 months])
 - H2020 funded
 - Development of network of *in situ* sites and stakeholders
 - Concept for preparation of EURISCO for *in situ* data

DISSEMINATION

Spread the word

- Regular training workshops
- Regularly short information in ECPGR bulletin
- EURISCO newsletter twice a year
- Journal article
- EURISCO talks and posters on several conferences
- Presentations on several ECPGR workshops
- ECPGR Grant Scheme activities

**THANK YOU FOR YOUR
ATTENTION**