

EURISCO, the European Search Portal for Plant Genetic Resources

Status quo & planned developments

EURISCO training workshop, 12th to 14th October 2016, Angers, France

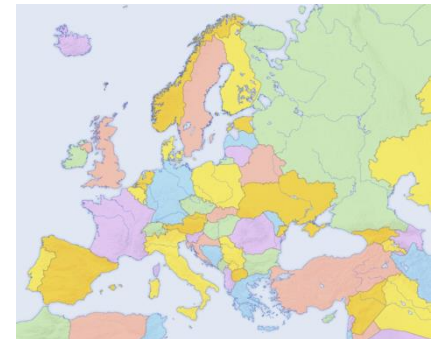
Stephan Weise
12 October 2016



BACKGROUND

Introduction I

- Development of European information system for plant genetic resources
 - Started in 2001 (EU project EPGRIS)
 - EURISCO: Search catalogue for *ex situ* collections; available online since 2003
 - National collections represented by National Inventories (NIs)
 - 43 countries involved (Nordic Countries → NordGen)
 - Network of National Focal Points (NFPs) links NIs ↔ EURISCO



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

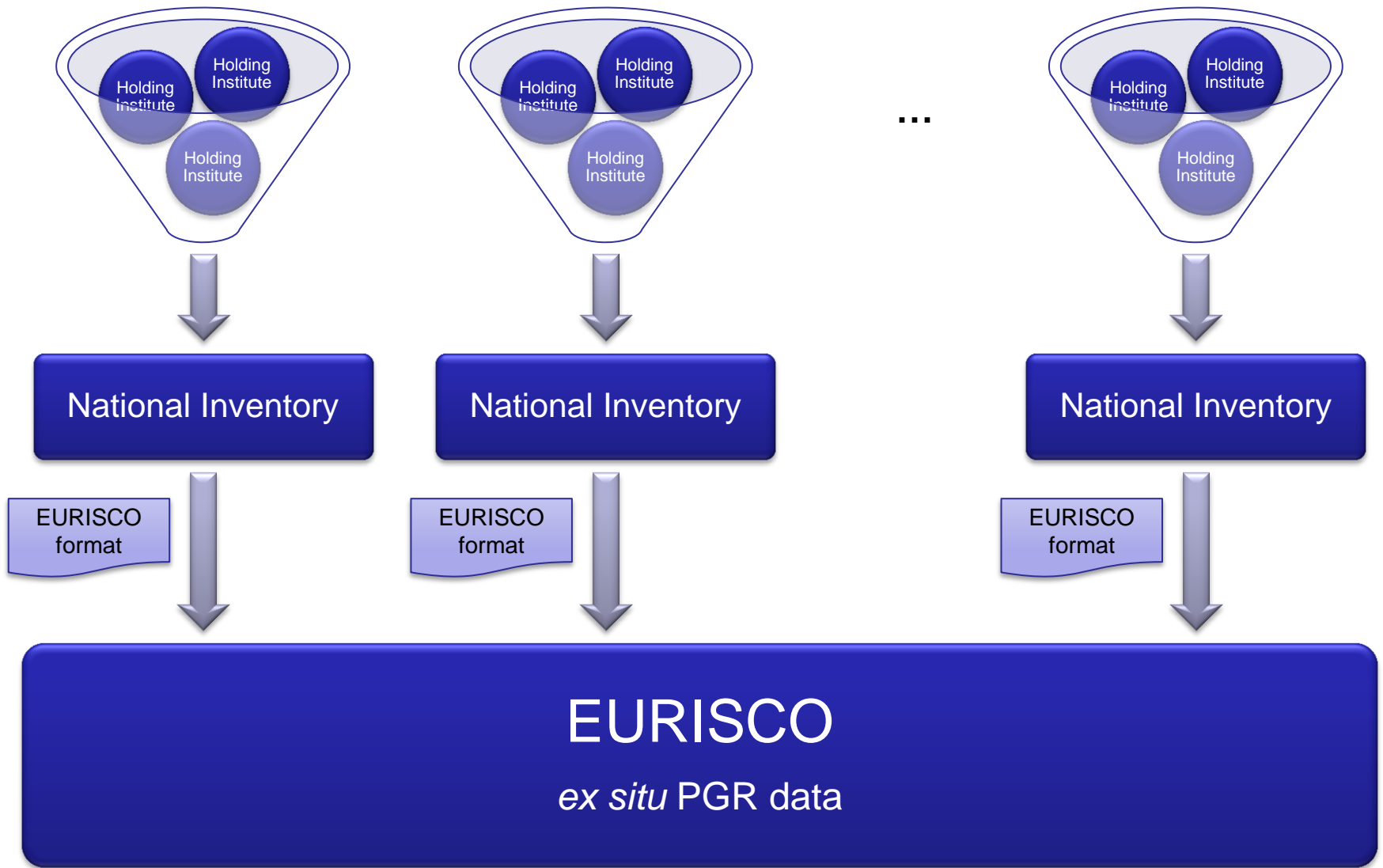
Introduction II

- Development of European information system for plant genetic resources (cont.)
 - Accession-level information system
 - Provides passport information about PGR 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

Data flow

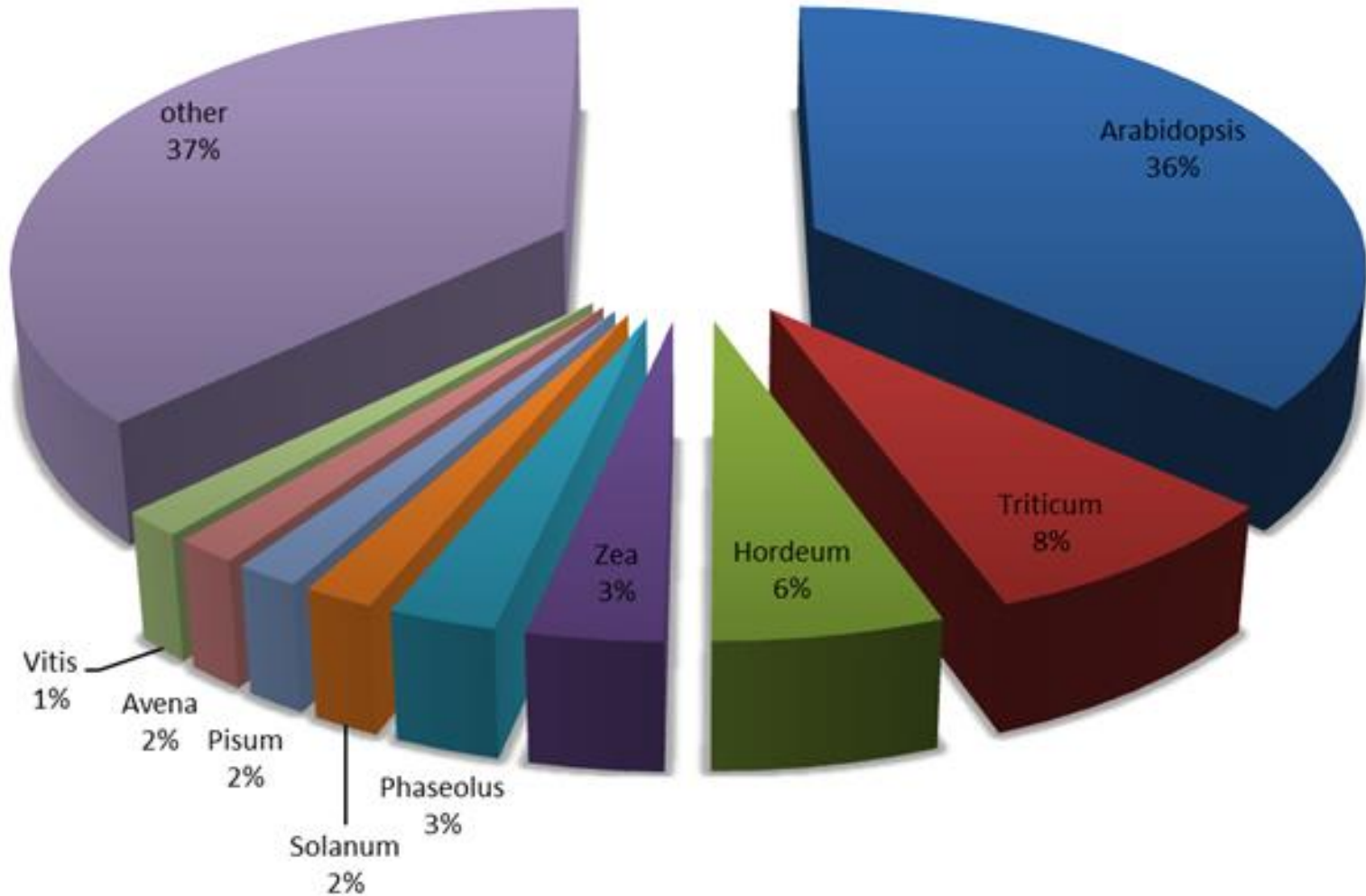


Contents of EURISCO

- 1,842,760 accessions
- 376 holding institutes
- 43 countries
- 6,233 genera (including synonyms, spelling variants)
- 41,649 species names (unique combinations genus + species, including synonyms)
- 368,446 MLS accessions
- 28,899 AEGIS accessions

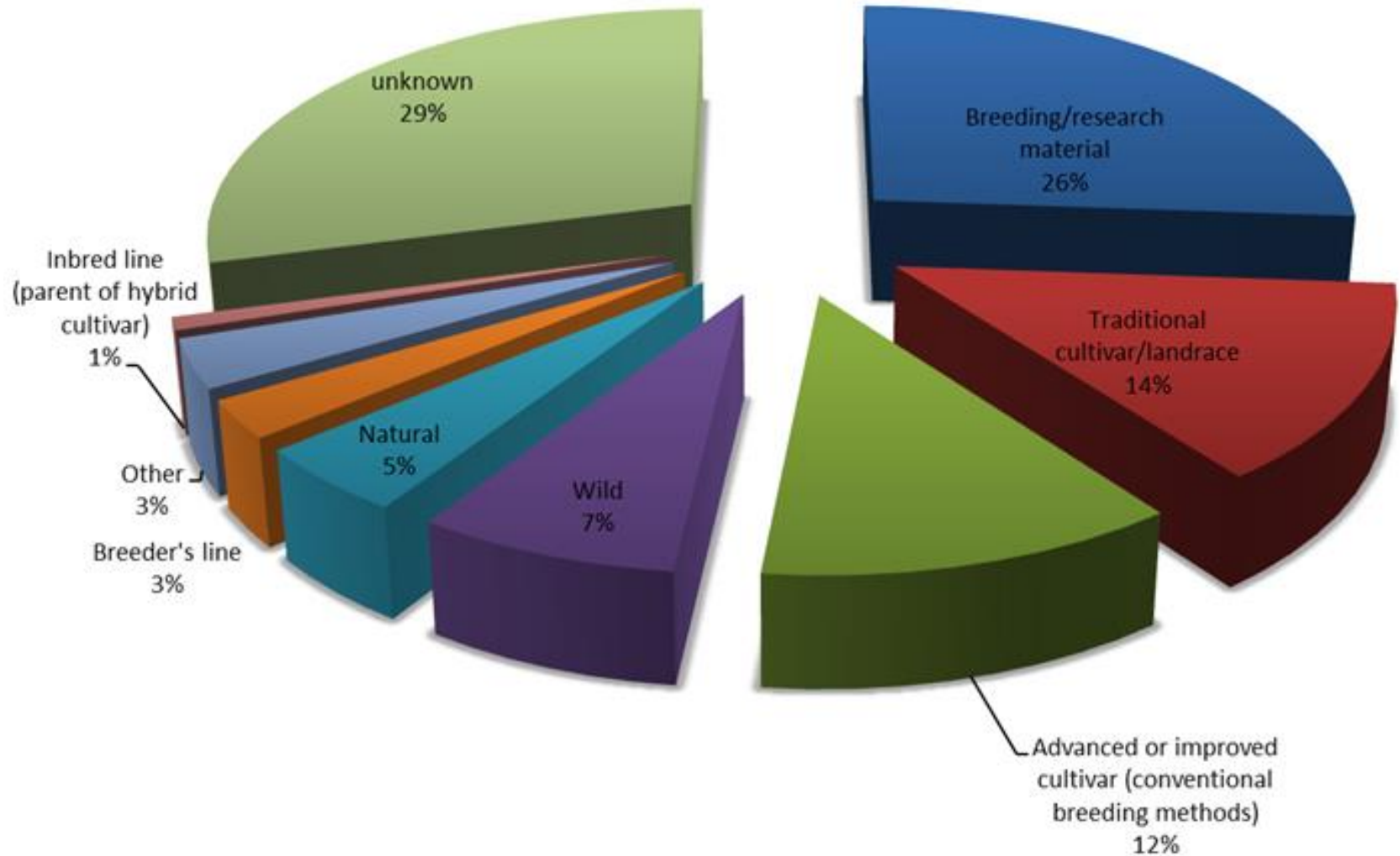
as of 2016-09-07

Genera



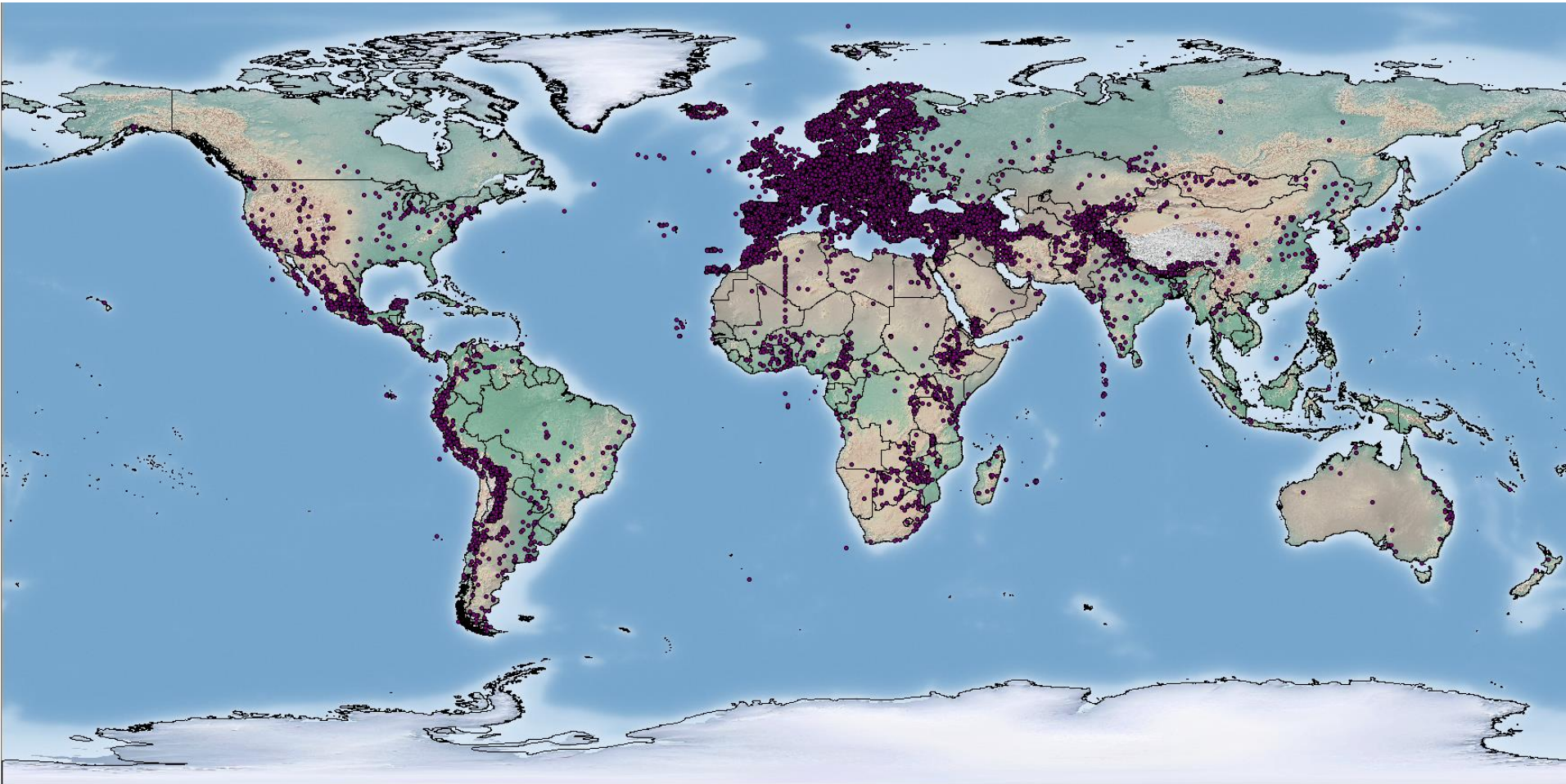
as of 2015-12-07

Biological status



as of 2015-12-07

Regions of origin



as of 2016-02-10

Data quality in EURISCO

- 587,391 accessions with collecting information
 - 91,808 different collecting sites
 - But only 188,456 accessions with coordinates (10% of all accessions; 32% of accessions with collecting information)
- 1,161,631 accessions with donor information
- 960,334 accessions with country of origin
 - 24 different geographic regions

as of 2016-09-07

EURISCO HOSTED BY IPK

IPK became host

- Since 2003:
 - EURISCO hosted by Bioversity International, Rome
- October 2012:
 - Request for tenders for hosting EURISCO
- March 2013:
 - IPK won the bid
- May and October 2013
 - Preparatory meetings in Gatersleben and Rome
- Since 15th April 2014:
 - Sub-contract between Bioversity International and IPK
 - Transfer of the EURISCO responsibilities to IPK (04-09/2014)

Challenges and decisions

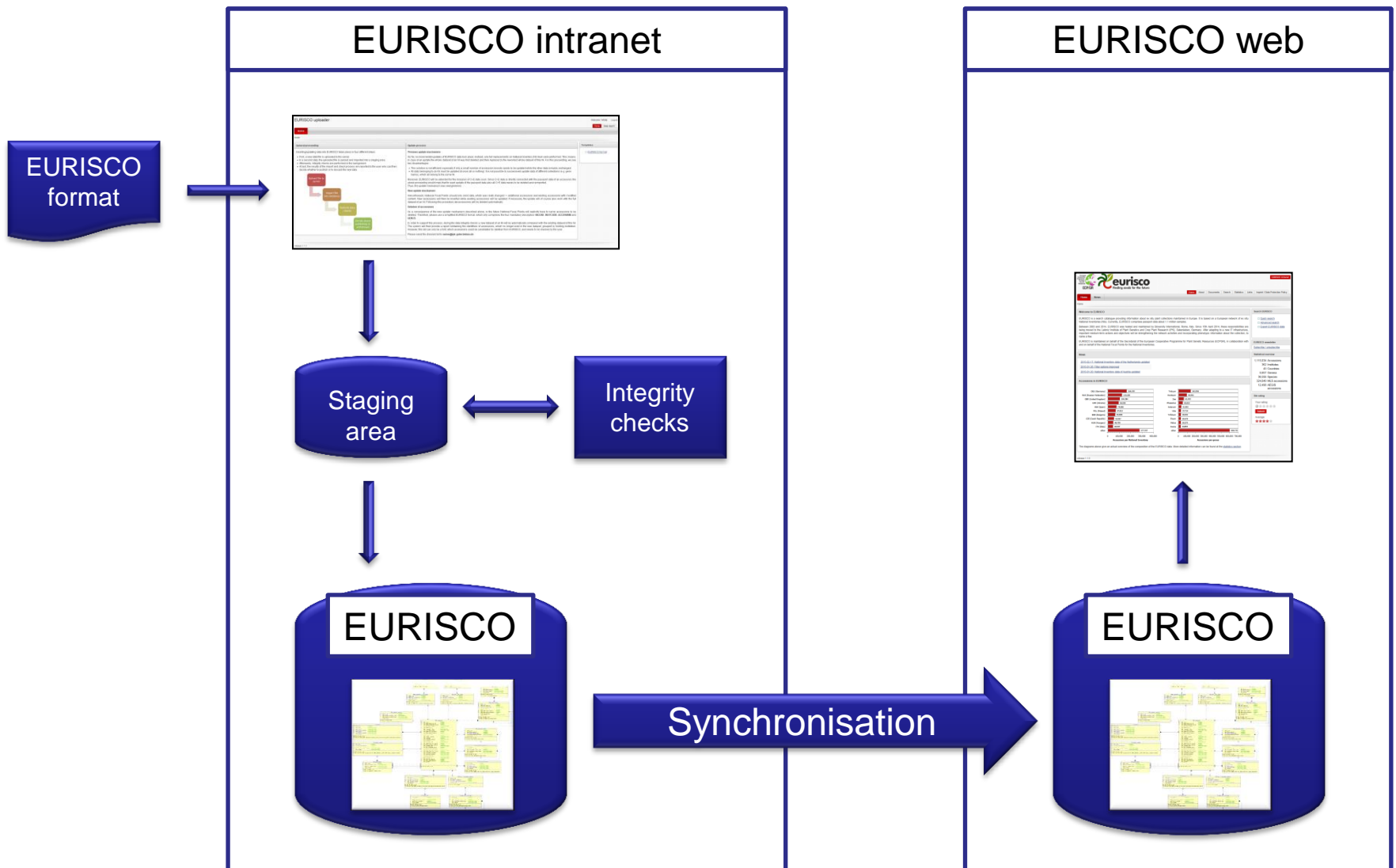
- Challenges faced:
 - Outdated systems
 - Insufficient technical documentation
 - High costs for transfer of as-is status
- Decisions:
 - No transfer of existing solutions
 - New development from scratch

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
 - 49 tables
 - 460 indexes
 - 90 triggers
 - 9 PL/SQL packages
 - 110 functions and procedures
 - 27 Java classes
- EURISCO web
 - 45 tables
 - 25 materialised views
 - 585 indexes
 - 6 PL/SQL packages
 - 25 functions and procedures
 - In-memory features

EURISCO WEB

New web application



European Cooperative Programme for Plant Genetic Resources
ECP/GR

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EURISCO Intranet

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

Home News

Home

Welcome to EURISCO

EURISCO is a search catalogue providing information about ex situ plant collections maintained in Europe. It is based on a European network of ex situ National Inventories (NIs). Currently, EURISCO comprises passport data about 1.8 million samples.

Between 2003 and 2014, EURISCO was hosted and maintained by Bioversity International, Rome, Italy. Since 15th April 2014, these responsibilities are being moved to the Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Gatersleben, Germany. After adapting to a new IT infrastructure, important medium-term actions and objectives will be strengthening the network activities and incorporating phenotypic information about the collection, to name a few.

EURISCO is maintained on behalf of the Secretariat of the European Cooperative Programme for Plant Genetic Resources (ECPGR), in collaboration with and on behalf of the National Focal Points for the National Inventories.

News

[2016-08-26: National Inventory data of Slovakia updated](#)

[2016-08-18: National Inventory data of The Netherlands updated](#)

[2016-07-27: National Inventory data of Poland updated](#)

Accessions in EURISCO



Country	Accessions
GBR (United Kingdom)	800,358
DEU (Germany)	174,362
RUS (Russian Federation)	123,430
UKR (Ukraine)	94,025
ESP (Spain)	76,984
POL (Poland)	70,209
BGR (Bulgaria)	63,713
CZE (Czech Republic)	52,947
HUN (Hungary)	46,750
ROU (Romania)	46,039
other	293,943



Genus	Accessions
Arabidopsis	669,587
Triticum	147,056
Hordeum	105,291
Zea	61,932
Phaseolus	49,774
Solanum	33,193
Pisum	29,735
Avena	29,430
Vitis	28,819
Malus	27,698
other	660,245

The diagrams above give an actual overview of the composition of the EURISCO data. More detailed information can be found at the [statistics section](#).

Search EURISCO

> Quick search

> Advanced search

> Export EURISCO data

> C&E data

EURISCO newsletter

[Subscribe / unsubscribe](#)

Regions of origin



Statistical overview

1,842,760 Accessions

376 Institutes

43 Countries

6,233 Genera

41,649 Species

368,446 MLS accessions

28,899 AEGIS accessions

Site rating

Your rating:

☉ ★ ★ ★ ★ ★

Submit

Average:

★ ★ ★ ★ ★

release 1.2.3

Search form


Search form interface showing four main sections: Taxonomy, Accession, Status, and Site. The Taxonomy section includes fields for Genus, Species, and Species Authority. The Accession section includes fields for Accession Number, Crop Name, Origin Country, Holding Institute Code, Holding Institute Name, and Accession Name. A dropdown menu is open for the Origin Country field, showing a list of countries including Afghanistan, Albania, Algeria, Andorra, Angola, Anguilla, Antarctica, Antigua and Barbuda, Argentina, Armenia, Australia, Austria, Azerbaijan, and Bahamas. A red arrow points to the 'Accession Name' field in the Accession section.

Buttons: Show All, Taxonomy, Accession, Status, Site, Search, Reset.

Four standard searches

- Taxonomy
- Accession
- Biological status
- Collecting site

Search results



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EURISCO Intranet

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

Search Advanced search Export data by species Export data by National Inventory

Home > Search > National inventory report accession

National inventory report

1-15 [16-20](#)


National Inventory	No Of Accessions
Azerbaijan	3
Belarus	2
Belgium	1
Bulgaria	95
Czech Republic	96
Germany	1079
Hungary	23
Israel	1
Italy	65
Moldova	3
Netherlands	167
Nordic Countries	167
Poland	118
Romania	19
Russian Federation	1070

1-15 [16-20](#)

[Download](#)

1.28 s

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

Search Advanced search Export data by species Export data by National Inventory

Home > Search > National inventory report accession > Accession list accession

Accession list

1-15 [16-30](#) [31-45](#) [46-60](#) [61-75](#) [Next Set](#) >

HOLDING	INSTITUTE	ACCESSION NUMBER	ACCESSION NAME	CROP NAME	ACQUISITION DATE	DETAILS
DEU146		AE 280			1974	
DEU146		AE 281			1974	
DEU146		AE 282			1974	
DEU146		AE 278			1974	
DEU146		AE 279			1974	
DEU146		AE 276			1974	
DEU146		AE 277			1974	
DEU146		AE 275			1974	
DEU146		AE 193			1974	
DEU146		TRI 2494			1947	
DEU146		TRI 3284			1947	
DEU271		GR 7280			1994	
DEU271		LE 2634			1954	
DEU271		CR 2682			2003-03-10	
DEU271		CR 2638			2003-03-10	

1-15 [16-30](#) [31-45](#) [46-60](#) [61-75](#) [Next Set](#) >

[Download](#)

0.45 s

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Search EURISCO

- > Quick search
- > Advanced search
- > Export EURISCO data
- > C&E data

Accession details

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

Search Advanced search Export data by species Export data by National Inventory

Home > Search > Passport data

Show All National Inventory Holding institute Accession Taxonomy Acquisition/storage Collection Donor Breeder Other

National inventory
National Inventory Code DEU
National Inventory Germany

Holding institute
Institute Code DEU146
Institute Name Genebank, Leibniz Institute of Plant Genetics and Crop Plant Research

Accession
Accession Number TRI 10454
Accession Names White Kandahar [land race]
Country Of Origin Afghanistan
MLS Status part of the MLS
AEGIS Status not part of the AEGIS

Taxonomy
Genus Triticum
Species sp.

Acquisition/storage
Acquisition Date 1973
Acquisition Source Other
Germplasm Storage Long term

Collection
Collecting Number 83
Collecting Date 1973
Collecting Latitude 31.633333
Collecting Longitude 64.3
Collecting Elevation 900
Collecting Site Chalingir

Donor
Donor Accession Number 26272
Description FAO Sortiment, Italy

Breeder
no data found

Other
Accession URL http://ghis.ipk-gatersleben.de/ghis_idetail.js?akzessionid=10426
Other Numbers DEU146:W 2427

National inventory
National Inventory Code DEU
National Inventory Germany

Holding institute
Institute Code DEU146
Institute Name Genebank, Leibniz Institute of Plant Genetics and Crop Plant Research

Accession
Accession Number TRI 10454
Accession Names White Kandahar [land race]
Country Of Origin Afghanistan
MLS Status part of the MLS
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Taxonomy
Genus Triticum
Species sp.

Acquisition/storage
Acquisition Date 1973
Acquisition Source Other
Germplasm Storage Long term

...

Advanced search form

EURISCO Intranet

EURISCO Finding seeds for the future

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

Search Advanced search Export data by species Export data by National Inventory

Home > Search > Advanced search

Advanced search

The advanced search allows to freely combine all fields related to taxonomy, accession, status and site, respectively. Moreover, the advanced search enables to perform multiple selection of up to five search terms per field.

Taxonomy

Genus
[X] TRITICUM

Species
[X] DICOCCOIDES [X] MONOCOCCUM [X] SPELTA [X] DURUM

Species Authority

Accession

Origin Country
[X] IRAQ (IRQ) [X] ISLAMIC REPUBLIC OF IRAN (IRN) [X] ISRAEL (ISR) [X] JORDAN (JOR) [X] TURKEY (TUR)

Holding Institute Code

Holding Institute Name

Crop Name

Accession Name

Status

Biological Status
[X] 100 (W&D)

Acquisition Source

Storage Type

Acquisition Date From [Select date] Acquisition Date To [Select date]

MLS Status [All statuses] AEGIS Status [All statuses]

Site

Latitude From [] [] [] [North] Latitude To [] [] [] [North]

Longitude From [] [] [] [East] Longitude To [] [] [] [East]

Elevation From [] Elevation To []

Collecting Date From [Select date] Collecting Date To [Select date]

[Search] [Reset]

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Taxonomy

Genus
[X] TRITICUM

Species
[X] DICOCCOIDES [X] MONOCOCCUM [X] SPELTA [X] DURUM

Species Authority

[X] 100 (Wild)

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



EURISCO Intranet

Home About Search C&E 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

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 *

- Triticum dicocum
- Triticum dimococcum
- Triticum durocompac
- Triticum durooblongum
- Triticum fungicidum
- Triticum georgicum
- Triticum georgicum
- Triticum hybernum
- Triticum hybr.
- Triticum imereticum

↻
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- Triticum araraticum
- Triticum dicoccoides
- Triticum durum

↑
↓
↕

National Inventory:

Filtered values

Rows: Actions: Download

1 - 5 >

NICODE	INSTCODE	ACCENUMB	GENUS	SPECIES	SPAUTHOR	SUBTAXA	SUBTAUTHOR	CROPNAME	ACCENAME	ACQDATE	ORIGCTY	SAMPSTAT	MLSSTAT	AEGISSTAT
POL	POL003	231368	Triticum	araraticum	Jakubz.	-	-	-	-	-	-	400	-	-
POL	POL003	231369	Triticum	araraticum	Jakubz.	-	-	-	-	-	-	400	-	-
POL	POL003	231370	Triticum	araraticum	Jakubz.	-	-	-	-	-	-	400	-	-
POL	POL003	5024	Triticum	araraticum	Jakubz.	-	-	wheat	T. ARARATICUM	1992----	SUN	400	-	-
HUN	HUN003	RCAT053457	Triticum	araraticum	Jakubz.	-	-	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&E 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 * France (FRA)

Genus ^

Apply Reset

Filtered values

Rows 5 Actions Download

1 - 5 >

NICODE	INSTCODE	ACCENUMB	GENUS	SPECIES	SPAUTHOR	SUBTAXA	SUBTAUTHOR	CROPNAME	ACCENAME	ACQDATE	ORIGCTY	SAMPSTAT	MLSSTAT	AEGISSTAT
FRA	FRA041	P000431	Medicago	littoralis	-	-	-	-	P000431	-	ITA	100	0	-
FRA	FRA041	L000633	Medicago	littoralis	-	-	-	-	L000633	-	GRC	-	0	-
FRA	FRA041	L000336	Medicago	littoralis	-	-	-	-	L000336	-	GRC	-	0	-
FRA	FRA041	P001891	Medicago	littoralis	-	-	-	-	P001891	-	FRA	100	0	-
FRA	FRA041	P000266	Medicago	littoralis	-	-	-	-	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 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

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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

CHARACTERISATION & EVALUATION DATA

C&E data: Extending EURISCO

- EURISCO backend completely extended for C&E data
 - Exchange format
 - Database schema
 - Upload tools
 - Data integrity checks
- Extension of EURISCO web interface for C&E data – first version available
 - Wizard-based searches for
 - Genus
 - Species and trait
 - Experiment
 - Trait

C&E data: Genus

Filter C&E data by genus

Genera *

- Brassica
- Capsicum
- Chondrilla
- Cicerbita
- Cucumis
- Eruca
- Allium
- Hordeum
- Lactuca

Bar chart showing scores for selected genera:

Lactuca	105,02
Solanum	77,663
Capsicum	50,736
Triticum	37,301
Hordeum	32,852

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 use the search bar below to define filters.

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)	Determined at natural	NLD	NL D037	Hordeum	CGN13027	0	-	United	Advanced or	Accession

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.

5

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

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.

5

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: 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=resif[...])

- 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: Experiment

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.

Q Go Rows 10

Experiment Start Year between 1967 and 2012

1 - 10 of 782

	Experiment Description	Dataset Remark	E
Q	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. Roelofsen and G. Pet, standard = Bruinisma Wonder	Test data CGN	
Q	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 = Bruinisma Wonder	Test data CGN	
Q	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 Bruinisma Wonder	Test data CGN	
Q	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 = Bruinisma Wonder	Test data CGN	
Q	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 = Bruinisma Wonder	Test data CGN	
Q	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 = Bruinisma Wonder	Test data CGN	
Q	Sowing date = March 13, Planting date = May 1, IVT glasshouse II-I, heated, soil culture, 2 stems, 5 plants per field, collection no. 982-1021, experimentist G. Pet, standard = Bruinisma Wonder	Test data CGN	
Q	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	Test data CGN	
Q	Sowing date = January 31, Planting date = March 31, IVT Glasshouse no. 12-7, heated, soil culture, 2 stems, 5 plants per field, collection no. 33-68, experimentist G. Pet, Standard = Claessee	Test data CGN	
Q	Sowing date = January 29, Planting date = March 28, IVT glasshouse no. 12-5, heated, soil culture, 2 stems, 5 plants per field, collection no. 1-111, experimentist G. Pet, standard = Claessee	Test data CGN	

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	weise
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 = Bruinisma Wonder
Experiment Start Year	1994
Details	contained traits
Rpt File	Download report file

0.02 s

Traits in selected experiment

Q Go Rows 10

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	-	Bruinisma Wonder=7 (1=very drooping, 3=drooping, 5=horizontal, 7=semi-erect, 9=erect)	scores
Flower attitude	-	Bruinisma 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	-	Bruinisma 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: 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

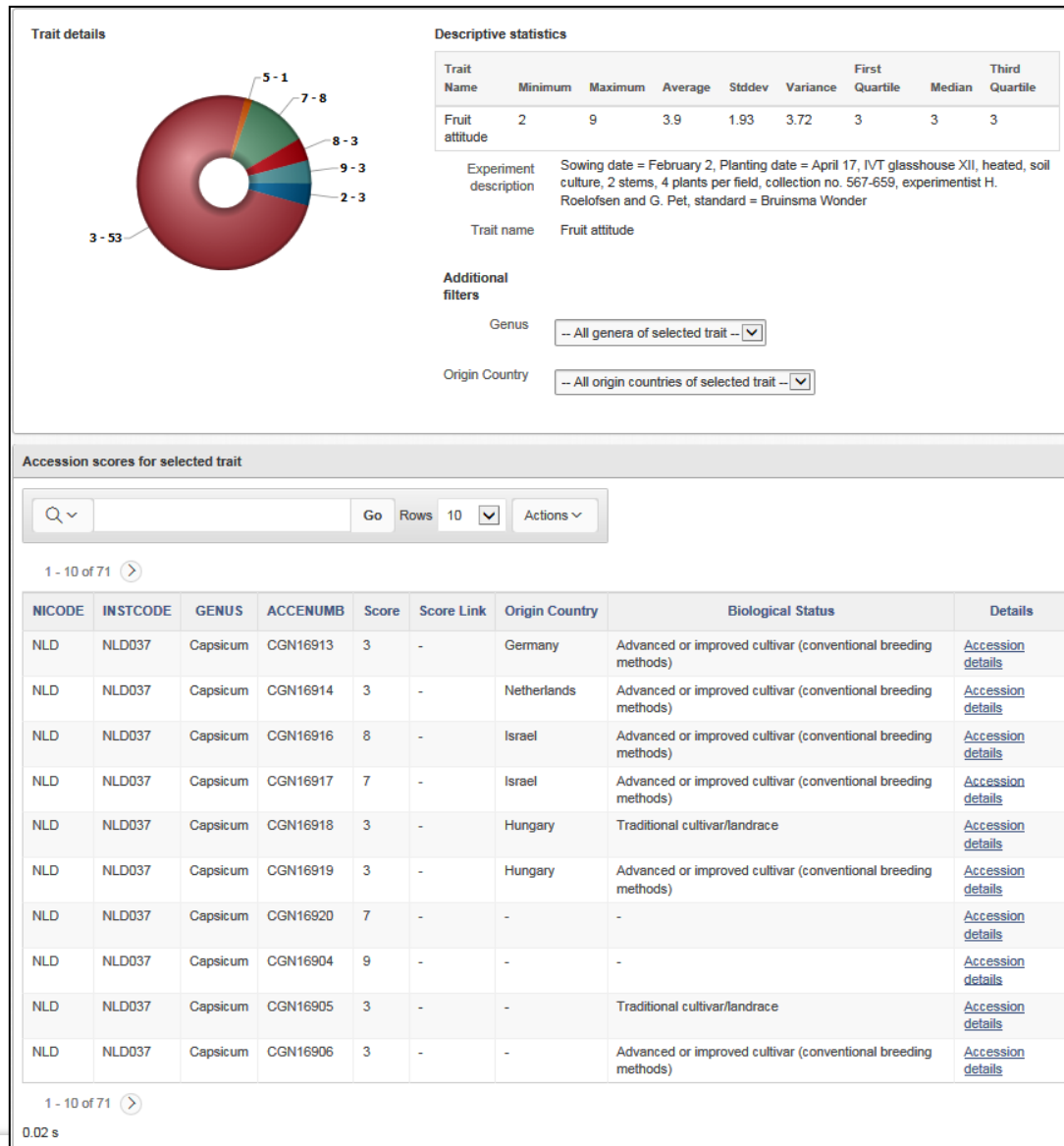
1 - 10 of 1214 >

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: 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
- 28,899 AEGIS accessions
- 34 member countries

AEGIS status auditing

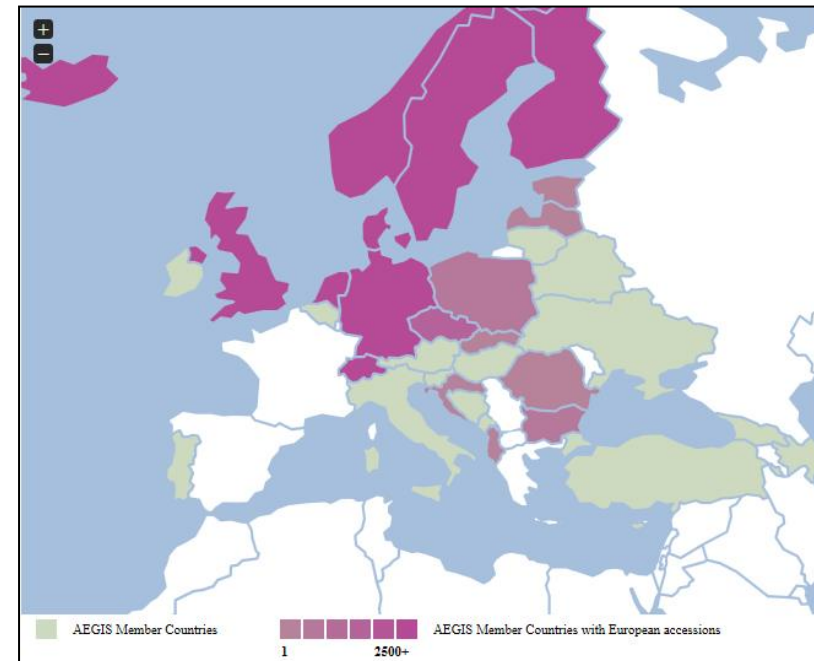
Q Go Actions ▾

1 - 15 >

NICODE	INSTCODE	AEGISSTAT old	AEGISSTAT current	Change timestamp	DML operation	No of accessions
SVK	SVK001	-	1	2016-08-26	Existing EURISCO accession labelled as part of AEGIS	5 (click for details)
SVK	SVK001	0	1	2016-08-26	Existing EURISCO accession labelled as part of AEGIS	47 (click for details)
LVA	LVA009	0	1	2016-06-10	Existing EURISCO accession labelled as part of AEGIS	12 (click for details)
POL	POL003	-	1	2016-06-02	Existing EURISCO accession labelled as part of AEGIS	149 (click for details)
SVK	SVK001	-	1	2016-03-01	Existing EURISCO accession labelled as part of AEGIS	247 (click for details)
LVA	LVA009	0	1	2016-02-15	Existing EURISCO accession labelled as part of AEGIS	9 (click for details)
ROU	ROM007	-	1	2016-02-02	Existing EURISCO accession labelled as part of AEGIS	196 (click for details)
EST	EST001	0	1	2016-01-12	Existing EURISCO accession labelled as part of AEGIS	15 (click for details)
POL	POL003	-	1	2016-01-11	Existing EURISCO accession labelled as part of AEGIS	152 (click for details)
BGR	BGR001	-	1	2015-12-08	Existing EURISCO accession labelled as part of AEGIS	261 (click for details)
NLD	NLD037	1	-	2015-11-06	Existing AEGIS accession completely removed from EURISCO	9 (click for details)
GBR	GBR016	-	1	2015-10-09	Existing EURISCO accession labelled as part of AEGIS	7 (click for details)
GBR	GBR016	0	1	2015-10-09	Existing EURISCO accession labelled as part of AEGIS	2517 (click for details)
NGB	SWE054	0	1	2015-09-02	Existing EURISCO accession labelled as part of AEGIS	3597 (click for details)
NGB	SWE054	-	1	2015-09-02	Existing EURISCO accession labelled as part of AEGIS	111 (click for details)

1 - 15 >

0.03 s



as of 2016-09-08

FUTURE OF EURISCO

More data

- Data quantity
 - Inclusion of additional passport data
 - ~250,000 accessions (van Hintum, 2014)
 - Data quality
 - Increase frequency of updates
 - Avg. age 1.16 years
 - Oldest 10% avg. 4.96 years
- (van Hintum, 2014)

The documentation of Plant Genetic Resources in Europe

Theo van Hintum, Centre for Genetic Resources, The Netherlands (CGN)
April, 2014

This is a personal view as input for the discussions at the workshop of the Documentation and Information Working Group 'Tailoring the Documentation of Plant Genetic Resources in Europe to the Needs of the User' to be held 20-22 May '14 in Prague, Czech Republic. It provides a conceptual background to the issues to be discussed and formulates a number of draft resolutions.

Focus

The current *ex situ* PGR documentation landscape consists of very many 'data sources', i.e., documentation systems of germplasm collections. The passport information from these systems is to a large extent collected by National Focal Points (NFPs) to create National Inventories (NIs). The information in NIs is expected to be regularly uploaded to EURISCO that thus should always provide an overview of the content of these NIs and of the genetic resources in Europe. Parallel to this data-flow and depository, Central Crop Data Bases (CCDBs) have been created since the early days of the ECPGR Crop Working Groups, to collect passport and sometimes additional data on a crop specific basis, however many of these databases do not appear to be up to date or to provide information and features that are not already present in EURISCO.

On a global level, the GeneSys initiative tries to create an entry point to data on all PGR maintained in the world. Data providers and database managers operate in an environment with rapidly evolving technologies and policies. It is therefore expected that developments in information technology, sequencing technology and policies on access and benefit sharing (ABS) will have a large impact on PGR documentation.

The combined data from EURISCO and 46 accessible Central Crop Data Bases originate from 506 data sources in 43 countries. The largest data source, according to EURISCO is IPK in Germany with 128k accessions, followed by the Vavilov Institute in Russia with 123k accessions¹. The number of accessions currently documented in EURISCO is 1065766, and the total number of accessions in Europe is expected to be around 1.3 million.

In this document some important issues related to the current situation and developments regarding the documentation of PGR in Europe will be discussed, and resolutions will be formulated. These resolutions are aimed at either the EURISCO Management (currently, since beginning of 2014 at IPK) that coordinates the network of NFPs and runs the EURISCO database and web interface, or the ECPGR Doc:Info Working Group, that acts as the steering committee for EURISCO and oversees the documentation activities of ECPGR.

The issues that are to be discussed include: quality and coverage of the passport data in EURISCO, characterisation and evaluation data in EURISCO, the future of CCDBs in relation to EURISCO, PGR Portals, the relation EURISCO - GeneSys, the relation

1

Better data

- Data quality
 - Improve taxonomic backbone of EURISCO
 - Management of taxon synonyms
 - Improvement of checks during import
 - GRIN, Catalogue of Life webservice
 - Increase completeness of information
 - Often limited information about certain accessions
 - Some descriptors only sparsely populated
 - SPECIES: 97%
 - BREDCODE: 40%
 - ELEVATION: 11%



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

Catalogue of Life



<http://www.catalogueoflife.org>

Challenges: Sea food?

▼ Taxonomy

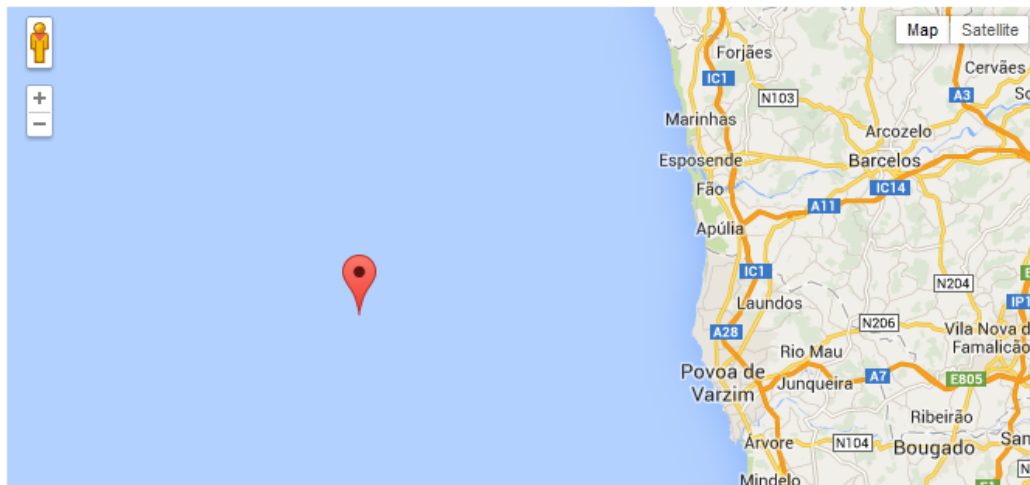
Genus **Medicago**
Species **murex**

▼ Acquisition/storage

Acquisition Source **Roadside**

▼ Collection

Collecting Institute Code
Collecting Date **1987**
Collecting Latitude **41.4264**
Collecting Longitude **-9.0831**
Collecting Elevation **635**



Challenges: Inconsistencies



Quick Search

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

Genus: Contains

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

nagykallos, 47°52'n, 21°51'e

◆ Accession Name

OMAR

ELMAR

000-800

000-135

000-798

Collecting Locality

, Slobozia Mare, Region Vulcăneşti, Slobozia Mare



Collecting Elevation

Collecting Locality



Increase functionality

- Improve import mechanism
 - Nested user accounts
 - Data upload also by holding institutes
 - Check and approval by NFPs
- Improve public web interface
 - Additional reports and download facilities
 - Extend filter possibilities by additional fields
 - Enable case insensitive search for taxa (for standard searches)
 - Provide a full-text search

Extend for *in situ* data

- Will be documented in EURISCO
- Sufficient specification needed
- Data exchange formats need to be agreed

Additional means of access

- Web services
 - Additional means of access
 - Data exchange with Genesys, GBIF etc.
 - Improvement of upload mechanism
 - Selective updates of certain accessions
- Mobile version

DISSEMINATION

Dissemination

- Presentations on several workshops
- Journal article
 - Nucleic Acids Research (database issue), DOI: 10.1093/nar/gkw755
- EURISCO posters on several conferences
- Regularly short information in ECPGR bulletin
- EURISCO newsletter twice a year
- Preparation of project proposals (H2020 and others)
- In preparation: Update of fact sheets

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- ECPGR
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 - ECPGR Executive Committee

**THANK YOU FOR YOUR
ATTENTION**