WheatIS DataDiscovery

AgBioData

Toward enhanced genomics, genetics, and breeding research outcomes through standardization of practices and protocols across agricultural databases

- Please keep your microphone muted and your webcam off
- Notice that the webinar will be recorded
- Ask your questions in the chat
- The presentation and the recorded video will be available

Raphaël Flores, Michael Alaux, 7 October 2020

Outline

- The WheatIS project
- WheatIS DataDiscovery: behind the scene
- Data providers & data exchange format
- WheatIS DataDiscovery web interface: live demo
- Beyond WheatIS: other species (FAIDARE)
- How to contribute
- Perspectives
- *Q&A session*

The WheatIS project

Created in 2011 following endorsement from the G20 Agriculture Ministries, the Wheat Initiative provides a framework to establish strategic research and organisation priorities for wheat research at the international level.

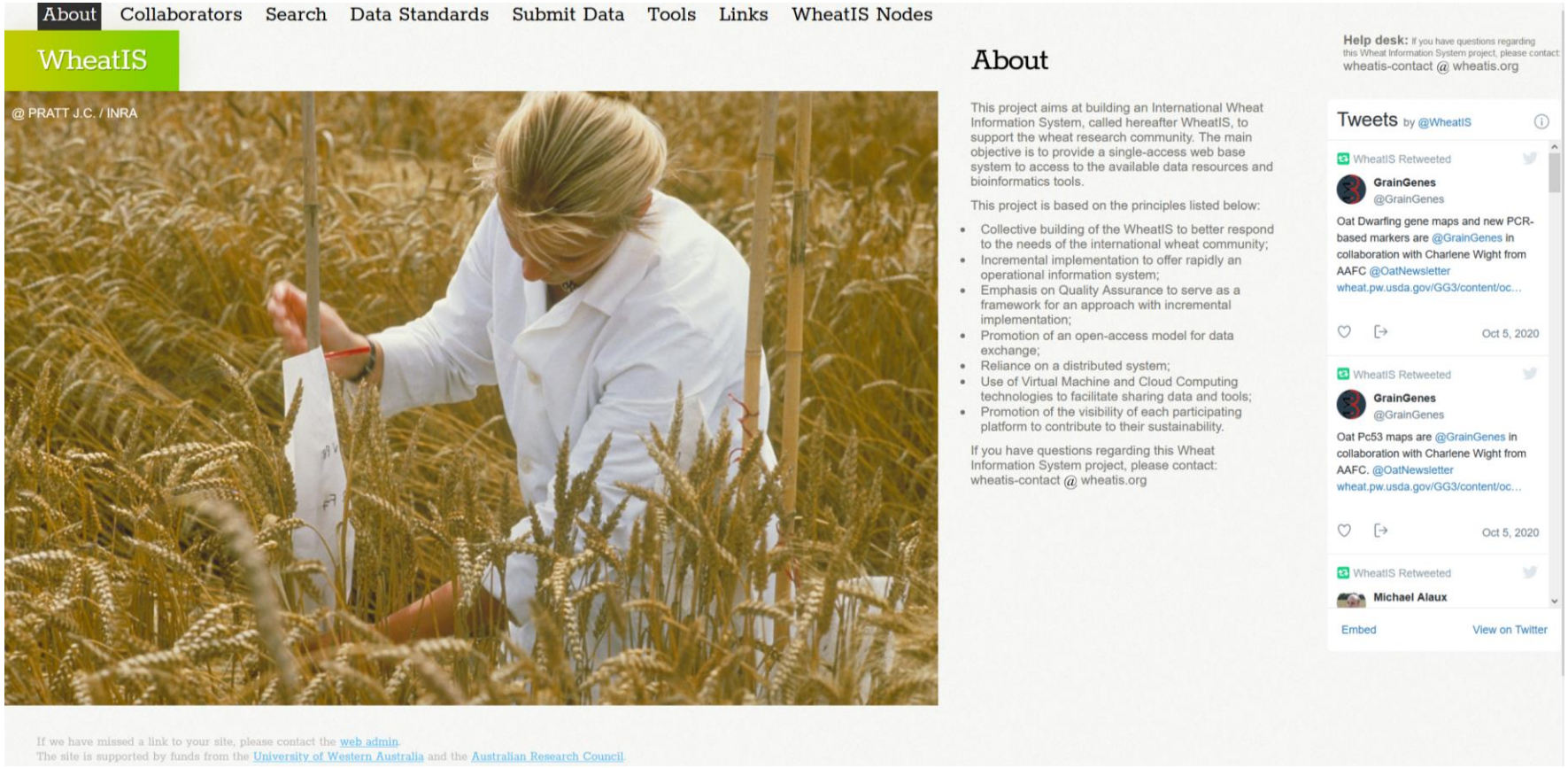
The Wheat Initiative endorsed the WheatIS Expert Working group in 2013.

Leadership team in 2020:
Chair: Taner Sen (USDA-ARS & Iowa State University)
Co-Chair: Hadi Quesneville (INRAE, FR), Mario Caccamo (NIAB, UK), David Edwards (University of Western Australia)

https://www.wheatinitiative.org

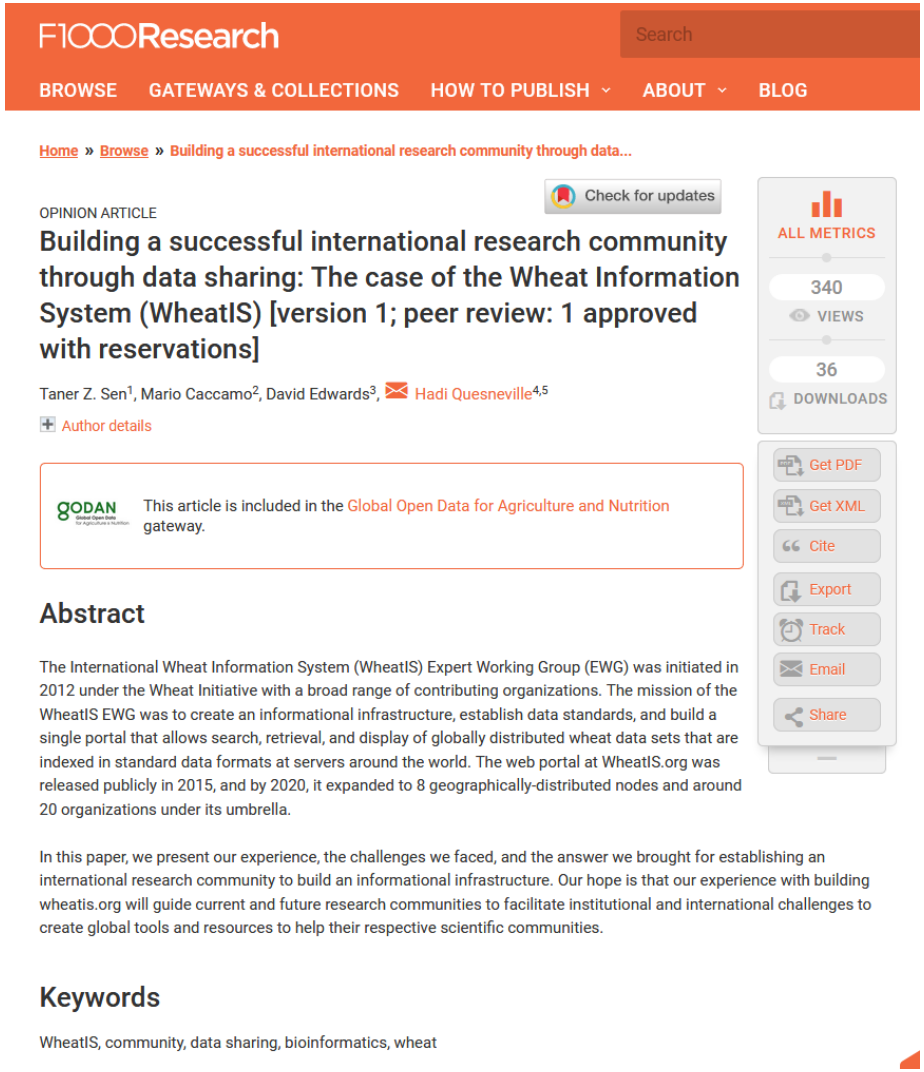
The WheatIS project

The WheatIS project aims at building an International Wheat Information System to support the wheat research community.



http://www.wheatis.org

The WheatIS project



F1000Research

Search

BROWSE GATEWAYS & COLLECTIONS HOW TO PUBLISH ABOUT BLOG

Home » Browse » Building a successful international research community through data...

Check for updates

OPINION ARTICLE

Building a successful international research community through data sharing: The case of the Wheat Information System (WheatIS) [version 1; peer review: 1 approved with reservations]

Taner Z. Sen[1], Mario Caccamo[2], David Edwards[3], Hadi Quesneville[4,5]

Author details

ALL METRICS
340 VIEWS
36 DOWNLOADS

Get PDF
Get XML
Cite
Export
Track
Email
Share

GODAN This article is included in the Global Open Data for Agriculture and Nutrition gateway.

Abstract

The International Wheat Information System (WheatIS) Expert Working Group (EWG) was initiated in 2012 under the Wheat Initiative with a broad range of contributing organizations. The mission of the WheatIS EWG was to create an informational infrastructure, establish data standards, and build a single portal that allows search, retrieval, and display of globally distributed wheat data sets that are indexed in standard data formats at servers around the world. The web portal at WheatIS.org was released publicly in 2015, and by 2020, it expanded to 8 geographically-distributed nodes and around 20 organizations under its umbrella.

In this paper, we present our experience, the challenges we faced, and the answer we brought for establishing an international research community to build an informational infrastructure. Our hope is that our experience with building wheatis.org will guide current and future research communities to facilitate institutional and international challenges to create global tools and resources to help their respective scientific communities.

Keywords

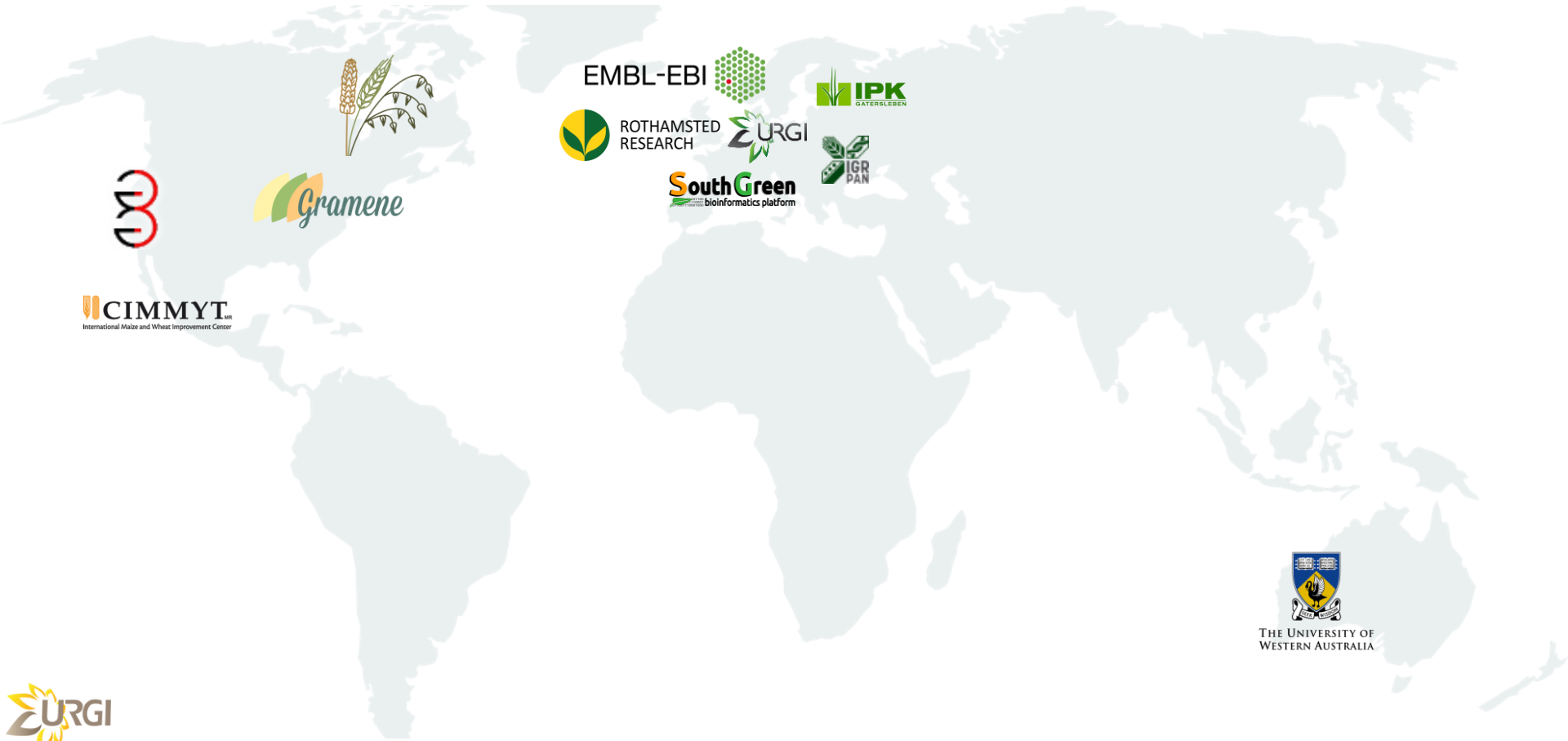
WheatIS, community, data sharing, bioinformatics, wheat

Community paper published in 2020

https://f1000research.com/articles/9-536

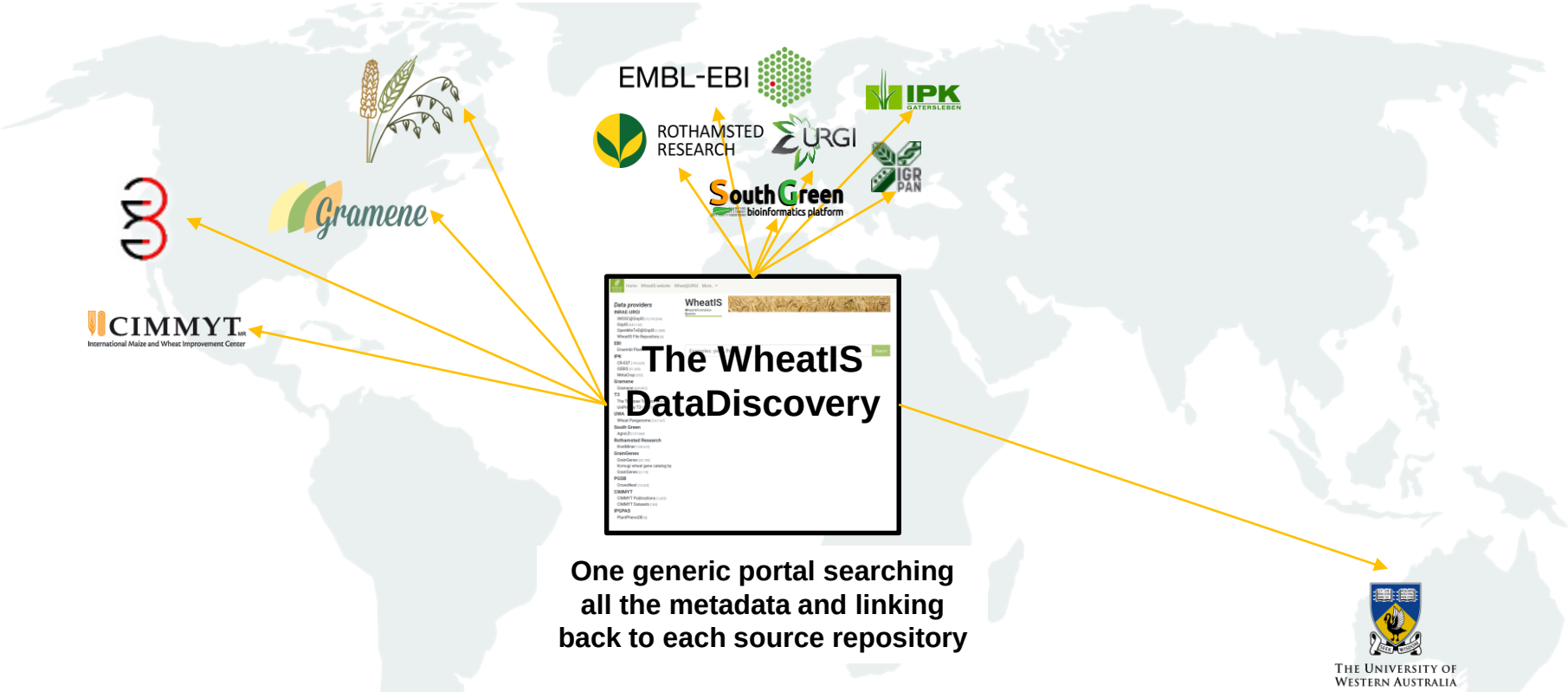
The WheatIS project

The main objective is to provide a single-access web based system to access to the available data resources and bioinformatics tools.
A federated plant data portal is needed because plant data with valuable information are published in dispersed data repository.



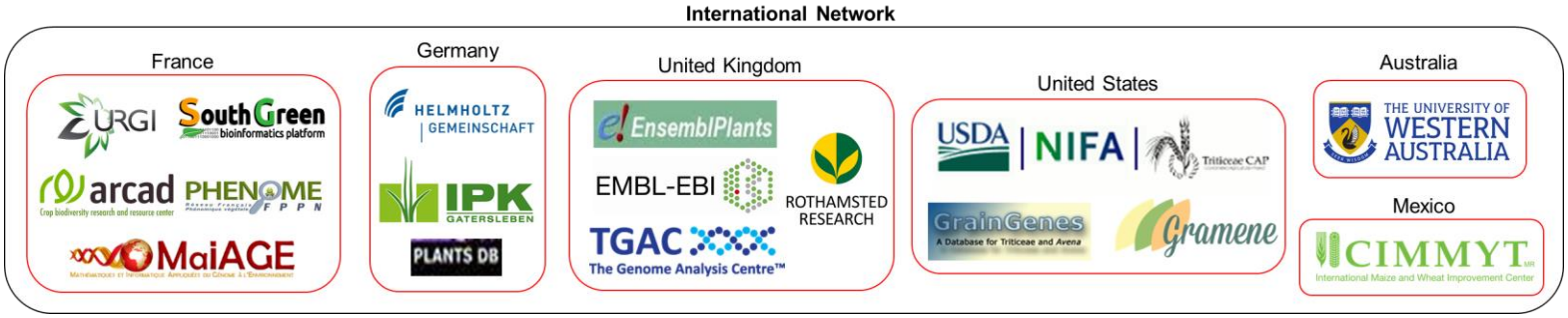
The WheatIS project

The main objective is to provide a single-access web based system to access to the available data resources and bioinformatics tools.
A federated plant data portal is needed because plant data with valuable information are published in dispersed data repository.



WheatIS DataDiscovery: Behind the scene

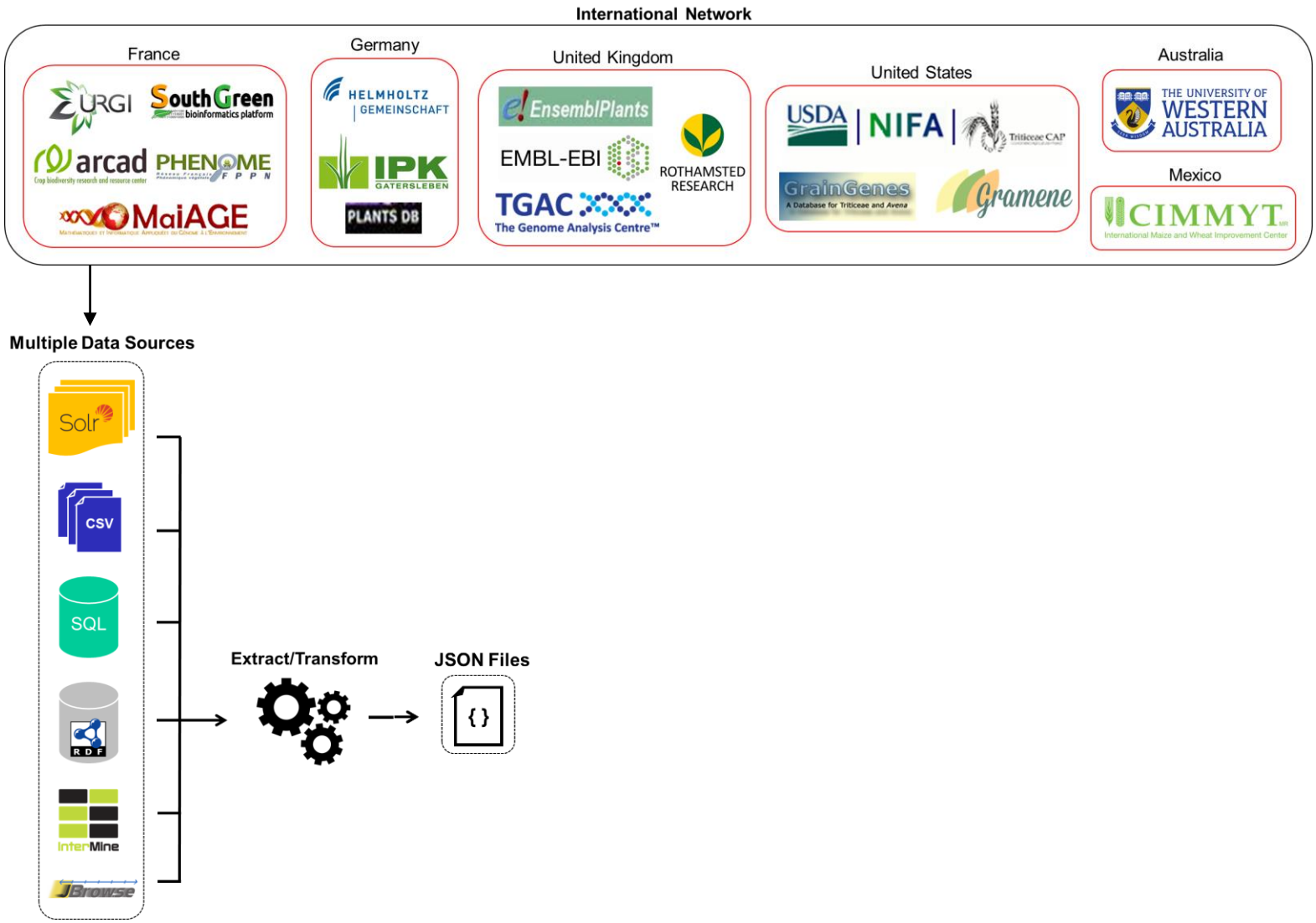
WheatIS DataDiscovery: Behind the scene



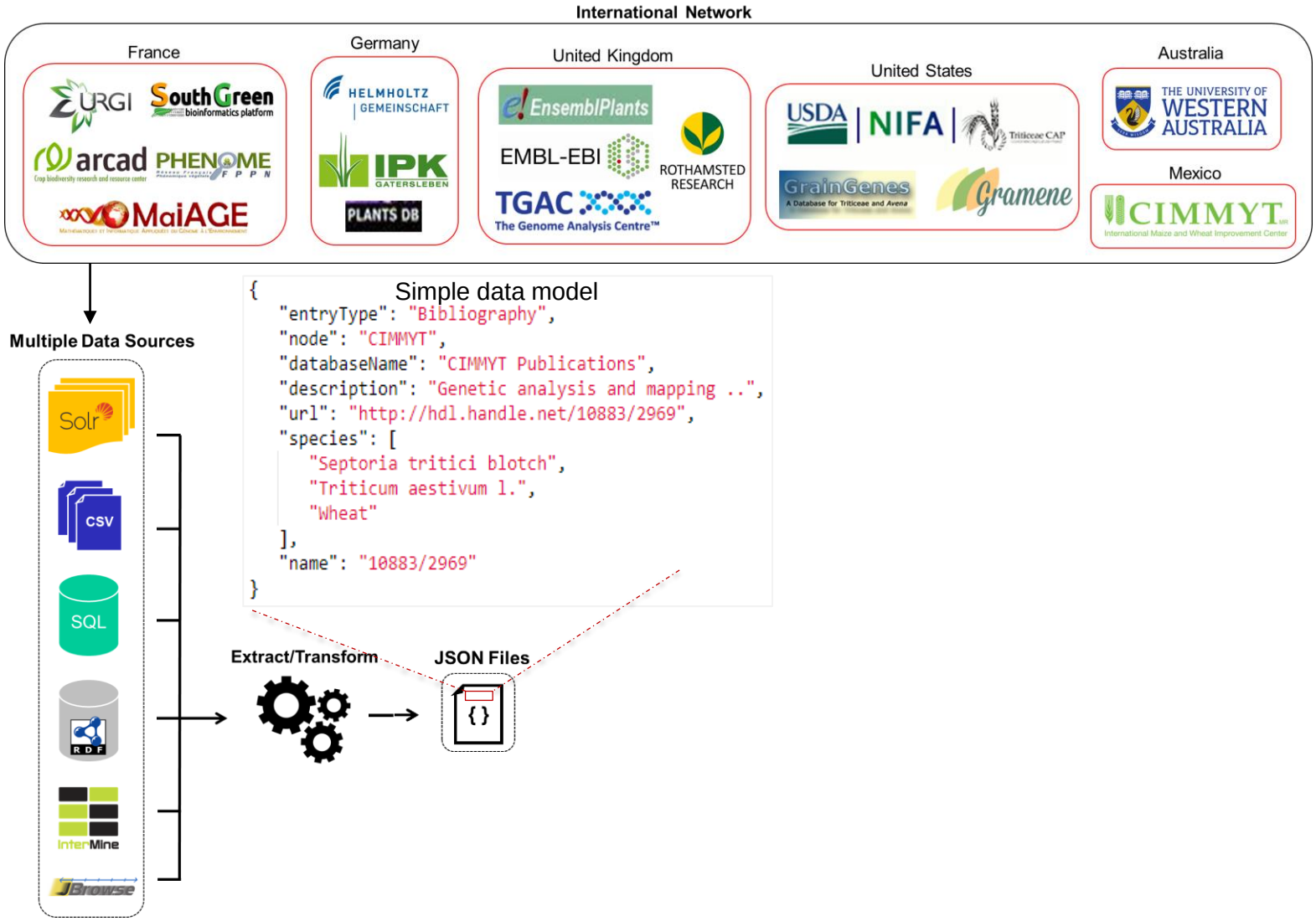
WheatIS DataDiscovery: Behind the scene

WheatIS DataDiscovery: Behind the scene

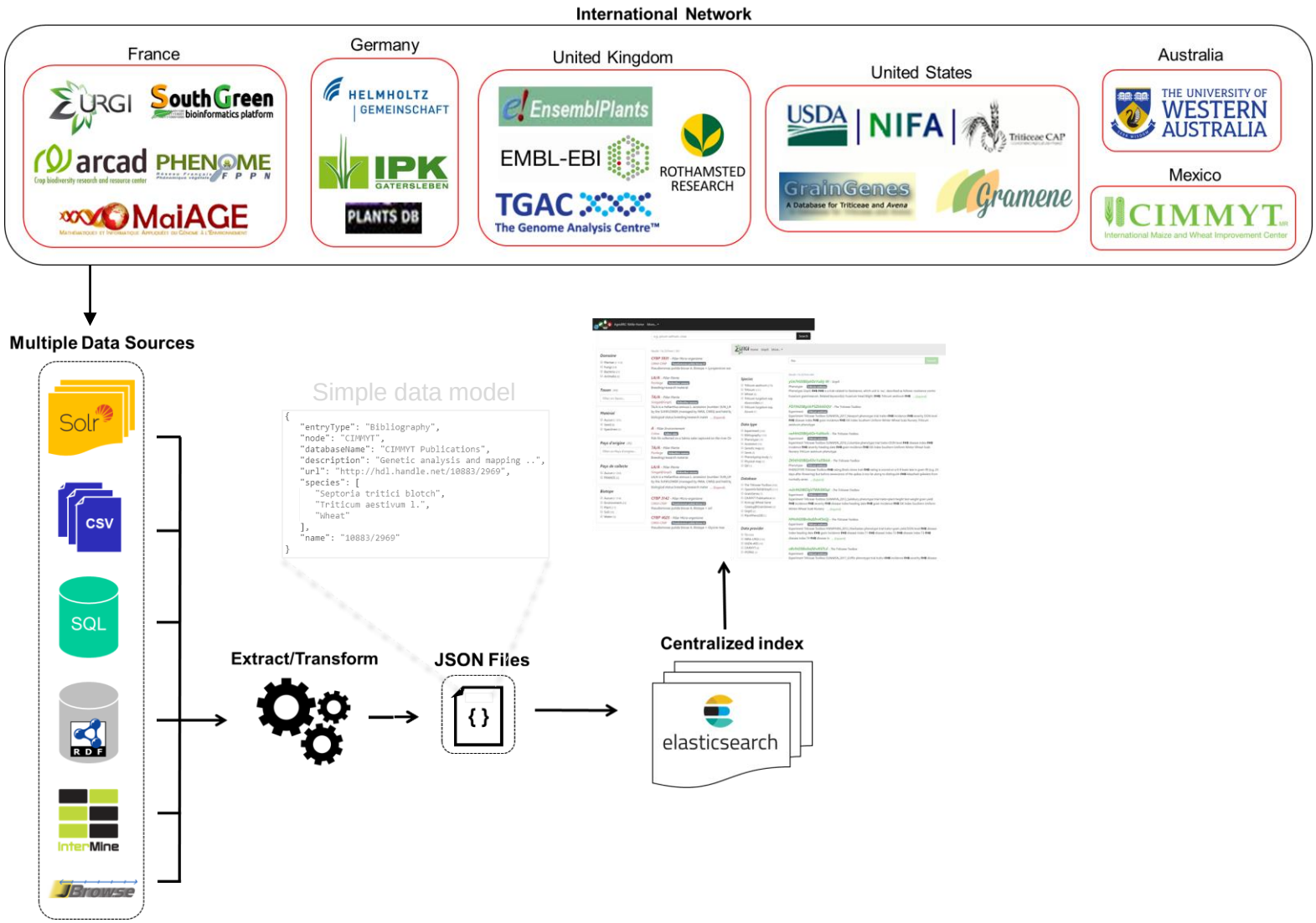
WheatIS DataDiscovery: Behind the scene



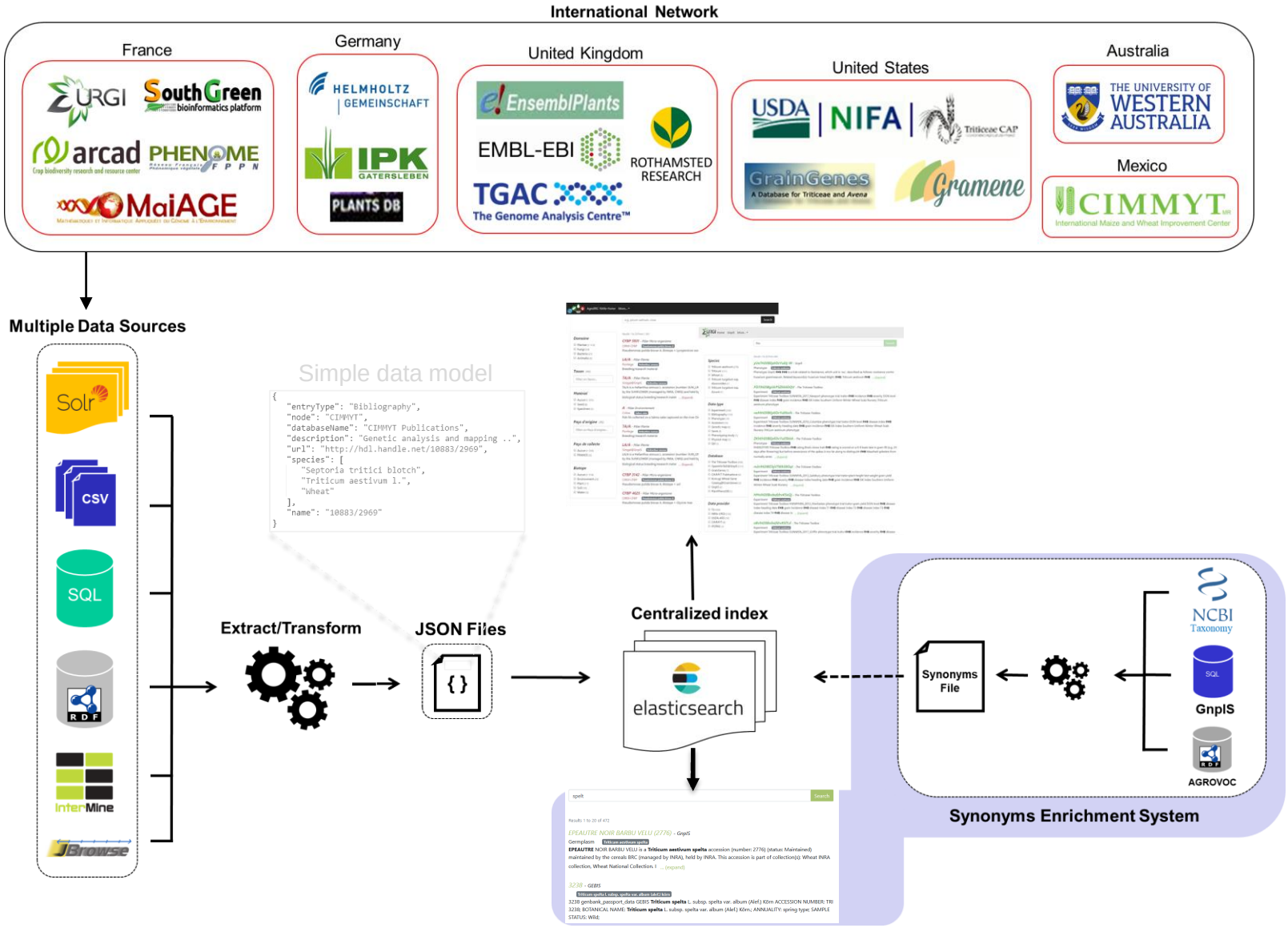
WheatIS DataDiscovery: Behind the scene



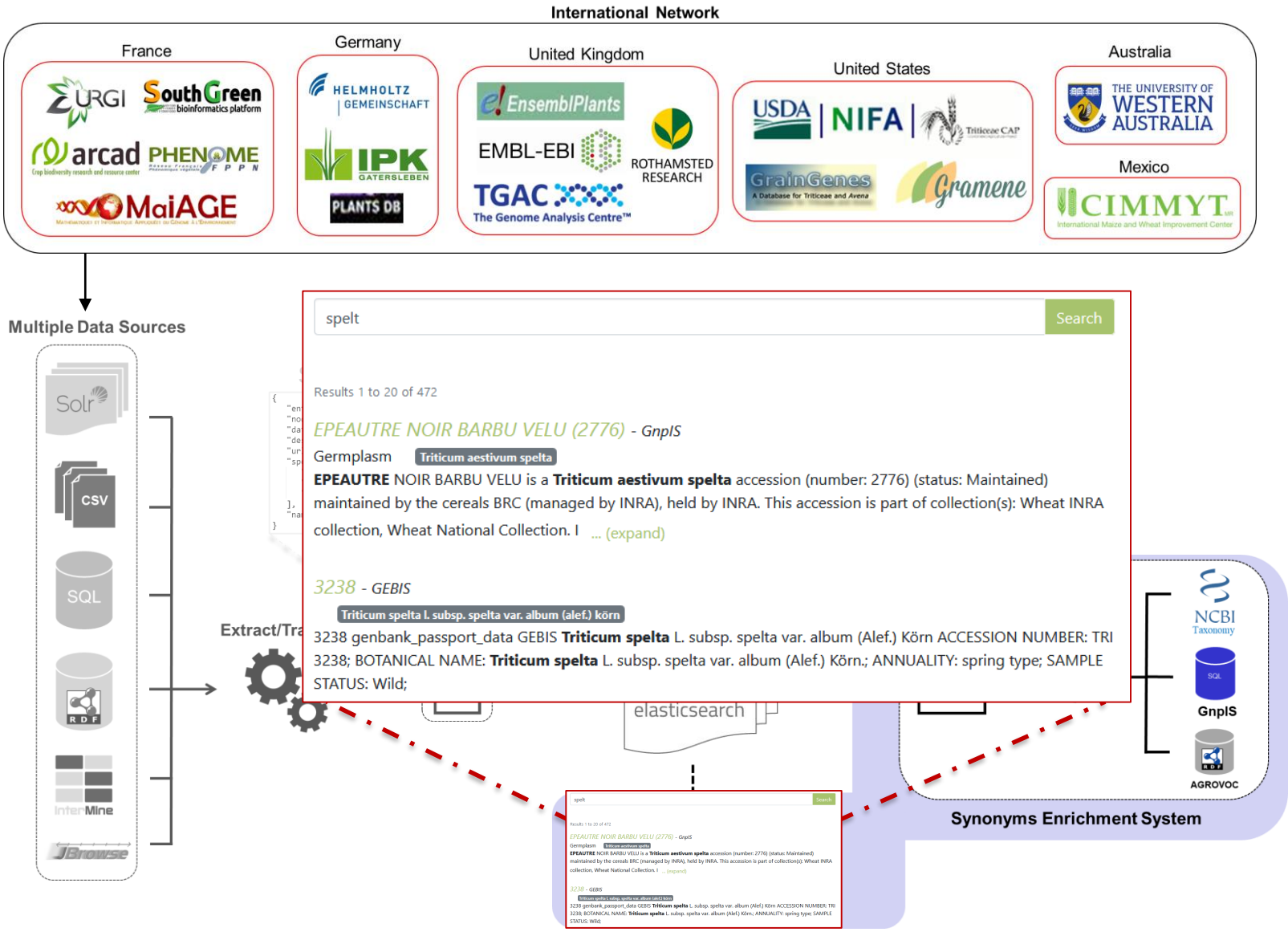
WheatIS DataDiscovery: Behind the scene



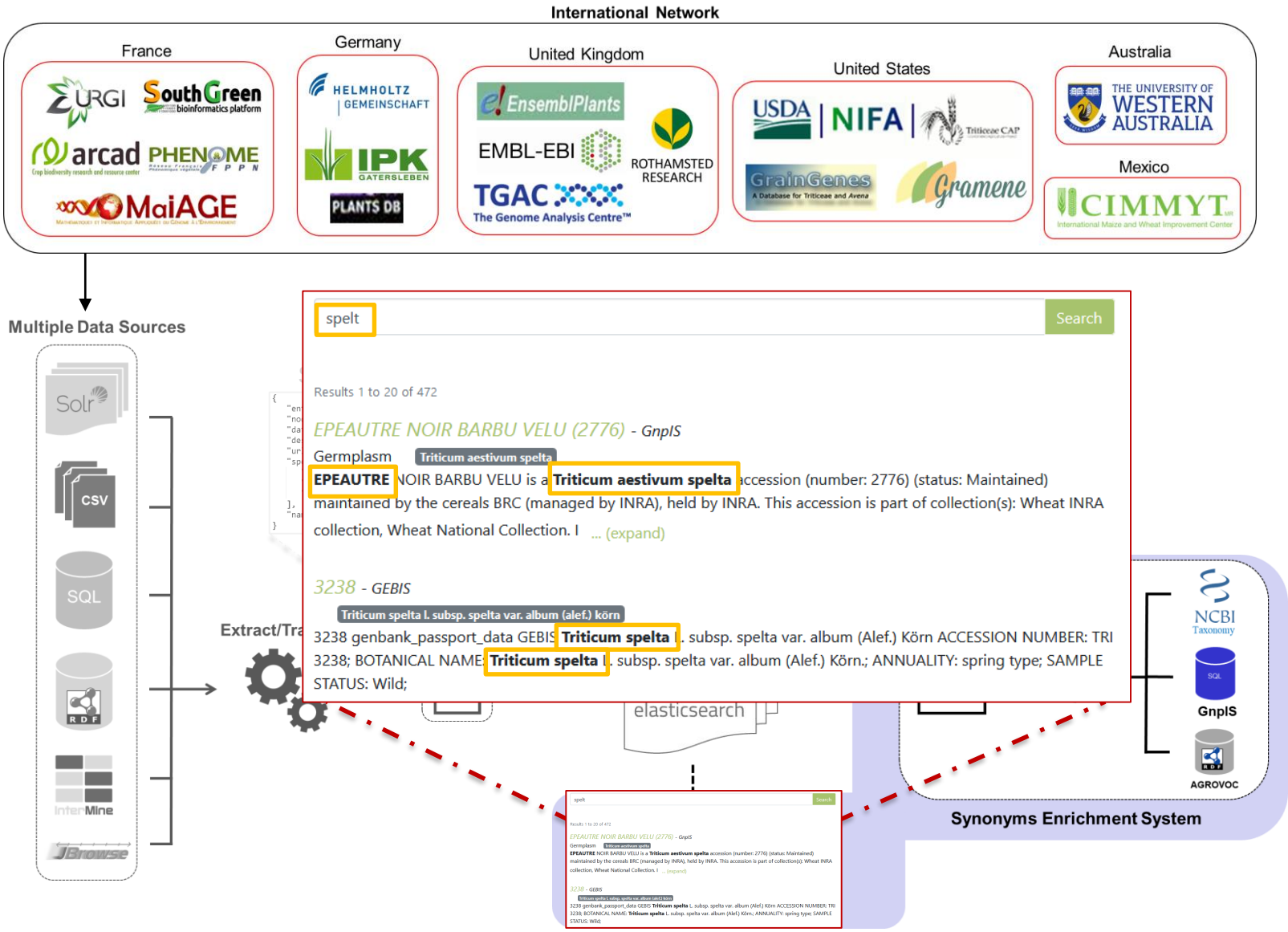
WheatIS DataDiscovery: Behind the scene



WheatIS DataDiscovery: Behind the scene



WheatIS DataDiscovery: Behind the scene



Data providers

Data providers

- INRAE-URGI
  - IWGSC@GnpIS [19 195 264]
  - GnpIS [642 142]
  - OpenMinTeD@GnpIS [1 589]
  - WheatIS File Repository [6]
- EBI
  - Ensembl Plants [1 168 762]
- IPK
  - CR-EST [199 220]
  - GEBIS [51 302]
  - MetaCrop [355]
- Gramene
  - Gramene [229 851]
- T3
  - The Triticeae Toolbox [206 406]
  - UniProt by T3 [16 607]
- UWA
  - Wheat Pangenome [167 167]
- South Green
  - AgroLD [137 060]
- Rothamsted Research
  - KnetMiner [108 474]
- GrainGenes
  - GrainGenes [20 190]
  - Komugi wheat gene catalog by GrainGenes [3 119]
- PGSB
  - CrowsNest [13 324]
- CIMMYT
  - CIMMYT Publications [1 605]
  - CIMMYT Datasets [183]
- IPGPAS
  - PlantPhenoDB [6]

Data providers

Data providers

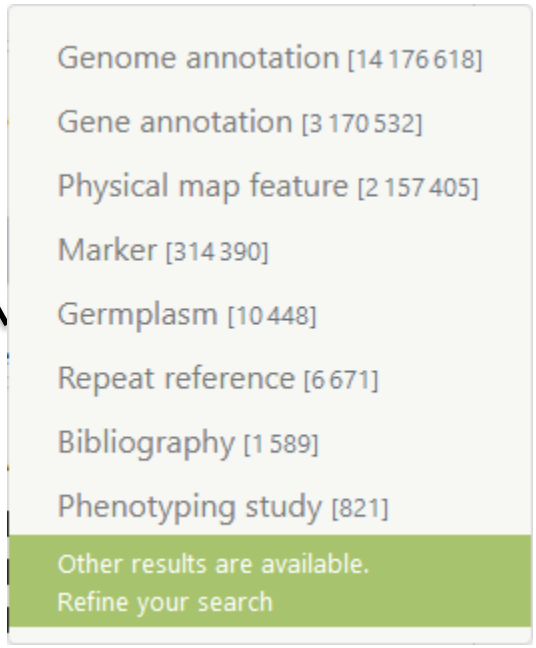
INRAE-URGI
- IWGSC@GnpIS [19 195 264]
- GnpIS [642 142]
- OpenMinTeD@GnpIS [1 589]
- WheatIS File Repository [6]

EBI
- Ensembl Plants [1 168 762]

IPK
- CR-EST [199 220]
- GEBIS [51 302]
- MetaCrop [355]

Gramene
- Gramene [229 851]

T3
- The Triticeae Toolbox [206 406]
- UniProt by T3 [16 607]



UWA
- Wheat Pangenome [167 167]

South Green
- AgroLD [137 060]

Rothamsted Research
- KnetMiner [108 474]

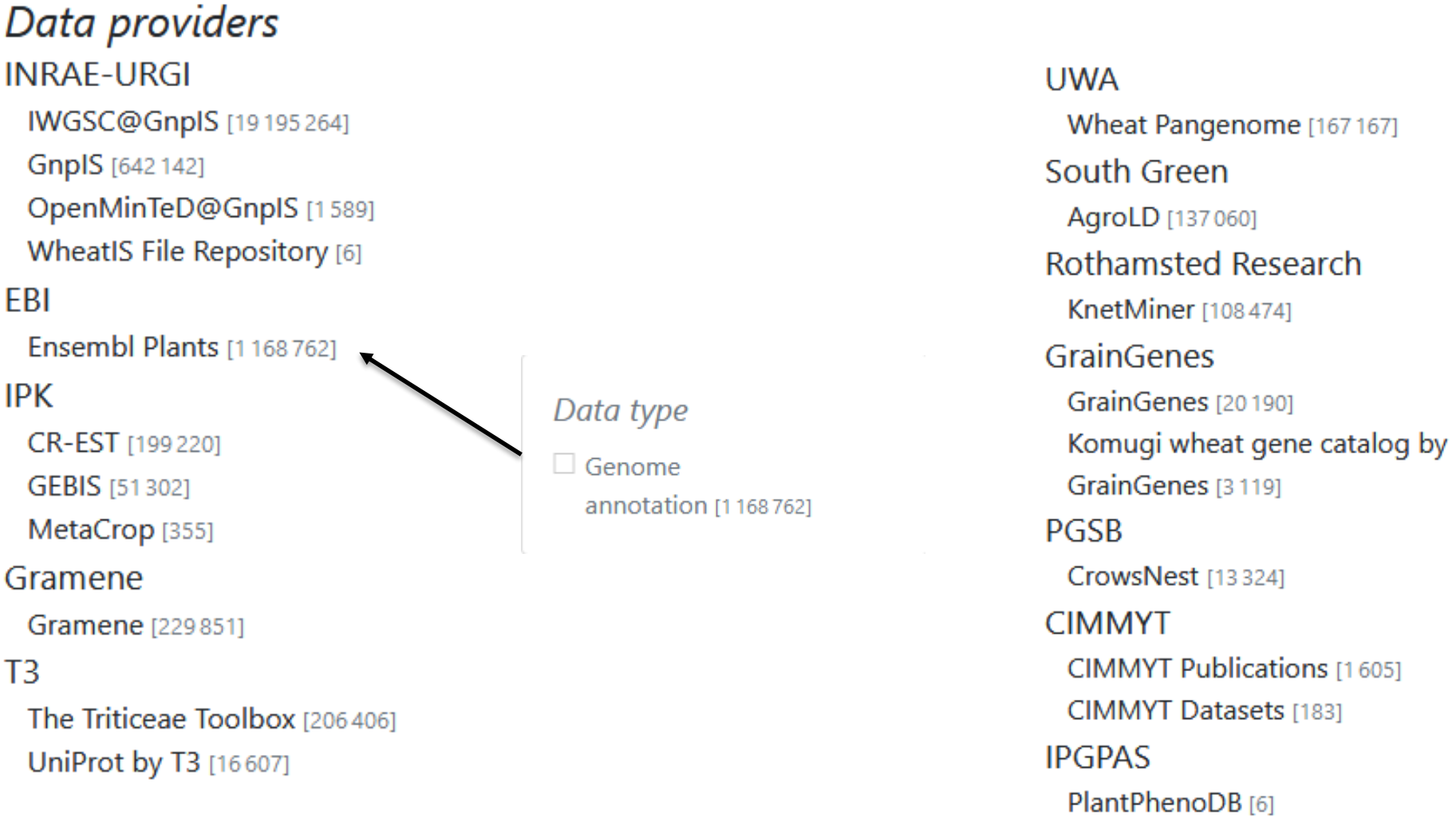
GrainGenes
- GrainGenes [20 190]
- Komugi wheat gene catalog by GrainGenes [3 119]

PGSB
- CrowsNest [13 324]

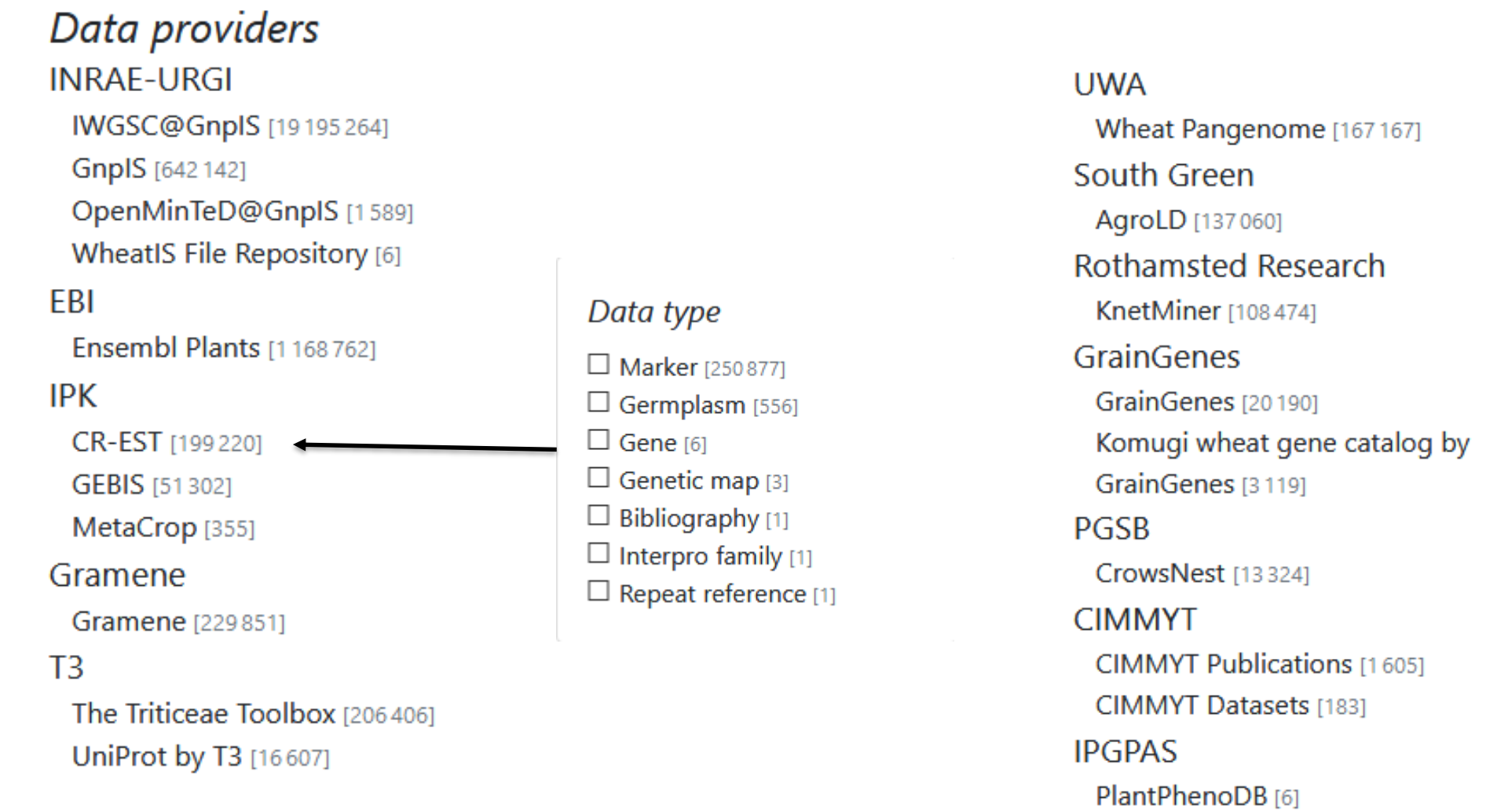
CIMMYT
- CIMMYT Publications [1 605]
- CIMMYT Datasets [183]

IPGPAS
- PlantPhenoDB [6]

Data providers



Data providers



Data providers

Data providers

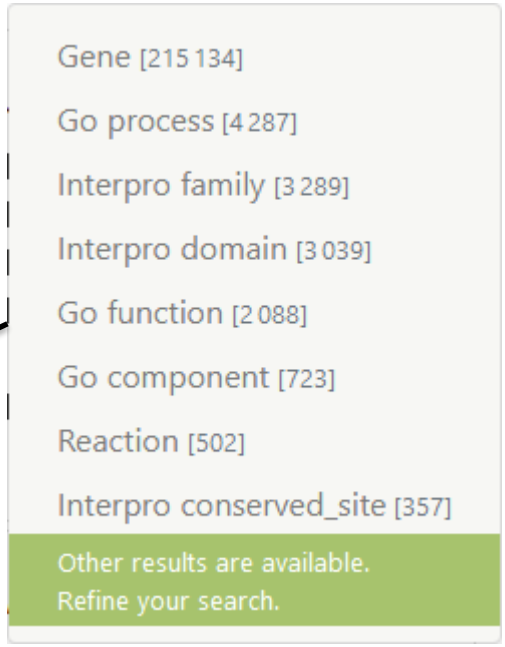
INRAE-URGI
- IWGSC@GnpIS [19 195 264]
- GnpIS [642 142]
- OpenMinTeD@GnpIS [1 589]
- WheatIS File Repository [6]

EBI
- Ensembl Plants [1 168 762]

IPK
- CR-EST [199 220]
- GEBIS [51 302]
- MetaCrop [355]

Gramene
- Gramene [229 851]

T3
- The Triticeae Toolbox [206 406]
- UniProt by T3 [16 607]



UWA
- Wheat Pangenome [167 167]

South Green
- AgroLD [137 060]

Rothamsted Research
- KnetMiner [108 474]

GrainGenes
- GrainGenes [20 190]
- Komugi wheat gene catalog by GrainGenes [3 119]

PGSB
- CrowsNest [13 324]

CIMMYT
- CIMMYT Publications [1 605]
- CIMMYT Datasets [183]

IPGPAS
- PlantPhenoDB [6]

Data providers

Data providers

INRAE-URGI
- IWGSC@GnpIS [19 195 264]
- GnpIS [642 142]
- OpenMinTeD@GnpIS [1 589]
- WheatIS File Repository [6]

EBI
- Ensembl Plants [1 168 762]

IPK
- CR-EST [199 220]
- GEBIS [51 302]
- MetaCrop [355]

Gramene
- Gramene [229 851]

T3
- The Triticeae Toolbox [206 406]
- UniProt by T3 [16 607]

Data type

- ☐ Marker [174 263]
- ☐ Germplasm [29 540]
- ☐ Protein [16 607]
- ☐ Phenotyping Experiment [2 473]
- ☐ Gene [99]
- ☐ Genotyping Experiment [31]

UWA
- Wheat Pangenome [167 167]

South Green
- AgroLD [137 060]

Rothamsted Research
- KnetMiner [108 474]

GrainGenes
- GrainGenes [20 190]
- Komugi wheat gene catalog by GrainGenes [3 119]

PGSB
- CrowsNest [13 324]

CIMMYT
- CIMMYT Publications [1 605]
- CIMMYT Datasets [183]

IPGPAS
- PlantPhenoDB [6]

Data providers

Data providers

INRAE-URGI
- IWGSC@GnpIS [19 195 264]
- GnpIS [642 142]
- OpenMinTeD@GnpIS [1 589]
- WheatIS File Repository [6]

EBI
- Ensembl Plants [1 168 762]

IPK
- CR-EST [199 220]
- GEBIS [51 302]
- MetaCrop [355]

Gramene
- Gramene [229 851]

T3
- The Triticeae Toolbox [206 406]
- UniProt by T3 [16 607]

Data type

- ☐ Gene annotation [167 163]
- ☐ Bibliography [4]

UWA
- Wheat Pangenome [167 167]

South Green
- AgroLD [137 060]

Rothamsted Research
- KnetMiner [108 474]

GrainGenes
- GrainGenes [20 190]
- Komugi wheat gene catalog by GrainGenes [3 119]

PGSB
- CrowsNest [13 324]

CIMMYT
- CIMMYT Publications [1 605]
- CIMMYT Datasets [183]

IPGPAS
- PlantPhenoDB [6]

Data providers

Data providers

INRAE-URGI
- IWGSC@GnpIS [19 195 264]
- GnpIS [642 142]
- OpenMinTeD@GnpIS [1 589]
- WheatIS File Repository [6]

EBI
- Ensembl Plants [1 168 762]

IPK
- CR-EST [199 220]
- GEBIS [51 302]
- MetaCrop [355]

Gramene
- Gramene [229 851]

T3
- The Triticeae Toolbox [206 406]
- UniProt by T3 [16 607]

Data type

☐ Gene annotation [137 060]

UWA
- Wheat Pangenome [167 167]

South Green
- AgroLD [137 060]

Rothamsted Research
- KnetMiner [108 474]

GrainGenes
- GrainGenes [20 190]
- Komugi wheat gene catalog by GrainGenes [3 119]

PGSB
- CrowsNest [13 324]

CIMMYT
- CIMMYT Publications [1 605]
- CIMMYT Datasets [183]

IPGPAS
- PlantPhenoDB [6]

Data providers

Data providers

INRAE-URGI
- IWGSC@GnpIS [19 195 264]
- GnpIS [642 142]
- OpenMinTeD@GnpIS [1 589]
- WheatIS File Repository [6]

EBI
- Ensembl Plants [1 168 762]

IPK
- CR-EST [199 220]
- GEBIS [51 302]
- MetaCrop [355]

Gramene
- Gramene [229 851]

T3
- The Triticeae Toolbox [206 406]
- UniProt by T3 [16 607]

Data type

☐ Gene annotation [108 474]

UWA
- Wheat Pangenome [167 167]

South Green
- AgroLD [137 060]

Rothamsted Research
- KnetMiner [108 474]

GrainGenes
- GrainGenes [20 190]
- Komugi wheat gene catalog by GrainGenes [3 119]

PGSB
- CrowsNest [13 324]

CIMMYT
- CIMMYT Publications [1 605]
- CIMMYT Datasets [183]

IPGPAS
- PlantPhenoDB [6]

Data providers

Data providers

INRAE-URGI
- IWGSC@GnpIS [19 195 264]
- GnpIS [642 142]
- OpenMinTeD@GnpIS [1 589]
- WheatIS File Repository [6]

EBI
- Ensembl Plants [1 168 762]

IPK
- CR-EST [199 220]
- GEBIS [51 302]
- MetaCrop [355]

Gramene
- Gramene [229 851]

T3
- The Triticeae Toolbox [206 406]
- UniProt by T3 [16 607]

Data type

- ☐ Germplasm [16 106]
- ☐ Qtl [3 925]
- ☐ Gene [3 119]
- ☐ Genetic map [147]
- ☐ Physical map [12]
- ☐ Bibliography [3]

UWA
- Wheat Pangenome [167 167]

South Green
- AgroLD [137 060]

Rothamsted Research
- KnetMiner [108 474]

GrainGenes
- GrainGenes [20 190]
- Komugi wheat gene catalog by GrainGenes [3 119]

PGSB
- CrowsNest [13 324]

CIMMYT
- CIMMYT Publications [1 605]
- CIMMYT Datasets [183]

IPGPAS
- PlantPhenoDB [6]

Data providers

Data providers

INRAE-URGI
- IWGSC@GnpIS [19 195 264]
- GnpIS [642 142]
- OpenMinTeD@GnpIS [1 589]
- WheatIS File Repository [6]

EBI
- Ensembl Plants [1 168 762]

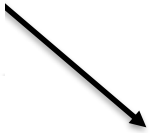
IPK
- CR-EST [199 220]
- GEBIS [51 302]
- MetaCrop [355]

Gramene
- Gramene [229 851]

T3
- The Triticeae Toolbox [206 406]
- UniProt by T3 [16 607]

Data type

☐ Gene annotation [13 324]



UWA
- Wheat Pangenome [167 167]

South Green
- AgroLD [137 060]

Rothamsted Research
- KnetMiner [108 474]

GrainGenes
- GrainGenes [20 190]
- Komugi wheat gene catalog by GrainGenes [3 119]

PGSB
- CrowsNest [13 324]

CIMMYT
- CIMMYT Publications [1 605]
- CIMMYT Datasets [183]

IPGPAS
- PlantPhenoDB [6]

Data providers

Data providers

INRAE-URGI
- IWGSC@GnpIS [19 195 264]
- GnpIS [642 142]
- OpenMinTeD@GnpIS [1 589]
- WheatIS File Repository [6]

EBI
- Ensembl Plants [1 168 762]

IPK
- CR-EST [199 220]
- GEBIS [51 302]
- MetaCrop [355]

Gramene
- Gramene [229 851]

T3
- The Triticeae Toolbox [206 406]
- UniProt by T3 [16 607]

Data type

- ☐ Bibliography [1 605]
- ☐ File [183]

UWA
- Wheat Pangenome [167 167]

South Green
- AgroLD [137 060]

Rothamsted Research
- KnetMiner [108 474]

GrainGenes
- GrainGenes [20 190]
- Komugi wheat gene catalog by GrainGenes [3 119]

PGSB
- CrowsNest [13 324]

CIMMYT
- CIMMYT Publications [1 605]
- CIMMYT Datasets [183]

IPGPAS
- PlantPhenoDB [6]

Data providers

Data providers

INRAE-URGI
- IWGSC@GnpIS [19 195 264]
- GnpIS [642 142]
- OpenMinTeD@GnpIS [1 589]
- WheatIS File Repository [6]

EBI
- Ensembl Plants [1 168 762]

IPK
- CR-EST [199 220]
- GEBIS [51 302]
- MetaCrop [355]

Gramene
- Gramene [229 851]

T3
- The Triticeae Toolbox [206 406]
- UniProt by T3 [16 607]

Data type

☐ Phenotyping study [6]

UWA
- Wheat Pangenome [167 167]

South Green
- AgroLD [137 060]

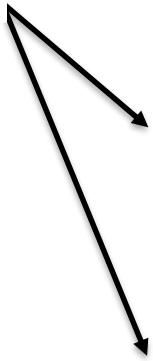
Rothamsted Research
- KnetMiner [108 474]

GrainGenes
- GrainGenes [20 190]
- Komugi wheat gene catalog by GrainGenes [3 119]

PGSB
- CrowsNest [13 324]

CIMMYT
- CIMMYT Publications [1 605]
- CIMMYT Datasets [183]

IPGPAS
- PlantPhenoDB [6]

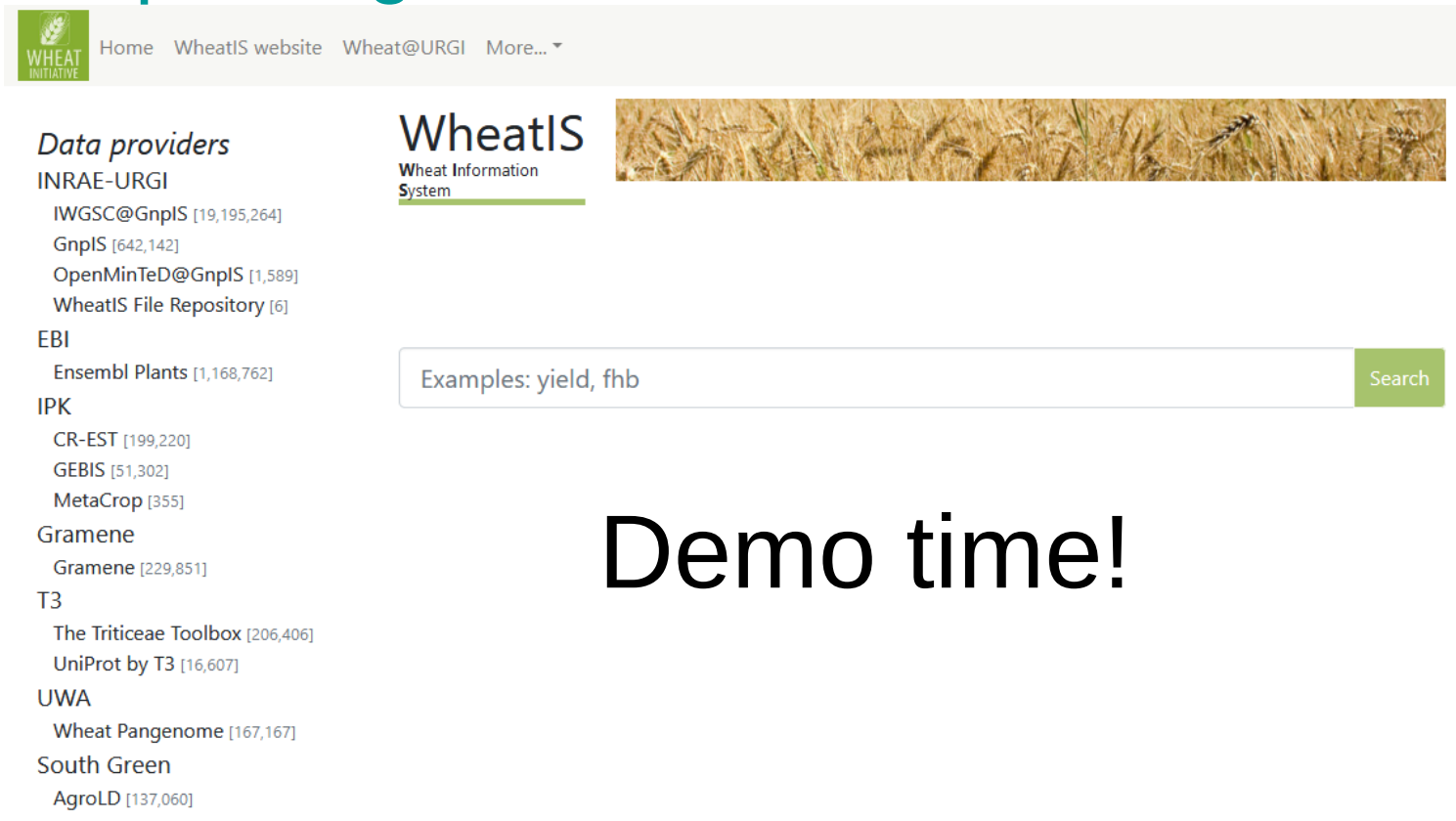


Data exchange format

Field	Status	Cardinality	Constraints
• name	• mandatory	• 1	• unique
• url	• mandatory	• 1	• none
• description	• mandatory	• 1	• none
• entryType	• mandatory	• 1	• cf. list in doc, recom.
• species	• mandatory	• 1-*	• cf. Species list below
• node	• mandatory	• 1	• same for all a dataset
• databaseName	• mandatory	• 1	• none

- WheatIS species list: Aegilops*, Hordeum*, Triticum*, Wheat*
- Format: JSON or TSV, as you wish!
- Web server: HTTP of FTP, as you wish!
- The up-to-date format is always available at https://urgi.versailles.inrae.fr/wheatis/join

https://urgi.versailles.inrae.fr/wheatis/



Demo time!

CFD2

Home WheatIS website Wheat@URGI More...

WheatIS

Wheat **I**nformation **S**ystem

Examples: yield, fhb Search

Data providers

- INRAE-URGI
  - IWGSC@GnpIS [19,195,264]
  - GnpIS [642,142]
  - OpenMinTeD@GnpIS [1,589]
  - WheatIS File Repository [6]
- EBI
  - Ensembl Plants [1,168,762]
- IPK
  - CR-EST [199,220]
  - GEBIS [51,302]
  - MetaCrop [355]
- Gramene
  - Gramene [229,851]
- T3
  - The Triticeae Toolbox [206,406]
  - UniProt by T3 [16,607]
- UWA
  - Wheat Pangenome [167,167]
- South Green
  - AgroLD [137,060]
- Rothamsted Research
  - KnetMiner [108,474]
- GrainGenes
  - GrainGenes [20,190]
  - Komugi wheat gene catalog by GrainGenes [3,119]
- PGSB
  - CrowsNest [13,324]
- CIMMYT
  - CIMMYT Publications [1,605]
  - CIMMYT Datasets [183]
- IPGPAS
  - PlantPhenoDB [6]

CFD2

Home WheatIS website Wheat@URGI More...

WheatIS

Wheat **I**nformation **S**ystem

Examples: yield, fhb Search

Data providers

- INRAE-URGI
  - IWGSC@GnpIS [19,195,264]
  - GnpIS [642,142]
  - OpenMinTeD@GnpIS [1,589]
  - WheatIS File Repository [6]
- EBI
  - Ensembl Plants [1,168,762]
- IPK
  - CR-EST [199,220]
  - GEBIS [51,302]
  - MetaCrop [355]
- Gramene
  - Gramene [229,851]
- T3
  - The Triticeae Toolbox [206,406]
  - UniProt by T3 [16,607]
- UWA
  - Wheat Pangenome [167,167]
- South Green
  - AgroLD [137,060]
- Rothamsted Research
  - KnetMiner [108,474]
- GrainGenes
  - GrainGenes [20,190]
  - Komugi wheat gene catalog by GrainGenes [3,119]
- PGSB
  - CrowsNest [13,324]
- CIMMYT
  - CIMMYT Publications [1,605]
  - CIMMYT Datasets [183]
- IPGPAS
  - PlantPhenoDB [6]

CFD2

Home WheatIS website Wheat@URGI More...

WheatIS

Wheat **I**nformation **S**ystem

Examples: yield, fhb Search

More...

- About
- Join us
- Legal mentions
- Help

Data providers

- INRAE-URGI
  - IWGSC@GnpIS [19,195,264]
  - GnpIS [642,142]
  - OpenMinTeD@GnpIS [1,589]
  - WheatIS File Repository [6]
- EBI
  - Ensembl Plants [1,168,762]
- IPK
  - CR-EST [199,220]
  - GEBIS [51,302]
  - MetaCrop [355]
- Gramene
  - Gramene [229,851]
- T3
  - The Triticeae Toolbox [206,406]
  - UniProt by T3 [16,607]
- UWA
  - Wheat Pangenome [167,167]
- South Green
  - AgroLD [137,060]
- Rothamsted Research
  - KnetMiner [108,474]
- GrainGenes
  - GrainGenes [20,190]
  - Komugi wheat gene catalog by GrainGenes [3,119]
- PGSB
  - CrowsNest [13,324]
- CIMMYT
  - CIMMYT Publications [1,605]
  - CIMMYT Datasets [183]
- IPGPAS
  - PlantPhenoDB [6]

CFD2

Home WheatIS website Wheat@URGI More...

WheatIS

Wheat **I**nformation **S**ystem

Examples: yield, fhb Search

Data providers

- INRAE-URGI
  - IWGSC@GnpIS [19,195,264]
  - GnpIS [642,142]
  - OpenMinTeD@GnpIS [1,589]
  - WheatIS File Repository [6]
- EBI
  - Ensembl Plants [1,168,762]
- IPK
  - CR-EST [199,220]
  - GEBIS [51,302]
  - MetaCrop [355]
- Gramene
  - Gramene [229,851]
- T3
  - The Triticeae Toolbox [206,406]
  - UniProt by T3 [16,607]
- UWA
  - Wheat Pangenome [167,167]
- South Green
  - AgroLD [137,060]
- Rothamsted Research
  - KnetMiner [108,474]
- GrainGenes
  - GrainGenes [20,190]
  - Komugi wheat gene catalog by GrainGenes [3,119]
- PGSB
  - CrowsNest [13,324]
- CIMMYT
  - CIMMYT Publications [1,605]
  - CIMMYT Datasets [183]
- IPGPAS
  - PlantPhenoDB [6]

CFD2

Home WheatIS website Wheat@URGI More...

WheatIS

Wheat **I**nformation **S**ystem

Data providers

- INRAE-URGI
  - IWGSC@GnpIS [19,195,264]
  - GnpIS [642,142]
  - OpenMinTeD@GnpIS [1,589]
  - WheatIS File Repository [6]
- EBI
  - Ensembl Plants [1,168,762]
- IPK
  - CR-EST [199,220]
  - GEBIS [51,302]
  - MetaCrop [355]
- Gramene
  - Gramene [229,851]
- T3
  - The Triticeae Toolbox [206,406]
  - UniProt by T3 [16,607]
- UWA
  - Wheat Pangenome [167,167]
- South Green
  - AgroLD [137,060]
- Rothamsted Research
  - KnetMiner [108,474]
- GrainGenes
  - GrainGenes [20,190]
  - Komugi wheat gene catalog by GrainGenes [3,119]
- PGSB
  - CrowsNest [13,324]
- CIMMYT
  - CIMMYT Publications [1,605]
  - CIMMYT Datasets [183]
- IPGPAS
  - PlantPhenoDB [6]

cfd Search

- **cfd**
- **cfd**014
- **cfd**046
- **cfd**066
- **cfd**069
- **cfd**1
- **cfd**1-2
- **cfd**10
- **cfd**101
- **cfd**101_5d

CFD2

cfd2 Search

Species
- ☐ Triticum aestivum [8]
- ☐ Aegilops tauschii [1]
- ☐ Triticum aestivum aestivum [1]

Data type
- ☐ Gene annotation [4]
- ☐ Physical map feature [3]
- ☐ Marker [2]
- ☐ Genome annotation [1]

Ontology annotation
- ☐ Aucun [10]

Expand search

Database
- ☐ IWGSC@GnpIS [8]
- ☐ GnpIS [2]

Data provider
- ☐ INRAE-URGI [10]

Results 1 to 10 of 10

cfd2 - *IWGSC@GnpIS*
Physical map feature Triticum aestivum
Physical map feature IWGSC@GnpIS **cfd2 cfd2** is a marker (type=marker, source=FPC) of Triticum aestivum located between positions 189601 and 189601 and which properties are Name=**cfd2**,Contig_hit=ctg2725 - 2 (TaaCsp3DShA_0070A24 TaaCsp3DShA_0079J22) Triticum a ... (expand)

JBrowse_chr5D_517967021_517967269_CFD_SSR_TRIMMED - *IWGSC@GnpIS*
Gene annotation Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr5D_517967021_517967269_CFD_SSR_TRIMMED Start = 517967021 , End = 517967269 , Strand = 0 , Source = ePCR , Seq_id = chr5D , Size = 247 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = gt(9) Triticum aestivum similari ... (expand)

JBrowse_chr4A_7333656_7333940_CFD_SSR_TRIMMED - *IWGSC@GnpIS*
Gene annotation Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr4A_7333656_7333940_CFD_SSR_TRIMMED Start = 7333656 , End = 7333940 , Strand = 0 , Source = ePCR , Seq_id = chr4A , Size = 283 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = ca(11) Triticum aestivum similarity chr4 ... (expand)

JBrowse_chr2A_100120355_100120651_CFD_SSR_TRIMMED - *IWGSC@GnpIS*
Gene annotation Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr2A_100120355_100120651_CFD_SSR_TRIMMED Start = 100120355 , End = 100120651 , Strand = 0 , Source = ePCR , Seq_id = chr2A , Size = 295 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = gt(10) Triticum aestivum similar ... (expand)

CFD2 - *IWGSC@GnpIS*
Genome annotation Triticum aestivum
Genome annotation IWGSC@GnpIS **CFD2 CFD2** is a similarity:ePCR_cfd of Triticum aestivum located between positions 14028 and 14311 on 4AS_v2_5981297 and which properties are Size=283,Motif=gt(9),load_id=CFD2_147 Triticum aestivum similarity

cfd2 Search

Species

- ☑ Triticum aestivum [8]
- ☐ Aegilops tauschii [1]
- ☐ Triticum aestivum aestivum [1]

Data type

- ☐ Gene annotation [4]
- ☐ Physical map feature [3]
- ☐ Genome annotation [1]

Ontology annotation

- ☐ Aucun [8]

Expand search

Database

- ☐ IWGSC@GnpIS [8]

Data provider

- ☐ INRAE-URGI [8]

Results 1 to 8 of 8

cfd2 - *IWGSC@GnpIS*

Physical map feature Triticum aestivum

Physical map feature IWGSC@GnpIS **cfd2 cfd2** is a marker (type=marker, source=FPC) of Triticum aestivum located between positions 189601 and 189601 and which properties are Name=**cfd2**,Contig_hit=ctg2725 - 2 (TaaCsp3DShA_0070A24 TaaCsp3DShA_0079J22) Triticum a ... (expand)

JBrowse_chr5D_517967021_517967269_CFD_SSR_TRIMMED - *IWGSC@GnpIS*

Gene annotation Triticum aestivum

SEQUENCE FEATURE IWGSC@GnpIS_chr5D_517967021_517967269_CFD_SSR_TRIMMED Start = 517967021 , End = 517967269 , Strand = 0 , Source = ePCR , Seq_id = chr5D , Size = 247 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = gt(9) Triticum aestivum similari ... (expand)

JBrowse_chr4A_7333656_7333940_CFD_SSR_TRIMMED - *IWGSC@GnpIS*

Gene annotation Triticum aestivum

SEQUENCE FEATURE IWGSC@GnpIS_chr4A_7333656_7333940_CFD_SSR_TRIMMED Start = 7333656 , End = 7333940 , Strand = 0 , Source = ePCR , Seq_id = chr4A , Size = 283 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = ca(11) Triticum aestivum similarity chr4 ... (expand)

JBrowse_chr2A_100120355_100120651_CFD_SSR_TRIMMED - *IWGSC@GnpIS*

Gene annotation Triticum aestivum

SEQUENCE FEATURE IWGSC@GnpIS_chr2A_100120355_100120651_CFD_SSR_TRIMMED Start = 100120355 , End = 100120651 , Strand = 0 , Source = ePCR , Seq_id = chr2A , Size = 295 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = gt(10) Triticum aestivum similar ... (expand)

CFD2 - *IWGSC@GnpIS*

Genome annotation Triticum aestivum

Genome annotation IWGSC@GnpIS **CFD2 CFD2** is a similarity:ePCR_cfd of Triticum aestivum located between positions 14028 and 14311 on 4AS_v2_5981297 and which properties are Size=283,Motif=gt(9),load_id=CFD2_147 Triticum aestivum similarity

CFD2

cfd2 Search

Species
- Triticum aestivum [4]

Data type
- Gene annotation [4]
- Physical map feature [3]
- Genome annotation [1]

Ontology annotation
- Aucun [4]

Expand search

Database
- IWGSC@GnpIS [4]

Data provider
- INRAE-URGI [4]

Results 1 to 4 of 4

JBrowse_chr5D_517967021_517967269_CFD_SSR_TRIMMED - *IWGSC@GnpIS*

Gene annotation Triticum aestivum

SEQUENCE FEATURE IWGSC@GnpIS_chr5D_517967021_517967269_CFD_SSR_TRIMMED Start = 517967021 , End = 517967269 , Strand = 0 , Source = ePCR , Seq_id = chr5D , Size = 247 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = gt(9) Triticum aestivum similari ... (expand)

JBrowse_chr4A_7333656_7333940_CFD_SSR_TRIMMED - *IWGSC@GnpIS*

Gene annotation Triticum aestivum

SEQUENCE FEATURE IWGSC@GnpIS_chr4A_7333656_7333940_CFD_SSR_TRIMMED Start = 7333656 , End = 7333940 , Strand = 0 , Source = ePCR , Seq_id = chr4A , Size = 283 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = ca(11) Triticum aestivum similarity chr4 ... (expand)

JBrowse_chr2A_100120355_100120651_CFD_SSR_TRIMMED - *IWGSC@GnpIS*

Gene annotation Triticum aestivum

SEQUENCE FEATURE IWGSC@GnpIS_chr2A_100120355_100120651_CFD_SSR_TRIMMED Start = 100120355 , End = 100120651 , Strand = 0 , Source = ePCR , Seq_id = chr2A , Size = 295 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = gt(10) Triticum aestivum similar ... (expand)

JBrowse_chr7D_631739332_631739579_CFD_SSR_TRIMMED - *IWGSC@GnpIS*

Gene annotation Triticum aestivum

SEQUENCE FEATURE IWGSC@GnpIS_chr7D_631739332_631739579_CFD_SSR_TRIMMED Start = 631739332 , End = 631739579 , Strand = 0 , Source = ePCR , Seq_id = chr7D , Size = 246 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = gt(19) Triticum aestivum similar ... (expand)

CFD2

Home WheatIS website Wheat@URGI More...

cfd2 Search

Intersection (*AND* query)

Species
- Triticum aestivum [4]

Data type
- Gene annotation [4]
- Physical map feature [3]
- Genome annotation [1]

Ontology annotation
- Aucun [4]

Expand search

Database
- IWGSC@GnpIS [4]

Data provider
- INRAE-URGI [4]

Results 1 to 4 of 4

JBrowse_chr5D_517967021_517967269_CFD_SSR_TRIMMED - *IWGSC@GnpIS*
Gene annotation Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr5D_517967021_517967269_CFD_SSR_TRIMMED Start = 517967021 , End = 517967269 , Strand = 0 , Source = ePCR , Seq_id = chr5D , Size = 247 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = gt(9) Triticum aestivum similari ... (expand)

JBrowse_chr4A_7333656_7333940_CFD_SSR_TRIMMED - *IWGSC@GnpIS*
Gene annotation Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr4A_7333656_7333940_CFD_SSR_TRIMMED Start = 7333656 , End = 7333940 , Strand = 0 , Source = ePCR , Seq_id = chr4A , Size = 283 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = ca(11) Triticum aestivum similarity chr4 ... (expand)

JBrowse_chr2A_100120355_100120651_CFD_SSR_TRIMMED - *IWGSC@GnpIS*
Gene annotation Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr2A_100120355_100120651_CFD_SSR_TRIMMED Start = 100120355 , End = 100120651 , Strand = 0 , Source = ePCR , Seq_id = chr2A , Size = 295 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = gt(10) Triticum aestivum similar ... (expand)

JBrowse_chr7D_631739332_631739579_CFD_SSR_TRIMMED - *IWGSC@GnpIS*
Gene annotation Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr7D_631739332_631739579_CFD_SSR_TRIMMED Start = 631739332 , End = 631739579 , Strand = 0 , Source = ePCR , Seq_id = chr7D , Size = 246 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = gt(19) Triticum aestivum similar ... (expand)


Home
WheatIS website
Wheat@URGI
More...
CFD2
cfd2
Search
SELECT WHERE CONTAINS « cfd2 »
AND species = « Triticum aestivum »
AND entryType = « Gene annotation »
Intersection
(AND query)
Species
Triticum aestivum [4]
Data type
Gene annotation [4]
Physical map feature [3]
Genome annotation [1]
Ontology annotation
Aucun [4]
Expand search
Database
IWGSC@GnpIS [4]
Data provider
INRAE-URGI [4]
Results 1 to 4 of 4
JBrowse_chr5D_517967021_517967269_CFD_SSR_TRIMMED - IWGSC@GnpIS
Gene annotation
Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr5D_517967021_517967269_CFD_SSR_TRIMMED Start = 517967021 , End = 517967269 , Strand = 0 , Source = ePCR , Seq_id = chr5D , Size = 247 , Marker = CFD2 , Id = CFD2 , Type = similarity , Motif = gt(9) Triticum aestivum similari ... (expand)
JBrowse_chr4A_7333656_7333940_CFD_SSR_TRIMMED - IWGSC@GnpIS
Gene annotation
Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr4A_7333656_7333940_CFD_SSR_TRIMMED Start = 7333656 , End = 7333940 , Strand = 0 , Source = ePCR , Seq_id = chr4A , Size = 283 , Marker = CFD2 , Id = CFD2 , Type = similarity , Motif = ca(11) Triticum aestivum similarity chr4 ... (expand)
JBrowse_chr2A_100120355_100120651_CFD_SSR_TRIMMED - IWGSC@GnpIS
Gene annotation
Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr2A_100120355_100120651_CFD_SSR_TRIMMED Start = 100120355 , End = 100120651 , Strand = 0 , Source = ePCR , Seq_id = chr2A , Size = 295 , Marker = CFD2 , Id = CFD2 , Type = similarity , Motif = gt(10) Triticum aestivum similar ... (expand)
JBrowse_chr7D_631739332_631739579_CFD_SSR_TRIMMED - IWGSC@GnpIS
Gene annotation
Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr7D_631739332_631739579_CFD_SSR_TRIMMED Start = 631739332 , End = 631739579 , Strand = 0 , Source = ePCR , Seq_id = chr7D , Size = 246 , Marker = CFD2 , Id = CFD2 , Type = similarity , Motif = gt(19) Triticum aestivum similar ... (expand)

cfd2 Search

Species
Triticum aestivum [7]

Data type
Gene annotation [4]
Physical map feature [3]
Genome annotation [1]

Ontology annotation
Aucun [7]
Expand search

Database
IWGSC@GnpIS [7]

Data provider
INRAE-URGI [7]

Results 1 to 7 of 7

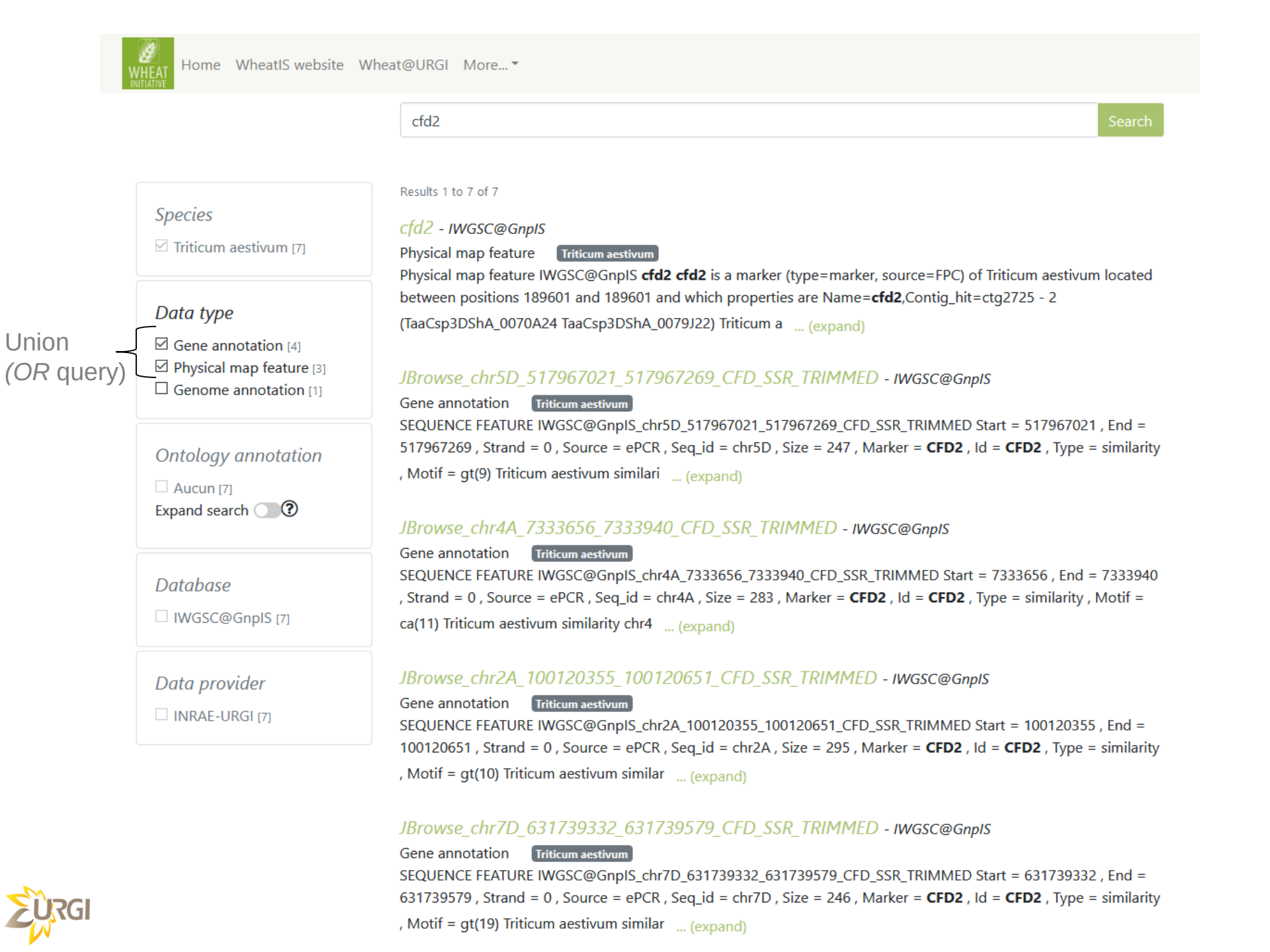
cfd2 - *IWGSC@GnpIS*
Physical map feature Triticum aestivum
Physical map feature IWGSC@GnpIS **cfd2 cfd2** is a marker (type=marker, source=FPC) of Triticum aestivum located between positions 189601 and 189601 and which properties are Name=**cfd2**,Contig_hit=ctg2725 - 2 (TaaCsp3DShA_0070A24 TaaCsp3DShA_0079J22) Triticum a ... (expand)

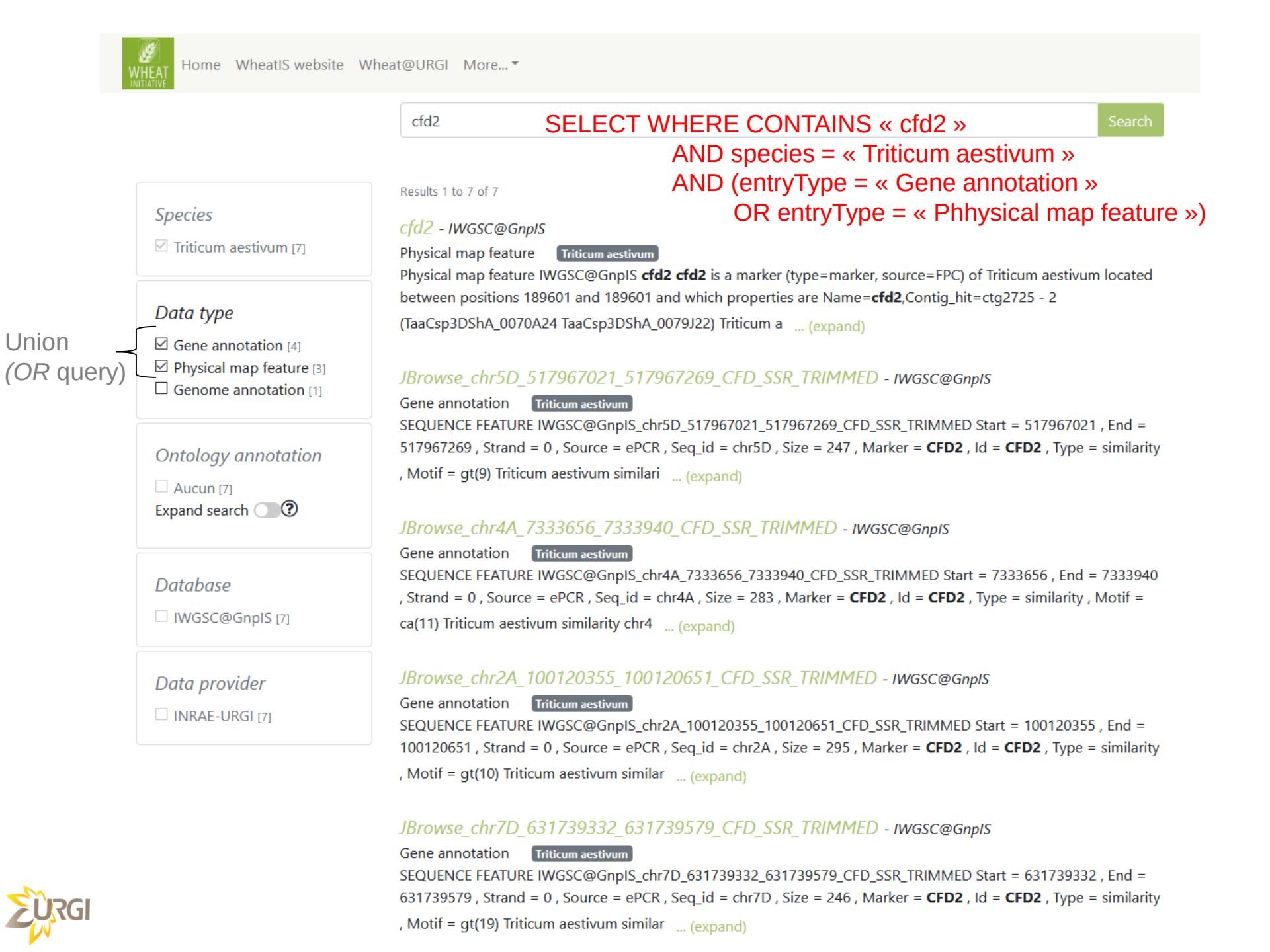
JBrowse_chr5D_517967021_517967269_CFD_SSR_TRIMMED - *IWGSC@GnpIS*
Gene annotation Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr5D_517967021_517967269_CFD_SSR_TRIMMED Start = 517967021 , End = 517967269 , Strand = 0 , Source = ePCR , Seq_id = chr5D , Size = 247 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = gt(9) Triticum aestivum similari ... (expand)

JBrowse_chr4A_7333656_7333940_CFD_SSR_TRIMMED - *IWGSC@GnpIS*
Gene annotation Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr4A_7333656_7333940_CFD_SSR_TRIMMED Start = 7333656 , End = 7333940 , Strand = 0 , Source = ePCR , Seq_id = chr4A , Size = 283 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = ca(11) Triticum aestivum similarity chr4 ... (expand)

JBrowse_chr2A_100120355_100120651_CFD_SSR_TRIMMED - *IWGSC@GnpIS*
Gene annotation Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr2A_100120355_100120651_CFD_SSR_TRIMMED Start = 100120355 , End = 100120651 , Strand = 0 , Source = ePCR , Seq_id = chr2A , Size = 295 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = gt(10) Triticum aestivum similar ... (expand)

JBrowse_chr7D_631739332_631739579_CFD_SSR_TRIMMED - *IWGSC@GnpIS*
Gene annotation Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr7D_631739332_631739579_CFD_SSR_TRIMMED Start = 631739332 , End = 631739579 , Strand = 0 , Source = ePCR , Seq_id = chr7D , Size = 246 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = gt(19) Triticum aestivum similar ... (expand)


WHEAT INITIATIVE
Home
WheatIS website
Wheat@URGI
More...
cfd2
Search
Species
Triticum aestivum [7]
Data type
Gene annotation [4]
Physical map feature [3]
Genome annotation [1]
Union
(OR query)
Ontology annotation
Aucun [7]
Expand search
Database
IWGSC@GnpIS [7]
Data provider
INRAE-URGI [7]
Results 1 to 7 of 7
cfd2 - IWGSC@GnpIS
Physical map feature
Triticum aestivum
Physical map feature IWGSC@GnpIS cfd2 cfd2 is a marker (type=marker, source=FPC) of Triticum aestivum located between positions 189601 and 189601 and which properties are Name=cfd2,Contig_hit=ctg2725 - 2 (TaaCsp3DShA_0070A24 TaaCsp3DShA_0079J22) Triticum a ... (expand)
JBrowse_chr5D_517967021_517967269_CFD_SSR_TRIMMED - IWGSC@GnpIS
Gene annotation
Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr5D_517967021_517967269_CFD_SSR_TRIMMED Start = 517967021 , End = 517967269 , Strand = 0 , Source = ePCR , Seq_id = chr5D , Size = 247 , Marker = CFD2 , Id = CFD2 , Type = similarity , Motif = gt(9) Triticum aestivum similari ... (expand)
JBrowse_chr4A_7333656_7333940_CFD_SSR_TRIMMED - IWGSC@GnpIS
Gene annotation
Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr4A_7333656_7333940_CFD_SSR_TRIMMED Start = 7333656 , End = 7333940 , Strand = 0 , Source = ePCR , Seq_id = chr4A , Size = 283 , Marker = CFD2 , Id = CFD2 , Type = similarity , Motif = ca(11) Triticum aestivum similarity chr4 ... (expand)
JBrowse_chr2A_100120355_100120651_CFD_SSR_TRIMMED - IWGSC@GnpIS
Gene annotation
Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr2A_100120355_100120651_CFD_SSR_TRIMMED Start = 100120355 , End = 100120651 , Strand = 0 , Source = ePCR , Seq_id = chr2A , Size = 295 , Marker = CFD2 , Id = CFD2 , Type = similarity , Motif = gt(10) Triticum aestivum similar ... (expand)
JBrowse_chr7D_631739332_631739579_CFD_SSR_TRIMMED - IWGSC@GnpIS
Gene annotation
Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr7D_631739332_631739579_CFD_SSR_TRIMMED Start = 631739332 , End = 631739579 , Strand = 0 , Source = ePCR , Seq_id = chr7D , Size = 246 , Marker = CFD2 , Id = CFD2 , Type = similarity , Motif = gt(19) Triticum aestivum similar ... (expand)
URGI


Home
WheatIS website
Wheat@URGI
More...
cfd2
Search
SELECT WHERE CONTAINS « cfd2 »
AND species = « Triticum aestivum »
AND (entryType = « Gene annotation »
OR entryType = « Phhysical map feature »)
Species
Triticum aestivum [7]
Data type
Gene annotation [4]
Physical map feature [3]
Genome annotation [1]
Union
(OR query)
Ontology annotation
Aucun [7]
Expand search
Database
IWGSC@GnpIS [7]
Data provider
INRAE-URGI [7]
Results 1 to 7 of 7
cfd2 - IWGSC@GnpIS
Physical map feature
Triticum aestivum
Physical map feature IWGSC@GnpIS cfd2 cfd2 is a marker (type=marker, source=FPC) of Triticum aestivum located between positions 189601 and 189601 and which properties are Name=cfd2,Contig_hit=ctg2725 - 2 (TaaCsp3DShA_0070A24 TaaCsp3DShA_0079J22) Triticum a ... (expand)
JBrowse_chr5D_517967021_517967269_CFD_SSR_TRIMMED - IWGSC@GnpIS
Gene annotation
Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr5D_517967021_517967269_CFD_SSR_TRIMMED Start = 517967021 , End = 517967269 , Strand = 0 , Source = ePCR , Seq_id = chr5D , Size = 247 , Marker = CFD2 , Id = CFD2 , Type = similarity , Motif = gt(9) Triticum aestivum similari ... (expand)
JBrowse_chr4A_7333656_7333940_CFD_SSR_TRIMMED - IWGSC@GnpIS
Gene annotation
Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr4A_7333656_7333940_CFD_SSR_TRIMMED Start = 7333656 , End = 7333940 , Strand = 0 , Source = ePCR , Seq_id = chr4A , Size = 283 , Marker = CFD2 , Id = CFD2 , Type = similarity , Motif = ca(11) Triticum aestivum similarity chr4 ... (expand)
JBrowse_chr2A_100120355_100120651_CFD_SSR_TRIMMED - IWGSC@GnpIS
Gene annotation
Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr2A_100120355_100120651_CFD_SSR_TRIMMED Start = 100120355 , End = 100120651 , Strand = 0 , Source = ePCR , Seq_id = chr2A , Size = 295 , Marker = CFD2 , Id = CFD2 , Type = similarity , Motif = gt(10) Triticum aestivum similar ... (expand)
JBrowse_chr7D_631739332_631739579_CFD_SSR_TRIMMED - IWGSC@GnpIS
Gene annotation
Triticum aestivum
SEQUENCE FEATURE IWGSC@GnpIS_chr7D_631739332_631739579_CFD_SSR_TRIMMED Start = 631739332 , End = 631739579 , Strand = 0 , Source = ePCR , Seq_id = chr7D , Size = 246 , Marker = CFD2 , Id = CFD2 , Type = similarity , Motif = gt(19) Triticum aestivum similar ... (expand)

cfd2 Search

Species
- ☐ Triticum aestivum [8]
- ☐ Aegilops tauschii [1]
- ☐ Triticum aestivum aestivum [1]

Data type
- ☐ Gene annotation [4]
- ☐ Physical map feature [3]
- ☐ Marker [2]
- ☐ Genome annotation [1]

Ontology annotation
- ☐ Aucun [10]

Expand search

Database
- ☐ IWGSC@GnpIS [8]
- ☐ GnpIS [2]

Data provider
- ☐ INRAE-URGI [10]

Results 1 to 10 of 10

cfd2 - *IWGSC@GnpIS*

Physical map feature **Triticum aestivum**

Physical map feature IWGSC@GnpIS **cfd2 cfd2** is a marker (type=marker, source=FPC) of Triticum aestivum located between positions 189601 and 189601 and which properties are Name=**cfd2**,Contig_hit=ctg2725 - 2 (TaaCsp3DShA_0070A24 TaaCsp3DShA_0079J22) Triticum a ... (expand)

JBrowse_chr5D_517967021_517967269_CFD_SSR_TRIMMED - *IWGSC@GnpIS*

Gene annotation **Triticum aestivum**

SEQUENCE FEATURE IWGSC@GnpIS_chr5D_517967021_517967269_CFD_SSR_TRIMMED Start = 517967021 , End = 517967269 , Strand = 0 , Source = ePCR , Seq_id = chr5D , Size = 247 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = gt(9) Triticum aestivum similari ... (expand)

JBrowse_chr4A_7333656_7333940_CFD_SSR_TRIMMED - *IWGSC@GnpIS*

Gene annotation **Triticum aestivum**

SEQUENCE FEATURE IWGSC@GnpIS_chr4A_7333656_7333940_CFD_SSR_TRIMMED Start = 7333656 , End = 7333940 , Strand = 0 , Source = ePCR , Seq_id = chr4A , Size = 283 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = ca(11) Triticum aestivum similarity chr4 ... (expand)

JBrowse_chr2A_100120355_100120651_CFD_SSR_TRIMMED - *IWGSC@GnpIS*

Gene annotation **Triticum aestivum**

SEQUENCE FEATURE IWGSC@GnpIS_chr2A_100120355_100120651_CFD_SSR_TRIMMED Start = 100120355 , End = 100120651 , Strand = 0 , Source = ePCR , Seq_id = chr2A , Size = 295 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = gt(10) Triticum aestivum similar ... (expand)

CFD2 - *IWGSC@GnpIS*

Genome annotation **Triticum aestivum**

Genome annotation IWGSC@GnpIS **CFD2 CFD2** is a similarity:ePCR_cfd of Triticum aestivum located between positions 14028 and 14311 on 4AS_v2_5981297 and which properties are Size=283,Motif=gt(9),load_id=CFD2_147 Triticum aestivum similarity

cfd2 Search

Species
- ☐ Triticum aestivum [8]
- ☐ Aegilops tauschii [1]
- ☐ Triticum aestivum aestivum [1]

Data type
- ☐ Gene annotation [4]
- ☐ Physical map feature [3]
- ☐ Marker [2]
- ☐ Genome annotation [1]

Ontology annotation
- ☐ Aucun [10]

Expand search

Database
- ☐ IWGSC@GnpIS [8]
- ☐ GnpIS [2]

Data provider
- ☐ INRAE-URGI [10]

Results 1 to 10 of 10

cfd2 - *IWGSC@GnpIS*
Physical map feature **Triticum aestivum**
Physical map feature IWGSC@GnpIS **cfd2 cfd2** is a marker (type=marker, source=FPC) of Triticum aestivum located between positions 189601 and 189601 and which properties are Name=**cfd2**,Contig_hit=ctg2725 - 2 (TaaCsp3DShA_0070A24 TaaCsp3DShA_0079J22) Triticum a ... (expand)

JBrowse_chr5D_517967021_517967269_CFD_SSR_TRIMMED - *IWGSC@GnpIS*
Gene annotation **Triticum aestivum**
SEQUENCE FEATURE IWGSC@GnpIS_chr5D_517967021_517967269_CFD_SSR_TRIMMED Start = 517967021 , End = 517967269 , Strand = 0 , Source = ePCR , Seq_id = chr5D , Size = 247 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = gt(9) Triticum aestivum similari ... (expand)

JBrowse_chr4A_7333656_7333940_CFD_SSR_TRIMMED - *IWGSC@GnpIS*
Gene annotation **Triticum aestivum**
SEQUENCE FEATURE IWGSC@GnpIS_chr4A_7333656_7333940_CFD_SSR_TRIMMED Start = 7333656 , End = 7333940 , Strand = 0 , Source = ePCR , Seq_id = chr4A , Size = 283 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = ca(11) Triticum aestivum similarity chr4 ... (expand)

JBrowse_chr2A_100120355_100120651_CFD_SSR_TRIMMED - *IWGSC@GnpIS*
Gene annotation **Triticum aestivum**
SEQUENCE FEATURE IWGSC@GnpIS_chr2A_100120355_100120651_CFD_SSR_TRIMMED Start = 100120355 , End = 100120651 , Strand = 0 , Source = ePCR , Seq_id = chr2A , Size = 295 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = gt(10) Triticum aestivum similar ... (expand)

CFD2 - *IWGSC@GnpIS*
Genome annotation **Triticum aestivum**
Genome annotation IWGSC@GnpIS **CFD2 CFD2** is a similarity:ePCR_cfd of Triticum aestivum located between positions 14028 and 14311 on 4AS_v2_5981297 and which properties are Size=283,Motif=gt(9),load_id=CFD2_147 Triticum aestivum similarity

cfd2 Search

Results 1 to 10 of 10

Species

- ☐ Triticum aestivum [8]
- ☐ Aegilops tauschii [1]
- ☐ Triticum aestivum

Database

- ☐ IWGSC@GnpIS [8]
- ☐ GnpIS [2]

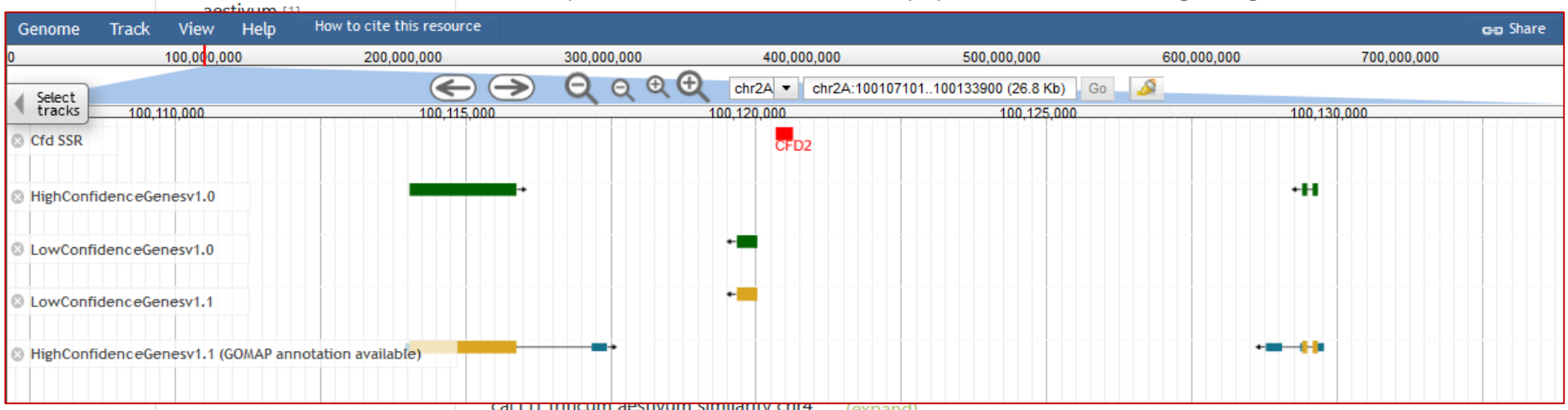
Data provider

- ☐ INRAE-URGI [10]

cfd2 - *IWGSC@GnpIS*

Physical map feature **Triticum aestivum**

Physical map feature IWGSC@GnpIS **cfd2 cfd2** is a marker (type=marker, source=FPC) of Triticum aestivum located between positions 189601 and 189601 and which properties are Name=**cfd2**,Contig_hit=ctg2725 - 2



ca(11) Triticum aestivum similarity chr4 ... (expand)

JBrowse_chr2A_100120355_100120651_CFD_SSR_TRIMMED - *IWGSC@GnpIS*

Gene annotation **Triticum aestivum**

SEQUENCE FEATURE IWGSC@GnpIS_chr2A_100120355_100120651_CFD_SSR_TRIMMED Start = 100120355 , End = 100120651 , Strand = 0 , Source = ePCR , Seq_id = chr2A , Size = 295 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = gt(10) Triticum aestivum similar ... (expand)

CFD2 - *IWGSC@GnpIS*

Genome annotation **Triticum aestivum**

Genome annotation IWGSC@GnpIS **CFD2 CFD2** is a similarity:ePCR_cfd of Triticum aestivum located between positions 14028 and 14311 on 4AS_v2_5981297 and which properties are Size=283,Motif=gt(9),load_id=CFD2_147 Triticum aestivum similarity

Home WheatIS website Wheat@URGI More...

cfd2 Search

Results 1 to 10 of 10

Species

- ☐ Triticum aestivum [8]
- ☐ Aegilops tauschii [1]
- ☐ Triticum aestivum

Database

- ☐ IWGSC@GnpIS [8]
- ☐ GnpIS [2]

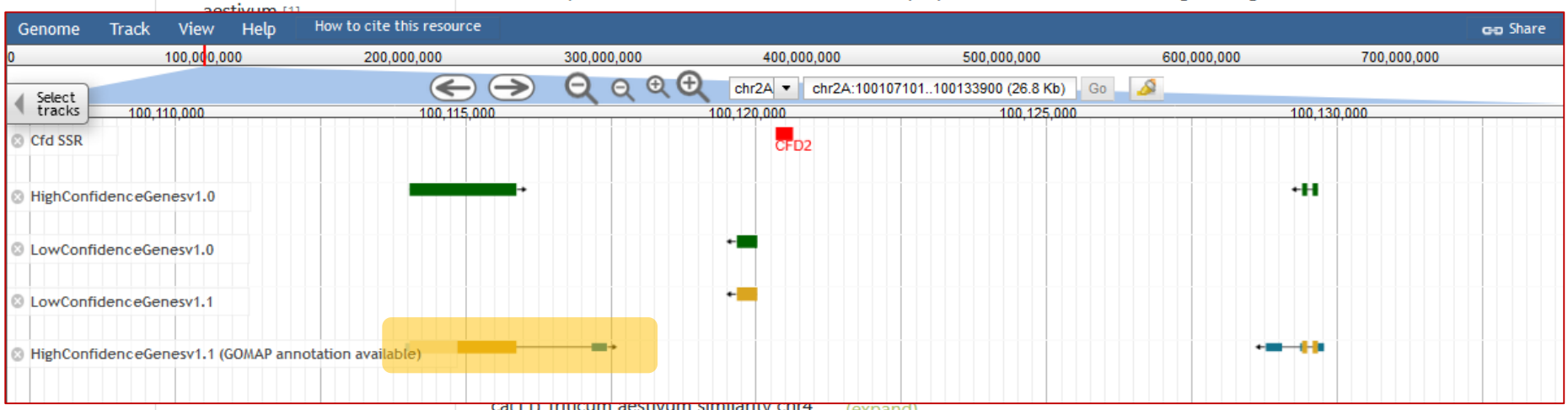
Data provider

- ☐ INRAE-URGI [10]

cfd2 - *IWGSC@GnpIS*

Physical map feature **Triticum aestivum**

Physical map feature IWGSC@GnpIS **cfd2 cfd2** is a marker (type=marker, source=FPC) of Triticum aestivum located between positions 189601 and 189601 and which properties are Name=**cfd2**,Contig_hit=ctg2725 - 2



ca(11) Triticum aestivum similarity chr4 ... (expand)

JBrowse_chr2A_100120355_100120651_CFD_SSR_TRIMMED - *IWGSC@GnpIS*

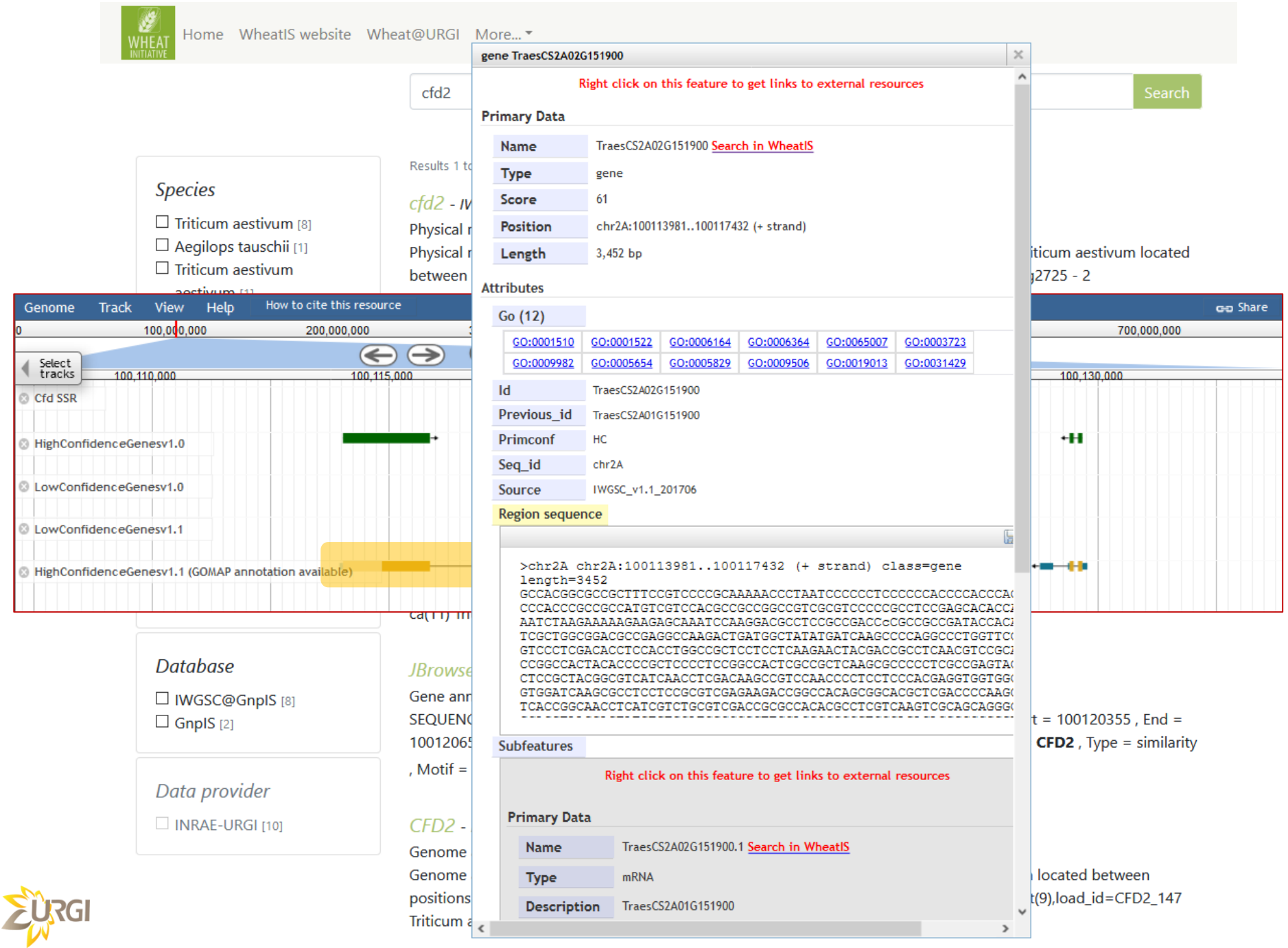
Gene annotation **Triticum aestivum**

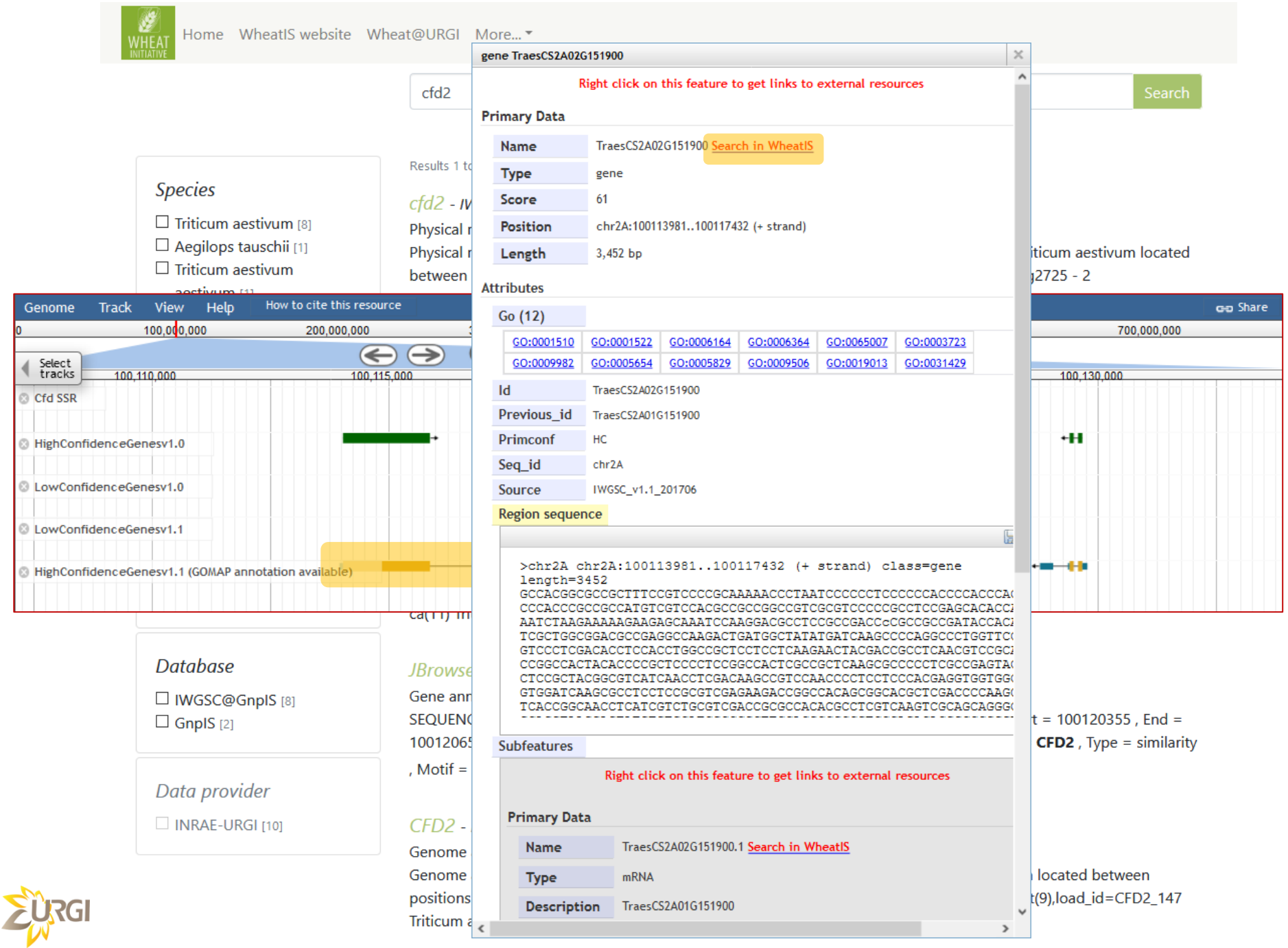
SEQUENCE FEATURE IWGSC@GnpIS_chr2A_100120355_100120651_CFD_SSR_TRIMMED Start = 100120355 , End = 100120651 , Strand = 0 , Source = ePCR , Seq_id = chr2A , Size = 295 , Marker = **CFD2** , Id = **CFD2** , Type = similarity , Motif = gt(10) Triticum aestivum similar ... (expand)

CFD2 - *IWGSC@GnpIS*

Genome annotation **Triticum aestivum**

Genome annotation IWGSC@GnpIS **CFD2 CFD2** is a similarity:ePCR_cfd of Triticum aestivum located between positions 14028 and 14311 on 4AS_v2_5981297 and which properties are Size=283,Motif=gt(9),load_id=CFD2_147 Triticum aestivum similarity


Home
WheatIS website
Wheat@URGI
More...
cfd2
Search
Species
Triticum aestivum [8]
Aegilops tauschii [1]
Triticum aestivum
Database
IWGSC@GnpIS [8]
GnpIS [2]
Data provider
INRAE-URGI [10]
Genome
Track
View
Help
How to cite this resource
Share
Select tracks
Cfd SSR
HighConfidenceGenesv1.0
LowConfidenceGenesv1.0
LowConfidenceGenesv1.1
HighConfidenceGenesv1.1 (GOMAP annotation available)
gene TraesCS2A02G151900
Right click on this feature to get links to external resources
Primary Data
Name
TraesCS2A02G151900 Search in WheatIS
Type
gene
Score
61
Position
chr2A:100113981..100117432 (+ strand)
Length
3,452 bp
Attributes
Go (12)
GO:0001510
GO:0001522
GO:0006164
GO:0006364
GO:0065007
GO:0003723
GO:0009982
GO:0005654
GO:0005829
GO:0009506
GO:0019013
GO:0031429
Id
TraesCS2A02G151900
Previous_id
TraesCS2A01G151900
Primconf
HC
Seq_id
chr2A
Source
IWGSC_v1.1_201706
Region sequence
>chr2A chr2A:100113981..100117432 (+ strand) class=gene
length=3452
Subfeatures
Right click on this feature to get links to external resources
Primary Data
Name
TraesCS2A02G151900.1 Search in WheatIS
Type
mRNA
Description
TraesCS2A01G151900


Home
WheatIS website
Wheat@URGI
More...
cfd2
Search
Species
Triticum aestivum [8]
Aegilops tauschii [1]
Triticum aestivum
Database
IWGSC@GnpIS [8]
GnpIS [2]
Data provider
INRAE-URGI [10]
Genome
Track
View
Help
How to cite this resource
Share
Select tracks
Cfd SSR
HighConfidenceGenesv1.0
LowConfidenceGenesv1.0
LowConfidenceGenesv1.1
HighConfidenceGenesv1.1 (GOMAP annotation available)
gene TraesCS2A02G151900
Right click on this feature to get links to external resources
Primary Data
Name
TraesCS2A02G151900
Search in WheatIS
Type
gene
Score
61
Position
chr2A:100113981..100117432 (+ strand)
Length
3,452 bp
Attributes
Go (12)
GO:0001510
GO:0001522
GO:0006164
GO:0006364
GO:0065007
GO:0003723
GO:0009982
GO:0005654
GO:0005829
GO:0009506
GO:0019013
GO:0031429
Id
TraesCS2A02G151900
Previous_id
TraesCS2A01G151900
Primconf
HC
Seq_id
chr2A
Source
IWGSC_v1.1_201706
Region sequence
>chr2A chr2A:100113981..100117432 (+ strand) class=gene
length=3452
Subfeatures
Right click on this feature to get links to external resources
Primary Data
Name
TraesCS2A02G151900.1
Search in WheatIS
Type
mRNA
Description
TraesCS2A01G151900

TraesCS2A02G151900 Search

Species
- [ ] Triticum aestivum [3]

Data type
- [ ] Genome annotation [2]
- [ ] Gene annotation [1]

Ontology annotation
- [ ] Aucun [3]

Expand search

Database
- [ ] Ensembl Plants [1]
- [ ] IWGSC@GnpIS [1]
- [ ] KnetMiner [1]

Data provider
- [ ] EBI [1]
- [ ] INRAE-URGI [1]
- [ ] Rothamsted Research [1]

Results 1 to 3 of 3

chr2A:100113980..100117432 - *IWGSC@GnpIS*

Genome annotation Triticum aestivum

Genome annotation IWGSC@GnpIS chr2A:100113980..100117432 Start = 100113980 , End = 100117432 , Strand = 1 , Source = IWGSC_v1.1_201706 , Previous_id = TraesCS2A01G151900 , Seq_id = chr2A , Name = **TraesCS2A02G151900** , Score = 61 , Primconf = HC , Type = gen ... (expand)

wheatknet:TRAESCS2A02G151900 - *KnetMiner*

Gene annotation Triticum aestivum

Gene ID **TRAESCS2A02G151900** has alternative name(s): **TRAESCS2A02G151900**, Start position 100113981 and End position 100117432 on Chromosome 2A, The species is 'Triticum aestivum' (https://eutils.ncbi.nlm.nih.gov/entrez/eutils/esummary.fcgi?db=taxonomy&id=456 ... (expand)

TraesCS2A02G151900 - *Ensembl Plants*

Genome annotation Triticum aestivum

Uncharacterized protein At3g57150 (Fragment) [Source:Projected from Arabidopsis thaliana (AT3G57150) UniProtKB/TrEMBL;Acc:C0SVF3] feature type = protein_coding

TraesCS2A02G151900 Search

Species
- [ ] Triticum aestivum [3]

Data type
- [ ] Genome annotation [2]
- [ ] Gene annotation [1]

Ontology annotation
- [ ] Aucun [3]

Expand search

Database
- [ ] Ensembl Plants [1]
- [ ] IWGSC@GnpIS [1]
- [ ] KnetMiner [1]

Data provider
- [ ] EBI [1]
- [ ] INRAE-URGI [1]
- [ ] Rothamsted Research [1]

Results 1 to 3 of 3

chr2A:100113980..100117432 - *IWGSC@GnpIS*

Genome annotation Triticum aestivum

Genome annotation IWGSC@GnpIS chr2A:100113980..100117432 Start = 100113980 , End = 100117432 , Strand = 1 , Source = IWGSC_v1.1_201706 , Previous_id = TraesCS2A01G151900 , Seq_id = chr2A , Name = **TraesCS2A02G151900** , Score = 61 , Primconf = HC , Type = gen ... (expand)

wheatknet:TRAESCS2A02G151900 - *KnetMiner*

Gene annotation Triticum aestivum

Gene ID **TRAESCS2A02G151900** has alternative name(s): **TRAESCS2A02G151900**, Start position 100113981 and End position 100117432 on Chromosome 2A, The species is 'Triticum aestivum' (https://eutils.ncbi.nlm.nih.gov/entrez/eutils/esummary.fcgi?db=taxonomy&id=456 ... (expand)

TraesCS2A02G151900 - *Ensembl Plants*

Genome annotation Triticum aestivum

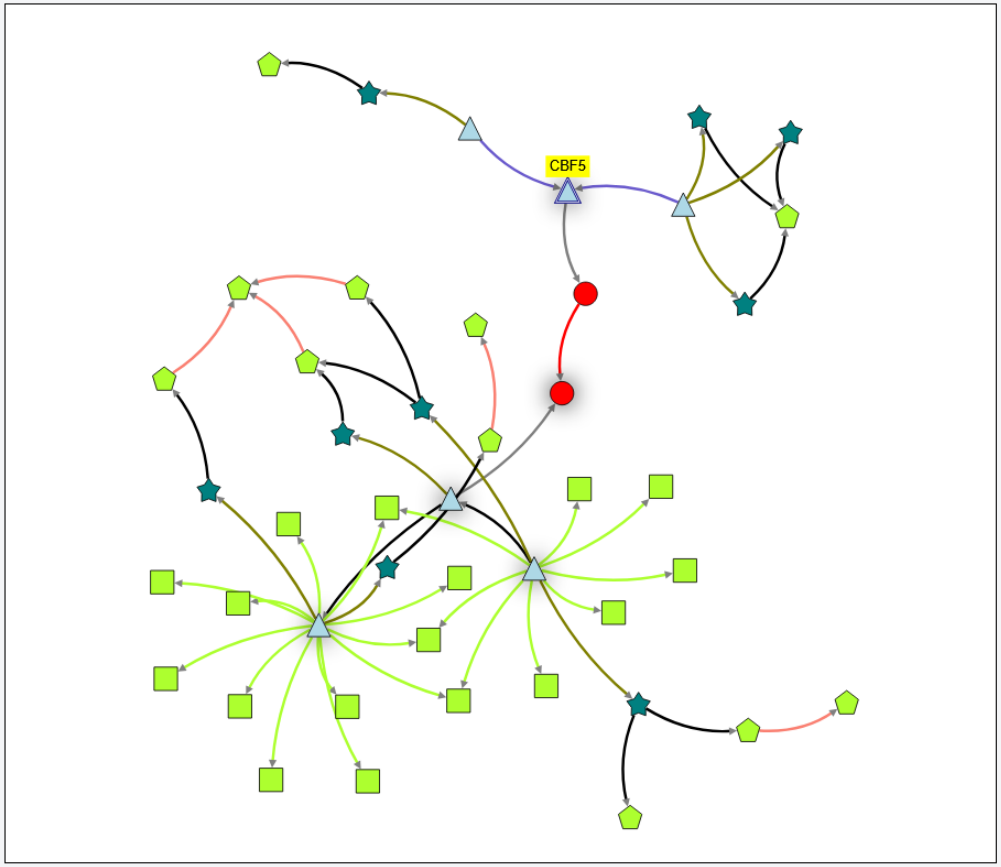
Uncharacterized protein At3g57150 (Fragment) [Source:Projected from Arabidopsis thaliana (AT3G57150) UniProtKB/TrEMBL;Acc:C0SVF3] feature type = protein_coding

KnetMiner Cite Us User Guide KnetMaps.js Sign in

Search

Discover the KnetMiner knowledge network for gene(s): **TRAESCS2A02G151900** (blue triangles with yellow label) and potential links to **any** phenotype/trait (green rectangles and pentagons). *Tip: Right-click-hold on nodes to add labels or to show their properties. Use the Interactive Legend to add (single-click) or hide (double-click) other types of information to/from the network.*

CoSE layout | Labels: None | Label size: 16px | Save Knetwork



Interactive Legend:

2/2 Protein	6/13 Gene	0/1 SNPEffect	9/11 SNP	0/1 Pathway	0/2 CoExpStudy	0/2 CoExpCluster	0/127 BioProc	0/94 PO	0/8 Domain	0/1 Enzyme	0/1 EC	0/20 Publication	11/11 Trait	0/1 Reaction	0/8 CellComp	0/12 MolFunc	17/17 Phenotype

Concepts: 45 (332); Relations: 52 (353)

Strand = 1

and End

ez/eutils

TraesCS2A02G151900 Search

Species
- [ ] Triticum aestivum [3]

Data type
- [ ] Genome annotation [2]
- [ ] Gene annotation [1]

Ontology annotation
- [ ] Aucun [3]

Expand search

Database
- [ ] Ensembl Plants [1]
- [ ] IWGSC@GnpIS [1]
- [ ] KnetMiner [1]

Data provider
- [ ] EBI [1]
- [ ] INRAE-URGI [1]
- [ ] Rothamsted Research [1]

Results 1 to 3 of 3

chr2A:100113980..100117432 - *IWGSC@GnpIS*

Genome annotation Triticum aestivum

Genome annotation IWGSC@GnpIS chr2A:100113980..100117432 Start = 100113980 , End = 100117432 , Strand = 1 , Source = IWGSC_v1.1_201706 , Previous_id = TraesCS2A01G151900 , Seq_id = chr2A , Name = **TraesCS2A02G151900** , Score = 61 , Primconf = HC , Type = gen ... (expand)

wheatknet:TRAESCS2A02G151900 - *KnetMiner*

Gene annotation Triticum aestivum

Gene ID **TRAESCS2A02G151900** has alternative name(s): **TRAESCS2A02G151900**, Start position 100113981 and End position 100117432 on Chromosome 2A, The species is 'Triticum aestivum' (https://eutils.ncbi.nlm.nih.gov/entrez/eutils/esummary.fcgi?db=taxonomy&id=456 ... (expand)

TraesCS2A02G151900 - *Ensembl Plants*

Genome annotation Triticum aestivum

Uncharacterized protein At3g57150 (Fragment) [Source:Projected from Arabidopsis thaliana (AT3G57150) UniProtKB/TrEMBL;Acc:C0SVF3] feature type = protein_coding

TraesCS2A02G151900 Search

Species
- [ ] Triticum aestivum [3]

Data type
- [ ] Genome annotation [2]
- [ ] Gene annotation [1]

Ontology annotation
- [ ] Aucun [3]

Expand search

Database
- [ ] Ensembl Plants [1]
- [ ] IWGSC@GnpIS [1]
- [ ] KnetMiner [1]

Data provider
- [ ] EBI [1]
- [ ] INRAE-URGI [1]
- [ ] Rothamsted Research [1]

Results 1 to 3 of 3

chr2A:100113980..100117432 - *IWGSC@GnpIS*

Genome annotation Triticum aestivum

Genome annotation IWGSC@GnpIS chr2A:100113980..100117432 Start = 100113980 , End = 100117432 , Strand = 1 , Source = IWGSC_v1.1_201706 , Previous_id = TraesCS2A01G151900 , Seq_id = chr2A , Name = **TraesCS2A02G151900** , Score = 61 , Primconf = HC , Type = gen ... (expand)

wheatknet:TRAESCS2A02G151900 - *KnetMiner*

Gene annotation Triticum aestivum

Gene ID **TRAESCS2A02G151900** has alternative name(s): **TRAESCS2A02G151900**, Start position 100113981 and End position 100117432 on Chromosome 2A, The species is 'Triticum aestivum' (https://eutils.ncbi.nlm.nih.gov/entrez/eutils /esummary.fcgi?db=taxonomy&id=456 ... (expand)

TraesCS2A02G151900 - *Ensembl Plants*

Genome annotation Triticum aestivum

Uncharacterized protein At3g57150 (Fragment) [Source:Projected from Arabidopsis thaliana (AT3G57150) UniProtKB/TrEMBL;Acc:C0SVF3] feature type = protein_coding

Gene-based displays
- Summary
  - Splice variants
  - Transcript comparison
  - Gene alleles
- Sequence
  - Secondary Structure
- Gene families
- Literature
- Plant Compara
  - Genomic alignments
  - Gene tree
  - Gene gain/loss tree
  - Orthologues
  - Paralogues
  - Homoeologues
- Pan-taxonomic Compara
  - Gene Tree
  - Orthologues
- Ontologies
  - GO: Biological process
  - GO: Cellular component
  - GO: Molecular function
- Phenotypes
- Genetic Variation
  - Variant table
  - Variant image
  - Structural variants
- Gene expression
- Pathway
- Regulation
- External references
- Supporting evidence
- ID History
  - Gene history

Configure this page
Custom tracks
Export data
Share this page
Bookmark this page

Ensembl Plants is produced in collaboration with Gramene

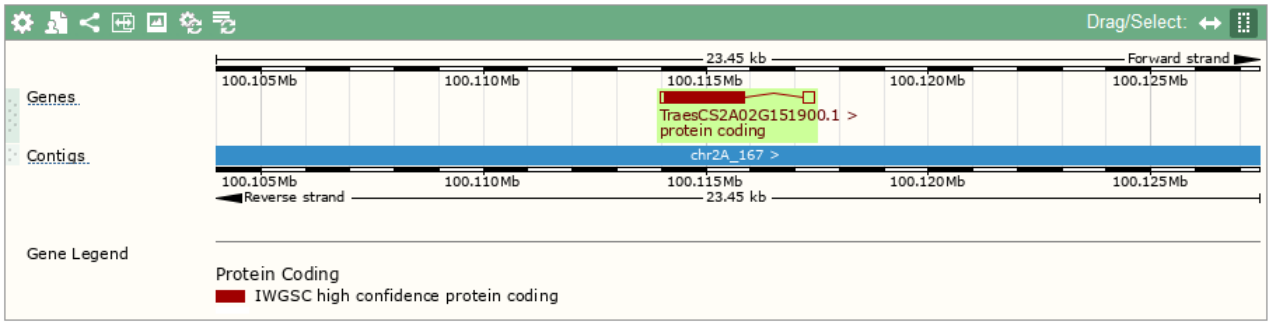
Gene: TraesCS2A02G151900

Description	Uncharacterized protein At3g57150 (Fragment) [Source:Projected from Arabidopsis thaliana (AT3G57150) UniProtKB/TrEMBL;Acc:C0SVF3]
Location	Chromosome 2A: 100,113,981-100,117,432 forward strand.
About this gene	This gene has 1 transcript (splice variant) and 144 orthologues.
Transcripts	Show transcript table

Summary

Gene type	Protein coding
Annotation method	Genes annotated with high confidence by IWGSC

Go to Region in Detail for more tracks and navigation options (e.g. zooming)



Configuring the display

Tip: use the "**Configure this page**" link on the left to show additional data in this region.

TraesCS2A02G151900 Search

Species
- [ ] Triticum aestivum [3]

Data type
- [ ] Genome annotation [2]
- [ ] Gene annotation [1]

Ontology annotation
- [ ] Aucun [3]

Expand search

Database
- [ ] Ensembl Plants [1]
- [ ] IWGSC@GnpIS [1]
- [ ] KnetMiner [1]

Data provider
- [ ] EBI [1]
- [ ] INRAE-URGI [1]
- [ ] Rothamsted Research [1]

Results 1 to 3 of 3

chr2A:100113980..100117432 - *IWGSC@GnpIS*

Genome annotation Triticum aestivum

Genome annotation IWGSC@GnpIS chr2A:100113980..100117432 Start = 100113980 , End = 100117432 , Strand = 1 , Source = IWGSC_v1.1_201706 , Previous_id = TraesCS2A01G151900 , Seq_id = chr2A , Name = **TraesCS2A02G151900** , Score = 61 , Primconf = HC , Type = gen ... (expand)

wheatknet:TRAESCS2A02G151900 - *KnetMiner*

Gene annotation Triticum aestivum

Gene ID **TRAESCS2A02G151900** has alternative name(s): **TRAESCS2A02G151900**, Start position 100113981 and End position 100117432 on Chromosome 2A, The species is 'Triticum aestivum' (https://eutils.ncbi.nlm.nih.gov/entrez/eutils/esummary.fcgi?db=taxonomy&id=456 ... (expand)

TraesCS2A02G151900 - *Ensembl Plants*

Genome annotation Triticum aestivum

Uncharacterized protein At3g57150 (Fragment) [Source:Projected from Arabidopsis thaliana (AT3G57150) UniProtKB/TrEMBL;Acc:C0SVF3] feature type = protein_coding

Ontology annotation

- Objective: link literature with experimental data (genotyping, phenotyping…) using ontology annotation
- Corpus of ~1600 wheat open access publications:

Title = (Gene Marker AND (Triticum aestivum OR wheat))
OR
abstract = (Gene Marker AND (Triticum aestivum OR wheat))

- Text mining ontology: Wheat Trait Ontology
  http://wheat.agroportal.lirmm.fr/ontologies/WHEATPHENOTYPE
- Semantic facet filtering:
  - document annotation using 2 fields
  - generic enough for any ontology
  - tested with GO and WTO
  - search optionaly on ontology subtree

soft red winter wheat grain yield Search

Species (978)
Filter on Species...

Data type (34)
Filter on Data type...

Ontology annotation (66)
Filter on Ontology annotati

Expand search

Database (19)
Filter on Database...

Data provider
- ☐ INRAE-URGI [19,577,154]
- ☐ UWA [167,167]
- ☐ Gramene [127,291]
- ☐ Rothamsted Research [108,474]
- ☐ South Green [103,639]
- ☐ IPK [60,170]
- ☐ T3 [33,452]
- ☐ GrainGenes [21,241]
- ☐ CIMMYT [1,758]
- ☐ EBI [47]
- ☐ IPGPAS [5]

Results 1 to 20 of 20,200,398 (limited to 10,000)

10.1186/s12863-019-0785-1 - *OpenMinTeD@GnpIS*
Bibliography Triticum
Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat**. 2019 Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat** Background Genomic selection has the potential to increase genetic ... (expand)

2014_SRWW_YNVP - *The Triticeae Toolbox*
Genotyping Experiment Triticum
2014_SRWW_YNVP **Yield** Validation Panel, used to verify results of 2012_ElitePanel. **Soft Red Winter Wheat**, cut with PstI.

SG-1550 - *GrainGenes*
Germplasm Triticum aestivum ssp. aestivum
Germplasm GrainGenes SG-1550 Cultivar. The Ohio **Grain** Company, Marysville, OH. USA-Ohio. USDA/FGIS **Soft Red Winter Wheat**. **Winter** growth habit. **Triticum aestivum** ssp. aestivum ... (expand)

USSRWWN_2016_Champaign - *The Triticeae Toolbox*
Phenotyping Experiment Triticum
USSRWWN_2016_Champaign Uniform Southern **Soft Red Winter Wheat** Nursery, USSRWWN, Despite high **yield** levels, results were affected by winterkill and stripe rust. Fertilizer: 70 + 40 N.

UESRWWN_2014_Urbana - *The Triticeae Toolbox*
Phenotyping Experiment Triticum
UESRWWN_2014_Urbana Uniform Eastern **Soft Red Winter Wheat** Nursery, UESRWWN Coop. test of elite SRWW lines, wet **winter** and early spring. FHB data are from irrigated and **grain** spawn inoculated nursery using single row plots.

10.1371/journal.pone.0208217 - *OpenMinTeD@GnpIS*
Bibliography Arabidopsis thaliana Triticum Triticum aestivum
Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia. 2019 Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia **Grain yield** is a trait of paramount importance in ... (expand)

10883/3464 - *CIMMYT Publications*
Bibliography Winter wheat
CIMMYT Dspace **Winter wheat** Publication 10883/3464 10883/3464 Effect of climate change and variety on long-term

soft red winter wheat grain yield Search

Species (978)
Filter on Species...

Data type (34)
Filter on Data type...

Ontology annotation (66)
Filter on Ontology annotati

Expand search

Database (19)
Filter on Database...

Data provider
- ☐ INRAE-URGI [19,577,154]
- ☐ UWA [167,167]
- ☐ Gramene [127,291]
- ☐ Rothamsted Research [108,474]
- ☐ South Green [103,639]
- ☐ IPK [60,170]
- ☐ T3 [33,452]
- ☐ GrainGenes [21,241]
- ☐ CIMMYT [1,758]
- ☐ EBI [47]
- ☐ IPGPAS [5]

Results 1 to 20 of 20,200,398 (limited to 10,000)

10.1186/s12863-019-0785-1 - *OpenMinTeD@GnpIS*
Bibliography Triticum
Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat**. 2019 Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat** Background Genomic selection has the potential to increase genetic ... (expand)

2014_SRWW_YNVP - *The Triticeae Toolbox*
Genotyping Experiment Triticum
2014_SRWW_YNVP **Yield** Validation Panel, used to verify results of 2012_ElitePanel. **Soft Red Winter Wheat**, cut with PstI.

SG-1550 - *GrainGenes*
Germplasm Triticum aestivum ssp. aestivum
Germplasm GrainGenes SG-1550 Cultivar. The Ohio **Grain** Company, Marysville, OH. USA-Ohio. USDA/FGIS **Soft Red Winter Wheat**. **Winter** growth habit. **Triticum aestivum** ssp. aestivum ... (expand)

USSRWWN_2016_Champaign - *The Triticeae Toolbox*
Phenotyping Experiment Triticum
USSRWWN_2016_Champaign Uniform Southern **Soft Red Winter Wheat** Nursery, USSRWWN, Despite high **yield** levels, results were affected by winterkill and stripe rust. Fertilizer: 70 + 40 N.

UESRWWN_2014_Urbana - *The Triticeae Toolbox*
Phenotyping Experiment Triticum
UESRWWN_2014_Urbana Uniform Eastern **Soft Red Winter Wheat** Nursery, UESRWWN Coop. test of elite SRWW lines, wet **winter** and early spring. FHB data are from irrigated and **grain** spawn inoculated nursery using single row plots.

10.1371/journal.pone.0208217 - *OpenMinTeD@GnpIS*
Bibliography Arabidopsis thaliana Triticum Triticum aestivum
Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia. 2019 Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia **Grain yield** is a trait of paramount importance in ... (expand)

10883/3464 - *CIMMYT Publications*
Bibliography Winter wheat
CIMMYT Dspace **Winter wheat** Publication 10883/3464 10883/3464 Effect of climate change and variety on long-term

URGI

soft red winter wheat grain yield Search

Species (978)

Filter on Species...

Data type (34)

Filter on Data type...

Ontology annotation (66)

Filter on Ontology annotati

Expand search

Database (19)

Filter on Database...

Data provider

- INRAE-URGI [19,577,154]
- UWA [167,167]
- Gramene [127,291]
- Rothamsted Research [108,474]
- South Green [103,639]
- IPK [60,170]
- T3 [33,452]
- GrainGenes [21,241]
- CIMMYT [1,758]
- EBI [47]
- IPGPAS [5]

Results 1 to 20 of 20,200,398 (limited to 10,000)

10.1186/s12863-019-0785-1 - *OpenMinTeD@GnpIS*

Bibliography Triticum

Hide

Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat**. 2019 Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat** Background Genomic selection has the potential to increase genetic gains by using molecular markers as predictors of breeding values of individuals. This study evaluated the accuracy of predictions for **grain yield**, heading date, plant height, and **yield** components in **soft red winter wheat** under different prediction scenarios. Response to selection for **grain yield** was also compared across different selection strategies- phenotypic, marker-based, genomic, combination of phenotypic and genomic, and random selections. Results Genomic selection was implemented through a ridge regression best linear unbiased prediction model in two scenarios- cross-validations and independent predictions. Accuracy for cross-validations was assessed using a diverse panel under different marker number, training population size, relatedness between training and validation populations, and inclusion of fixed effect in the model. The population in the first scenario was then trained and used to predict **grain yield** of biparental populations for independent validations. Using subsets of significant markers from association mapping increased accuracy by 64-70% for **grain yield** but resulted in lower accuracy for traits with high heritability such as plant height. Increasing size of training population resulted in an increase in accuracy, with maximum values reached when 60% of the lines were used as a training panel. Predictions using related subpopulations also resulted in higher accuracies. Inclusion of major growth habit genes as fixed effect in the model caused increase in **grain yield** accuracy under a cross-validation procedure. Independent predictions resulted in accuracy ranging between - 0.14 and 0.43, dependent on the grouping of site-year data for the training and validation populations. Genomic selection was %22superior%22 to marker-based selection in terms of response to selection for **yield**. Supplementing phenotypic with genomic selection resulted in approximately 10% gain in response compared to using phenotypic selection alone. Conclusions Our results showed the effects of different factors on accuracy for **yield** and agronomic traits. Among the factors studied, training population size and relatedness between training and validation population had the greatest impact on accuracy. Ultimately, combining phenotypic with genomic selection would be relevant for accelerating genetic gains for **yield** in **winter wheat**. Lozada, DN et al. BMC GENETICS Hide

2014_SRWW_YNVP - *The Triticeae Toolbox*

Genotyping Experiment Triticum

2014_SRWW_YNVP **Yield** Validation Panel, used to verify results of 2012_ElitePanel. **Soft Red Winter Wheat**, cut with PstI.

SG-1550 - *GrainGenes*

Germplasm Triticum aestivum ssp. aestivum

Germplasm GrainGenes SG-1550 Cultivar. The Ohio **Grain** Company, Marysville, OH. USA-Ohio. USDA/FGIS **Soft Red Winter Wheat**. **Winter** growth habit. **Triticum aestivum** ssp. aestivum ... (expand)

soft red winter wheat grain yield Search

Species (978)
Filter on Species...

Data type (34)
Filter on Data type...

Ontology annotation (66)
Filter on Ontology annotati

Expand search

Database (19)
Filter on Database...

Data provider
- ☐ INRAE-URGI [19,577,154]
- ☐ UWA [167,167]
- ☐ Gramene [127,291]
- ☐ Rothamsted Research [108,474]
- ☐ South Green [103,639]
- ☐ IPK [60,170]
- ☐ T3 [33,452]
- ☐ GrainGenes [21,241]
- ☐ CIMMYT [1,758]
- ☐ EBI [47]
- ☐ IPGPAS [5]

Results 1 to 20 of 20,200,398 (limited to 10,000)

10.1186/s12863-019-0785-1 - *OpenMinTeD@GnpIS*
Bibliography Triticum
Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat**. 2019 Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat** Background Genomic selection has the potential to increase genetic ... (expand)

2014_SRWW_YNVP - *The Triticeae Toolbox*
Genotyping Experiment Triticum
2014_SRWW_YNVP **Yield** Validation Panel, used to verify results of 2012_ElitePanel. **Soft Red Winter Wheat**, cut with PstI.

SG-1550 - *GrainGenes*
Germplasm Triticum aestivum ssp. aestivum
Germplasm GrainGenes SG-1550 Cultivar. The Ohio **Grain** Company, Marysville, OH. USA-Ohio. USDA/FGIS **Soft Red Winter Wheat**. **Winter** growth habit. **Triticum aestivum** ssp. aestivum ... (expand)

USSRWWN_2016_Champaign - *The Triticeae Toolbox*
Phenotyping Experiment Triticum
USSRWWN_2016_Champaign Uniform Southern **Soft Red Winter Wheat** Nursery, USSRWWN, Despite high **yield** levels, results were affected by winterkill and stripe rust. Fertilizer: 70 + 40 N.

UESRWWN_2014_Urbana - *The Triticeae Toolbox*
Phenotyping Experiment Triticum
UESRWWN_2014_Urbana Uniform Eastern **Soft Red Winter Wheat** Nursery, UESRWWN Coop. test of elite SRWW lines, wet **winter** and early spring. FHB data are from irrigated and **grain** spawn inoculated nursery using single row plots.

10.1371/journal.pone.0208217 - *OpenMinTeD@GnpIS*
Bibliography Arabidopsis thaliana Triticum Triticum aestivum
Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia. 2019 Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia **Grain yield** is a trait of paramount importance in ... (expand)

10883/3464 - *CIMMYT Publications*
Bibliography Winter wheat
CIMMYT Dspace **Winter wheat** Publication 10883/3464 10883/3464 Effect of climate change and variety on long-term

soft red winter wheat grain yield Search

Species (978)

Filter on Species...

Data type (34)

Filter on Data type...

Ontology annotation (66)

Filter on Ontology annotati

Expand search

Database (19)

Filter on Database...

Data provider

- [ ] INRAE-URGI [19,577,154]
- [ ] UWA [167,167]
- [ ] Gramene [127,291]
- [ ] Rothamsted Research [108,474]
- [ ] South Green [103,639]
- [ ] IPK [60,170]
- [ ] T3 [33,452]
- [ ] GrainGenes [21,241]
- [ ] CIMMYT [1,758]
- [ ] EBI [47]
- [ ] IPGPAS [5]

Results 1 to 20 of 20,200,398 (limited to 10,000)

10.1186/s12863-019-0785-1 - *OpenMinTeD@GnpIS*

Bibliography Triticum

Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat**. 2019 Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat** Background Genomic selection has the potential to increase genetic ... (expand)

2014_SRWW_YNVP - *The Triticeae Toolbox*

Genotyping Experiment Triticum

2014_SRWW_YNVP **Yield** Validation Panel, used to verify results of 2012_ElitePanel. **Soft Red Winter Wheat**, cut with PstI.

SG-1550 - *GrainGenes*

Germplasm Triticum aestivum ssp. aestivum

Germplasm GrainGenes SG-1550 Cultivar. The Ohio **Grain** Company, Marysville, OH. USA-Ohio. USDA/FGIS **Soft Red Winter Wheat**. **Winter** growth habit. **Triticum aestivum** ssp. aestivum ... (expand)

USSRWWN_2016_Champaign - *The Triticeae Toolbox*

Phenotyping Experiment Triticum

USSRWWN_2016_Champaign Uniform Southern **Soft Red Winter Wheat** Nursery, USSRWWN, Despite high **yield** levels, results were affected by winterkill and stripe rust. Fertilizer: 70 + 40 N.

UESRWWN_2014_Urbana - *The Triticeae Toolbox*

Phenotyping Experiment Triticum

UESRWWN_2014_Urbana Uniform Eastern **Soft Red Winter Wheat** Nursery, UESRWWN Coop. test of elite SRWW lines, wet **winter** and early spring. FHB data are from irrigated and **grain** spawn inoculated nursery using single row plots.

10.1371/journal.pone.0208217 - *OpenMinTeD@GnpIS*

Bibliography Arabidopsis thaliana Triticum Triticum aestivum

Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia. 2019 Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia **Grain yield** is a trait of paramount importance in ... (expand)

10883/3464 - *CIMMYT Publications*

Bibliography Winter wheat

CIMMYT Dspace **Winter wheat** Publication 10883/3464 10883/3464 Effect of climate change and variety on long-term

Genotyping Data Project: 2014_SRWW_YNVP

Genotyping Data Project Details

View basic information about the genotyping data project.

Genotyping Data Project Name	2014_SRWW_YNVP
Breeding Program	Kansas State University
Trial Location	[No Location]
Year	2014
Description	Yield Validation Panel, used to verify results of 2012_ElitePanel. Soft Red Winter Wheat, cut with PstI.
Genotyping Facility	Kansas State Genotyping Lab

2014_SRWW_YNVP SGN8146

Genotyping Protocols

View basic information about the genotyping protocols used in this genotyping data project.

Genotyping Data

View and download genotyping data.

Show 10 entries

Protocol	Sample Name	Sample Type	Accession Name	Synonyms	Description	Number of Marker Scores	IGD Number	Download
GBS restriction site, KSG	KY07C-1249-148-3-1	accession	KY07C-1249-148-3-1		SNP genotypes for stock (name = KY07C-1249-148-3-1, id = 219126)	112307		Download
GBS restriction site, KSG	OH11-204-61	accession	OH11-204-61		SNP genotypes for stock (name = OH11-204-61, id = 219175)	112307		Download
GBS restriction site, KSG	SHIRLEY	accession	SHIRLEY	CV-1039,VA03W-409	SNP genotypes for stock (name = SHIRLEY, id =	112307		Download

soft red winter wheat grain yield Search

Species (978)
Filter on Species...

Data type (34)
Filter on Data type...

Ontology annotation (66)
Filter on Ontology annotati

Expand search

Database (19)
Filter on Database...

Data provider
- ☐ INRAE-URGI [19,577,154]
- ☐ UWA [167,167]
- ☐ Gramene [127,291]
- ☐ Rothamsted Research [108,474]
- ☐ South Green [103,639]
- ☐ IPK [60,170]
- ☐ T3 [33,452]
- ☐ GrainGenes [21,241]
- ☐ CIMMYT [1,758]
- ☐ EBI [47]
- ☐ IPGPAS [5]

Results 1 to 20 of 20,200,398 (limited to 10,000)

10.1186/s12863-019-0785-1 - *OpenMinTeD@GnpIS*
Bibliography Triticum
Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat**. 2019 Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat** Background Genomic selection has the potential to increase genetic ... (expand)

2014_SRWW_YNVP - *The Triticeae Toolbox*
Genotyping Experiment Triticum
2014_SRWW_YNVP **Yield** Validation Panel, used to verify results of 2012_ElitePanel. **Soft Red Winter Wheat**, cut with PstI.

SG-1550 - *GrainGenes*
Germplasm Triticum aestivum ssp. aestivum
Germplasm GrainGenes SG-1550 Cultivar. The Ohio **Grain** Company, Marysville, OH. USA-Ohio. USDA/FGIS **Soft Red Winter Wheat**. **Winter** growth habit. **Triticum aestivum** ssp. aestivum ... (expand)

USSRWWN_2016_Champaign - *The Triticeae Toolbox*
Phenotyping Experiment Triticum
USSRWWN_2016_Champaign Uniform Southern **Soft Red Winter Wheat** Nursery, USSRWWN, Despite high **yield** levels, results were affected by winterkill and stripe rust. Fertilizer: 70 + 40 N.

UESRWWN_2014_Urbana - *The Triticeae Toolbox*
Phenotyping Experiment Triticum
UESRWWN_2014_Urbana Uniform Eastern **Soft Red Winter Wheat** Nursery, UESRWWN Coop. test of elite SRWW lines, wet **winter** and early spring. FHB data are from irrigated and **grain** spawn inoculated nursery using single row plots.

10.1371/journal.pone.0208217 - *OpenMinTeD@GnpIS*
Bibliography Arabidopsis thaliana Triticum Triticum aestivum
Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia. 2019 Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia **Grain yield** is a trait of paramount importance in ... (expand)

10883/3464 - *CIMMYT Publications*
Bibliography Winter wheat
CIMMYT Dspace **Winter wheat** Publication 10883/3464 10883/3464 Effect of climate change and variety on long-term

soft red winter wheat grain yield Search

Species (978)
Filter on Species...

Data type (34)
Filter on Data type...

Ontology annotation (66)
Filter on Ontology annotati

Expand search

Database (19)
Filter on Database...

Data provider
- INRAE-URGI [19,577,154]
- UWA [167,167]
- Gramene [127,291]
- Rothamsted Research [108,474]
- South Green [103,639]
- IPK [60,170]
- T3 [33,452]
- GrainGenes [21,241]
- CIMMYT [1,758]
- EBI [47]
- IPGPAS [5]

Results 1 to 20 of 20,200,398 (limited to 10,000)

10.1186/s12863-019-0785-1 - *OpenMinTeD@GnpIS*
Bibliography Triticum
Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat**. 2019 Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat** Background Genomic selection has the potential to increase genetic ... (expand)

2014_SRWW_YNVP - *The Triticeae Toolbox*
Genotyping Experiment Triticum
2014_SRWW_YNVP **Yield** Validation Panel, used to verify results of 2012_ElitePanel. **Soft Red Winter Wheat**, cut with PstI.

SG-1550 - *GrainGenes*
Germplasm Triticum aestivum ssp. aestivum
Germplasm GrainGenes SG-1550 Cultivar. The Ohio **Grain** Company, Marysville, OH. USA-Ohio. USDA/FGIS **Soft Red Winter Wheat**. **Winter** growth habit. **Triticum aestivum** ssp. aestivum ... (expand)

USSRWWN_2016_Champaign - *The Triticeae Toolbox*
Phenotyping Experiment Triticum
USSRWWN_2016_Champaign Uniform Southern **Soft Red Winter Wheat** Nursery, USSRWWN, Despite high **yield** levels, results were affected by winterkill and stripe rust. Fertilizer: 70 + 40 N.

UESRWWN_2014_Urbana - *The Triticeae Toolbox*
Phenotyping Experiment Triticum
UESRWWN_2014_Urbana Uniform Eastern **Soft Red Winter Wheat** Nursery, UESRWWN Coop. test of elite SRWW lines, wet **winter** and early spring. FHB data are from irrigated and **grain** spawn inoculated nursery using single row plots.

10.1371/journal.pone.0208217 - *OpenMinTeD@GnpIS*
Bibliography Arabidopsis thaliana Triticum Triticum aestivum
Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia. 2019 Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia **Grain yield** is a trait of paramount importance in ... (expand)

10883/3464 - *CIMMYT Publications*
Bibliography Winter wheat
CIMMYT Dspace **Winter wheat** Publication 10883/3464 10883/3464 Effect of climate change and variety on long-term

Trial detail for USSRWWN_2016_Champaign

Trial Details

View and edit basic information about the experiment.

Edit Trial Details

Trial Name	USSRWWN_2016_Champaign
Breeding Program	Soft Red Winter Wheat Nursery Cooperative
Trial Location	Champaign, IL
Year	2016
Stock Type Being Evaluated in This Trial	accession
Trial Type	phenotyping_trial
Planting Date	2015-October-02
Harvest Date	2016-July-01
Description	Uniform Southern Soft Red Winter Wheat Nursery, USSRWWN, Despite high yield levels, results were affected by winterkill and stripe rust. Fertilizer: 70 + 40 N.
Folder	Uniform Southern Soft Red Winter Wheat Nursery New Folder Change Folder

USSRWWN_2016_Champaign
SGN7159

Plot Width (m)	[No Plot Width]
Plot Length (m)	[No Plot Length]
Field Size (ha)	[No Field Size]
Trial Will Be Genotyped	no
Trial Will Be In Crosses	no

Generate barcode labels for plots or plants or accessions in this trial. Go

Directly record phenotypes to database for this trial. Go

Field Layout Tools and Phenotype Heatmap

View and edit the spatial layout of the experiment. Also view a heatmap for phenotyped traits.

soft red winter wheat grain yield Search

Species (978)
Filter on Species...

Data type (34)
Filter on Data type...

Ontology annotation (66)
Filter on Ontology annotati

Expand search

Database (19)
Filter on Database...

Data provider
- ☐ INRAE-URGI [19,577,154]
- ☐ UWA [167,167]
- ☐ Gramene [127,291]
- ☐ Rothamsted Research [108,474]
- ☐ South Green [103,639]
- ☐ IPK [60,170]
- ☐ T3 [33,452]
- ☐ GrainGenes [21,241]
- ☐ CIMMYT [1,758]
- ☐ EBI [47]
- ☐ IPGPAS [5]

Results 1 to 20 of 20,200,398 (limited to 10,000)

10.1186/s12863-019-0785-1 - *OpenMinTeD@GnpIS*
Bibliography Triticum
Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat**. 2019 Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat** Background Genomic selection has the potential to increase genetic ... (expand)

2014_SRWW_YNVP - *The Triticeae Toolbox*
Genotyping Experiment Triticum
2014_SRWW_YNVP **Yield** Validation Panel, used to verify results of 2012_ElitePanel. **Soft Red Winter Wheat**, cut with PstI.

SG-1550 - *GrainGenes*
Germplasm Triticum aestivum ssp. aestivum
Germplasm GrainGenes SG-1550 Cultivar. The Ohio **Grain** Company, Marysville, OH. USA-Ohio. USDA/FGIS **Soft Red Winter Wheat**. **Winter** growth habit. **Triticum aestivum** ssp. aestivum ... (expand)

USSRWWN_2016_Champaign - *The Triticeae Toolbox*
Phenotyping Experiment Triticum
USSRWWN_2016_Champaign Uniform Southern **Soft Red Winter Wheat** Nursery, USSRWWN, Despite high **yield** levels, results were affected by winterkill and stripe rust. Fertilizer: 70 + 40 N.

UESRWWN_2014_Urbana - *The Triticeae Toolbox*
Phenotyping Experiment Triticum
UESRWWN_2014_Urbana Uniform Eastern **Soft Red Winter Wheat** Nursery, UESRWWN Coop. test of elite SRWW lines, wet **winter** and early spring. FHB data are from irrigated and **grain** spawn inoculated nursery using single row plots.

10.1371/journal.pone.0208217 - *OpenMinTeD@GnpIS*
Bibliography Arabidopsis thaliana Triticum Triticum aestivum
Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia. 2019 Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia **Grain yield** is a trait of paramount importance in ... (expand)

10883/3464 - *CIMMYT Publications*
Bibliography Winter wheat
CIMMYT Dspace **Winter wheat** Publication 10883/3464 10883/3464 Effect of climate change and variety on long-term

soft red winter wheat grain yield Search

Species (978)
Filter on Species...

Data type (34)
Filter on Data type...

Ontology annotation (66)
Filter on Ontology annotati

Expand search

Database (19)
Filter on Database...

Data provider
- ☐ INRAE-URGI [19,577,154]
- ☐ UWA [167,167]
- ☐ Gramene [127,291]
- ☐ Rothamsted Research [108,474]
- ☐ South Green [103,639]
- ☐ IPK [60,170]
- ☐ T3 [33,452]
- ☐ GrainGenes [21,241]
- ☐ CIMMYT [1,758]
- ☐ EBI [47]
- ☐ IPGPAS [5]

Results 1 to 20 of 20,200,398 (limited to 10,000)

10.1186/s12863-019-0785-1 - *OpenMinTeD@GnpIS*
Bibliography Triticum
Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat**. 2019 Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat** Background Genomic selection has the potential to increase genetic ... (expand)

2014_SRWW_YNVP - *The Triticeae Toolbox*
Genotyping Experiment Triticum
2014_SRWW_YNVP **Yield** Validation Panel, used to verify results of 2012_ElitePanel. **Soft Red Winter Wheat**, cut with PstI.

SG-1550 - *GrainGenes*
Germplasm Triticum aestivum ssp. aestivum
Germplasm GrainGenes SG-1550 Cultivar. The Ohio **Grain** Company, Marysville, OH. USA-Ohio. USDA/FGIS **Soft Red Winter Wheat**. **Winter** growth habit. **Triticum aestivum** ssp. aestivum ... (expand)

USSRWWN_2016_Champaign - *The Triticeae Toolbox*
Phenotyping Experiment Triticum
USSRWWN_2016_Champaign Uniform Southern **Soft Red Winter Wheat** Nursery, USSRWWN, Despite high **yield** levels, results were affected by winterkill and stripe rust. Fertilizer: 70 + 40 N.

UESRWWN_2014_Urbana - *The Triticeae Toolbox*
Phenotyping Experiment Triticum
UESRWWN_2014_Urbana Uniform Eastern **Soft Red Winter Wheat** Nursery, UESRWWN Coop. test of elite SRWW lines, wet **winter** and early spring. FHB data are from irrigated and **grain** spawn inoculated nursery using single row plots.

10.1371/journal.pone.0208217 - *OpenMinTeD@GnpIS*
Bibliography Arabidopsis thaliana Triticum Triticum aestivum
Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia. 2019 Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia **Grain yield** is a trait of paramount importance in ... (expand)

10883/3464 - *CIMMYT Publications*
Bibliography Winter wheat
CIMMYT Dspace **Winter wheat** Publication 10883/3464 10883/3464 Effect of climate change and variety on long-term

URGI

soft red winter wheat grain yield Search

Results 1 to 20 of 20,200,398 (limited to 10,000)

Species (978)

Filter on Species...

Data type (34)

Filter on Data type...

Ontology annotation (66)

Filter on Ontology annotati

- None [20,199,703]
- crop yield (ID:0000038) [122]
- resistance to Stripe Rust (ID:0000089) [87]
- pathogen resistance (ID:0030988) [81]
- plant height (ID:0000047) [79]
- resistance to Leaf Rust (ID:0031017) [73]
- resistance to Powdery Mildew (ID:0030907) [73]
- resistance to rust (ID:0000085) [64]

Other results are available.
Refine your search.

Research [108,474]
- South Green [103,639]
- IPK [60,170]
- T3 [33,452]
- GrainGenes [21,241]
- CIMMYT [1,758]
- EBI [47]
- IPGPAS [5]

10.1186/s12863-019-0785-1 - *OpenMinTeD@GnpIS*

Bibliography Triticum

Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat**. 2019 Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat** Background Genomic selection has the potential to increase genetic ... (expand)

2014_SRWW_YNVP - *The Triticeae Toolbox*

Genotyping Experiment Triticum

2014_SRWW_YNVP **Yield** Validation Panel, used to verify results of 2012_ElitePanel. **Soft Red Winter Wheat**, cut with PstI.

SG-1550 - *GrainGenes*

Germplasm Triticum aestivum ssp. aestivum

inGenes SG-1550 Cultivar. The Ohio **Grain** Company, Marysville, OH. USA-Ohio. USDA/FGIS **Soft Red** **Winter** growth habit. **Triticum aestivum** ssp. aestivum ... (expand)

2016_Champaign - *The Triticeae Toolbox*

periment Triticum

6_Champaign Uniform Southern **Soft Red Winter Wheat** Nursery, USSRWWN, Despite high **yield** ere affected by winterkill and stripe rust. Fertilizer: 70 + 40 N.

2014_Urbana - *The Triticeae Toolbox*

periment Triticum

4_Urbana Uniform Eastern **Soft Red Winter Wheat** Nursery, UESRWWN Coop. test of elite SRWW lines, early spring. FHB data are from irrigated and **grain** spawn inoculated nursery using single row plots.

10.1371/journal.pone.0208217 - *OpenMinTeD@GnpIS*

Bibliography Arabidopsis thaliana Triticum Triticum aestivum

Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia. 2019 Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia **Grain yield** is a trait of paramount importance in ... (expand)

10883/3464 - *CIMMYT Publications*

Bibliography Winter wheat

CIMMYT Dspace **Winter wheat** Publication 10883/3464 10883/3464 Effect of climate change and variety on long-term

soft red winter wheat grain yield Search

Species (978)

Filter on Species...

Data type (34)

Filter on Data type...

Ontology annotation (66)

grain

- **grain** hardness (ID:0000096) [12]
- **grain** weight per ear (ID:0000358) [1]
- high **grain** protein content (ID:0000350) [1]
- soft **grain** texture (ID:00000063) [1]

Data provider

- [ ] INRAE-URGI [19,577,154]
- [ ] UWA [167,167]
- [ ] Gramene [127,291]
- [ ] Rothamsted Research [108,474]
- [ ] South Green [103,639]
- [ ] IPK [60,170]
- [ ] T3 [33,452]
- [ ] GrainGenes [21,241]
- [ ] CIMMYT [1,758]
- [ ] EBI [47]
- [ ] IPGPAS [5]

Results 1 to 20 of 20,200,398 (limited to 10,000)

10.1186/s12863-019-0785-1 - *OpenMinTeD@GnpIS*

Bibliography Triticum

Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat**. 2019 Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat** Background Genomic selection has the potential to increase genetic ... (expand)

2014_SRWW_YNVP - *The Triticeae Toolbox*

Genotyping Experiment Triticum

2014_SRWW_YNVP **Yield** Validation Panel, used to verify results of 2012_ElitePanel. **Soft Red Winter Wheat**, cut with PstI.

SG-1550 - *GrainGenes*

Germplasm Triticum aestivum ssp. aestivum

GrainGenes SG-1550 Cultivar. The Ohio **Grain** Company, Marysville, OH. USA-Ohio. USDA/FGIS **Soft Red** **eat**. **Winter** growth habit. **Triticum aestivum** ssp. aestivum ... (expand)

N_2016_Champaign - *The Triticeae Toolbox*

g Experiment Triticum

USSRWWN_2016_Champaign Uniform Southern **Soft Red Winter Wheat** Nursery, USSRWWN, Despite high **yield** levels, results were affected by winterkill and stripe rust. Fertilizer: 70 + 40 N.

UESRWWN_2014_Urbana - *The Triticeae Toolbox*

Phenotyping Experiment Triticum

UESRWWN_2014_Urbana Uniform Eastern **Soft Red Winter Wheat** Nursery, UESRWWN Coop. test of elite SRWW lines, wet **winter** and early spring. FHB data are from irrigated and **grain** spawn inoculated nursery using single row plots.

10.1371/journal.pone.0208217 - *OpenMinTeD@GnpIS*

Bibliography Arabidopsis thaliana Triticum Triticum aestivum

Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia. 2019 Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia **Grain yield** is a trait of paramount importance in ... (expand)

10883/3464 - *CIMMYT Publications*

Bibliography Winter wheat

CIMMYT Dspace **Winter wheat** Publication 10883/3464 10883/3464 Effect of climate change and variety on long-term

soft red winter wheat grain yield Search

Species (978)
Filter on Species...

Data type (34)
Filter on Data type...

Ontology annotation (66)
grain

- **grain** hardness (ID:0000096) [12]
- **grain** weight per ear (ID:0000358) [1]
- high **grain** protein content (ID:0000350) [1]
- soft **grain** texture (ID:00000063) [1]

Data provider
- [ ] INRAE-URGI [19,577,154]
- [ ] UWA [167,167]
- [ ] Gramene [127,291]
- [ ] Rothamsted Research [108,474]
- [ ] South Green [103,639]
- [ ] IPK [60,170]
- [ ] T3 [33,452]
- [ ] GrainGenes [21,241]
- [ ] CIMMYT [1,758]
- [ ] EBI [47]
- [ ] IPGPAS [5]

Results 1 to 20 of 20,200,398 (limited to 10,000)

10.1186/s12863-019-0785-1 - *OpenMinTeD@GnpIS*
Bibliography Triticum
Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat**. 2019 Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat** Background Genomic selection has the potential to increase genetic ... (expand)

2014_SRWW_YNVP - *The Triticeae Toolbox*
Genotyping Experiment Triticum
2014_SRWW_YNVP **Yield** Validation Panel, used to verify results of 2012_ElitePanel. **Soft Red Winter Wheat**, cut with PstI.

SG-1550 - *GrainGenes*
Germplasm Triticum aestivum ssp. aestivum
GrainGenes SG-1550 Cultivar. The Ohio **Grain** Company, Marysville, OH. USA-Ohio. USDA/FGIS **Soft Red** **eat**. **Winter** growth habit. **Triticum aestivum** ssp. aestivum ... (expand)

N_2016_Champaign - *The Triticeae Toolbox*
g Experiment Triticum
USSRWWN_2016_Champaign Uniform Southern **Soft Red Winter Wheat** Nursery, USSRWWN, Despite high **yield** levels, results were affected by winterkill and stripe rust. Fertilizer: 70 + 40 N.

UESRWWN_2014_Urbana - *The Triticeae Toolbox*
Phenotyping Experiment Triticum
UESRWWN_2014_Urbana Uniform Eastern **Soft Red Winter Wheat** Nursery, UESRWWN Coop. test of elite SRWW lines, wet **winter** and early spring. FHB data are from irrigated and **grain** spawn inoculated nursery using single row plots.

10.1371/journal.pone.0208217 - *OpenMinTeD@GnpIS*
Bibliography Arabidopsis thaliana Triticum Triticum aestivum
Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia. 2019 Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia **Grain yield** is a trait of paramount importance in ... (expand)

10883/3464 - *CIMMYT Publications*
Bibliography Winter wheat
CIMMYT Dspace **Winter wheat** Publication 10883/3464 10883/3464 Effect of climate change and variety on long-term

soft red winter wheat grain yield Search

Species
Triticum [1]

Data type
Bibliography [1]

Ontology annotation
(66)

grain weight per ear (ID:0000358) [1] ×

Filter on Ontology annotati

Expand search

Database
OpenMinTeD@GnpIS [1]

Data provider
INRAE-URGI [1]

Results 1 to 1 of 1

10.1007/s11032-013-9862-8 - *OpenMinTeD@GnpIS*

Bibliography Triticum

Hide

Quantitative trait loci for leaf chlorophyll fluorescence parameters, chlorophyll and carotenoid contents in relation to biomass and **yield** in **bread wheat** and their chromosome deletion bin assignments. 2013 Quantitative trait loci for leaf chlorophyll fluorescence parameters, chlorophyll and carotenoid contents in relation to biomass and **yield** in **bread wheat** and their chromosome deletion bin assignments Relatively little is known of the genetic control of chlorophyll fluorescence (CF) and pigment traits important in determining efficiency of photosynthesis in **wheat** and its association with biomass productivity. A doubled haploid population of 94 lines from the **wheat** cross Chinese Spring x SQ1 was trialled under optimum glasshouse conditions for 4 years to identify quantitative trait loci (QTL) for CF traits including, for the first time in **wheat**, JIP-test parameters per excited cross section (CSm): ABS/CSm, DIo/CSm, TRo/CSm, RC/CSm and ETo/CSm, key parameters determining efficiency of the photosynthetic apparatus, as well as chlorophyll and carotenoid contents to establish associations with biomass and **grain yield**. The existing genetic map was extended to 920 loci by adding Diversity Arrays Technology markers. Markers and selected genes for photosynthetic light reactions, pigment metabolism and biomass accumulation were located to chromosome deletion bins. Across all CF traits and years, 116 QTL for CF were located on all chromosomes except 7B, and 39 QTL were identified for pigments on the majority of chromosomes, excluding 1A, 2A, 4A, 3B, 5B, 1D, 2D, 5D, 6D and 7D. Thirty QTL for plant productivity traits were mapped on chromosomes 3A, 5A, 6A, 7A, 1B, 2B, 4B, 6B, 7B, 3D and 4D. A region on chromosome 6B was identified where 14 QTL for CF parameters coincided with QTL for chlorophyll content and **grain** weight per ear. Thirty-five QTL regions were coincident with candidate genes. The environment was shown to dominate in determining expression of genes for those traits. Czyczylo-Mysza, I et al. MOLECULAR BREEDING Hide

soft red winter wheat grain yield Search

Species
Triticum [1]

Data type
Bibliography [1]

Ontology annotation
(66)

grain weight per ear (ID:0000358) [1] ×

Filter on Ontology annotati

Expand search

Database
OpenMinTeD@GnpIS [1]

Data provider
INRAE-URGI [1]

Results 1 to 1 of 1

10.1007/s11032-013-9862-8 - *OpenMinTeD@GnpIS*

Bibliography Triticum

Hide

Quantitative trait loci for leaf chlorophyll fluorescence parameters, chlorophyll and carotenoid contents in relation to biomass and **yield** in **bread wheat** and their chromosome deletion bin assignments. 2013 Quantitative trait loci for leaf chlorophyll fluorescence parameters, chlorophyll and carotenoid contents in relation to biomass and **yield** in **bread wheat** and their chromosome deletion bin assignments Relatively little is known of the genetic control of chlorophyll fluorescence (CF) and pigment traits important in determining efficiency of photosynthesis in **wheat** and its association with biomass productivity. A doubled haploid population of 94 lines from the **wheat** cross Chinese Spring x SQ1 was trialled under optimum glasshouse conditions for 4 years to identify quantitative trait loci (QTL) for CF traits including, for the first time in **wheat**, JIP-test parameters per excited cross section (CSm): ABS/CSm, DIo/CSm, TRo/CSm, RC/CSm and ETo/CSm, key parameters determining efficiency of the photosynthetic apparatus, as well as chlorophyll and carotenoid contents to establish associations with biomass and **grain yield**. The existing genetic map was extended to 920 loci by adding Diversity Arrays Technology markers. Markers and selected genes for photosynthetic light reactions, pigment metabolism and biomass accumulation were located to chromosome deletion bins. Across all CF traits and years, 116 QTL for CF were located on all chromosomes except 7B, and 39 QTL were identified for pigments on the majority of chromosomes, excluding 1A, 2A, 4A, 3B, 5B, 1D, 2D, 5D, 6D and 7D. Thirty QTL for plant productivity traits were mapped on chromosomes 3A, 5A, 6A, 7A, 1B, 2B, 4B, 6B, 7B, 3D and 4D. A region on chromosome 6B was identified where 14 QTL for CF parameters coincided with QTL for chlorophyll content and **grain** weight per ear. Thirty-five QTL regions were coincident with candidate genes. The environment was shown to dominate in determining expression of genes for those traits. Czyczylo-Mysza, I et al. MOLECULAR BREEDING Hide

Open Access | Published: 10 April 2013

Quantitative trait loci for leaf chlorophyll fluorescence parameters, chlorophyll and carotenoid contents in relation to biomass and yield in bread wheat and their chromosome deletion bin assignments

I. Czyczyło-Mysza, M. Tyrka, I. Marcińska, E. Skrzypek, M. Karbarz, M. Dziurka, T. Hura, K. Dziurka & S. A. Quarrie

Molecular Breeding **32**, 189–210(2013) | Cite this article

Abstract

Relatively little is known of the genetic control of chlorophyll fluorescence (CF) and pigment traits important in determining efficiency of photosynthesis in wheat and its association with biomass productivity. A doubled haploid population of 94 lines from the wheat cross Chinese Spring × SQ1 was trialled under optimum glasshouse conditions for 4 years to identify quantitative trait loci (QTL) for CF traits including, for the first time in wheat, JIP-test parameters per excited cross section (CS_m): ABS/CS_m, DI_0/CS_m, TR_0/CS_m, RC/CS_m and ET_0/CS_m, key parameters determining efficiency of the photosynthetic apparatus, as well as chlorophyll and carotenoid contents to establish associations with biomass and grain yield. The existing genetic map was extended to 920 loci by adding Diversity Arrays Technology markers. Markers and selected genes for photosynthetic light reactions, pigment metabolism and biomass accumulation were located to chromosome deletion bins. Across all CF traits and years, 116 QTL for CF were located on all chromosomes except 7B, and 39 QTL were identified for pigments on the majority of chromosomes, excluding 1A, 2A, 4A, 3B, 5B, 1D, 2D, 5D, 6D and 7D. Thirty QTL for plant productivity traits were mapped on chromosomes 3A, 5A, 6A, 7A, 1B, 2B, 4B, 6B, 7B, 3D and 4D. A region on chromosome 6B was identified where 14 QTL for CF parameters coincided with QTL for chlorophyll content and grain weight per ear. Thirty-five QTL regions were coincident with candidate genes. The environment was shown to dominate in determining expression of genes for those traits.

soft red winter wheat grain yield Search

Species (978)
Filter on Species...

Data type (34)
Filter on Data type...

Ontology annotation (66)
Filter on Ontology annotati

Expand search

Database (19)
Filter on Database...

Data provider
- ☐ INRAE-URGI [19,577,154]
- ☐ UWA [167,167]
- ☐ Gramene [127,291]
- ☐ Rothamsted Research [108,474]
- ☐ South Green [103,639]
- ☐ IPK [60,170]
- ☐ T3 [33,452]
- ☐ GrainGenes [21,241]
- ☐ CIMMYT [1,758]
- ☐ EBI [47]
- ☐ IPGPAS [5]

Results 1 to 20 of 20,200,398 (limited to 10,000)

10.1186/s12863-019-0785-1 - *OpenMinTeD@GnpIS*
Bibliography Triticum
Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat**. 2019 Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat** Background Genomic selection has the potential to increase genetic ... (expand)

2014_SRWW_YNVP - *The Triticeae Toolbox*
Genotyping Experiment Triticum
2014_SRWW_YNVP **Yield** Validation Panel, used to verify results of 2012_ElitePanel. **Soft Red Winter Wheat**, cut with PstI.

SG-1550 - *GrainGenes*
Germplasm Triticum aestivum ssp. aestivum
Germplasm GrainGenes SG-1550 Cultivar. The Ohio **Grain** Company, Marysville, OH. USA-Ohio. USDA/FGIS **Soft Red Winter Wheat**. **Winter** growth habit. **Triticum aestivum** ssp. aestivum ... (expand)

USSRWWN_2016_Champaign - *The Triticeae Toolbox*
Phenotyping Experiment Triticum
USSRWWN_2016_Champaign Uniform Southern **Soft Red Winter Wheat** Nursery, USSRWWN, Despite high **yield** levels, results were affected by winterkill and stripe rust. Fertilizer: 70 + 40 N.

UESRWWN_2014_Urbana - *The Triticeae Toolbox*
Phenotyping Experiment Triticum
UESRWWN_2014_Urbana Uniform Eastern **Soft Red Winter Wheat** Nursery, UESRWWN Coop. test of elite SRWW lines, wet **winter** and early spring. FHB data are from irrigated and **grain** spawn inoculated nursery using single row plots.

10.1371/journal.pone.0208217 - *OpenMinTeD@GnpIS*
Bibliography Arabidopsis thaliana Triticum Triticum aestivum
Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia. 2019 Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia **Grain yield** is a trait of paramount importance in ... (expand)

10883/3464 - *CIMMYT Publications*
Bibliography Winter wheat
CIMMYT Dspace **Winter wheat** Publication 10883/3464 10883/3464 Effect of climate change and variety on long-term

soft red winter wheat grain yield Search

Species (978)

Filter on Species...

Data type (34)

Filter on Data type...

Ontology annotation (66)

grain

- **grain** hardness (ID:0000096) [12]
- **grain** weight per ear (ID:0000358) [1]
- high **grain** protein content (ID:0000350) [1]
- soft **grain** texture (ID:00000063) [1]

Data provider

- [ ] INRAE-URGI [19,577,154]
- [ ] UWA [167,167]
- [ ] Gramene [127,291]
- [ ] Rothamsted Research [108,474]
- [ ] South Green [103,639]
- [ ] IPK [60,170]
- [ ] T3 [33,452]
- [ ] GrainGenes [21,241]
- [ ] CIMMYT [1,758]
- [ ] EBI [47]
- [ ] IPGPAS [5]

Results 1 to 20 of 20,200,398 (limited to 10,000)

10.1186/s12863-019-0785-1 - *OpenMinTeD@GnpIS*

Bibliography Triticum

Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat**. 2019 Accuracy of genomic selection for **grain yield** and agronomic traits in **soft red winter wheat** Background Genomic selection has the potential to increase genetic ... (expand)

2014_SRWW_YNVP - *The Triticeae Toolbox*

Genotyping Experiment Triticum

2014_SRWW_YNVP **Yield** Validation Panel, used to verify results of 2012_ElitePanel. **Soft Red Winter Wheat**, cut with PstI.

SG-1550 - *GrainGenes*

Germplasm Triticum aestivum ssp. aestivum

GrainGenes SG-1550 Cultivar. The Ohio **Grain** Company, Marysville, OH. USA-Ohio. USDA/FGIS **Soft Red** **eat**. **Winter** growth habit. **Triticum aestivum** ssp. aestivum ... (expand)

N_2016_Champaign - *The Triticeae Toolbox*

g Experiment Triticum

USSRWWN_2016_Champaign Uniform Southern **Soft Red Winter Wheat** Nursery, USSRWWN, Despite high **yield** levels, results were affected by winterkill and stripe rust. Fertilizer: 70 + 40 N.

UESRWWN_2014_Urbana - *The Triticeae Toolbox*

Phenotyping Experiment Triticum

UESRWWN_2014_Urbana Uniform Eastern **Soft Red Winter Wheat** Nursery, UESRWWN Coop. test of elite SRWW lines, wet **winter** and early spring. FHB data are from irrigated and **grain** spawn inoculated nursery using single row plots.

10.1371/journal.pone.0208217 - *OpenMinTeD@GnpIS*

Bibliography Arabidopsis thaliana Triticum Triticum aestivum

Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia. 2019 Genome-wide association studies for **yield**-related traits in **soft red winter wheat** grown in Virginia **Grain yield** is a trait of paramount importance in ... (expand)

10883/3464 - *CIMMYT Publications*

Bibliography Winter wheat

CIMMYT Dspace **Winter wheat** Publication 10883/3464 10883/3464 Effect of climate change and variety on long-term

soft red winter wheat grain yield Search

Species
Triticum [1]

Data type
Bibliography [1]

Ontology annotation
(66)

high grain protein content (ID:0000350) [1] ×

Filter on Ontology annotati

Expand search

Database
OpenMinTeD@GnpIS [1]

Data provider
INRAE-URGI [1]

Results 1 to 1 of 1

10.1016/j.fcr.2011.05.013 - *OpenMinTeD@GnpIS*

Bibliography Triticum

Hide

Introgression of a major gene for high **grain** protein content in some Indian **bread wheat** cultivars. 2011 Introgression of a major gene for high **grain** protein content in some Indian **bread wheat** cultivars In **bread wheat**, high **grain** protein content (GPC) determines nutritional value, processing properties and quality of the end-product. In view of this, marker-assisted selection (MAS) was performed for introgression of a major gene for high GPC (Gpc-B1) into 10 **wheat** genotypes. As a result, 124 BC(3)F(5)/F(6) progenies with Gpc-B1 were developed and evaluated in multi-location field trials. Significant interaction of Gpc-B1 with the recipient parent genotypes and the environment was noticed. However, a total of seven MAS-derived progenies with significantly higher GPC (14.83-17.85%) than their recipient parental genotypes and having no **yield** penalty were obtained. In these selected progenies, no significant negative correlation of **grain yield** with GPC (%) or protein **yield** was observed suggesting that GPC could be improved without **yield** penalty. This study thus suggested that MAS in combination with phenotypic selection is a useful strategy for development of **wheat** genotypes with high GPC associated with no loss in **yield**. (c) 2011 Elsevier B.V. All rights reserved. Kumar, J et al.

FIELD CROPS RESEARCH Hide

soft red winter wheat grain yield Search

Species
Triticum [1]

Data type
Bibliography [1]

Ontology annotation
(66)

high grain protein content (ID:0000350) [1] ×

Filter on Ontology annotati

Expand search

Database
OpenMinTeD@GnpIS [1]

Data provider
INRAE-URGI [1]

Results 1 to 1 of 1

10.1016/j.fcr.2011.05.013 - *OpenMinTeD@GnpIS*

Bibliography Triticum

Hide

Introgression of a major gene for high **grain** protein content in some Indian **bread wheat** cultivars. 2011 Introgression of a major gene for high **grain** protein content in some Indian **bread wheat** cultivars In **bread wheat**, high **grain** protein content (GPC) determines nutritional value, processing properties and quality of the end-product. In view of this, marker-assisted selection (MAS) was performed for introgression of a major gene for high GPC (Gpc-B1) into 10 **wheat** genotypes. As a result, 124 BC(3)F(5)/F(6) progenies with Gpc-B1 were developed and evaluated in multi-location field trials. Significant interaction of Gpc-B1 with the recipient parent genotypes and the environment was noticed. However, a total of seven MAS-derived progenies with significantly higher GPC (14.83-17.85%) than their recipient parental genotypes and having no **yield** penalty were obtained. In these selected progenies, no significant negative correlation of **grain yield** with GPC (%) or protein **yield** was observed suggesting that GPC could be improved without **yield** penalty. This study thus suggested that MAS in combination with phenotypic selection is a useful strategy for development of **wheat** genotypes with high GPC associated with no loss in **yield**. (c) 2011 Elsevier B.V. All rights reserved. Kumar, J et al.

FIELD CROPS RESEARCH Hide

ELSEVIER

Field Crops Research

Volume 123, Issue 3, 12 September 2011, Pages 226-233

Introgression of a major gene for high grain protein content in some Indian bread wheat cultivars

J. Kumar [a, c, 1], V. Jaiswal [a, 1], A. Kumar [a], N. Kumar [a], R.R. Mir [a, d], S. Kumar [a], R. Dhariwal [a], S. Tyagi [a], M. Khandelwal [e], K.V. Prabhu [b], R. Prasad [e], H.S. Balyan [a], P.K. Gupta [a]

Show more

https://doi.org/10.1016/j.fcr.2011.05.013

Abstract

In bread wheat, high grain protein content (GPC) determines nutritional value, processing properties and quality of the end-product. In view of this, marker-assisted selection (MAS) was performed for introgression of a major gene for high GPC (*Gpc-B1*) into 10 wheat genotypes. As a result, 124 BC_3F_5/F_6 progenies with *Gpc-B1* were developed and evaluated in multi-location field trials. Significant interaction of *Gpc-B1* with the recipient parent genotypes and the environment was noticed. However, a total of seven MAS-derived progenies with significantly higher GPC (14.83–17.85%) than their recipient parental genotypes and having no yield penalty were obtained. In these selected progenies, no significant negative correlation of grain yield with GPC (%) or protein yield was observed suggesting that GPC could be improved without yield penalty. This study thus suggested that MAS in combination with phenotypic selection is a useful strategy for development of wheat genotypes with high GPC associated with no loss in yield.

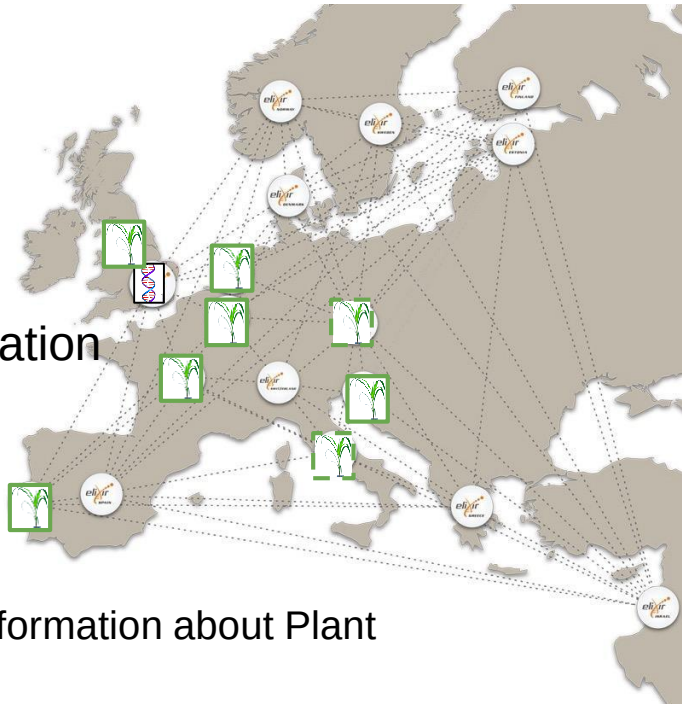
URL dereferencing

All search parameters and filters are available in the URL for later direct reference, ie.:

https://urgi.versailles.inra.fr/wheatis/search?query=yield&node=Gramene&entry=Gene&species=Triticum%20urartu

Beyond WheatIS: other species/communities

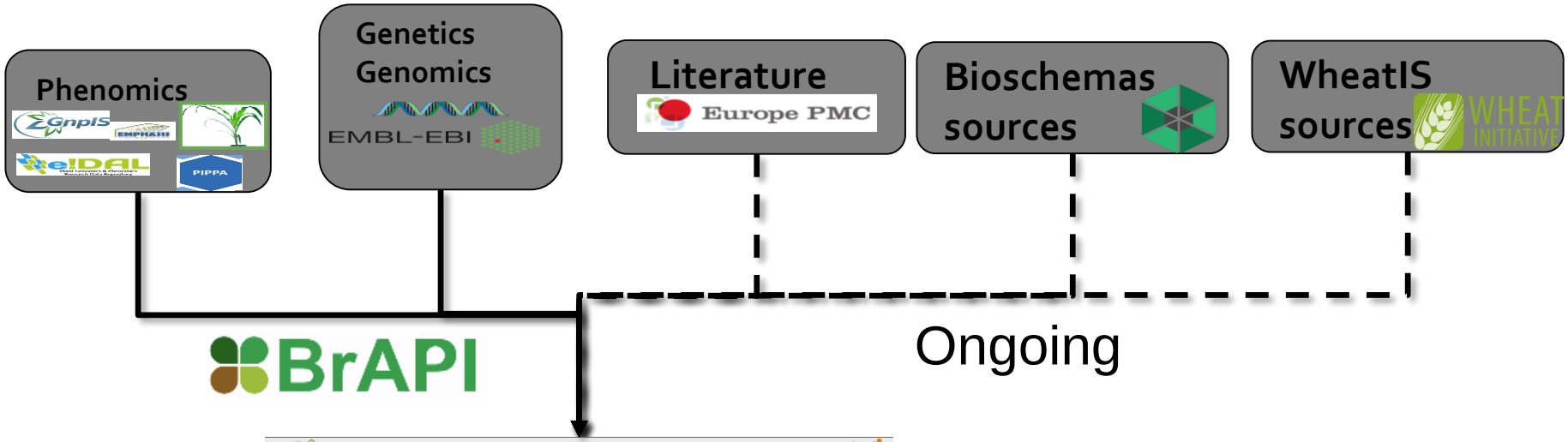
- ELIXIR: European Infrastructure for life science
- ELIXIR Plant Data Search Service: FAIDARE
- Data repositories federation - extends WheatIS
- FAIDARE is global, beyond Elixir
  - open to US (eg. TERRA-REF) and other!
- BreedingAPI (http://brapi.org): International collaboration
  - Standard Open Web Service REST API
  - Information Exchange, Main target: Breeding
  - Excellence in Breeding platform (CGIAR, Peter Selby)
  - MIAPPE compliant (http://www.miappe.org): Minimum Information about Plant Phenotyping Experiment
  - More: MIAPPE Webinar 11th December 2020 (stay tuned)

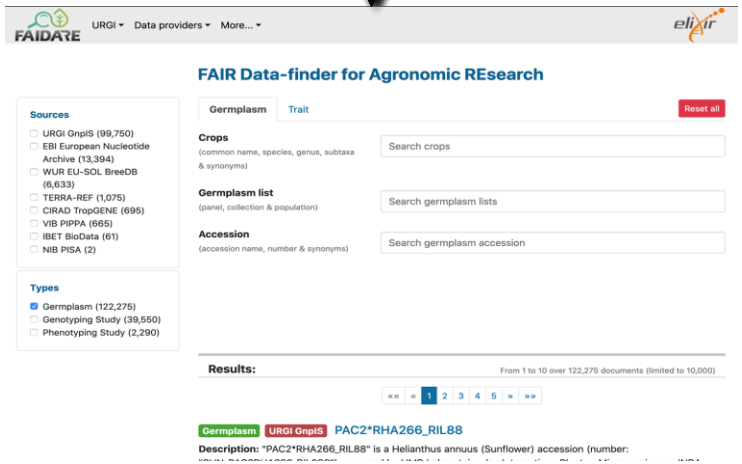


Beyond WheatIS: other species/communities

Findable Accessible Interoperable Reusable

ELIXIR Plant Data Search Service: FAIDARE





https://urgi.versailles.inrae.fr/faidare

Perspectives

- IWGSC RefSeq v2
- What about your data?
- Automatic data updates on a regular basis
- Ontology annotation extended to GO, TO, CO_321…
- Ontology alignment (ie. WTO with CO_321)

How to contribute/join

Data

- Documentation on How to join the WheatIS federation https://urgi.versailles.inrae.fr/wheatis/join
- We offer support, contact us at urgi-contact@inrae.fr

Code

- Open source under BSD3 License
- Available on our Gitlab instance https://forgemia.inra.fr/urgi-is/data-discovery
- Have a look at the readme to install and run locally
- Contributions (any) are very welcome! Follow the guidelines

Take home message

WheatIS

- A federation of wheat data repositories for public data discovery
- Simple and generic data model
- Open source state-of-the-art web interfaces
- Easy to join: provide TSV or JSON files and ping us!

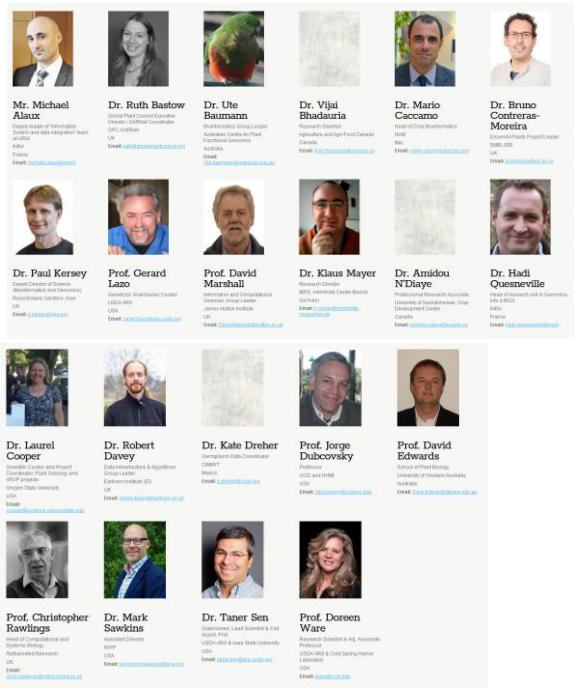
Acknowledgements

Raphaël Flores
Cyril Pommier
Bilal El-Houdaigui
Maud Marty
Célia Michotey
Erik Kimmel
Dorothée Charruaud
Nacer Mohellibi
Nicolas Francillonne
A.F. Adam-Blondon
Hadi Quesneville
Michael Alaux

Data providers:

Kate Dreher (CIMMYT)
Jesus Herrera de la Cruz (CIMMYT)
Dave Edwards (UWA)
Philipp Bayer (UWA)
Clayton L. Birkett (T3)
Marc Chakiachvili (EBI)
Bruno Contreras Moreira (EBI)
Dan Bolser (EBI)
Paul Kersey (EBI)
Victoria Blake (GrainGenes)
Margaret Woodhouse (GrainGenes)
Steve Michel (GrainGenes)
Uwe Scholz (IPK)
Matthias Lange (IPK)
Daniel Arend (IPK)
Andrew Olson (Gramene)
Keywan Hassani-Pak (Rothamsted)
Marco Brandizi (Rothamsted)
Manuel Spannagl (PGSB)
Robert Bossy (INRAE)
Claire Nedellec (INRAE)
…

The WheatIS EWG



Publication on WheatIS DataDiscovery under writing
Since then, please cite:

Alaux *et al.*, Genome Biology 2018
https://doi.org/10.1186/s13059-018-1491-4

Community paper: Sen *et al.*, F1000
https://f1000research.com/articles/9-536

@gnuraph raphael.flores@inrae.fr
@michaelalaux michael.alaux@inrae.fr
@WheatIS wheatis-contact@wheatis.org