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WheatIS EWG updates

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WheatIS EWG updates



New chair

- ❑ Thanks to Taner Sen, who stays as co-chair
- ❑ Thanks to Hadi Quesneville
- ❑ Michael Alaux: chair since April 2023
 - ❑ Head of the Plant bioinformatics facility at INRAE-URGI
 - ❑ Wheat projects and consortium:
IWGSC, BreedWheat, Whealbi, AGENT

COVID lockdowns

- ❑ Less coordination activities
 - ❑ No in person-meeting
 - ❑ Only few virtual meetings
- Meetings start again now
 - ❑ WheatIS EWG virtual meeting 13/10/2022
 - ❑ Planning a WheatIS annual assembly at PAG
 - ❑ Friday 13/01/2023 10AM-12PM
 - ❑ You are welcome !

COVID lockdowns

□ Communication activities

□ Article Sen et al.

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

□ Logo design

The screenshot shows the F1000Research article page. The header includes the F1000Research logo, a search bar, and a 'SUBMIT YOUR RESEARCH' button. The navigation menu contains 'BROWSE', 'GATEWAYS & COLLECTIONS', 'HOW TO PUBLISH', 'ABOUT', 'BLOG', 'MY RESEARCH', and 'SIGN IN'. The article title is 'Building a successful international research community through data sharing: The case of the Wheat Information System (WheatIS) [version 1; peer review: 2 approved, 1 approved with reservations]'. The authors listed are Taner Z. Sen, Mario Caccamo, David Edwards, and Hadi Quesneville. The article has 1231 views and 107 downloads. A sidebar on the right shows 'ALL METRICS', 'VIEWS', and 'DOWNLOADS'. The main content area includes an 'Open Peer Review' section with 'Reviewer Status' (2 green checkmarks, 1 question mark) and 'Reviewer Reports' for three reviewers: Runxuan Zhang (question mark), Stavros Makrodimitis (green checkmark), and Nevin Gerek Ince (green checkmark). The 'Comments on this article' section shows 'All Comments (0)' and an 'Add a comment' button. The abstract text is visible at the bottom of the page.

Abstract

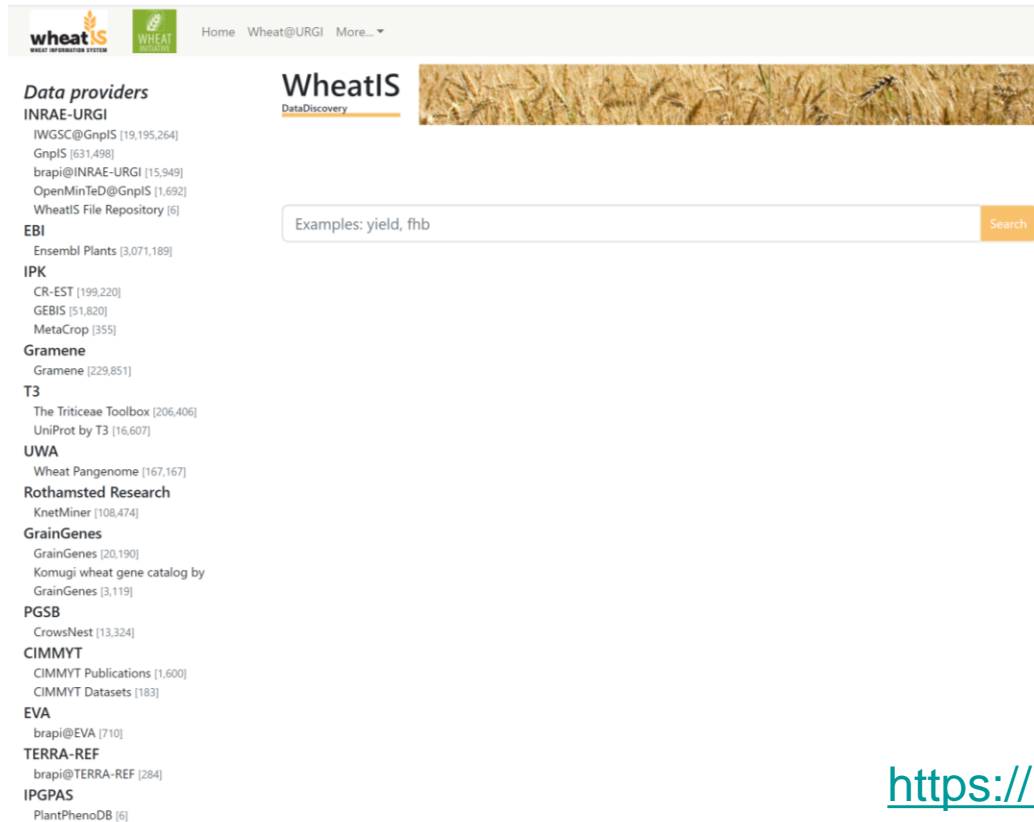
The International Wheat Information System (WheatIS) Expert Working Group (EWG) was initiated in 2012 under the Wheat Initiative with a broad range of contributing organizations. The mission of the WheatIS EWG was to create an informational infrastructure, establish data standards, and build a single 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.



COVID lockdowns

- Bioinformatics development activities
 - WheatIS data discovery tool
 - New version of the tool



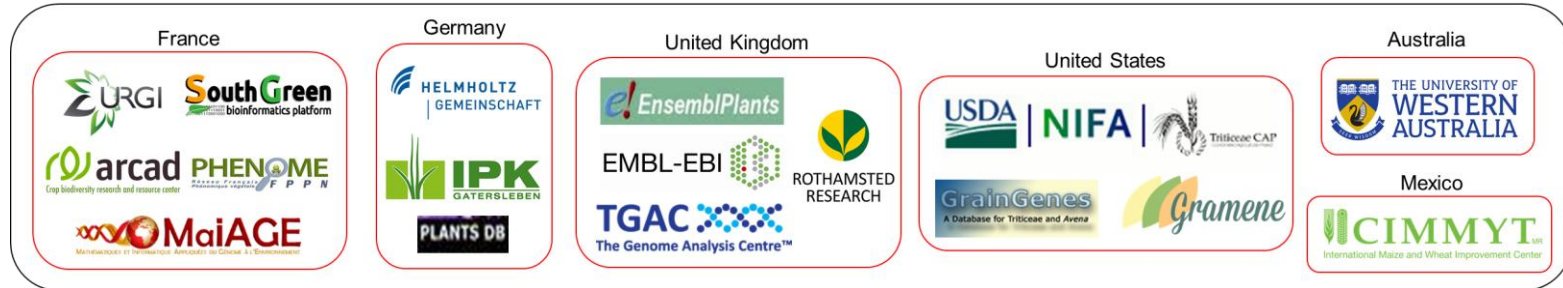
The screenshot shows the WheatIS DataDiscovery website. The header includes the WheatIS logo and navigation links for Home, Wheat@URGI, and More... A search bar is present with the text "Examples: yield, fhb" and a "Search" button. The main content area lists various data providers with their respective counts:

- Data providers**
- INRAE-URGI**
 - IWGSC@GnplS [19,195,264]
 - GnplS [631,498]
 - brapi@INRAE-URGI [15,949]
 - OpenMinTeD@GnplS [1,692]
 - WheatIS File Repository [6]
- EBI**
 - Ensembl Plants [3,071,189]
- IPK**
 - CR-EST [199,220]
 - GEBIS [51,820]
 - MetaCrop [355]
- Gramene**
 - Gramene [229,851]
- T3**
 - The Triticeae Toolbox [206,406]
 - UniProt by T3 [16,607]
- UWA**
 - Wheat Pangenome [167,167]
- Rothamsted Research**
 - KnetMiner [108,474]
- GrainGenes**
 - GrainGenes [20,190]
 - Komugi wheat gene catalog by GrainGenes [3,119]
- PGSB**
 - CrowsNest [13,324]
- CIMMYT**
 - CIMMYT Publications [1,600]
 - CIMMYT Datasets [183]
- EVA**
 - brapi@EVA [710]
- TERRA-REF**
 - brapi@TERRA-REF [284]
- IPGPAS**
 - PlantPhenoDB [6]

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

WheatIS data discovery

International Network



INRAE-URGI

IWGSC@GnpIS [19 195 264]
GnpIS [631 498]
brapi@INRAE-URGI [15 949]
OpenMinTeD@GnpIS [1 692]
WheatIS File Repository [6]

EBI

Ensembl Plants [3 071 189]

IPK

CR-EST [199 220]
GEBIS [51 820]
MetaCrop [355]

Gramene

Gramene [229 851]

T3

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

UWA

Wheat Pangenome [167 167]

Rothamsted Research

KnetMiner [108 474]

GrainGenes

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Komugi wheat gene catalog by
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CrowsNest [13 324]

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CIMMYT Publications [1 600]
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PlantPhenoDB [6]

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



WheatIS data discovery



Home Wheat@URGI More... ▾

fhb

Search

Species (13)

Filter on Species...

Data type

- Bibliography [48]
- Phenotyping Experiment [32]
- Genetic map [6]
- Germplasm [4]
- Qtl [4]
- Gene [3]
- Phenotyping study [1]
- Physical map [1]
- QTL [1]

Ontology annotation (22)

Filter on Ontology annotation...

Expand search ?

Database

- OpenMinTeD@GnpIS [44]
- The Triticeae Toolbox [36]
- GrainGenes [11]
- CIMMYT Publications [4]
- Komugi wheat gene catalog by GrainGenes [3]
- GnpIS [1]
- PlantPhenoDB [1]

Results 1 to 20 of 100

[10.3389/fpls.2019.01007](#) - OpenMinTeD@GnpIS

Bibliography **Triticum**

Genetic Mapping and Prediction Analysis of **FHB** Resistance in a Hard Red Spring Wheat Breeding Population. 2019 Genetic Mapping and Prediction Analysis of **FHB** Resistance in a Hard Red Spring Wheat Breeding Population Fusarium head blight (**FHB**) is one of the

[10.1371/journal.pone.0057500](#) - OpenMinTeD@GnpIS

Bibliography **Triticum** **Triticum aestivum**

Whole Genome Association Mapping of Fusarium Head Blight Resistance in European Winter Wheat (*Triticum aestivum* L.). 2013 Whole Genome Association Mapping o [...] valuated for resistance to Fusarium head blight (**FHB**) caused by *Fusarium graminearum* and *Fusarium cu*

[10.3389/fpls.2018.00573](#) - OpenMinTeD@GnpIS

Bibliography **Triticum**

Genetic Analysis of Fusarium Head Blight Resistance in CIMMYT Bread Wheat Line C615 Using Traditional and Conditional QTL Mapping. 2018 Genetic Analysis of [...] nd Conditional QTL Mapping Fusarium head blight (**FHB**) is a destructive wheat disease present through

[KS031027-FHB-8](#) - The Triticeae Toolbox

Germplasm **Triticum aestivum**

KS031027-FHB-8 Property Growth habit=Winter, Species=aestivum

[10.1007/s00122-019-03362-9](#) - OpenMinTeD@GnpIS

Bibliography **Triticum**

Genetics for low correlation between Fusarium head blight disease and deoxynivalenol (DON) content in a bread wheat mapping population. 2019 Genetics for lo [...] owing minor and the latter showing no effects on **FHB** resistance.AbstractDeoxynivalenol (DON) contami

[UNLFHB_NH_2020](#) - The Triticeae Toolbox

Phenotyping Experiment **Triticum**

UNLFHB_NH_2020 **FHB**

[10883/18889](#) - CIMMYT Publications

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



WheatIS data discovery



Home Wheat@URGI

More... ▾

- About
- Join us
- Terms of use
- Help
- News/Perspectives

How to join the wheatIS for the Plant federations of searchable data?

If you want your information system to be referenced, you should provide a [JSON](#) file with metadata only. The metadata format must follow the indications below and we invite you to [contact us](#) as soon as possible so that we can provide the best way to go ahead.

Note that since the tool makes a backlink to your information system, we need a URL allowing researchers to get detailed information about the indexed entry directly in your information system.

Overview of the metadata associated to each searchable entry/document

- a short *name* identifying uniquely the entry, ie. [BTH_Le_MouIon_2000_SetA](#)
- an *url* linking back to the entry in your own web application, ie. <https://urgi.versailles.inrae.fr/ephephesis/ephephesis/viewer.do#trialCard/trialId=56>
- a *description*, of the entry that contains all the relevant keywords allowing to find your entry. All the terms of this field are used by the search tool to allow users to find entries
- an *entryType* describing the type of the entry, that could be any of the terms listed in the dedicated section below
- a *species* field, containing the species related to the entry (zero, one or several, but it is highly recommended to provide at least one)
- a *node*, the name of your laboratory/institute, it should be the same for all the entities you manage
- a *databaseName*, the name of the database from which the entry has been extracted. It can differ from one entry to another if you handle several databases

Detailed specifications for the metadata fields

name

I

The value of the *name* field must be unique in your own dataset and should be clear enough to help scientists to identify at the first glance this entry among the other.

Status	Cardinality	Constraints
Mandatory	1	Unique

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

Plans for 2023 (challenges and help)

- ❑ WheatIS data discovery development planned
 - ❑ Challenge: few PM without dedicated hiring
 - ❑ Help: support to institutional boards of direction
- ❑ Perform some videos
 - ❑ Challenge: difficult to have a professional quality
 - ❑ Help: communication people from the WI or budget ?
- ❑ Article on the WheatIS data discovery tool to write
 - ❑ Challenge: little time available

Plans for 2023 (challenges and help)

- ❑ Other subjects that will be discussed during the annual assembly at PAG:
 - ❑ Website updates
 - ❑ Perhaps help needed
 - ❑ Future of the files repository
 - ❑ Is there a need from other WI EWG ?
 - ❑ Standards and nomenclature follow-up
 - ❑ Perhaps financial help for meetings

Plans for 2023 (challenges and help)

- ❑ For underrepresented countries
 - ❑ New EWG members
 - ❑ New data sources to index in the WheatIS data discovery tool

Topics that should be addressed in partnership with other EWGs

- ❑ What are the needs of other EWG in terms of data ?
 - ❑ Data discovery: new sources to add ?
 - ❑ Files repository to store data ?
 - ❑ Guidance about data standards, tools to analyse their data, etc. ?

Acknowledgements

WheatIS Expert Working Group



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