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## WheatIS data discovery

Michael Alaux

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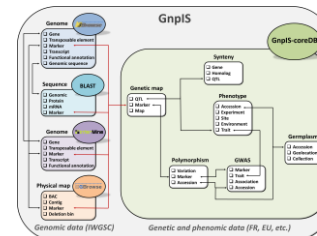
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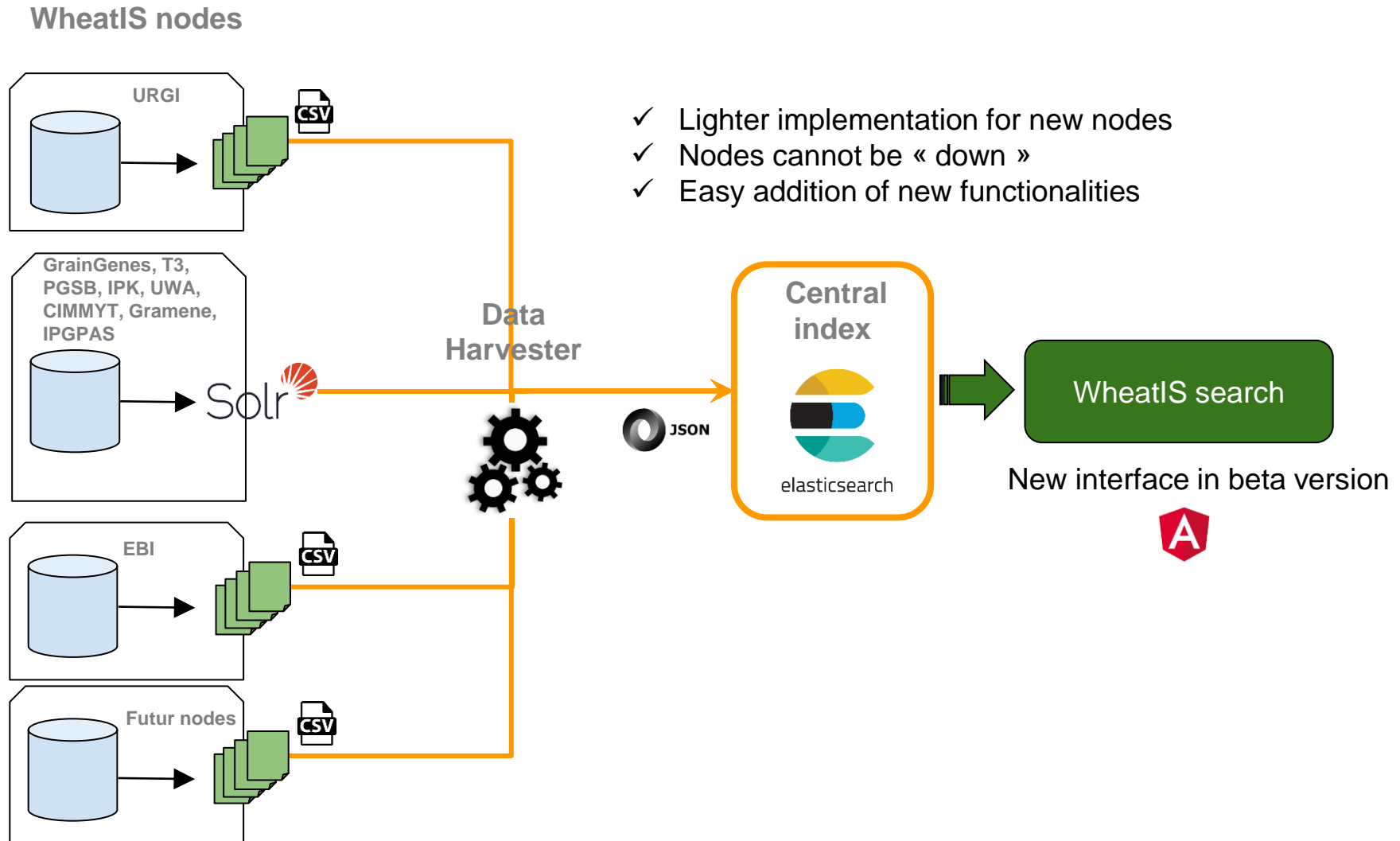
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# WheatIS data discovery

Michael Alaux



# New architecture



# New beta version



Wheat@URGI WheatIS Wheat Initiative

## URGI

IWGSC@GnpIS [18 566 139]  
GnpIS [92 214]  
OpenMinTeD [3 398]  
WheatIS File Repository [6]

## EBI

Ensembl Plants [2 122 980]

## IPK

CR-EST [199 220]  
GEBIS [50 875]  
MetaCrop [177]

## Gramene

Gramene [229 789]

## UWA

Wheat Pangenome [167 167]

## T3

The Triticeae Toolbox [138 441]

## South Green

AgroLD [137 060]

## Rothamsted Research

KNetMiner [110 775]

## GrainGenes

GrainGenes [15 827]  
Wheat Gene Catalog at  
Komugi [3 043]

## PGSB

CrowsNest [13 324]

## CIMMYT

CIMMYT Dspace [981]  
CIMMYT dataverse [1]

## IPGPAS

PlantPhenoDB [3]

## WheatIS

Wheat Information  
System



Examples: yield, fhb

Search

# New data

## URGI

IWGSC@GnpIS [19 241 077]

GnpIS [156 827]

} Data added

OpenMinTeD [3 398]

Bibliography

WheatIS File Repository [6]

## EBI

Ensembl Plants [2 391 552]

## IPK

CR-EST [199 220]

GEBIS [51 302]

MetaCrop [355]

## Gramene

Gramene [229 851]

## T3

The Triticeae Toolbox [185 781]

## UWA

Wheat Pangenome [167 167]

# New data

## South Green

AgroLD [137 060] Linked data

## Rothamsted Research

KNetMiner [110 775] Knowledge networks

## GrainGenes

GrainGenes [16 755] Data added: genes, maps, germplasm

Wheat Gene Catalog at  
Komugi [3 119] Gene Catalog

## PGSB

CrowsNest [13 324]

## CIMMYT

CIMMYT Dspace [981]

CIMMYT dataverse [38]

## IPGPAS

PlantPhenoDB [3]

# New filters

FHB Search

Results 1 to 20 from 219

### Data type

- Bibliography [123]
- Experiment [59]
- Phenotype [18]
- Accession [9]
- Genetic map [6]
- Gene [2]
- Physical map [1]
- Qtl [1]

[SUWWSN\\_2016\\_Fayetteville](#) - The Triticeae Toolbox  
Experiment Triticum aestivum  
Experiment Triticeae Toolbox SUWWSN\_2016\_Fayetteville phenotype trial traits=DON level **FHB** disease index **FHB** incidence **FHB** severity **FHB** grain incidence **FHB** ISK index Southern Uniform Winter Wheat Scab Nursery Triticum aestivum phenotype

[SUWWSN\\_2016\\_Newport](#) - The Triticeae Toolbox  
Experiment Triticum aestivum  
Experiment Triticeae Toolbox SUWWSN\_2016\_Newport phenotype trial traits=DON level **FHB** disease index **FHB** incidence **FHB** severity **FHB** grain incidence **FHB** ISK index Southern Uniform Winter Wheat Scab Nursery Triticum aestivum phenotype

[SUWWSN\\_2016\\_Urbana](#) - The Triticeae Toolbox  
Experiment Triticum aestivum  
Experiment Triticeae Toolbox SUWWSN\_2016\_Urbana phenotype trial traits=DON level **FHB** disease index **FHB** incidence **FHB** severity heading date **FHB** grain incidence **FHB** ISK index Southern Uniform Winter Wheat Scab Nursery Triticum aestivum phenotype

[SUWWSN\\_2016\\_Columbia](#) - The Triticeae Toolbox  
Experiment Triticum aestivum  
Experiment Triticeae Toolbox SUWWSN\_2016\_Columbia phenotype trial traits=DON level **FHB** disease index **FHB** incidence **FHB** severity heading date **FHB** grain incidence **FHB** ISK index Southern Uniform Winter Wheat Scab Nursery Triticum aestivum phenotype

**FHB** - GnpIS  
Phenotype Triticum aestivum  
Phenotype GnpIS **FHB FHB** is a trait related to Resistance, which unit is 'wu', described as follows: resistance contre Fusarium graminearum. Related keyword(s): Fusarium Head Blight (**FHB**) Triticum aestivum **FHB** ... (Expand)

[SUWWSN\\_2016\\_Lexington](#) - The Triticeae Toolbox  
Experiment Triticum aestivum  
Experiment Triticeae Toolbox SUWWSN\_2016\_Lexington phenotype trial traits=DON level **FHB** disease index **FHB** incidence **FHB** severity heading date plant height **FHB** grain incidence **FHB** ISK index Southern Uniform Winter Wheat Scab Nursery Triticum aestivu ... (Expand)

[SUWWSN\\_2016\\_Blacksburg](#) - The Triticeae Toolbox  
Experiment Triticum aestivum  
Experiment Triticeae Toolbox SUWWSN\_2016\_Blacksburg phenotype trial traits=DON level **FHB** disease index **FHB** incidence **FHB** severity heading date plant height grain yield test weight **FHB** grain incidence **FHB** ISK index

### Database

- OpenMinTeD [121]
- The Triticeae Toolbox [84]
- GrainGenes [7]
- CIMMYT Dspace [2]
- GnpIS [2]
- Wheat Gene Catalog at Komugi [2]
- PlantPhenoDB [1]

### Node

- URGI [123]
- T3 [84]
- GrainGenes [9]
- CIMMYT [2]
- IPGPAS [1]

### Species

- Triticum [121]
- Triticum aestivum [95]
- Wheat [2]
- Triticum turgidum ssp. dicoccoides [1]
- Triticum turgidum ssp. durum [1]

# New filters

yield Search

Results 1 to 20 from 2 704

**10883/1551** - CIMMYT Dspace  
Bibliography **Wheat yield**  
CIMMYT Dspace Wheat **Yield** Publication 10883/1551 10883/1551 Herbicidal effect on the growth and **yield** of wheat 2009-01-01 Herbicidal effect on the growth and **yield** of wheat Article ... (Expand)

**QYld.crc-2A** - Wheat Gene Catalog at Komugi  
Gene **Triticum aestivum**  
Gene Wheat Gene Catalog at Komugi QYld.crc-2A [GrainGenes Summary] **Yield** and **Yield** Components; Grain **yield** Triticum aestivum

**QYld.crc-4A** - Wheat Gene Catalog at Komugi  
Gene **Triticum aestivum**  
Gene Wheat Gene Catalog at Komugi QYld.crc-4A [GrainGenes Summary] **Yield** and **Yield** Components; Grain **yield** Triticum aestivum

**QYld.ndsu-5B** - Wheat Gene Catalog at Komugi  
Gene **Triticum aestivum**  
Gene Wheat Gene Catalog at Komugi QYld.ndsu-5B [GrainGenes Summary] **Yield** and **Yield** Components; Grain **yield** Triticum aestivum

**QYld.inra-7D** - Wheat Gene Catalog at Komugi  
Gene **Triticum aestivum**  
Gene Wheat Gene Catalog at Komugi QYld.inra-7D [GrainGenes Summary] **Yield** and **Yield** Components; Grain **yield** Triticum aestivum

**QGyld.unl-3A.1** - Wheat Gene Catalog at Komugi  
Gene **Triticum aestivum**  
Gene Wheat Gene Catalog at Komugi QGyld.unl-3A.1 [GrainGenes Summary] **Yield** and **Yield** Components; Grain **yield** Triticum aestivum

**QGyld.unl-3A.2** - Wheat Gene Catalog at Komugi  
Gene **Triticum aestivum**

**Data type** (18)

- Experiment [1 138]
- Gene annotation [701]
- Bibliography [636]
- Gene [53]
- Gwas [51]
- Phenotype [36]
- Interpro family [28]
- Qtl [17]

Other results are available.  
Refine your search.

- CR-EST [5]
- CIMMYT dataverse [1]
- GEBIS [1]
- PlantPhenoDB [1]
- WheatIS File Repository [1]

**Node**

- URGI [1 671]
- T3 [597]
- Rothamsted Research [158]
- CIMMYT [129]
- Gramene [85]
- GrainGenes [46]
- South Green [11]
- IPK [6]
- IGPAS [1]



# Usage metrics

2016

Summary			
<b>Reported period</b>	Year 2016		
<b>First visit</b>	01 Jul 2016 - 03:57		
<b>Last visit</b>	31 Dec 2016 - 00:42		
	Unique visitors	Number of visits	Pages
Viewed traffic *	<b>&lt;= 460</b> Exact value not available in 'Year' view	<b>689</b> (1.49 visits/visitor)	<b>3,609</b> (5.23 Pages/Visit)
Not viewed traffic *			<b>110</b>

\* Not viewed traffic includes traffic generated by robots, worms, or replies with special HTTP status codes.

2017

Summary			
<b>Reported period</b>	Year 2017		
<b>First visit</b>	01 Jan 2017 - 15:36		
<b>Last visit</b>	31 Dec 2017 - 08:09		
	Unique visitors	Number of visits	Pages
Viewed traffic *	<b>&lt;= 1,556</b> Exact value not available in 'Year' view	<b>2,236</b> (1.43 visits/visitor)	<b>17,568</b> (7.85 Pages/Visit)
Not viewed traffic *			<b>996</b>































\* Not viewed traffic includes traffic generated by robots, worms, or replies with special HTTP status codes.

2018

Summary			
<b>Reported period</b>	Year 2018		
<b>First visit</b>	07 Jan 2018 - 07:20		
<b>Last visit</b>	27 Nov 2018 - 07:33		
	Unique visitors	Number of visits	Pages
Viewed traffic *	<b>&lt;= 1,931</b> Exact value not available in 'Year' view	<b>3,307</b> (1.71 visits/visitor)	<b>27,371</b> (8.27 Pages/Visit)
Not viewed traffic *			<b>604</b>

\* Not viewed traffic includes traffic generated by robots, worms, or replies with special HTTP status codes.

# Countries for 2018

Countries (Top 30) - <a href="#">Full list</a>					
Countries			Unique visitors	Number of visits	Pages
	China	cn	938 (48.6%)	1,606 (48.6%)	14,461
	United States	us	262 (13.6%)	449 (13.6%)	3,466
	France	fr	153 (7.9%)	261 (7.9%)	2,143
	Great Britain	gb	98 (5.1%)	168 (5.1%)	1,335
	South Africa	za	64 (3.3%)	110 (3.3%)	1,101
	India	in	96 (5.0%)	164 (5.0%)	957
	Germany	de	58 (3.0%)	100 (3.0%)	712
	Australia	au	53 (2.7%)	90 (2.7%)	645
	Japan	jp	38 (2.0%)	65 (2.0%)	425
	Canada	ca	27 (1.4%)	46 (1.4%)	290
	Argentina	ar	17 (0.9%)	29 (0.9%)	245
	Italy	it	13 (0.7%)	22 (0.7%)	180
	Mexico	mx	14 (0.7%)	24 (0.7%)	148
	Russian Federation	ru	10 (0.5%)	18 (0.5%)	133
	Spain	es	9 (0.5%)	16 (0.5%)	126
	Poland	pl	8 (0.4%)	15 (0.5%)	115
	Ethiopia	et	6 (0.3%)	10 (0.3%)	81
	Pakistan	pk	6 (0.3%)	10 (0.3%)	71
	Hong Kong	hk	5 (0.3%)	8 (0.2%)	65
	Belgium	be	5 (0.3%)	9 (0.3%)	65
	Saudi Arabia	sa	4 (0.2%)	7 (0.2%)	56
	Netherlands	nl	4 (0.2%)	6 (0.2%)	49
	Kuwait	kw	3 (0.2%)	4 (0.1%)	46
	Iran	ir	4 (0.2%)	7 (0.2%)	44
	Czech Republic	cz	4 (0.2%)	6 (0.2%)	41
	Chile	cl	3 (0.2%)	5 (0.2%)	39
	Moldova	md	2 (0.1%)	4 (0.1%)	32
	Denmark	dk	3 (0.2%)	4 (0.1%)	31
	Austria	at	3 (0.2%)	5 (0.2%)	28
	Norway	no	2 (0.1%)	4 (0.1%)	24

# Promotion

- Computer Demo at PAG 2020 ?
- WheatIS logo ?
- Publication ?

I mentionned the tool in Alaux et al. *Genome Biology* 2018 (with acknowledgements to the WheatIS expert working group).

# Acknowledgements



# Questions

**Alaux et al., *Genome Biology* 2018**

<https://doi.org/10.1186/s13059-018-1491-4>



**Linking the International Wheat Genome Sequencin...**

The Wheat@URGI portal has been developed to provide the international community of researchers and breeders with access to the bread wheat reference genome se...

[genomebiology.biomedcentral.com](http://genomebiology.biomedcentral.com)

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