



The Wheat Rust Toolbox – Web-based tools for surveillance

Jens G. Hansen¹, Poul Lassen¹ & David Hodson²

WHEAT RUST TOOLBOX

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RUST SURVEY

Country:

Survey name:

Location name:

Latitude: decimal degree N S

Longitude: decimal degree E W

Elevation: meters

Survey site: N.A. Farmer field Weet Road side Trail

Field area size: ha

Crop: N.A. Bread wheat Durum wheat Barley Triticale oats Other

Cultivar name:

Date of survey:

Growth stage: N.A. Tillering Boot Flowering Milk Dough Maturity

Diseases:

Stem Rust: Incidence at field level: N.A. None (0) Low (less than 20%) Moderate (20 - 40%) High (more than 40%)
 Severity on infected plants: N.A. None (0) Low (less than 20%) Moderate (20 - 40%) High (more than 40%)
 Infection type: E M S

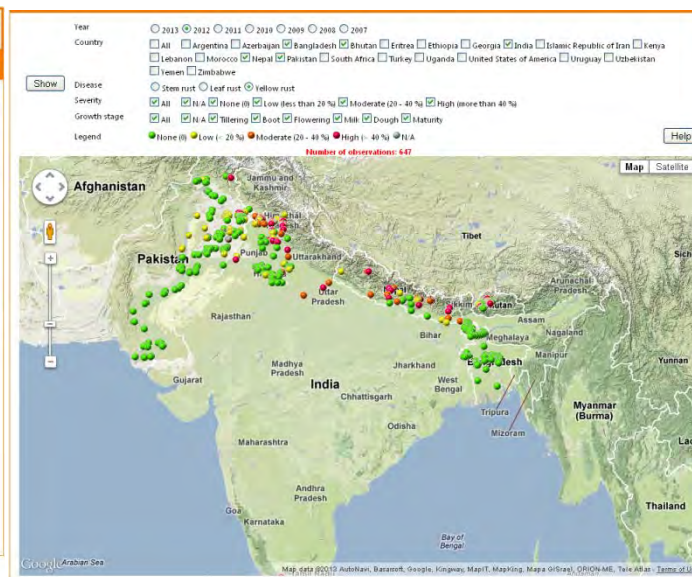
Leaf Rust: Incidence at field level: N.A. None (0) Low (less than 20%) Moderate (20 - 40%) High (more than 40%)
 Severity on infected plants: N.A. None (0) Low (less than 20%) Moderate (20 - 40%) High (more than 40%)
 Infection type: E M S

Yellow Rust: Incidence at field level: N.A. None (0) Low (less than 20%) Moderate (20 - 40%) High (more than 40%)
 Severity on infected plants: N.A. None (0) Low (less than 20%) Moderate (20 - 40%) High (more than 40%)
 Infection type: E M S

Sample: Stem rust sample collected

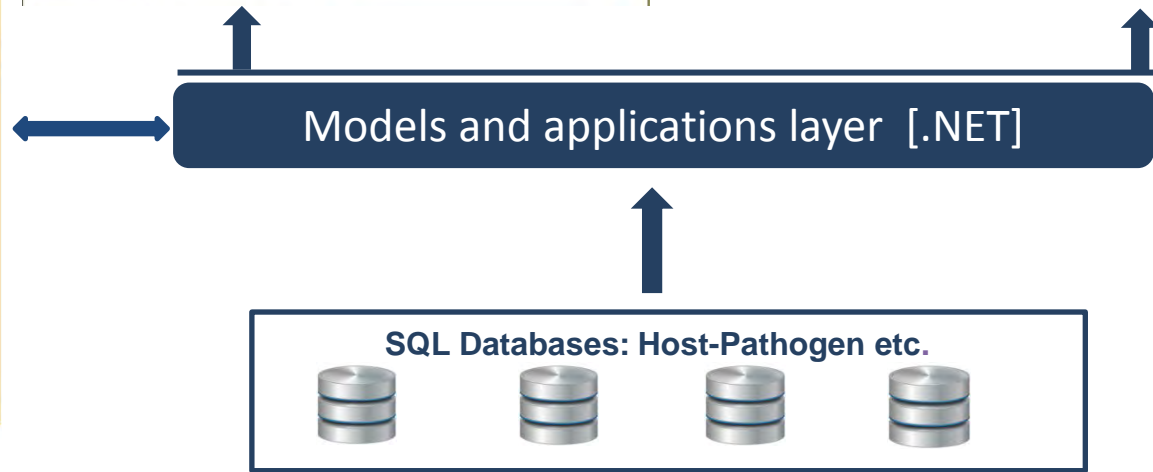
Comment:

Web site provided by Aarhus University, Faculty of Science and Technology, Department of Agroecology. Report technical problems to webmaster: Rust@LivU.dk. Optimized for screen size 1024x768.



Tools public in RustTracker and on GRRC web site

“Showversions”
Embed in iFrame



<iframe src="http://130.226.173.136/ProjectNET/WheatRustToolbox/Show/SurveyMap.aspx" width="1100" height = "785" scrolling="no" frameborder="0"></iframe>

WHEAT RUST TOOLBOX



Home

Wheat Rust survey

Barberry

Partners

Welcome Zos [logout](#)

THIS IS

New rust survey

Edit rust survey

My rust survey ▶

Output ▶

OX

Summary

Analysing tool

Export

Surveillance data entry and control

WHEAT RUST TOOLBOX

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RUST SURVEY

Country:

Surveyor name:

Institution:

Location name:

Latitude: decimal degrees N S 8° 0' 0" N

Longitude: decimal degrees E W 40° 0' 0" E

Elevation: meters

Survey site: N/A Farmer field Weed Road side Trial

Field area size: ha

Crop: N/A Bread wheat Durum wheat Barley Triticale Oats Other

Cultivar name:

Date of survey:

Growth stage: N/A Tillering Boot Flowering Milk Dough Maturity

Diseases

Stem Rust

Incidence at field level: N/A None (0) Low (less than 20%) Moderate (20 - 40%)

Severity on infected plants: N/A None (0) Low (less than 20%) Moderate (20 - 40%)

Infection type: R M S

Leaf Rust

Incidence at field level: N/A None (0) Low (less than 20%) Moderate (20 - 40%)

Severity on infected plants: N/A None (0) Low (less than 20%) Moderate (20 - 40%)

Infection type: R M S

Yellow Rust


Incidence at field level: N/A None (0) Low (less than 20%) Moderate (20 - 40%)

Severity on infected plants: N/A None (0) Low (less than 20%) Moderate (20 - 40%)

Infection type: R M S

Sample Stem rust sample collected

Comment:



1. User enter data
2. User can Edit own data
3. Quality control then public
4. Output Toolbox and RustTracker

WHEAT RUST TOOLBOX

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SURVEY MANAGEMENT

Unpublished Published

UNPUBLISH

Year: 2013 2012 2011 2010 2009 2008 2007

Unpublish data for selected year and country: Country: Bangladesh Bhutan Ethiopia Georgia Iraq Islamic Republic of Iran Kenya Lebanon Malawi Morocco Nepal Pakistan Tanzania Turkey United States of America Yemen

SELECTED LOCATIONS

User	Country	Year	ID	Location	Cultivar	Site	Crop	Obs
PKM	Bangladesh	2013	1	Jagnathpur, Thakurgaon	Prodip	Farmer field	Bread wheat	
PKM	Bangladesh	2013	2	Jagnathpur, Thakurgaon	Sourav	Farmer field	Bread wheat	
PKM	Bangladesh	2013	3	Muthrapur, Thakurgaon	Prodip	Farmer field	Bread wheat	
PKM	Bangladesh	2013	4	Baliadangi, Thakurgaon	Swarna	Farmer field	Bread wheat	
PKM	Bangladesh	2013	5	Baliadangi, Thakurgaon	Unknown	Farmer field	Bread wheat	
PKM	Bangladesh	2013	6	Baliadangi, Thakurgaon	Swarna	Farmer field	Bread wheat	
PKM	Bangladesh	2013	7	Atwari, Panchagarh	Swarna	Farmer field	Bread wheat	
PKM	Bangladesh	2013	8	Uttar Botina, Thakurgaon	Unknown	Farmer field	Bread wheat	
PKM	Bangladesh	2013	9	Boda, Panchagarh	Prodip	Farmer field	Bread wheat	
PKM	Bangladesh	2013	10	Kaharol, Dinajpur	Prodip	Farmer field	Bread wheat	
PKM	Bangladesh	2013	11	WRC Substation, Thakurgaon	BARI Gom-26	Trial	Bread wheat	

OBSERVATIONS

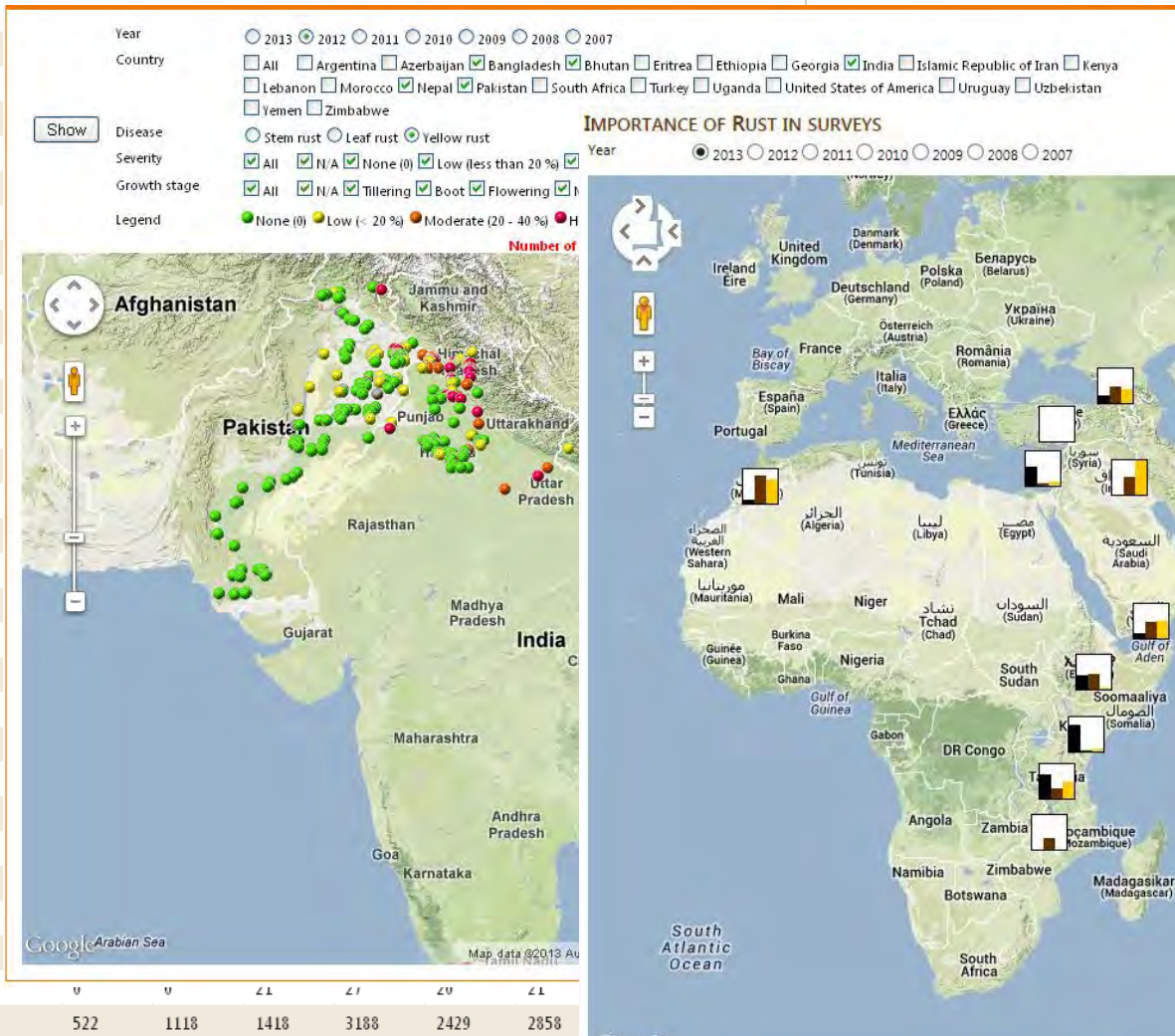
ID	Month	Day	Publish	Surveyor	Institution	Growth stage	Stem Rust	Leaf Rust	Yellow Rust
1	3	15	<input checked="" type="checkbox"/>	K. Mustarin, M.S. Hossain, M.M.A. Reza	Wheat Research Centre, BARI	Dough	None (0)	Moderate (20 - 40%)	None (0)

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Surveillance data output

Country Name	2007	2008	2009	2010	2011	2012	2013	Total
Afghanistan	0	0	3	0	0	0	0	3
Algeria	0	0	0	103	0	0	0	103
Argentina	0	0	0	0	0	208	0	208
Azerbaijan	0	0	0	62	0	8	0	70

Bangladesh						
Bhutan						
Egypt						
Eritrea						
Ethiopia						
Georgia						
India						
Iraq						
Islamic Republic of Iran						
Kazakhstan						
Kenya						
Lebanon						
Morocco						
Mozambique						
Nepal						
Pakistan						
Saudi Arabia						
South Africa						
Sudan						
Syrian Arab Republic						
Tajikistan						
Turkey						
Uganda						
United States of America						
Uruguay						
Uzbekistan						
Yemen						
Zambia						
Zimbabwe						
Total	522	1118	1418	3188	2429	2858



My Rust tools – Only for data providers

“My Rust” available by country only after login

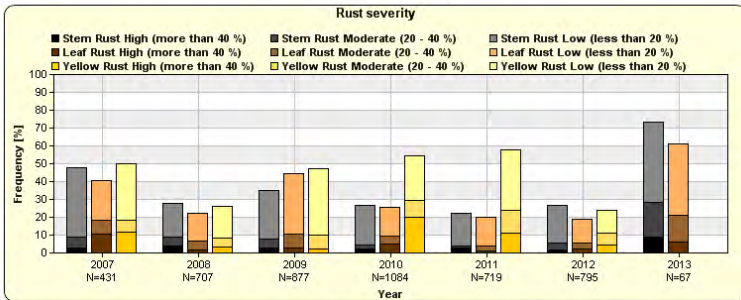
COUNTRY

SUMMARY

	2007	2008	2009	2010	2011	2012	2013	Total
Number of observations	431	707	877	1084	719	795	67	4690
Number of observations with Stem Rust	207	195	309	292	158	210	49	1420
Number of observations with Leaf Rust	175	156	391	278	144	152	41	1337
Number of observations with Yellow Rust	216	185	416	590	414	192	0	2013
Number of observations with no rust	59	87	0	221	207	386	18	978

RUST SEVERITY

Numbers Frequency

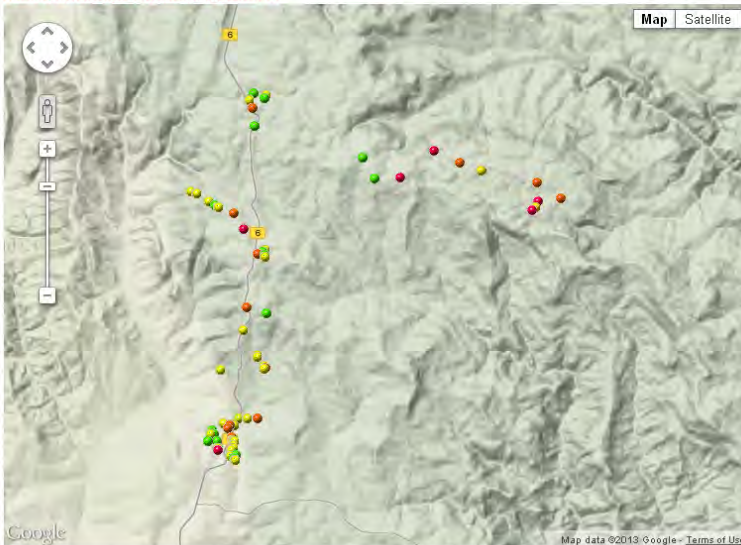


YEAR 2013 2012 2011 2010 2009 2008 2007

DISEASE Stem rust Leaf rust Yellow rust

LEGEND None (0) Low (< 20 %) Moderate (20 - 40 %) High (> 40 %)

Number of observations with location coordinates: 67

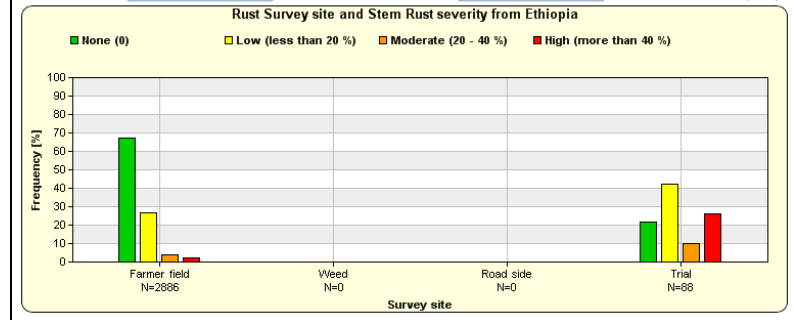


RUST ANALYSING TOOL

Country

Year 2013 2012 2011 2010 2009 2008 2007

First selection Second selection Observations Frequency

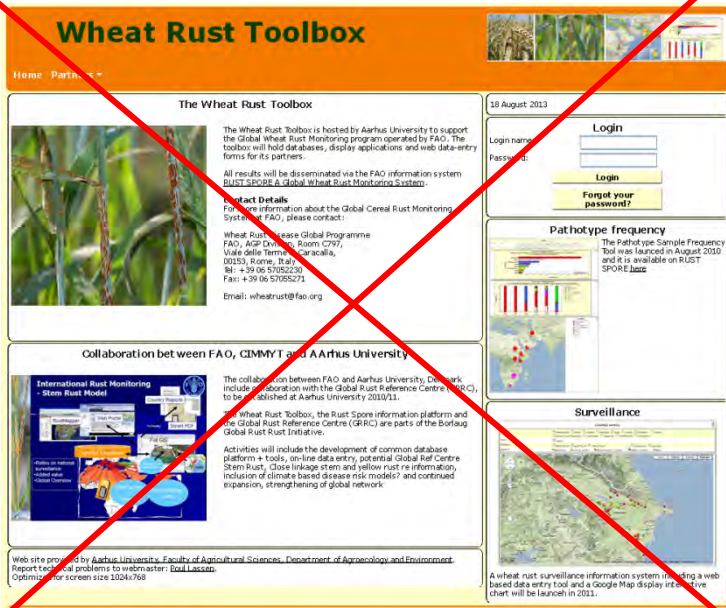


EXPORT

Export own country data

Experiences and challenges

Google Wheat Rust Toolbox



Wheat Rust Toolbox

Home Partners

The Wheat Rust Toolbox

The Wheat Rust Toolbox is hosted by Aarhus University to support the Global Wheat Rust Monitoring program operated by FAO. The toolbox will hold databases, display applications and web data-entry forms for its partners.

All results will be disseminated via the FAO information system [RUST SPORE A Global Wheat Rust Monitoring System](#).

Contact Details
For more information about the Global Cereal Rust Monitoring System or FAO, please contact:
Wheat Rust Disease Global Programme
FAO, AGP Division, Room C797,
Viale delle Terme di Caracalla,
00153, Rome, Italy
Tel: +39 06 5705223
Fax: +39 06 5705271
Email: wheatrust@fao.org

18 August 2013

Login

Login name:
Password:

Login
Forgot your password?

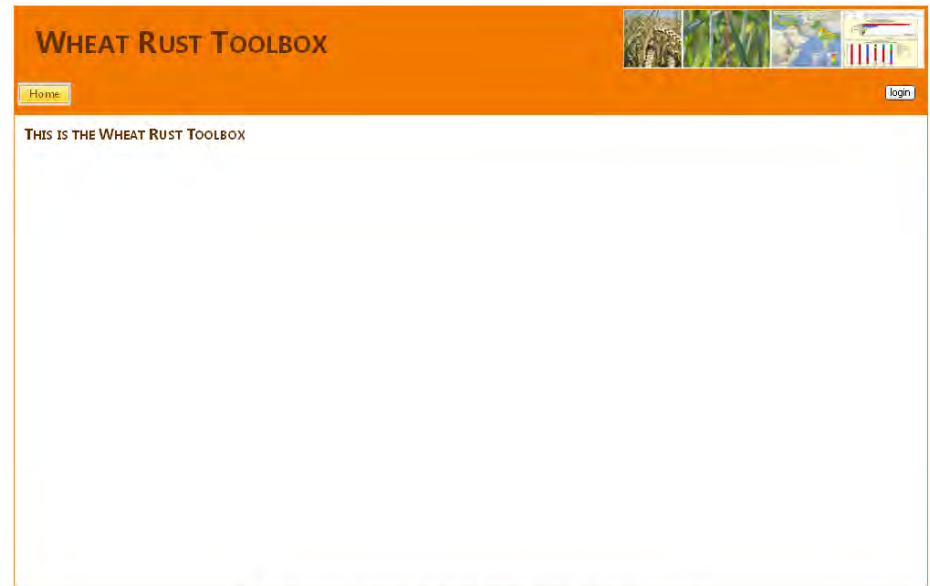
Pathotype Frequency

The Pathotype Sample Frequency Tool was launched in August 2010 and it is available on [RUST SPORE](#).

Surveillance

A wheat rust surveillance information system including a web based data entry tool and a Google Map display interface will be launched in 2011.

Web site provided by Aarhus University, Faculty of Agricultural Sciences, Department of Agroecology and Environment.
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WHEAT RUST TOOLBOX

Home login

THIS IS THE WHEAT RUST TOOLBOX

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Experiences and challenges

Use of the data entry web form is a problem using a slow Internet connection

→ Send data to David Hodson i Excel.

Report the data as soon as possible –
Can be used for forecasting epidemics.

Be careful with sampling Ids. Must be identical in toolbox and on samples sent.

Who is using this information and how?



Web site provided by Aarhus University, Faculty of Science and Technology, Department of Agroecology.
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Thanks to all who provided the data