



**January 2019**

## **Happy New Year from the BGRI Community**

Dear members of the Borlaug Global Rust Initiative community,

Welcome back to another year of the BGRI newsletter! We are pleased to be able to continue to share with you news from around the world about wheat research and innovation. Last year held many milestones for wheat -- such as the publication of the reference sequence of bread wheat -- that will allow even greater strides in research and global efforts to create a more sustainable food system.

Thank you for continuing to be with us on this journey.

## **Save the Date: 2020 BGRI Technical Workshop**

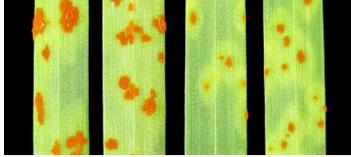


**It is our pleasure to announce that the 2020 BGRI Technical Workshop will be held in the United Kingdom in June 2020.**

More information on abstract submission, final dates, and workshop participation will be released over the next months.

## **Significant wheat rust occurrences in Southern Africa**

**Researchers at the University of the Free State have confirmed the presence of PTKST in South Africa**



Infection types produced by races PTKST (left) and PTKSK (right) on primary leaves of wheat line LCSr24Ag, containing the resistance gene *Sr24*.

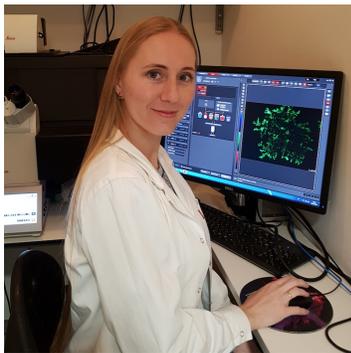
Race analysis of samples collected during South Africa's 2017 annual rust survey confirmed the presence of another Ug99 stem rust variant in South Africa. This brings the total number of Ug99 races described from South Africa to five.

Paper: **First Report of *Puccinia graminis f. sp. tritici* Race PTKSK, a Variant of Ug99 in South Africa**

In addition, stripe rust was observed for the first time in Zimbabwe in September 2018. It appears to be distinct from variants previously detected in South Africa, and further tests are being conducted. Plant pathologists from the Agricultural Research Council-Small Grain at Bethlehem and University of the Free State in Bloemfontein are closely monitoring the situation in collaboration with wheat researchers from Seed-Co International.

Information compiled by: Zak Pretorius, Willem Boshoff, Tegwe Soko, & Tarekegn Terefe.

## Yr15 wheat stripe rust resistance gene: discovery, cloning and future perspectives



Valentina Klymiuk, one of the co-first authors on the Yr15 cloning paper.

After 25 years, an international team of researchers released a paper that described the main results of the cloning of *Yr15*, a highly effective wheat stripe rust resistance gene

The work led to the discovery of a unique protein structure that could explain plant resistance to fungal pathogens, opening a door for a new field of plant pathology studies.

• **Read Valentina's blog on the discovery & cloning of Yr15**  
• Paper: **Cloning of the wheat *Yr15* resistance gene sheds light on the plant tandem kinase-pseudokinase family**

## Events and Opportunities

### **GREAT Theme 4: Gender-Responsive Plant Breeding Course** (*Kampala, Uganda*)

15 February 2019 (Application Deadline)

Week 1: July 22-31, 2019 - Kampala, Uganda

Week 2: January 13-17, 2020 - Kampala, Uganda

[View online application and requirements at the GREAT website](#)

### **30th Fungal Genetics Conference**

12-17 March 2019 (*Pacific Grove, CA, USA*)

<http://conferences.genetics-gsa.org/Fungal/2019/index>

#### **Rust Workshop at the Fungal Genetics Conference**

12 March 2019

*Speakers:* Catherine Aime, Anna Berlin, Fungi DB, Tao Siqi

*Brainstorm Session:* Diane Saunders, Peter van Esse, Anna Berlin, Sebastien

Duplessis, Catherine Aime, Melania Figueroa

*Contact:* [Peter.vanessa@tsl.ac.uk](mailto:Peter.vanessa@tsl.ac.uk)

**1st International Wheat Congress**  
21-26 July 2019 (Saskatchewan, Canada)

<http://2019iwc.ca>

Abstract Submission: 1 February 2018

<https://2019iwc.ca/call-for-abstracts/>

## Contribute to the BGRI Newsletter and Social Media

If you have any news of interest to the BGRI community, please send us a message and we will try to include it in subsequent BGRI newsletters! We also publish and share stories on our [Twitter](#) and [Facebook](#) accounts. Use [@globalrust](#) to tag any contributions.

Events, career and educational opportunities, photos, and new publications are especially welcome.

Contact BGRI newsletter editor [Samantha Hautea](#) or [the BGRI](#).

**VISIT OUR WEBSITE**

**Borlaug Global Rust Initiative**  
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