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December 2020

BEST WISHES FOR THE NEW YEAR!

"Historic" release of six improved wheat varieties in Nepal



The Nepal Agricultural Research Council (NARC) announced the release of six new wheat varieties for multiplication and distribution to the country's wheat farmers, offering increased production for Nepal's nearly one million wheat farmers and boosting nutrition for its 28 million wheat consumers. Derived from materials developed by CIMMYT, the varieties include five bred for elevated levels of zinc, and Borlaug 100, a variety that is high-yielding, drought- and heat-resilient, wheat blast resistant, and high in zinc.

"Releasing six varieties in one attempt is history news for Nepal," said CIMMYT Asia Regional Representative and Principal Scientist Arun Joshi.

"It is an especially impressive achievement by the NARC breeders and technicians during a time of COVID-related challenges and restrictions" said NARC Executive Director Deepak

Bhandari.

NARC staff have begun the process of seed multiplication and participatory varietal selection trials with farmers.

Pictured is one of the newly released biofortified wheat varieties, NL 1369 (Zinc Gahun-2) in the field in Nepal.

[Read more here.](#)

Field Notes: Kyrgyzstan, October 2020



Jyldyz Egemberdieva collecting rust samples in the field.



Stem and yellow rust on wheat.



*Aecia yellow rust spores on *Berberis Heteropoda* Schrenk, used for inoculation.*

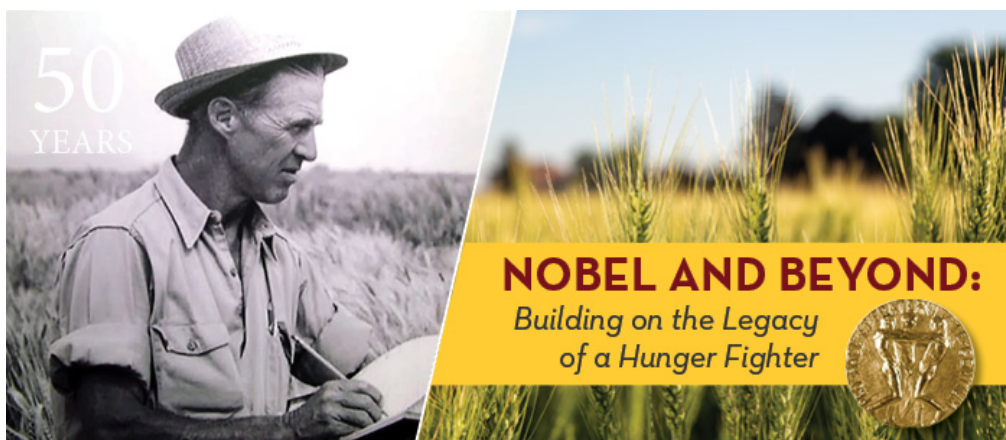
Jyldyz Egemberdieva, an early-career plant breeder and mycologist from the Kyrgyz Institute for Livestock and Plant Protection, sent photographs of stem and yellow rusts from wheat fields in Kyrgyzstan, collected in Fall 2020.

"There are five varieties of barberry in Kyrgyzstan —*Berberis kashgarica* Rupr., *Berberis Heteropoda* Schrenk, *Berberis Oblonga*, *Berberis integerrima* and *Berberis nummlariam*," reported Egemberdieva, noting the potential for high incidence of infection. Using spores collected in the middle of May, they inoculated eight varieties of spring wheat sent from the Michigan State University obtained from North Dakota State University, and a local standard, Intensivnay, and collected data.

"Most varieties were resistant to stem rust, but some were moderately susceptible to yellow rust," said Egemberdieva, who has been collaborating with George Bird and Karim Maredeia of the MSU using the varieties Ambush, Glenn, Land, Linker, Camer, Velpo, Rolland, and WBg473.

[For more information, contact Egemberdieva.](#)

Nobel and Beyond: Building on the Legacy of a Hunger Fighter



A virtual event to commemorate the 50-year anniversary of Norman E. Borlaug's Nobel Peace Prize featured distinguished speakers Jeanie Borlaug Laube and Ronnie Coffman, chair and vice-chair respectively of the BGRI; Hale Tufan, associate director Feed the Future Lab for Crop Improvement; Barbara Stinson, president of the World Food Prize, and others. The event was hosted by the University of Minnesota's College of Food, Agricultural and Natural Resource Sciences Department of Plant Pathology and Alumni Relations on December 10.

[View the entire event here.](#)

Ruth Wanyera: "Let There Be Food to Eat"



CIMMYT honored long-term collaborator Ruth Wanyera, national wheat research program coordinator at the Kenya Agricultural and Livestock Research Organization (KALRO). Wanyera has dedicated her more than 30-year career to plant protection research. One of the first scientists to recognize stem rust in East Africa, she received the BGRI's Norman E. Borlaug Lifetime Achievement Award in October 2020.

[Read more here.](#)

Ruth Wanyera (3rd from R) gives a lesson to pathology interns at KALRO. Photo: CIMMYT

Hans Braun: CIMMYT Global Wheat Program director retires



"CIMMYT is at my heart; it is what I know," said Hans-Joachim Braun, remarking on his retirement from CIMMYT after a 37-year career. Braun's decades of international research and travel have yielded many high-impact wheat varieties. A native of Germany, where he plans to retire, Braun most recently served as director of CIMMYT's Global Wheat Program. Braun received the BGRI's Norman E. Borlaug Lifetime Achievement Award in October 2020.

Congratulations, Hans!

Hans Braun (center), Sanjaya Rajaram (3rd from R), Ravi Singh (1st from R) and colleagues out standing in a CIMMYT field.
Photo: CIMMYT

[Read more here.](#)

Linda McCandless: BGRI Norman E. Borlaug Lifetime Achievement awardee



Linda McCandless headed to Pokhara, Nepal, to interview wheat farmers with NARC scientists. Photo: Chris Knight

Linda McCandless, senior associate director for communications in Cornell's Department of Global Development, received a BGRI Norman E. Borlaug Lifetime Achievement Award on December 11 to honor her career advocating for science and smallholder farmers.

"Partnering with scientists, students and farmers around the world has been the job of a lifetime," said McCandless who has been communicating about the BGRI since its first wheat project launched in 2008.

[Read more here.](#)

In the News

[Retrospective analysis of CIMMYT's strategies, perspectives on integrating genomic selection for grain yield in bread wheat.](#)

Presentation by Philomin Juliana, BGRI Virtual Workshop, YouTube video. 8 October 2020.

[Study finds large-scale expansion of stem rust resistance gene in barley and oat.](#)

John Innes Centre News, 10 December 2020.

[Fungal diseases of wheat in Pakistan: Which is the best fungicide for rust control in wheat crop.](#)

Official recommendations from Bilal Kanju Agriculture, YouTube video. 28 December 2020.

Recent Publications

[Extensive Genetic Variation at the Sr22 Wheat Stem Rust Resistance Gene Locus in the Grasses Revealed Through Evolutionary Genomics and Functional Analyses.](#)

M. Asyraf Md Hatta, Sreya Ghosh, Matthew N. Rouse, Michael Ayliffe, Brande B.H. Wulff and others. APS Journal. 1 October 2020.

[Lessons from a GWAS study of a wheat pre-breeding program: pyramiding resistance alleles to Fusarium crown rot.](#)

Marcos Malosetti, Laura B. Zwep, Mark Dieters and others. Theoretical and Applied Genetics. 26 December 2020.

Opportunities

[Nominations are open for the 2021 Norman Borlaug Award for Field Research and Application.](#)

This award recognizes exceptional, science-based achievement in international agriculture and food production by an individual under the age of 40. Any individual or organization may submit a nomination. Deadline is 15 June 2021.

Save the Date

May 15-20, 2021: Plant & Animal Genome Conference XXIX

PAG XXIX, originally scheduled for January 2021 in San Diego, has been postponed until at least May 2021, pending further health updates. Stay tuned.

September 12-16, 2022: Second International Wheat Congress

Due to the global outbreak of COVID-19, the Second International Wheat Congress has been postponed to 2022 in Beijing.

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 [Matt Hayes](#) or [the BGRI](#).

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The Borlaug Global Rust Initiative is supported through the Delivering Genetic Gain in Wheat (DGGW) project in the Department of Global Development in the College of Agriculture and Life Sciences at Cornell University. DGGW is funded by the Bill & Melinda Gates Foundation and UK aid from the UK government.