

June 6, 2000

NEWS RELEASE

Contact: Rick Ward, Michigan State University wheat breeder, Lansing, MI, ph. 517-285-9725

U.S. crop scientists form closer ties with China on scab research

East Lansing, MI— Wheat and barley researchers in the United States and China have been working more collaboratively in recent years, due in no small part to a common problem: fusarium head blight, commonly called scab.

The fungal disease was a significant problem in areas of the U.S. in the 1990s, resulting in yield and quality losses valued at well over \$2 billion on wheat and barley farms in at least 18 states, according to university and industry estimates.

Scab is an even bigger problem in China, the world's largest wheat producing nation that has been researching methods to control the fungal disease for decades.

A group of U.S. wheat and barley researchers from the United States traveled to China in early May to participate in an international forum focused on scab research advancements in wheat and barley.

"The problems we've been seeing are being shared by scientists from around the world. We're not alone in this problem," says Bob Stack, plant pathology professor at North Dakota State University, and a speaker at the forum. "Despite a lot more experience in dealing with the scab issue, the Chinese are not really any further along than we are."

About 100 scientists from around the world attended the forum, and most were plant breeders and geneticists. Some of the presentations focused on genetic engineering and the use of pieces of plant DNA called "molecular markers," which researchers use to identify genes that are associated with a specific trait such as disease resistance. Other presentations emphasized classical breeding methods.

U.S. and Chinese wheat and barley researchers are collaborating on scab research, such as scientist exchanges and in testing of experimental wheat and barley lines. To develop commercial varieties with greater scab tolerance, U.S. wheat and barley breeders are screening and using germplasm from various sources around the world, including Chinese wheat lines, such as Sumai3.

At the international forum, Michigan State University wheat breeder Rick Ward presented an overview of the U.S. Wheat and Barley Scab Initiative, organized several years ago to solve scab through a concerted national research effort. Current research supported by the Initiative involves 104 projects carried out in 23 states by over 70 scientists from 22 land grant universities and the USDA's Agriculture Research Service.

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U.S. crop scientists form closer ties on scab research with China, page two

“The Chinese are just as fascinated about the Scab Research Initiative as anyone else, and wondered how it got started. I explained how it came about and was funded through the U.S. Congress. It struck me later that here I am talking about raw democracy in action, in the heart of the world’s largest communist nation,” says Ward, who serves as co-chair of the Initiative.

Ward says the Chinese have a large wheat research program, which they need to keep up with their food consumption demands. “Although China is the world’s largest wheat producing nation that can sometimes produce a wheat surplus, it’s also evident that China must import grain to feed its population,” he says.

The U.S. Wheat and Barley Scab Initiative could serve as a platform for greater international cooperation on disease research, with China and other countries, says Ward. His overview of the U.S. Wheat and Barley Scab Initiative presented in China may be found on the Initiative’s web site, www.scabusa.org.

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Written by Tracy Sayler, with information contributed by North Dakota State University Extension Communications.

Editors: For a photo of U.S. crop scientists inspecting barley research plots in China, or photos from the International Scab Forum, contact Sue Canty, U.S. Wheat and Barley Scab Initiative Networking and Facilitation Office, ph. 517-355-2236, or by email at scabusa@pilot.msu.edu.