The World's Wheat Crop Under Threat from New Disease

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Abstracted by Martin Price October 2005 from a report on the CIMMYT web site.

Representatives of major donor countries and organizations, together with wheat specialists from around the world, 75 in all, gathered in Nairobi last fall to hear a report from an expert panel about the status of a new rust strain, first reported in Uganda in 1999. Only now is the significance and potential danger of the new strain becoming clear. The disease, Ug99, also called black rust, has spread to Kenya, Ethiopia, and possibly other countries. They agreed that the new strain of wheat stem rust is a major, strategic threat to global wheat production.

“Nobody’s seen an epidemic for 50 years, nobody in this room except myself,” said Norman E. Borlaug, Nobel Peace Laureate and former CIMMYT wheat breeder. “Maybe we got too complacent.”

The new strain or strains are especially dangerous, because many wheat cultivars in major wheat producing countries show little or no resistance. The spores of the fungus are well adapted for long distance travel on high-altitude wind currents.

To identify new sources of resistance, the Kenya Agricultural Research Institute (KARI) is screening thousands of wheat lines from all over the world at its station in Njoro, in the Great Rift Valley, a known hotspot for wheat rusts. “Despite the overall impression that most wheats are susceptible, we’ve found a few lines at Njoro that show resistance,” says CIMMYT rust specialist Ravi Singh.

But resistance in an experimental wheat line is a long way from a resistant, high-yielding cultivar that farmers will actually grow. The delegates endorsed the creation of the Global Rust Initiative to monitor the spread of the disease and to work on long-term solutions—including new, locally adapted, resistant wheat varieties and a global testing and distribution system.

For further information see the CIMMYT website http://www.cimmyt.org/en/

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