

Biotech could blunt predicted devastation of climate change

A study of wheat yields by 53 researchers on six continents, including a Kansas State University professor, has found that the effects of climate change on Kansas' top crop will be far more disastrous, and begin much sooner, than previous thought.

Each time the average global temperature increases by one degree Celsius (1.8 degrees Fahrenheit), global wheat grain production is reduced by about 6 percent, according to the study, published in the scientific journal *Nature Climate Change*.

According to the researchers, the 6 percent decline would equate to 42 megatons, or 42 million tons, of wheat each time the global temperature rises by a single degree Celsius.

"To put this in perspective, the amount is equal to a quarter of global wheat trade, which reached 147 (megatons) in 2013," the researchers wrote.

While the study reaches bleak conclusions, the researchers offered a glimmer of hope in the final paragraph of their report.

"There are several adaptation options to counter the adverse effects of climate change on global wheat production – and for some regions, this will be critical," the researchers wrote.

One such option is being explored at the Wheat Genetics Resource Center on the Kansas State campus. Harold Trick, a professor, and Allan Fritz, a wheat breeder – are adding genetic material from rice to wheat, creating a transgenic crop better suited to survive hotter temperatures.

"Currently, there is no genetically engineered wheat on the marketplace," Trick told *The Topeka Capital-Journal* earlier this month.

Read full, original article: Study: Effects of climate change on wheat will be dire