

Spring Heat More Damaging To Wheat Than Fall Freeze

(AP/MS NEWS)--A new study says spring heat poses a greater danger to winter wheat crops than early freezes in the fall.

Researchers at Kansas State University examined results from experimental field trials and matched that data with weather information at those sites. The data spanned from 1985 through 2013 in 11 locations.

The research found that a 1-degree increase in heat in the spring would decrease yields by 7 percent.

Agricultural economist and K-State Professor Andrew Barkley says researchers expect new wheat varieties to be more heat resistant in the future.

He says the research focuses on the effect of warming temperatures on U.S. wheat yields and that “there’s a lot of evidence to suggest that temperatures will increase in the future and what we’ve done here is estimate the impact of what might happen to wheat yields if temperature increase in Kansas.”

Barkley says yield losses can occur in both the fall and the spring, with freeze in the fall and heat stress in the spring. “our result suggests the heat in the spring is a more important driver of yield loss than the freezing in the fall. And, with global warming, we’ll actually have a reduction in the damage to the yields in the fall because those freeze would be less frequent. But we do find that with increased heat in the spring, the net effect of temperature gains would be to reduce wheat yields”

He says damage from hotter temperatures can be partially offset with more precipitation. Hot, dry springs would mean higher losses.

The research is being published in the Proceedings of the National Academy of Sciences.

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