

U.K. researchers seeking permission to field test genetically modified wheat

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Credit: Wikipedia

(Phys.org)—A team of researchers with the of Universities of Lancaster,

Rothamsted and Essex has submitted a request to Britain's Department for Environment, Food and Rural Affairs asking for permission to grow genetically modified (GM) wheat in an outdoor research effort—consultation by the department is expected to take approximately six weeks. If permission is granted, the team plans to plant the GM wheat this April at a site near Rothamsted, leading to a harvest and a second planting the following year.

The GM technique used by the researchers is new. It involves splitting the [wheat seed](#) in half and then bombarding it with gold particles that have been infused with genetically coded material for SBPase—an enzyme that has been found to be important in the photosynthesis process. In greenhouse studies, the technique has been shown to increase [crop yields](#) from 20 to 40 percent. The researchers do not expect to see such gains in crops grown outdoors, of course, but are hopeful—they suspect they may see gains as high as 20 percent. They plan to use two types of GM techniques, one that adds two genes and another that adds six genes.

Genetically modifying plants to make them more disease resistant or to improve yields is not new, of course; many studies have been carried out over the past several decades, but results have been mixed due to a variety of constraints. One factor holding back research has been public fear and rejection of the technology—some groups have even mounted campaigns to stop such research, fearing it will contaminate natural plants. Protesters stomped on GM crops, for example, planted for testing back in the 1990s, generating headlines and instilling fear in the general populace.

But times have changed, the researchers have told the press. They believe that as more research has been conducted and the public has been given more information regarding GMO crops, there is less resistance to the idea. Now, they add, there appears to be more concern

regarding how to feed the growing population—estimates suggest that world food production will have to increase by 40 percent over the next 20 years and 70 percent by the year 2050 just to keep up with the demand. Natural means for increasing crop yields have stalled, the researchers note; wheat yields have not increased in 30 years.

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