

Sustainable wheat: New GMO variety could reduce need for fertilizers, preserve phosphorus

One of the troubles with agriculture is the need for farmers to apply fertilizer. The plants don't soak up all of it, which inevitably results in fertilizer running off into lakes and rivers.

[Not only is it] wasteful of the farmer's precious financial resources, but [also] it is wasteful of the planet's finite supply of phosphorus. [Leaching into water can also] trigger nasty algal blooms, which kicks off a chain reaction known as [eutrophication](#).

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Depending on the type of soil, a phosphorus-containing compound called *phytate* may be in abundant supply...[A team of Pakistani researchers] turned to a fungus, *Aspergillus japonicus*, which produces an enzyme, called phytase, that breaks down phytate.

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So [the researchers] inserted the fungal gene for phytase into wheat....The result was the creation of wheat plants with high phytase content in their roots....The enzyme would then break down phytate and release the phosphorus, which the wheat could soak up.

When compared to control plants grown in the presence of phytate, the genetically engineered plants grew bigger and contained more phosphorus.

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The next step would be to conduct field trials to verify that, under real-world conditions, their plants require less fertilizer than other crops.

The GLP aggregated and excerpted this article to reflect the diversity of news, opinion, and analysis. Read full, original post: [Genetically Engineered Wheat Reduces Need For Fertilizer, Helps Environment](#)