

GM technology increases drought tolerance by protecting roots

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Agriculture is estimated to be the biggest single user of earth's freshwater. Technologies that help farmers use less water can translate into major gains in global water conservation. The amount of water used for irrigation in the US has dropped significantly since 1980, largely due to improvements in technologies like plant breeding and irrigation systems. But researchers are still making major progress in technologies that reduce the amount of water needed for agriculture. We spoke with agriculture expert Wayne Parrott, PhD, an expert in plant breeding at the University of Georgia, who gave us the inside scoop on how new technologies are helping farmers use less water.

How do both conventional breeding methods and agricultural biotechnology play a role in creating new crops that require less water?

In the case of corn, some hybrids are examples of what conventional breeding can do to achieve a measure of drought tolerance. Other hybrids are an example of the same trait obtained with biotechnology. In both cases, the use of other biotech traits, such as resistance to corn root worms, helps ensure that the root system remains healthy enough to use whatever water is in the soil. Over the long-term, it will take the combination of conventional breeding and biotech breeding to increase the level of drought-tolerance in crops to a point where some yield is salvageable under extreme conditions.

As you can see, scientists have used both biotech and conventional breeding to produce crops that grow better with less water. These advancements will go a long way towards creating a food system that uses less water and is better prepared for climate change.

Read full, original post: [Growing Food and a "Thirst" for Innovation](#)