

GROWERTALKS

GT in Brief

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Genetic Tweak Cuts Plant Water Use 25%

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University of Illinois researchers have found that by altering a gene inside tobacco plants they can get the plant to grow to near normal size using 25% less water. This bodes well for future crop growth in arid regions and during drought ... and maybe could trickle down to ornamentals that require less frequent watering, too.

The research results were published March 6 in the journal *Nature Communications*. In a nutshell, Stephen Long, a professor at the Institute of Plant Biology at the University of Illinois, and his team “tweaked” the gene that codes a protein known as PsbS that’s crucial to photosynthesis. PsbS plays a key role in relaying information about the quantity of daylight, which triggers the opening and closing of the leaf stomata. Keep the stomata closed more and the plant will transpire less and use less water.

However, there’s the question of whether a plant modified in such a way, especially a high-yield food crop, would produce as much as an unmodified plant, since closed stomata mean less photosynthesis. Much more research is needed. **GT**