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Monsanto, BASF Discover Drought Tolerance Gene In Corn

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According to a [press release](#), scientists at Missouri, US-based [Monsanto Company](#) and Ludwigshafen, Germany-based [BASF Corp.](#) have unveiled the discovery that a naturally-occurring gene can help corn plants combat drought conditions and confer yield stability during periods of inadequate water supplies. The companies will use the gene in their first-generation drought-tolerant corn product, which will be the first biotechnology-derived drought-tolerant crop in the world.

The drought-tolerant corn contains the cspB gene, from *Bacillus subtilis*. CspB codes for an RNA chaperone, which are commonly occurring protein molecules that bind to RNAs and facilitate their function. In corn, cspB works by helping the plant maintain growth and development during times of inadequate water supply. A corn plant is particularly vulnerable to drought during reproductive growth stages; by mitigating the impact of drought on the plant, cspB helps provide yield stability, which is of significant value to farmers faced with unpredictable rainfall.

The two companies targeted the drought-tolerant corn product for as early as 2012, pending appropriate regulatory approvals. Both companies also recently announced that they have completed regulatory submissions for cultivation in the United States and Canada, and for import to Mexico, the European Union and Colombia. Submissions in other import markets will follow in the months to come. According to a United Nations' Food and Agriculture Organization ([FAO](#)) report, the number and duration of dry spells, especially in already drought-prone areas, is expected to increase.

Drought-tolerant corn technology is part of the R&D and commercialization collaboration in plant biotechnology between BASF and Monsanto, announced in March 2007. The two companies are jointly contributing US \$1.5 billion over the life of the collaboration, which is aimed at developing higher-yielding crops and crops more tolerant to adverse environmental conditions such as drought.

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