

Drought Tolerance Research in Maize

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There is a considerable amount of research devoted to the development of drought tolerance in plants. A majority of this research has been conducted in model species whereby hundreds of genes have been shown to create functional efficacy for drought tolerance. The current challenge is to convert this functional efficacy in model plants into field efficacy in crop plants. Pioneer has a comprehensive research effort devoted to creating drought tolerant maize, which includes both native and transgenic approaches. Transgenes can serve as a source of novel genetic variation that interact with endogenous genes to expand the diversity amenable to selection. In addition, this new diversity allows us to expand our examination of the physiology of drought tolerance. In this talk I will provide an industry perspective of current transgenic approaches, as well as native approaches towards improving maize yields under water-limited conditions.