

Optimum[®] AQUAmax[™] hybrids Corn hybrids that help make the most of moisture

Optimum[®] AQUAmax[™] hybrids from Pioneer offer growers additional choices to help minimize risk and maximize their productivity under drought stress. Developed and tested utilizing Pioneer's extensive drought technology research and proprietary Accelerated Yield Technology (AYT[™]) system, Optimum AQUAmax hybrids help deliver a yield advantage in water-limited environments.

Water limitations and heat stress are key factors that can impact yield in many areas of the country, especially the western Corn Belt. Pioneer has been a leader in developing corn hybrids for such water-limited areas for more than 50 years.

How Optimum AQUAmax hybrids are developed

Pioneer understands that drought tolerance is a much more complex challenge compared to developing insect resistance or herbicide resistance traits. That's because the relationship between yield and low-moisture conditions is affected by many other variables such as soil type, fertilizer, heat load, diseases, insects and nutrient availability.

Because of the complexity of drought, Pioneer employs a systematic, multi-generational approach that integrates a number of different technologies. For example, using our AYT system, Pioneer researchers are able to efficiently scan and identify native traits within corn plants that enable them to improve water access and usage during low moisture stress conditions.

- Through conventional breeding, selection and testing, Pioneer achieves continual improvement of its germplasm base and hybrids.



Competitor hybrid (left) and Optimum[®] AQUAmax[™] hybrid (right) in managed moisture stress environment at research facility in California, 2009.

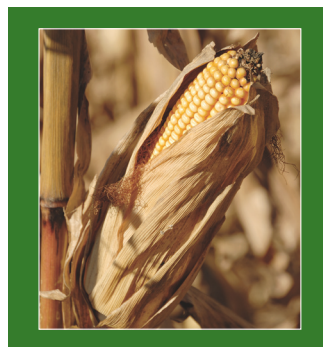
- Optimum AQUAmax hybrids contain target native traits that help deliver such characteristics as prolific silking and extended roots that reach deep for water.
- As new hybrids are developed, their performance and quality are confirmed in additional genetic backgrounds and stress environments with the help of Pioneer's exclusive EnClass[®] system.

Validated through extensive testing

In 223 on-farm comparisons, product advancement tests and research trials in 2008-10 in water-limited environments concentrated in Nebraska, Colorado, Kansas, Oklahoma and Texas and controlled stress evaluations in California and Chile, Optimum AQUAmax hybrids were tested against leading commercially available competitor and Pioneer[®] brand hybrids. Optimum AQUAmax hybrids demonstrated a 5.0 percent average yield advantage over the leading commercial hybrids tested.*

Managing for optimized performance

Pioneer is also committed to providing growers with "best management practices" information to help maximize their productivity in limited-water environments. For example, higher yields can often be achieved by planting very early hybrids that pollinate and fill ears ahead of the most severe moisture limitations of late summer. Our Agronomy Research plant population and row spacing studies are also important to help growers maximize performance under low-moisture conditions. And Pioneer's right product for the right acre placement strategy is also critical to maximizing grower productivity. Your local Pioneer sales professional can help you select the right hybrid with the right package of agronomic and defensive traits to match your field-by-field growing conditions.



Optimum[®] AQUAmax[™] hybrid in 2010 Nebraska on-farm field trial.

Optimum AQUAmax hybrids are available for 2012 planting.