

Accelerated Yield Technology (AYT™) system helping boost yield potential of Pioneer® brand Y Series soybeans

Pioneer researchers have developed an exciting system called Accelerated Yield Technology (AYT™) to further enhance the performance potential of new Pioneer® brand Y Series soybeans.

The AYT system is helping Pioneer research double the rate of genetic yield gain of its elite new varieties compared to varieties developed without these innovative molecular breeding technologies.

A matrix of breeding technologies

The AYT system is a key part of a comprehensive plan to accelerate yield gain and broaden resistance to key diseases and insects by novel trait integration through our proprietary matrix of gene mapping, molecular breeding technologies and field testing protocols.

Pioneer has led the way in developing proprietary marker-assisted selection processes, most notably to protect soybean yield from harmful pests such as soybean cyst nematode, Phytophthora root rot, brown stem rot, sudden death syndrome and frogeye leaf spot.

So, instead of employing molecular breeding technologies to only *protect* yield, AYT marker technologies are now being used to *boost* the genetic yield potential of Y Series varieties as well.



Pioneer researchers can identify high-yielding gene combinations using molecular markers before field testing even begins.

Using markers to select for yield

The AYT process starts with Pioneer researchers mining and analyzing their vast germplasm database to identify native genes associated with high yields.

Using molecular markers and patented molecular breeding techniques, plant scientists are able to track and select native genes associated with increased yields ... and stack these genes in elite Pioneer varietal lines.

These breakthroughs, using non-transgenic biotechnologies,



Seedlings are tagged in field test plots. After DNA screening results are obtained, the bar coded plants are scanned to identify those with favorable genes based on genetic testing.

allow Pioneer researchers to quickly and efficiently "design" varieties carrying these yield-enhancing genes.

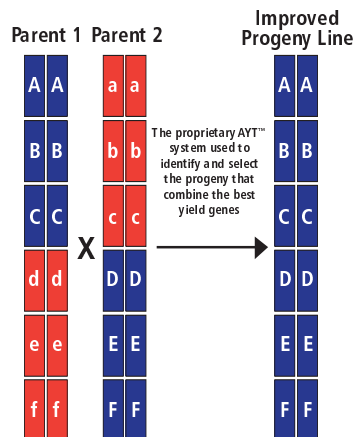
Pioneer Y Series varieties

Next-generation Pioneer Y Series soybean varieties have been developed utilizing AYT processes. A limited supply of Y Series varieties were available to growers for 2008 planting. Full commercial launch of more than 30 Y Series varieties — ranging in maturity from Group 0 through Group VII — is slated for the 2009 planting season.



Stay in touch with your local Pioneer sales professional about these exciting new products to help you make the most from your soybean acres. And for information on the latest soybean innovations, visit us at www.pioneer.com/soybeans.

Using the AYT™ system to identify varieties with highest yield potential



Blue markers with upper case letters symbolize genes associated with higher yields. Pioneer plant scientists, using proprietary AYT™ molecular breeding processes, combine the two parents to produce a progeny line that contains all six yield genes.



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