SEED TECHNOLOGY AND TRAIT UPDATE

Arnie Imholte [1/]

This past year, DuPont received the 2007 Agrow Award for "Best R&D Pipeline" in recognition of the broad array of new technology and biotech traits in development across the DuPont Agriculture & Nutrition platform. The depth and breath of the DuPont pipeline across new chemistries and genetic traits make it unique to the industry. The following is just a sampling of the exciting work done by scientists within the DuPont companies.

Pioneer Hi-Bred is preparing to launch its new Optimum™ GAT™ trait in soybeans, which offers growers expanded choices for controlling a broad spectrum of weeds through both glyphosate and ALS herbicide tolerance. The trait also will be introduced in corn and other crops.

Another trait, which Pioneer is leading the way is anthracnose stalk rot in corn. Pioneer has characterized and deployed a rare native corn gene that provides resistance to *Colletotrichum graminicola*, the fungus that causes Anthracnose Stalk Rot and premature plant death. Through the use of advanced techniques in gene mapping and molecular breeding, Pioneer is rapidly incorporating this gene into elite corn hybrids adapted to both North and South America.

Pioneer has made a significant commitment to address the need for drought-tolerant plants, and is beginning to make breakthroughs in this challenging area. It is coupling conventional breeding, molecular breeding and transgenic programs that might move novel genes into corn. Pioneer also uses a variety of tools, including gene shuffling which optimizes desired traits by multiplying the effectiveness of beneficial genes. This proprietary technology is helping to identify and develop next-generation traits to help plants survive and perform better against agronomic and environmental stresses, including numerous diseases, plant pests and drought.

Pioneer is also aggressively pursuing enhanced efficiency in nitrogen use - applying both transgenic and traditional research methods to future hybrid improvement. Our ultimate goal is to deliver a product to our customers that requires reduced quantities of nitrogen while maintaining overall yield, or alternatively, increases overall yield at existing levels of nitrogen usage.

Currently, Pioneer offers a wide range of products with the Herculex® family of traits, which offers most effective, control insect control on the market. Pioneer is currently working with the Environmental Protection Agency in ways to assist growers in managing refuge acres, and increase compliance, while reducing the problems associated with planting refuge acres.

For soybeans, new Pioneer seed and trait developments on the horizon include a line of high-yielding soybeans, increased resistance to the soybean cyst nematode and sudden death syndrome, and soybean varieties with higher levels of healthy soils.

Pioneer Hi-Bred International, Inc., a subsidiary of DuPont is the world's leading source of customized solutions for farmers, livestock producers and grain and oilseed processors. With headquarters in Des Moines, Iowa, Pioneer provides access to advanced plant genetics, crop protection solutions and quality crop systems to customers in nearly 70 countries. DuPont is a

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science-based products and services company. Founded in 1802, DuPont puts science to work by creating sustainable solutions essential to a better, safer, healthier life for people everywhere. Operating in more than 70 countries, DuPont offers a wide range of innovative products andservices for markets including agriculture and food; building and construction; communications; and transportation.