



**1999 EVALUATIONS OF NUTRITIONALLY ENHANCED CORN**

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There are several specialty corns being marketed for value-enhanced grain production. These include the TopCross, Supercede, and NutriDense corns.

These specialty corns were developed with improved nutritional traits to enhance the feed value of grain. Nutritionally enhanced grains produced by these specialty corns offer major advantages over No. 2 yellow corn because they contain more protein, essential amino acids, and energy (oil) which can help livestock feeders reduce reliance on costly ingredients and supplements.

The Supercede and NutriDense corns have been introduced more recently, and we undertook limited testing of Supercede hybrids in 1998. Unlike the TopCross high oil corn production system which involves the use of blends, the Supercede and NutriDense nutritionally enhanced corns

are single cross hybrids. The Supercede and NutriDense corn hybrids have been licensed to seed companies for distribution and are registered trademarks of Dow AgroSciences and ExSeed Genetics, respectively.

Evaluations of nutritionally enhanced corns in 1999 were conducted at the OSU-OARDC Research Farm at Wooster in northeast Ohio and the OSU-OARDC Northwest Branch Research Farm near Hoytville in northwest Ohio. Nine nutritionally enhanced corns including two Supercede hybrids, six NutriDense hybrids, and a single cross high oil corn hybrid) from five seed companies were planted at each site (Supercede and NutriDense are trademarks of Dow AgroSciences and ExSeed Genetics, respectively.) A normal (low oil) single cross hybrid was also included as a check.

Grain yields of the nutritionally enhanced corn hybrids ranged from 164 to 191 bushels per acre at Hoytville and 119 to 141 bushels per acre at Wooster. At Hoytville, most of the Supercede and NutriDense entries produced yields that were not significantly different

from the normal corn hybrids. Yields of most of the Supercede and NutriDense hybrids were comparable. Differences in yield among the specialty and normal hybrids were not significant at Wooster.

Grain produced by the NutriDense, Supercede, and single cross high oil corn was characterized by higher oil content than grain of normal corn hybrid (5.9 percent vs. 4.2 percent at Hoytville; 6.0 percent vs. 4.2 percent at Wooster). There were significant differ-

ences in grain oil content among the nutritionally enhanced hybrids at each location with oil levels ranging from 5.4 percent to 6.8 percent at both sites. Grain protein levels of nutritionally enhanced hybrids averaged 2.1 percentage points higher than the normal corn at Hoytville, but only 0.4 percent higher at Wooster.

At Hoytville, the nine nutritionally enhanced hybrids exhibited significantly higher grain protein levels than the normal corn, whereas at Wooster, protein levels in the nutritionally

enhanced and normal corn grain were generally not significantly different. At both locations, there were significant differences in grain protein among the nutritionally enhanced corn hybrids. Starch levels in grain averaged 3.5 percentage points less in nutritionally enhanced corn compared to normal corn.

Full results of the 1999 Nutritionally Enhanced Corn are available on the web at the following address: <http://www.ag.ohiostate.edu/hocorn/NECrep99.htm>



**Corn Growers Look To 21st Century**

Indiana Corn Growers Association President Michael Aylesworth testified on behalf of NCGA Sept. 21 before the Commission on 21st Century Production Agriculture.

Aylesworth is a member of the Public Policy Action Team, which will be charting NCGA's policy course into the next century.

Corn Board member Greg Guenther also spoke on behalf of the Illinois Corn Growers Association. The commission is holding field hearings around the country to seek input regarding the future of production agriculture in the United States.

Aylesworth outlined some of the fundamental tools

needed for America's farmers to remain profitable into the next century. These include expanded research; affordable, effective crop insurance tools; a strong global economy and access to markets around the world; a fair and reasonable tax system; and viable, efficient transportation systems. He also addressed a number of emerging trends that are changing the face of farming, including agribusiness mergers and acquisitions, rapid advancements in technology and biotechnology, and growing environmental concerns worldwide.

"The state of this country's agricultural economy is changing," Aylesworth noted. "For Freedom to Farm to work and for farmers to sur-

vive the 21st century, we must identify emerging trends in the industry and prepare for their implications."

**Plant Genome Projects Benefit From NSF Grants**

The National Science Foundation (NSF) has awarded \$50 million in grants for broad-based research in knowledge and distributed intelligence (KDI).

The awards are for projects as varied as knowledge networking in biocomplexity, earthquake computer modeling, and case studies in intellectual property.

A total of eight projects including genomics and other biological sciences totaling \$14.5 million will contribute to the overall plant genome mapping effort. These projects are to develop methods to handle the vast amount of information generated by research such as the Plant Genome Initiative.



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