

Variety and Planting Trials

Dordt College students hear from Ron Stertler (right, with clipboard) about custom processing specialty varieties.



The **Dordt College Agricultural Stewardship Center** continued in 1999 its comparison of three kinds of corn hybrid: a well-known commercial hybrid, its Bt-gene cousin, and an inexpensive hybrid from a local seed company ([Table 7, click to view](#)). The exact hybrids have changed over time, but the variety types have remained the same. In the first year, the local hybrid yielded more poorly than the other two. In 1998, the local hybrid outyielded the hybrids from the better-known company. As [Table 7](#) shows, 1999 was a repeat of the previous year. The local number needed a bit more drying than the other two hybrids, but its greater yield and cheaper price made it the financial winner. A picture is emerging: if you choose carefully, you can find value in local seed.

Responding to rising interest in specialty markets, the Dordt Stewardship Center also evaluated a number of light-hilum, food-type soybeans. The Asgrow number yielded the best of the six varieties ([Table 7](#)). For a producer marketing food-type soybeans, economics of these varieties would depend not only on their yields and seed costs, but also on the preferences of the buyer. Until now, many buyers of beans for the Japanese tofu market have preferred Vinton-81. That presents a quandary for growers, since Vinton yields do not measure up to modern varieties (as in this trial). That's just another reason to make sales arrangements before the crop is planted.

Mark Westgate traveled to the Wilcox field day to explain the cross-pollination effect.



Gary and Venita Wilcox, Correctionville, were, like Arlyn Valvick, stimulated by a magazine article - one in the John Deere Furrow describing how Minnesota farmers increased their corn yields by mixing hybrids in the field. The scientist who was involved with that work is Dr. Mark Westgate, and he is now at Iowa State University. As Mark explained to the field day audience, cross-pollination can lead to a yield increase of 5-8 bushels under the right conditions. It is important to find combinations of hybrids that do not share any inbred parent lines. In Minnesota, the farmers Westgate worked with tried many combinations of hybrids.

Naturally seed companies do not readily share information about hybrid parent lines. Gary worked with Garst dealer Gary Manker to choose two appropriate hybrids, 8600-IT and 8550. Wilcox seeded the two hybrids in separate strips and in strips of alternating rows of the two hybrids. He reports that these two hybrids seemed to tassel within a day or two.

How did the trial turn out? Well, we will have to wait at least another year to see the yield boost Minnesota farmers found. The yield of the hybrid mix was almost exactly halfway between that of the two individual hybrids ([Table 7](#)). Although it's hard to pinpoint the problem in this trial, Mark Westgate is interested in working with more farmers to get information on silking times for hybrids. That knowledge could lead to future trials.

Table 7. Multiple-Treatment Variety and Planting Trials									Multiple Treatment Variety and Planting Trials											
				TREATMENT "A"					TREATMENT "B"					TREATMENT "C"						
COOPERATOR	CROP	PREVIOUS CROP	YIELD SIGNIF- CANCE	DESCRIPTION	YIELD (bu. or T)	STAT.	TRT COSTS	\$ BENEFIT		DESCRIPTION	YIELD (bu. or T)	STAT.	TRT COSTS	\$ BENEFIT	DESCRIPTION	YIELD (bu. or T)	STAT.	TRT COSTS	\$ BENEFIT	OVERALL COMMENTS
DORDT COLLEGE	CORN	SOYBEANS	*	NK 44640	168.5	b	\$44.09	\$0.00		NK 4640Bt	169.4	b	\$55.54	(\$11.46)	VIKING 4921	180.1	a	\$37.38	\$25.86	LOCAL HYBRID > NK HYBRID > NK Bt HYBRID. LOCAL HYBRID NEEDED DRYING
DORDT COLLEGE	SOY- BEANS	CORN	*	ASGROW 2247	56.8	a	—			VINTON 81	50.6	b	\$22.94		IA1008	55.9	ab	~\$22.00		
				IA1009	56.1	ab	~\$18.70			IA2016	54.4	ab	26.51		IA2034	51.3	ab	\$22.66		
STRUTHERS	CORN	CORN	*	0 NITROGEN	112.9	b	\$0.00			100 LBS N	137.4	a	\$16.92		140 LBS N	138.7	a	\$21.80		AVG. STALK NITRATE ADEQUATE IN ZERO-N, BUT 2 REPS YIELDED POORLY
WILCOX	CORN	SOYBEANS	NS	GARST 8600IT	190.7	a	\$29.39	\$0.00		GARST 8550	205.8	a	\$29.39	\$0.00	ALTERNATE ROW MIX	198.8	a	\$29.39	\$0.00	HYBRIDS TASSELED WITHIN 1-2 DAYS. 8550 FLEXED WITH LATE-SEASON RAIN