Strip Intercropping -- Walking and Jumping in a Dry Year

Figure 9. Corn yields in walking and jumping strips, 2000
White-Jumping, Black-Walking

In 1999, **Paul and Karen Mugge**, Sutherland, worked with ISU agronomist Richard Cruse to compare two strip intercropping systems, dubbed "walking" and "jumping" strips. The goal was to jump the corn strips around the field ahead of the rootworm beetle larvae, which can migrate in the soil. In 1999, the jumping strips were successful, giving a 40-bushel yield bonus in the border rows of corn that receive extra sunlight. The 2000 crop year in northwest Iowa was dominated by drought conditions. Table 8 and Fig. 9 show that yields overall were down in the two systems. Perhaps due to moisture stress, there was no yield bonus in the #1 rows, located on the south edges of the strips. In strip north rows (#6), both walking and jumping strips exhibited a yield bonus of 30-40 bushels. The dry soil conditions may have made it more difficult for the rootworm larvae to migrate to the #6 rows in the walking strips.

TABLE 8. Strip Intercropping, Row Yields and Stands – "Jumping" vs. "Walking" Strips

EAST-WEST STRIPS	MUGGE			
	"JUMPING"		"WALKING"	
ROW	YIELD	STAND	YIELD	STAND
	BU/ACRE	PLANTS/ ACRE	BU/ACRE	PLANTS/ ACRE
(S)	(OATS)		(SOY)	
1	151.66	31,152	157.61	31,944
2	147.02	33,792	141.58	32,736
3	135.04	28,776	139.41	32,208
4	147.52	31,680	138.96	31,944
5	156.96	28,248	140.26	32,472
6	187.62	33,000	181.65	32,472
(N)	(SOY)		(SOY)	
STRIP AVG.:	154.3	30,994	149.9	32,296