

## - 1997 Planting Date Study -

- A soybean planting date study using organic conventional tillage in 1997 reveals that the greatest weed pressure from giant foxtail, velvet leaf, Pennsylvania smartweed and pig weed occurred for the May 16th planting date. The number of foxtail heads per acre at canopy closure for the June 19th planting date was only 8 % the number as that of the May 16th planting date, Table 2. The excessive weeds could be controlled between the rows where cultivation eliminated all, including volunteer corn. However, the weeds within the row, especially giant foxtail and ivy leaf morning glory, were not satisfactorily reduced by two conventional tillage cultivations. Barring direct cultivation of crop plants, crop counts at maturity were essentially the same as at emergence for planting dates 1 through 3; however, the crop stand for planting date 4 was significantly less at harvest than the previous planting dates. The reduced stand of planting date 4, along with its shortened growing season, i.e. - only 2136 cumulative degree days, caused this treatment to yield very poorly, Table 1. Stand establishment for planting date 4 was very slow due to lack of soil moisture for 2 weeks after planting followed by damaging heavy rains. Thus, its final stand was only about 77% of planting date 1, Table 1. Crop yields were not tightly correlated to weed control; for example, the May 16th planting date yielded the same or greater than the later planting dates which had less weed pressure throughout most of the growing season. Plots were split and rotary hoed either once or twice. No significant improvement in weed control was detected in plots rotary hoed twice; data not shown.

**Table 1** Yield and stand counts of soybeans; harvested October 1997.

Planting Date	Yield (bu/ac @13%)	Plant count at emergence (Plants/acre)	Plant count at maturity (Plants/acre)	Cumulative Degree Days (base 50° F)
5/16/97	33.5	156333	158156	2701
6/3/1997	32.3	155750	147875	2505
6/19/1997	28.4	147875	146125	2436
7/1/1997	11.2	155094	119875	2136

**Table 2** Number of weeds per acre estimated from counts in 35 feet of row for giant foxtail heads and 175 feet of row for broadleaf weeds; counts taken at about canopy closure in Field 1.

Planting Date	Sample Date	Foxtail heads	Velvet leaf	Smartweed	Pig weed
5/16/1997	8/21/1997	41000	213	25	150
6/3/1997	9/16/1997	26500	38	0	0
6/19/1997	9/25/1997	3000	38	38	0
7/1/1997	10/16/1997	23400	13	0	0