

Soybean Planting Date Evaluations

Purpose:

Soybeans can tolerate a wide window of planting dates and still achieve reasonable yields. Wet spring conditions can hinder soybean planting sometimes resulting in late May or early June planting. For this reason some growers have pushed planting dates earlier over the last number of years. New technologies such as seed treatments and pre-tillage have also allowed for earlier planting. This project was conducted to assess soybean yield response to planting date. To make soybean planting date decisions growers need reliable long-term research results. Soybean planting date trials were conducted from 2002 – 2007 to evaluate representative weather patterns and yield impact over a relatively long period of time.

Methods:

Experiments were established in 12 fields across southern Ontario from 2002 to 2007. Trials were replicated twice to ensure accurate results. Trials were conducted in Middlesex, Oxford, Perth, and Huron counties. Experiments were planted with the same variety at one location across a number of dates from early May to early June. April planting dates were difficult to achieve since field conditions were usually not suitable for soybean planting. Only two sites allowed for April planting.

Fields were treated as a whole for fertilizer, weed and insecticide control applications. Crop inputs were applied perpendicular to the treatments whenever possible. This ensured that mistakes, misses, overlaps and any tramp damage occurred across all treatments. Three sites were conventional tillage and nine were no-till. Strips were generally 20 feet wide by the length of the field.

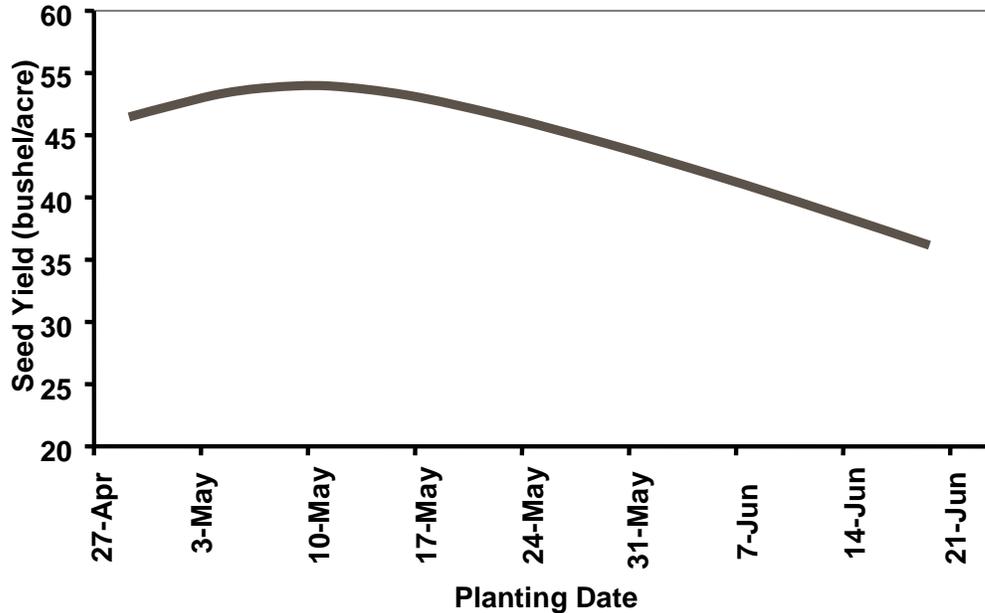
Results:

Yields were measured with a weigh wagon. Average results are presented in graph #1. See below.

Summary:

On average the highest soybean yields were achieved when soybeans were planted during the first half of May. This is somewhat earlier than soybeans have traditionally been seeded in Ontario. Waiting from May 10 to May 24 resulted in a yield loss of 4 bu/ac. Planting after the optimal window resulted in a yield loss of 0.3 bu/ac/day in this study. Field conditions did not allow for very early planting in mid April and limited planting in late April. In the two experiments where a planting date of late April was achieved a slight yield loss was evident compared to the early May planting. From this study the ideal planting window for maximum yield was the first half of May.

Graph #1. Soybean Response to Planting Date



Average soybean yield response to planting date from 2002 -2007 across 12 sites in southwestern Ontario.

Next Steps:

Very early planting dates (April) have not been fully explored. Conditions at these trial sites did not allow for very early planting.

Acknowledgements:

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