# Emergence of Polymer-Coated Soybeans Using a Very Early Planting Date

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## Objective

To evaluate the emergence of a soybean variety with two types of polymer coatings when planted early.

## Background

| | | | |
|---|---|---|---|
| Cooperator: | OSU Unger Farm | Herbicides: | Roundup (1 qt/A) |
| County: | Crawford | | Boundary (1 qt/A) |
| Soil Type: | Blount silt loam | Varieties: | Huber 323 |
| Previous Crop: | Corn | Planting Date: | April 1, 2000 |
| Tillage: | No-till | Planting Rate: | 207,570 seeds/A |
| Soil Test: | pH 6.9, P 31 ppm, K 122 ppm | Row Width: | 7.5 inches |
| Fertilizer: | 0-50-50 lb/A<br>actual N-$P_2O_5$-$K_2O$ | | |

## Methods

A completely randomized design with three treatments and five replications was used. Treatments were two types of polymer coatings and a non-coated treatment. These coatings made of biodegradable materials were designed to delay germination of the soybean seed. The coatings A and C were described as being able to delay germination and protect the seed from pathogens from one to two weeks respectively. The same soybean variety was used for all treatments. A 15-foot International no-till drill was used to plant the treatments. Each treatment plot was 10 rows wide with a length of 325 feet (varied slightly). Four stand counts were taken on June 20, 2000, in each replicate using a 36-inch hula-hoop randomly tossed in the plot.

## Results

**Table 1. Polymer Seed Coating.**

| Treatments | Emergence (plants/A) |
|---|---|
| Coating A | 57,536 |
| Coating C | 57,288 |
| No Coating | 52,390 |
| F <1<br>CV = 18.3% | NS |

## Summary and Notes

Soybeans with Coating A emerged about one week slower than the control treatment. Soybeans with Coating C were two weeks slower in emerging than the control. Plant stand counts 11 weeks after planting were not significantly different among the three treatments. Results indicate no benefit to the use of either polymer coating treatment.

Ohio State University agronomists recommend a final soybean population of 105,000 plants per acre. Bean leaf beetles damaged plots throughout the test area. Stand counts for all treatments were unacceptable to obtain representative yields. To that end, soybean yield data were not taken.

For additional information, contact:

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