

Early Plant Corn: A Preliminary Report

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The goal of this study is to test a polymer seed coating known as “Intellicoat” seed technology. The polymer seed is designed to delay emergence until temperatures are ideal for germination and growth. This delay in emergence would allow farmers to plant corn earlier than normal.

Corn planting near Lexington should normally occur between April 15 and May 15. To test the polymer coating effect on corn germination, the seeds were planted on March 17, April 3 and May 13, 2003 at Lexington, Kentucky. Two corn hybrids were planted with and without the seed coating. Air temperatures were warm enough for germination following each planting date. However, air temperatures near freezing occurred on March 23, March 31, April 12, April 13, April 14 and April 23. Frost occurred on April 23 and damaged the corn planted at the first two dates. These plants received additional damage from slugs. The preliminary results are summarized in Table 1.

Table 1. Average stand counts for corn that emerged from coated and non-coated seed corn at Spindletop Research Farm in Lexington, KY. (Note: These are only averages of four plots, but have not been statistically analyzed.)

Planting Date	Hybrid	Coated	Target Stand (per acre)	Stand Count (per acre)	
				Before Frost	After Frost
March 17	EX18S EP	Yes	30,000	26,136	109
	EX18S	No	30,000	27,588	762
	EX20R EP	Yes	30,000	29,040	1,524
	EX20R	No	30,000	29,040	544
April 3	EX18S EP	Yes	30,000	24,684	14,702
	EX18S	No	30,000	29,040	3,378
	EX20R EP	Yes	30,000	21,780	27,443
	EX20R	No	30,000	29,040	13,939
May 13	EX18S EP	Yes	30,000	...	31,944
	EX18S	No	30,000	...	31,944
	EX20R EP	Yes	30,000	...	27,588
	EX20R	No	30,000	...	27,588

Several counties are also experimenting with the polymer coated corn. Most of these studies were conducted as strip plots in each county without replications. The following is a summary of observations across the counties.

Table 2. Summary of stand counts for strip trials in several counties.

County	County Agent	Planting Date	Target Stand (per acre)	Stand Count (per acre)	
				Coated	Non-Coated
Ballard	Tom Miller	April 14	29,000	27,000	27,000
Hardin	Rodney Grusy	April 1	28,000	21,560	19,040
Hopkins	George Kelley	April 3	30,000	25,000	24,833
Hopkins	George Kelley	April 3	30,000	30,666	29,583

For additional information and updates on the project, see: <http://www.uky.edu/Ag/GrainCrops/> and click on “Early Plant” or contact your county extension agent.