Polymer seed coatings and performance of relay intercropped soybeans in indiana. (C03-mccoy100400-Oral)

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Abstract:

By planting soybeans into standing wheat, the growing season can be extended. However, soybeans growing in wheat have to compete for light, water, and nutrients until wheat harvest. This can result in tall and etiolated plants, possibly leading to lodging, mechanical damage, and lowered yields. Wheat damage during soybean seeding has also been observed. Polymer seed coatings may minimize problems by delaying emergence. Our objectives were to assess the effect of wheat row width on yield, to quantify mechanical damage caused by interseeding, to test effects of seed coatings on soybean emergence, growth, and yield, and to evaluate relay intercropping as an alternative to sequential double-cropping. Monocrop, relay-intercrop (with and without coatings), and double-crop systems were evaluated at 15 locations from 1999 to 2001. 38cm wheat yielded 14 percent less than 19cm wheat. Yield losses from mechanical damage were less than 7 percent compared to 38cm monocrop wheat. Coatings delayed soybean emergence 5 to 23 days, resulting in plants that were 3 to 15cm shorter at wheat harvest. Coatings did not improve yields relative to uncoated soybeans. Relay intercropping resulted in higher yields than double-crop soybeans except in Southern Indiana, where double-cropping common.

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