

Interplanting of a Deficient Soybean (*Glycine max*) Stand

Steven Troesser

Dr. William Wiebold, Advisor

ABSTRACT

The planting of adequate soybean seeds does not always materialize into a satisfactory final plant stand. Many different environmental factors play an important part in the process of soybean germination and emergence. Environmental factors that can adversely affect germination and emergence are moisture, oxygen supply, temperature, and diseases. All of these factors can reduce the emergence percentage and increase the time for emergence of soybeans. In the past management options for a deficient soybean stand consisted of leaving the existing stand till harvest or destroying the present stand and starting over by replanting. The objective of this study is to evaluate a third option in managing deficient soybean stands: interplanting. Interplanting is the process of planting additional seeds into an existing deficient stand. With the cost of soybean seed doubling over the past 20 years, interplanting was evaluated as a way to decrease seed cost when dealing with a deficient stand. The study was conducted in 2002, 2003, and 2004 at Bradford Research Farm located near Columbia, MO and consisted of 5 treatments, 6 seeding rates, and 4 replications. The yield data collected from this study showed that interplanting was a viable option at seeding population of 74 100 per acre. At seeding rates of 148 200 to 444 600 per acre, the “let be” treatment which is leaving the existing stand till harvest had greater yields. Replanting was not a viable option compared with the “let be” and interplanting treatments.