

2020 Soybean Singulation Study

Soybeans were planted on April 21st at 140,000 plants/acre on 15" rows at five different planting populations to see what an adequate final stand is, what canopy closure looks like between multiple populations, and how low can we drop population without sacrificing yield. We used a 16R31 ExactEmerge planter and split the planter for each planting depth, so we set half the planter for population A and the other half for population B to maximize field space. Therefore, there were 15 or 16 rows per depth.

We noted daily emergence differences by population counts for seven days. We took a final population count on 5/11 (one week after initial emergence). All population counts were taken from the center two rows of each treatment and the average was recorded.

Soybean Population	Average Population at 24hr emergence (5/5 AM -5/6 AM)	Final Population at 7 days (5/11)
140,000	103,000	121,000
120,000	80,000	101,000
100,000	67,000	82,000
80,000	52,000	70,000
70,000	49,000	60,000

Table 1. Soybean population stand counts. Multiply population listed x 1000..

Initial emergence was higher as planting population increased. Late emergers came up later in the season, but harvest stand counts were not taken due to how thick the soybeans were. There were no visual stand differences between the treatments.

Soybean Population	Moisture	Dry Yield (bu/ac)
140,000	14.9%	66.56
120,000	15.0%	64.50
100,000	15.1%	63.36
80,000	14.7%	59.65
70,000	14.7%	52.77

Table 2. Soybean planting depth yield data.

*This study was for demonstrative purposes only and was non-replicated.