

2020 Soybean Planting Depth Study

Soybeans were planted on April 21st at 140,000 plants/acre on 15" rows at six different planting depths to highlight the importance of proper seeding depth, detrimental effects of planting too shallow or too deep, and consequently the late season plant health differences based on planting depth. We used a 16R31 ExactEmerge planter and split the planter for each planting depth, so we set half the planter for depth A and the other half for depth 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 Planting Depth	Average Population at 24hr emergence (5/5 AM -5/6 AM)	Final Population at 7 days (5/11)
0.5"	20	25
1.0"	106	106
1.5"	103	110
2.0"	61	112
2.5"	15	63
3.0"	2	20

Table 1. Soybean planting depth population counts. Multiply population listed x 1000..

The 1.0" and 1.5" planting depth had the best emergence. 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 except for 0.5". Most of the 0.5" soybeans were lying on the surface and subsequently died.

Soybean Planting Depth	Moisture	Dry Yield (bu/ac)
0.5"	15.7%	28.45*
1.0"	15.6%	63.24
1.5"	15.6%	66.36
2.0"	15.6%	60.28
2.5"	15.6%	64.05
3.0"	15.5%	58.00

Table 2. Soybean planting depth yield data.

*We had reel issues and not all the grain was harvested.

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