

Effects of Planting Depth of Soybean (*Glycine max*) on Growth and Development
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The objective of this study was to examine the effects of soybean (*Glycine max*) seed placement on growth and development. Several abiotic and biotic factors influence germination and emergence, planting depth is no exception. Planting depth is a management practice that can be controlled at the time of planting, making it an ideal candidate for experimentation. To determine the effect of planting depth on soybeans, soybeans were established at different depths. Previous studies have shown that a seeding depth of 1.57 inches (4.0 cm) had a positive impact on the morphological development of soybean plants (Limede et al). To determine the optimal range for soybean placement, plants were evaluated at 0.5, 1.0, 1.5, and 2.0 inch seeding depths. The effect that depth has on soybeans was found via the monitoring of emergence, plant height, and growth stage. A randomized complete block design was utilized for this study. Data was collected 3, 6, 9, and 13 days after planting. ANOVA and t-tests assuming unequal variances were used to compare relationships between depth, germination, and development. Time was identified as a significant factor for both growth and development. Overall, from the data that was collected and analyzed, there were no significant differences found regarding the impact of planting depth of soybeans on growth and emergence. Within the fourteen day span of this experiment, no distinct differences could be identified. In production agriculture, soybeans are planted within a large window of depths depending on soil moisture and planting date. From this research, planting depth does not affect emergence or the initial growth of soybeans. It's been concluded that there would be reason to believe that extending this experiment's timeline could yield significant results relating to the original question of seeding depth and growth and development.

Relevant words: planting depth, *Glycine max*, emergence