

Yield Response of Increased Seeding Rates in Single Row Peanut in Georgia

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The foundation for achieving maximum yield potential of peanut (*Arachis hypogaea* L.) is acquiring a uniform plant stand. Plant stands can be affected by many factors like environmental conditions, seed quality, and/or seeding rate. In the last few years, growers have experienced problems with varying environmental conditions and seed quality causing a perception that increased seeding rate is needed to get adequate stands. However, growers have also adopted the idea that increased seeding rates above the UGA Extension recommendations are needed to obtain the largest yield possible. On-farm trials were conducted in Jeff Davis and Colquitt counties to determine the influence of seeding rates on plant height, and yield potential for single row peanut. Seeding rate treatments consisted of: 1.) 13.1 seed m⁻¹ using a large edible bean seed plate 2.) 19.7 seed m⁻¹ using a large edible bean seed plate, 3.) 19.7 seed m⁻¹ using a Virginia peanut seed plate, and/or 4.) 26.3 seed m⁻¹ using a Virginia peanut seed plate. Plant stands increased significantly as seeding rates increased with plant stands ranging from 18.3 to 24.3 and 11.8 to 23.6 plants m⁻¹ for the Jeff Davis and Colquitt county trials, respectively. Plant height (cm) and yield were significantly increased from 12.9 to 17.4 cm and 9,558 to 10,713 kg/ha, respectively, with the increase in seeding rates at the Colquitt county trial. Weather conditions had an impact on plant stands at the Colquitt county trial which could have contributed to the yield and growth differences. In the Jeff Davis County trial, increased seeding rates above 19.7 seed m⁻¹ did not achieve more plant height nor greater yields. Based on these trials, increased seeding rates above UGA recommendations may be warranted during situations where environmental conditions or seed quality are an issue but not where these factors have minimal influence.