

## **Peanut Yield and Quality Responses to Planting Date, Harvest Date, Cultivar, and Late-Season Flower Termination**

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As a botanically indeterminate plant, flowering and fruit initiation occurs in peanut over a long extended time period during the growing season. Thus a wide range of maturity, size, and maturity within size in peanut fruit exists at harvest. Immature kernels that meet commercial edible size specifications negatively affect quality during processing. Peanut yield, quality factors, and maturity can be affected by numerous factors during the entire production season. Research was conducted during the 2016 and 2017 crop years on a Red Bay sandy loam (Fine-loamy, kaolinitic, thermic Rhodic Kandiudults) near Dawson, GA (31.7904118°, -84.5122288°) in irrigated and non-irrigated production environments. Three planting dates (30 day intervals), two cultivars (GA 09B: high oleic and GA 06G: normal oleic), two harvest dates (on-time and 12 days later), and a late-season flower termination treatment were utilized to impose differing environmental conditions and determine the impact on peanut yield and quality as well as to provide samples for metabolomics analysis. Significant main effects for yield were irrigation, year, planting date, and harvest date. Numeric, but not statistically different yield increases resulted for the GA 06G cultivar and late-season flower termination.