

Response of Non-irrigated Peanut to Multiple Rate Delayed Flumioxazin Applications

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Flumioxazin is a crucial tool for weed management in Georgia, and across the United States peanut producing region. Over 75% of Georgia hectares are treated with flumioxazin to control troublesome weed species. It is crucial weed control is achieved during weeks three through eight of the nearly 22-week long growing season. Lack of weed control can be detrimental to peanut yield and quality. Though flumioxazin is heavily utilized, peanut injury has been noted under unfavorable environmental conditions after planting. This is often reported for irrigated peanut during cool and wet springs, after growers use water to establish a uniform stand. However, there is minimal information about peanut establishment when growers apply flumioxazin under non-irrigated production. Research was conducted in Georgia at Tifton and Plains, investigating the response of non-irrigated peanut to multiple rates and timings of flumioxazin applications. Flumioxazin at 0, 27, 54, and 107 g ai ha⁻¹ was applied at 0, 3, 5, 7, 10, and 14 d after planting (DAP) on GA-16HO. For the 0, 3, 5, 7, 10, and 14 DAP, 1.3 cm of accumulated rainfall was reached on 4, 1, 0, 13, 10, and 6 d after treatment (DAT) for Plains, and 2, 1, 15, 13, 10, and 6 DAT for Plains, respectively. Data collected included crop width, stand counts, percent injury to the non-treated control, and final yield. Data was analyzed using Tukey's HSD for means separation. In Tifton, the overall trend indicated as rate and time after application increased, yield, stand counts, and plant width decreased, with injury increasing. Plains did not indicate a trend for rate, but as application time after planting increased, peanut was negatively affected.