

Peanut Response to Dual Magnum and Valor Under High Moisture Conditions

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Peanut injury from preemergence applications of Dual Magnum (s-metolachlor) and/or Valor (flumioxazin) is often a concern for growers when moisture conditions are high during the first 21 to 30 days after planting (DAP). Limited research has addressed the effects of these herbicides under extreme moisture conditions. Therefore, small-plot, replicated field trials were conducted in 2017 and 2018 to evaluate the effects of Dual Magnum and Valor combinations on peanut growth and yield under high moisture conditions. Dual Magnum 7.62EC (0, 16, 21, and 42 ozs/A) and Valor SX 51WG (0, 3, and 6 ozs/A) were applied alone or in combination immediately after peanut planting (GA-06G). The 1X labeled rates for Dual Magnum and Valor are 16 oz/A and 3 oz/A, respectively. Within the first 7 DAP, irrigation/rainfall events totaled 4.29" to 5.35". By 30 DAP, rainfall/irrigation events totaled 7.92" to 11.32". The plot area was maintained weed-free throughout the growing season. Data collected via destructive harvests at 19 to 21 days after treatment included peanut plant density, whole-plant biomass, and J-rooting. Due to a later planting date in 2017, peanut yield data were not obtained. However, peanut yield data were collected in 2018 using commercial harvesting equipment. No interactions between Dual Magnum and Valor were observed. Neither Dual Magnum nor Valor had an effect on peanut plant density or J-rooting. Valor caused 2% to 11% (3 oz/A) and 16% to 28% (6 oz/A) reductions in whole-plant biomass. Dual Magnum caused 6% (16 oz/A), 13% to 20% (21 oz/A) and 22% to 28% (42 oz/A) reductions in whole-plant biomass. Valor had no effect on peanut yield. Dual Magnum reduced peanut yields by 4% (16 oz/A), 5% (21 oz/A), and 11% (42 oz/A).