

Field Evaluation of Flumioxazin Formulations for Weed Control in Peanut

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According to a recent agrichemical use survey, herbicides were applied to 94% of the peanut acres grown in the U.S. The most popular peanut herbicide applied was flumioxazin with 62% of the acreage treated. Flumioxazin, sold under the trade name of Valor® (Valent), was first registered for use in peanut in 2001. Since that time, other flumioxazin formulations have been commercialized including Panther® (Nufarm), RedEagle Flumioxazin (RedEagle), and Rowel® (Monsanto). All of these products are formulated as 51% water dispersible granules (WDG). Newer flumioxazin formulations, Valor® EZ (Valent) and Panther® SC (Nufarm), are liquids (4 lb ai/gallon). In 2017, research was conducted in Georgia to compare the performance of various flumioxazin formulations for use in peanut weed management systems. A small-plot, replicated field trial was conducted at the University of Georgia Ponder Research Farm near Ty Ty, Georgia. The trial was arranged in a randomized complete block design with a 4 by 3 factorial design (4 flumioxazin formulations and 2 application rates). Panther® 4SC, RedEagle Flumioxazin 51WDG, Valor® EZ 4SC, and Valor® SX 51WDG were applied preemergence immediately after planting at 3.0 or 6.0 oz/A in combination with Prowl® H₂O (pendimethalin). Cadre® (imazapic) + Dual Magnum® (s-metolachlor) + 2,4-DB were also applied at 32 days after planting. Treatments were replicated four times. All herbicides were applied using a CO₂-powered backpack sprayer calibrated to deliver 15 GPA at 38 PSI using AIXR 11002 nozzles. There were no interactions between flumioxazin formulations and rates. When averaged over rates, the RedEagle formulation caused less peanut injury when compared to the other formulations. When averaged over formulation, the 6.0 oz/A rate caused more peanut injury than the 3.0 oz/A rate. No differences in Palmer amaranth (*Amaranthus palmeri*) control and peanut yield were observed between formulations or rates.