Evaluation of Flumioxazin Formulations for Weed Control in Peanut

Miller,* J.T.[1], Prostko, E.P.[2], and Carter, O.W.[3]

[1]Jeff Davis County Extension Agent, UGA Cooperative Extension, Hazlehurst, GA 31539
[2]Professor and Extension Weed Specialist, UGA Department of Crop & Soil Sciences, Tifton, GA 31793
[3]Graduate Research Assistant, UGA Department of Crop & Soil Sciences, Tifton, GA 31793

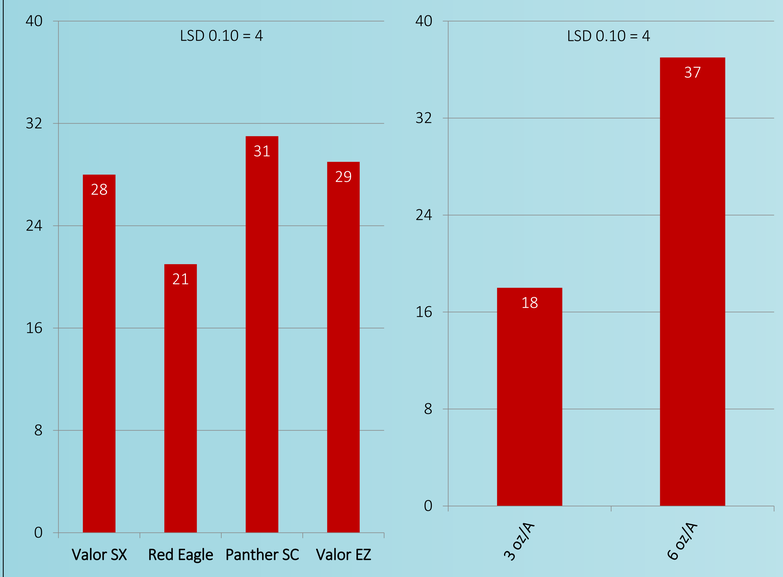
Introduction:

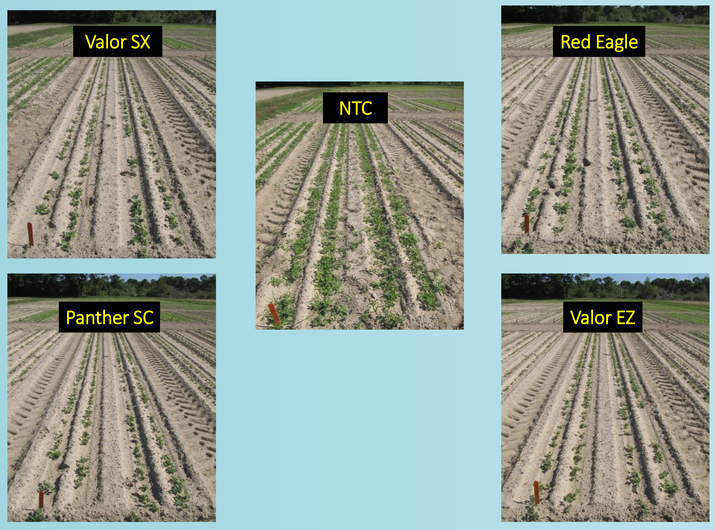
Peanuts are an important crop for Jeff Davis County and the state of Georgia with 840,000 acres planted statewide in 2017. According to a 2013 USDA/NASS Agricultural Chemical Use Survey, flumioxazin is the top herbicide applied to U.S. peanut. According to this survey, flumioxazin was applied on 62% of the U.S. peanut acres. With several new flumioxazin formulations on the market in 2017, many peanut growers were concerned about how these new products would perform. Thus, research was conducted to evaluate three of the new formulations.

Materials and Methods:

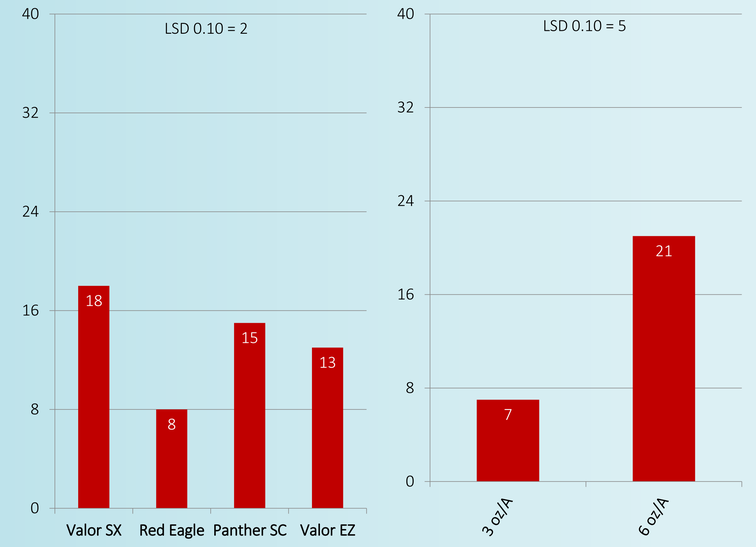
- Small-plot field trial conducted at the UGA Ponder Research Farm – Ty Ty, GA
- 'GA-06G' planted on April 24, 2017 (twin rows)
- Irrigated
- 4 X 2 factorial in RCB design
- 4 flumioxazin formulations:
  - *Valor SX 51 WG*
  - *Red Eagle Flumioxazin 51WG*
  - *Panther 4SC*
  - *Valor EZ 4SC*
- 2 herbicide rates:
  - *3 oz/A*
  - *6 oz/A*
- 4 replications (6' x 25' plots)
- All treatments also included Prowl H_2O 3.8ASC @ 32 oz/A (2 DAP) fb Cadre 2AS @ 4 oz/A + Dual Magnum 7.64EC @ 21 oz/A + 2,4-DB 1.75SL @ 18 oz/A (32 DAP)
- Application equipment: backpack sprayer, 15 GPA, AIXR 11002 nozzles, 38 PSI, 3.5 MPH, 20" spacing, 20" boom height.

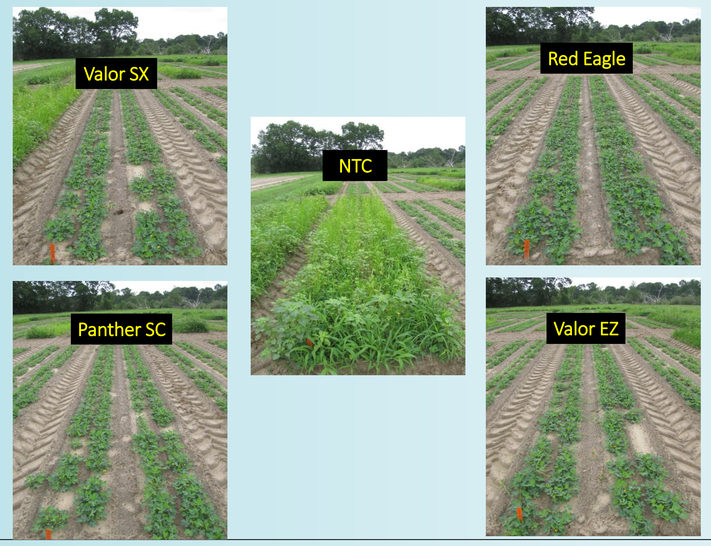
Peanut Stunting (%) - 21 DAP



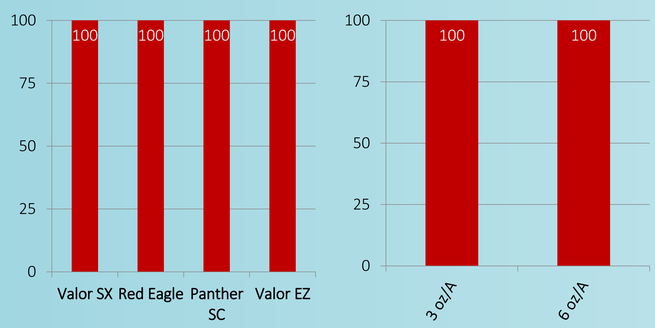


Peanut Stunting (%) - 45 DAP

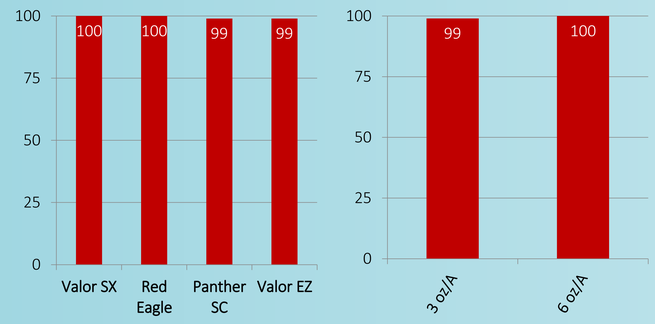




Palmer Amaranth Control (%) - 21 DAP



Palmer Amaranth Control (%) - 45 DAP



Results:

- No interactions between flumioxazin formulation and rate were observed (P > 0.11).
- When averaged over rates, the Red Eagle flumioxazin formulation caused less peanut stunting when compared to the other formulations.
- When averaged over formulations, the 6 oz/A rate caused more peanut stunting than the 3 oz/A rate.
- No differences in Palmer amaranth control were observed between formulations or rate.
- No differences in peanut yield were observed between formulations or rate (P > 0.59).

Peanut Yield (lbs/A)