

HERBICIDE PROGRAMS FOR CONTROL OF PALMER AMARANTH IN SOUTH TEXAS PEANUT

2021 project report by Josh McGinty and James Grichar
Factsheet prepared by Emi Kimura

BACKGROUND INFORMATION

When? – 2021

Where? – Pearsall, TX

Planting date? – June 16, 2021


Soil texture? – Duval loamy fine sand


Target weed? – Palmer amaranth


Spray information? – Table 1


Dual Magnum PRE (80%), Prowl H₂O PRE followed by Anthem Flex + 2,4-DB EPOST (81%), Prowl H₂O PRE followed by Cadre + 2,4-DB EPOST (84%), Prowl H₂O + Valor PRE (88%), Prowl H₂O + Valor + Dual Magnum PRE (96%), Prowl H₂O + Dual Magnum PRE followed by Dual Magnum + 2,4-DB MPOST (98%), and Prowl H₂O + Valor + Dual Magnum PRE followed by Dual Magnum + 2,4-DB MPOST (98%).

RESULTS AND DISCUSSION

 Thirteen days after PRE applications were made, control of Palmer amaranth was highest with tank mixtures of Prowl H₂O with either Valor, Dual Magnum, Valor + Dual Magnum, Anthem Flex, or Outlook (99-100% control), versus that of Prowl H₂O + Warrant (90%), Prowl H₂O + Pursuit (60%), or Prowl H₂O alone (67 to 78%) (Figure 1).

 Fourteen days after EPOST applications were made, control of Palmer amaranth was greatest with Prowl H₂O + Valor PRE (91%), Prowl H₂O + Outlook (91%), Prowl H₂O + Dual Magnum PRE (92%), and Prowl H₂O + Valor + Dual Magnum PRE (96 to 97%).

 By four weeks after all applications were made, the greatest control of Palmer amaranth was observed with Prowl H₂O +

 At the final evaluation (48 DA MPOST), control of Palmer amaranth was highest with Prowl H₂O + Valor + Dual Magnum PRE followed by Dual Magnum + 2,4-DB MPOST (98%), Prowl H₂O + Dual Magnum PRE followed by Dual Magnum + 2,4-DB MPOST (97%), Prowl H₂O + Valor + Dual Magnum PRE (95%), Prowl H₂O PRE followed by Cadre + 2,4-DB EPOST (92%), Prowl H₂O PRE followed by Anthem Flex + 2,4-DB EPOST (88%), Prowl H₂O + Dual Magnum PRE (83%), Prowl H₂O + Valor PRE (78%), and Prowl H₂O + Anthem Flex (78%).


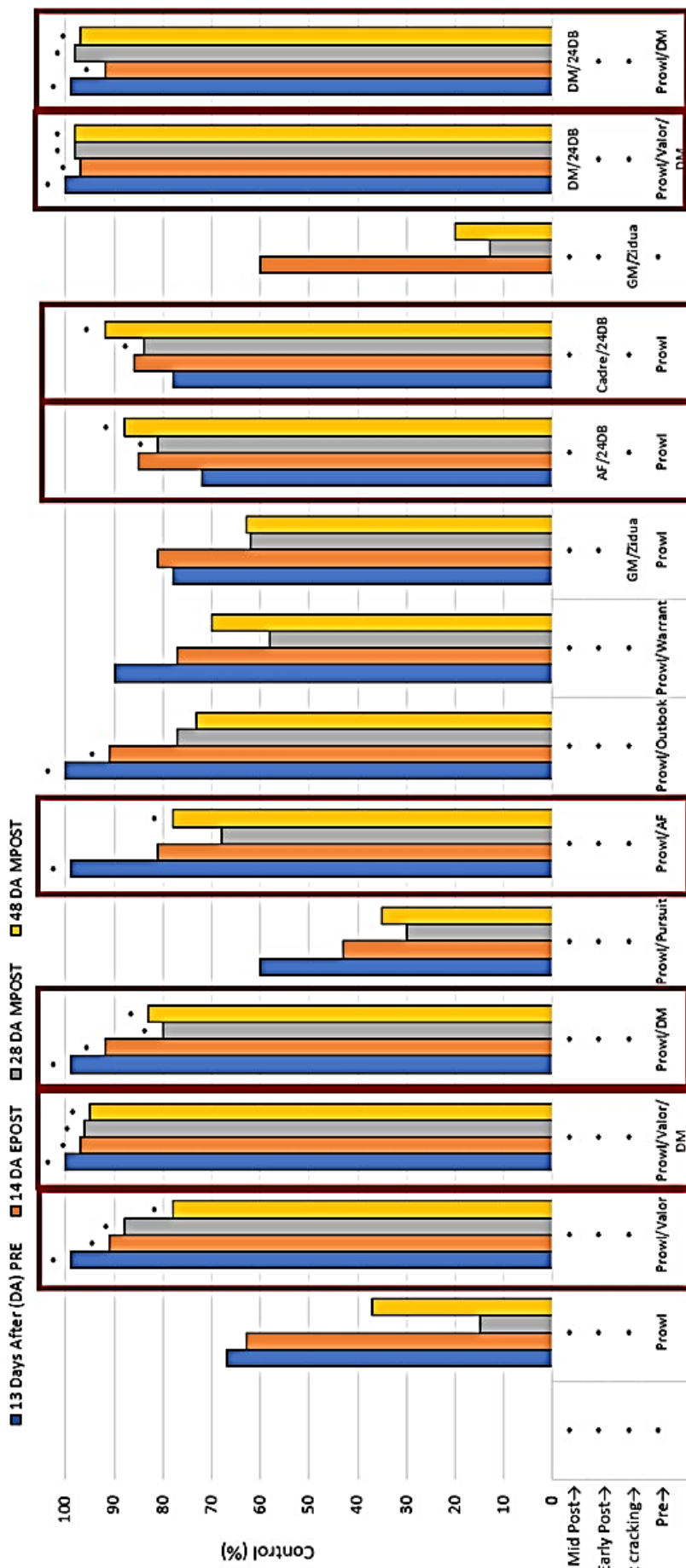
 Applications of Gramoxone + Zidua at cracking resulted in 20 to 25% stunting of peanut at 15 days after application. The application of Anthem Flex EPOST resulted in 14% burning of peanut leaf tissue at 14 days after EPOST. No crop injury was observed with any other herbicide treatments (data not shown).

Table 1. Environmental conditions at applications, Pearsall, TX, 2021

Application timing	PRE	At-cracking	EPOST	MPOST
Application date	6/18/21	7/1/21	7/16/21	7/30/21
Application start time	9:00 AM	9:30 AM	9:35 AM	8:50 AM
Air temperature (°F)	85	80	83	79
Relative humidity (%)	60	84	71	83
Soil temperature (at 10 cm) (°F)	88	80	81	87
Soil moisture	Fair	Excellent	Excellent	Excellent
Cloud cover (%)	60	50	30	10

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INFORMATION

- Bars with * are statistically same as the highest value within a same timing of rating (P=0.05)
- Abbreviations: DM = Dual Magnum, AF = Anthem Flex, GM = Gramozone
- Rates: Prowl H2O at 1.0 qt, Valor at 2.0 oz, Dual Magnum at 1.33 pt, Pursuit at 4.0 oz, Anthem Flex at 2.0 oz, Outlook at 12.0 oz, Warrant at 1.5 qt, Zidua at 2.0 oz, and 2,4-DB at 1.6 qt
- The highest control of Palmer amaranth at the final evaluation (48 DA MPOST)

Figure 1. Herbicide programs for control of Palmer amaranth in south Texas peanut

Source: McGinty and Grichar, 2021