



Result Demonstration Report

2021 Herbicide Comparison Study for Controlling Broadleaf Weeds in Warm-Season Forage Systems

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Cooperator

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Summary

Herbicides have been proven to be an effective method for controlling weeds in warm season forage systems. Bitter Sneezeweed, Woolly Croton, Blackberry, Horsemint, False Ragweed, Black-eyed susan, Carolina Horse Nettle, Maypop, White Snake Root, Poorjoe, and Virginia Pepper Weed were the primary weeds inhabiting the test plots. Producers face many choices when selecting various products to be used in forage systems for adequate weed control. We compared herbicide efficacy on herbicides that are new to the market to herbicides that have been on the market for several years.

Objective

The objective of this result demonstration was to compare herbicide efficacy on weed control in warm-season forage systems.

Materials and Methods

Materials and rates of herbicides used for this experiment are shown in Table 1. The trial was a strip trial that was not replicated. Plots were treated on July 8, 2021 using a boom sprayer calibrated at 19 gallons of solution per acre rate. Plot size was 12 x 50 feet with a 5 feet buffer between plots. All treatments used a methylated seed oil (MSO) as a surfactant.

Time: 10:00 a.m.- 12 p.m.

Air Temperature: 82°

Soil Temperature: 81°

Relative Humidity: 71%

Wind: South at 1 mph

Cloud Cover: 20%

Table I. Herbicide & Rates Used in Study

Plot	Herbicide	Application Rate/Acre
1	Weed Master	2 pints
2	PastureGard	1.5
3	Weed Master	3 pints
4	DuraCor	12 oz
5	Grazon Next HL	1.2 pints
6	DuraCor	16 oz
7	Grazon P+D	1 qt
8	DuraCor + Remedy Ultra	12 oz + 6 oz

Results and Discussion

Strip trial with 8 different treatments and sprayer was calibrated at 19 gallons per acre solution treated on July 8, 2021, using a boom sprayer. Plot size was 12 x 50 foot with a 5 feet buffer between plots. Plot ratings were evaluated at approximately 30, 60, and 90 days after treatment (DAT). The results are in Table II. Table III shows the cost of each individual treatment for one-acre rate of tank mix.

Trade names of commercial products used in this report is included only for better understanding and clarity. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by Texas AgriLife Extension Service and the Texas A&M University System is implied. Readers should realize that results from one experiment do not represent conclusive evidence that the same response would occur where conditions vary.

Table II. Percent Control for 30, 60, & 90 Days after Treatment (DAT)

Plot	Herbicide	Application Rate/Acre	30DAT % Control	60DAT % Control	90DAT % Control
1	Weed Master	2 pints	80	70	70
2	PastureGard	1.5	99	90	85
3	Weed Master	3 pints	90	85	80
4	DuraCor	12 oz	90	95	95
5	Grazon Next HL	1.2 pints	95	95	95
6	DuraCor	16 oz	90	98	98
7	Grazon P+D	1 qt	95	98	98
8	DuraCor + Remedy Ultra	12 oz + 6 oz	95	99	99

Table III. 2021 Herbicide Comparison Study for Controlling Broadleaf Weeds in Warm-Season Forage Systems Cost/Acre

<u>Herbicide (s)</u>	<u>Application Rates</u>	<u>Cost (\$)/Acre</u>
Weed Master	2 pints	\$7.58
PastureGard	1.5	\$22.56
Weed Master	3 pints	\$11.38
DuraCor	12 oz	\$9.47
Grazon Next HL	1.2 pints	\$8.00
DuraCor	16 oz	\$12.63
Grazon P+D	1 qt	\$7.04
DuraCor + Remedy Ultra	12 oz + 6 oz	\$12.96

* Costs are the average retail prices from Rozell Sprayers & Manufacturing and Red River Specialties (Sept. 23, 2021) for Herbicide Only no, Surfactant

DuraCor = \$101 per gallon = \$101/128 oz = \$0.789/oz x 12 ounces per acre= \$9.47 per acre

GrazonNext HL = \$102.50 per 2 gal=\$102.50/256 oz oz = \$0.400/oz x 20 oz per acre= \$8.00 per acre

DuraCor = \$101 per gallon = \$101/128 oz = \$0.789/oz x 16 ounces per acre= \$12.63 per acre

PastureGard HL = \$120.00 per gallon = \$120/128 oz = \$0.94/oz x 24 oz per acre = \$22.56 per acre

Weedmaster = \$75.75 per 2.5 gallons = \$75.25/320 oz = \$0.237/ oz x 32 oz per acre = \$7.58 per acre

DuraCor = \$101 per gallon = \$101/128 oz = \$0.789/oz x 12 oz per acre= \$9.47 per acre

Remedy Ultra = \$74.50/gal = \$74.50/128 oz = \$0.582/oz x 6 oz per acre = \$3.49/acre

Weedmaster = \$75.75 per 2.5 gallons = \$75.75/320 oz= \$0.237/ oz x 48 oz per acre = \$11.38 per acre

Grazon P+D = \$70.38 per 2.5 gallon = \$70.38/320 oz= \$0.22/ oz x 32 oz per acre rate = \$7.04 per acre

Conclusions

This is the second year of a multi-county result demonstration comparing new to the market herbicides to herbicides that have been on the market for many years. Very positive results have occurred. These result demonstration plots demonstrated that proper weed control early in the season coupled with adequate rainfall will produce more forage. Adequate forage growth is also a mechanism for weed control due to keeping the ground covered with a dense forage. Also noted is that herbicides with no soil residual had increased weed pressure in the treated areas as the season progressed compared to herbicides with soil residual.

Acknowledgements

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