



Result Demonstration Report

2019 Herbicide Comparison Study for Controlling Greenbrier and Other Broadleaf Weeds

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Summary

Herbicides have been proven to be an effective method for controlling weeds in forage systems. Greenbrier is a very tough weed to control in pastures. Producers face many choices when selecting various products to be used in forage systems for adequate weed control.

Objective

The objective of this result demonstration was to compare herbicide effectiveness on greenbrier and other broadleaf weed control in 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 June 28, 2019 using a tractor and sprayer calibrated at 17 gallons per acre rate. Plot size was 30 x 50 feet

Time: 10 a.m.-3 p.m.

Air Temperature: 85°

Soil Temperature: 82°

Relative Humidity: 90%

Wind: South to South at 8 MPH

Cloud Cover: 35%

Table I. Herbicide & Rates Used in Study

Plot	Herbicide & Rate
1	PastureGard HL 24 oz/acre
2	MezaVue @ 18 oz/acre
3	MezaVue @ 24 oz/acre
4	MezaVue @ 32 oz/acre
5	GrazonNext HL @ 20 oz/acre + Remedy Ultra @ 8 oz/acre + 0.1 oz/acre MSM
6	2,4-D @ 32 oz/acre + 8 oz/acre Remedy Ultra + 0.1 oz/acre MSM
7	Weedmaster @ 48 oz/acre (3 pints)
8	Chaparral @ 2 oz/acre
9	Surmount @ 24 oz/acre
10	Weedmaster @ 32 oz/acre + 8 oz/acre Remedy Ultra + 0.1 oz/acre MSM

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.

Results and Discussion

Plots were treated on June 26, 2019 using a pull-behind sprayer with a cluster nozzle. Sprayer was calibrated to apply 17 gallons of spray solution per acre. Plot ratings were evaluated at approximately 30 & 60 Days after treatment. The results are in Table II. Table III shows the cost of each individual treatment for one-acre rate of tank mix.

Table II. Percent Control for 30 & 60 Days after Treatment

Plot	Herbicide/ Rate	30 DAT	60DAT
1	PastureGard HL @ 24 oz/acre	80%	80%
2	MezaVue @ 18 oz/acre	95%	95%
3	MezaVue @ 24 oz/acre	95%	95%
4	MezaVue @ 32 oz/acre	95%	95%
5	Grazon Next @ 20 oz/acre Remedy @ 8 oz/acre MSM @ 0.1 oz/acre	95%	90%
6	2,4-D @ 32 oz/acre Remedy @ 8 oz/acre MSM @ 0.1 oz/acre	60%	60%
7	Weedmaster @ 48 oz/acre	40%	50%
8	Chaparral @ 2 oz/acre	60%	70%
9	Surmount @ 24 oz/acre	60%	70%
10	Weedmaster @ 32 oz/acre Remedy @ 8 oz/acre MSM @ 0.1 oz/acre	50%	60%

Table III. 2019 Green brier & General Weed Control Result Demonstration Cost/Acre

<u>Herbicide (s) and Application Rates</u>	<u>Cost (\$)/Acre</u>
PastureGard HL @ 24 oz/acre	\$22.50/acre
MezaVue @ 18 oz/acre	\$19.62/acre
MezaVue @ 24 oz/acre	\$26.16/acre
MezaVue @ 32 oz/acre	\$34.88/acre
Grazon Next @ 20 oz/acre \$7.60 Remedy @ 8 oz/acre \$4.69 MSM @ 0.1 oz/acre \$0.30	\$12.59/acre
2,4-D @ 32 oz/acre \$3.84 Remedy @ 8 oz/acre \$4.69 MSM @ 0.1 oz/acre \$0.30	\$8.83/acre
Weedmaster @ 48 oz/acre	\$10.13/acre
Chaparral @ 2 oz/acre	\$12.40/acre
Surmount @ 24 oz/acre	\$10.88/acre
Weedmaster @ 32 oz/acre \$6.75 Remedy @ 8 oz/acre \$4.69 MSM @ 0.1 oz/acre \$0.30	\$11.74

* Costs from Rozell Sprayers & Manufacturing and Red River Specialties (December 5, 2019) for Herbicide Only no, Surfactant

PastureGard HL = \$120.00 per gallon = \$120/128 oz = \$0.9375/ounce x 24 ounce per acre= \$22.50 per acre

MezaVue = \$140 per gallon = \$140/128 oz = \$1.09/ ounce x 18 oz per acre rate = \$19.62 per acre

MezaVue = \$140 per gallon = \$140/128 oz = \$1.09/ ounce x 24 oz per acre rate = \$26.16 per acre

MezaVue = \$140 per gallon = \$140/128 oz = \$1.09/ ounce x 32 oz per acre rate = \$34.88 per acre

GrazonNext HL = \$49.00 per gallon = \$49.00/128 oz = \$0.38/ounce x 24 ounce per acre= \$7.60 per acre

Remedy Ultra = \$75.00/gal = \$75.00/128 = \$0.585/ounce x 8 ounce per acre = \$4.69/acre

Metsulfuron Methyl = \$0.30 per tenth x 1 = \$.30/acre

2,4-D = \$37.50 per 2.5 gallons = \$15 per gallon = \$15/128 oz per gallon = \$0.12/ ounce x 32 oz per acre = \$3.84 per acre

Weedmaster = \$67.50 per 2.5 gallons = \$27 per gallon = \$27/128 oz per gallon = \$0.21/ ounce x 48 oz per acre = \$10.13 per acre

Chaparral = \$124 per 20 oz = \$6.20 per ounce x 2 ounce per acre = \$12.40 per acre rate

Surmount = \$145 per 2.5 gallons = \$58.00 per gallon = \$58/ 128 = \$0.45/ounce x 24oz. per acre rate = \$10.88 per acre

Weedmaster = \$67.50 per 2.5 gallons = \$27 per gallon = \$27/128 oz per gallon = \$0.21/ ounce x 32 oz per acre = \$6.75 per acre

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Conclusions

This is the first year of a multi-county research trial. There was no chance of rain the day the test plots were sprayed. We did get a rain shower just after the last plot was sprayed. Plots 1-5 had enough time before the rain shower to be rain fast. Plots 6-10 did not have enough time to be rain fast, therefor, herbicide efficacy was decreased. Very positive results have occurred. More research needs to be conducted to get an accurate account on which herbicides would be effective in controlling greenbrier in forage systems.

Acknowledgements

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