Result Demonstration Report

2020 Herbicide Comparison Study for Controlling General Broadleaf and Viney 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, 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 June 11, 2020 using a tractor and sprayer calibrated at 15 gallons per acre rate. Plot size was 12 x 50 feet with a 5 feet buffer between plots.

Time: 10:30 a.m.- 1 p.m.

Air Temperature: 81°

Soil Temperature: 81°

Relative Humidity: 35%

Wind: East at 4 mph

Cloud Cover: 20%

Table I. Herbicide & Rates Used in Study

Plot	Herbicide	Application Rate/Acre
1	DuraCor	12 oz
2	Grazon Next	1.2 pints
3	DuraCor	16 oz
4	PastureGard	1.5 pints
5	Weed Master	2 pints
6	DuraCor + Remedy Ultra	12 oz + 6 oz
7	Weed Master	3 pints
8	MezaVue	18 oz

Results and Discussion

Strip trial with 8 different treatments and sprayer was calibrated at 15 gallons per acre solution treated on June11, 2020. Plot size was 12 x 50 feetwith a 5 feet buffer between plots. Plots were treated on June 11, 2020 using a boom sprayer. Sprayer was calibrated to apply 15 gallons of spray solution per acre. Plot ratings were evaluated at approximately 30, 60, 90, and 120 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.

Table II. Percent Control for 30, 60, 90 &120 Days after Treatment (DAT)

Plot	Herbicide	Application Rate/Acre	30DAT % Control	60DAT % Control	90DAT % Control	120 DAT % Control
1	DuraCor	12 oz	98	100	100	100
2	Grazon Next	1.2 pints	98	100	100	100
3	DuraCor	16 oz	98	100	100	100
4	PastureGard	1.5 pints	100	100	100	95
5	Weed Master	2 pints	85	95	95	90
6	DuraCor + Remedy Ultra	12 oz + 6 oz	99	100	100	100
7	Weed Master	3 pints	98	98	98	95
8	MezaVue	18 oz	100	100	100	100

Table III. 2020 Herbicide Comparison Study for Controlling Broadleaf Weeds in Warm-Season Forage Systems Cost/Acre

Herbicide (s)	**Application Rates**	**Cost ($)/Acre**
DuraCor	12 oz	$9.12
Grazon Next	1.2 pints	$7.60
DuraCor	16 oz	$12.16
PastureGard	1.5 pints	$22.56
Weed Master	2 pints	$7.36
DuraCor + Remedy Ultra	12 oz + 6 oz	$12.60
Weed Master	3 pints	$11.04
MezaVue	18 oz	$16.92

***** Costs from Rozell Sprayers & Manufacturing and Red River Specialties (October 15, 2020) for Herbicide Only no, Surfactant
DuraCor = $97 per gallon = $97/128 oz **=** $0.76/ounce x 12 ounces per acre= $9.12 per acre
GrazonNext HL = $49 per gallon = $49.00/128 ounces = $0.38/ounce x 20 ounces per acre= $7.60 per acre
DuraCor = $97 per gallon = $97/128 ounce **=** $0.76/ounce x 16 ounces per acre= $12.16 per acre
PastureGard HL = $120.00 per gallon = $120/128 ounces = $0.94/ounce x 24 ounces per acre = $22.56 per acre
Weedmaster = $72 per 2.5 gallons = $72/320 ounces = $0.23/ ounce x 32 ounces per acre = $7.36 per acre
DuraCor = $97 per gallon = $97/128 ounces **=** $0.76/ounce x 12 ounces per acre= $9.12 per acre
Remedy Ultra = $74.00/gal = $74.00/128 ounces = $0.58/ounce x 6 ounces per acre = $3.48/acre
Weedmaster = $72 per 2.5 gallons = $72/320 ounces= $0.23/ ounce x 48 ounces per acre = $11.04 per acre
MezaVue = $120 per gallon = $120/128 ounces= $0.94/ ounce x 18 ounces per acre rate = $16.92 per acre

Conclusions

This is the first year of a multi-county research trial 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. More research needs to be conducted to get an accurate account on which herbicides would be effective in controlling broadleaf weeds in warm-season forage systems when comparing new to the market herbicides efficacy to herbicides that have been on the market for many years.

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