Result Demonstration Report

2024 Herbicide Comparison Study for Controlling Greenbrier in Fence-lines

7P Ranch
Cooperator

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Summary

Herbicides have been proven to be an effective method for controlling weeds in fence-lines. Greenbrier (*Smilax bona-nox*) is a very tough, fast-growing weed to control because of extensive, underground rhizomes extruding from tubers. It grows as a bush in pastures and as a vine in trees and fencerows. Greenbrier can tolerate temperature extremes from very hot Texas summers to minus 18 degrees in winter. It also tolerates soil pH ranges from 4.5-8.5. Therefore, it is adapted to just about every region of Texas. Producers face many choices when selecting various products to be used in fence-lines for adequate long term weed control.

Objective

The objective of the result demonstration was to compare herbicide effectiveness on greenbrier in fence-lines.

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 September 27, 2024, using backpack sprayers with one gallon of spray solution. The greenbrier spray solution was applied until the greenbrier leaves were glistening with no runoff. The plot size was 15 feet in length.

Time: 10:20 a.m.-11:40 p.m.
Air Temperature: 78°
Soil Temperature: 84°
Relative Humidity: 86%
Wind: South to South at 8 MPH
Cloud Cover: 45%

Table I. Herbicide & Rates Used in Study

Plot	Herbicide & Rate
1	2%V/V Grazon Next + 2% V/V Remedy
2	6.6 oz/100 gallons water Chaparral
3	1.5% V/V Invora
4	2% V/V Invora
5	2% V/V Grazon P+D3 + 2% V/V Remedy
6	2% V/V PastureGard
7	1% V/V DuraCor + 2% V/V PastureGard
8	2% V/V MezaVue + 2% Remedy
9	Control

Results and Discussion

Plots were treated on September 27, 2024 using a backpack sprayer with flat fan spray nozzle tip. Plot ratings were evaluated at approximately 30, 60, 90 and 180 Days after treatment (DAT). The results are in Table II. Table III shows the cost of each individual treatment for one gallon backpack sprayer tank mix.

Table II. Percent Control for 30, 60, 90 & 180 Days After Treatment (DAT)

Plot	Herbicides & Rate Used	% Initial Plot Coverage	% Control 30 DAT	% Control 60 DAT	% Control 90 DAT	% Control 180 DAT
1	2%V/V Grazon Next + 2% V/V Remedy	85	95	100	100	100
2	6.6 oz/100 gallons water Chaparral	95	95	100	100	100
3	1.5% V/V Invora	90	95	100	100	100
4	2% V/V Invora	95	95	100	100	100
5	2% V/V Grazon P+D3 + 2% V/V Remedy	90	95	100	100	100
6	2% V/V PastureGard	95	95	100	100	100
7	1% V/V DuraCor + 2% V/V PastureGard	85	95	100	100	100
8	2% V/V MezaVue + 2% Remedy	80	95	100	100	100
9	Control	75	0	0	0	0

Table III. 2024 Herbicide Comparison for Greenbrier Control Cost/Gallon

Herbicide (s) and Application Rates	**Cost ($)/gallon**
2%V/V Grazon Next HL + 2% V/V Remedy	$1.26 + $1.64= **$2.90**
6.6 oz/100 gallons water Chaparral	**$0.48**
1.5% V/V Invora	**$2.96**
2% V/V Invora	**$3.94**
2% V/V Grazon P+D3 + 2% V/V Remedy	$1.21 + $1.64 = **$2.85**
2% V/V PastureGard	**$2.82**
1% V/V DuraCor + 2% V/V PastureGard	$1.05 + $2.82 = **$3.87**
2% V/V MezaVue + 2% V/V Remedy	$3.33 +$1.64 = **$4.97**

***** Average Costs from Rozell Sprayers & Manufacturing and Azelis (April 1, 2025) for Herbicide Only no, Surfactant
Grazon Next HL = $126.55 per 2.0/gal. = $126.55 / 256 = $0.49/ounce x 2.56 oz= $1.26/gallon solution
Chaparral = $115.45/pound = $115.45/16oz = $7.22/ounce x 0.066 oz/gal= $0.48/gallon solution
Remedy Ultra = $82.23 per 1.0/gal = $82.23/128 = $0.64/ounce x 2.56 oz= $1.64/gallon solution
Invora = $197.33/1 gal= 197.33/128= $1.54/oz x 1.92 oz= $2.96/gallon solution
Invora = $197.33/1 gal= 197.33/128= $1.54/oz x 2.56 oz= $3.94/gallon solution
Grazon P+D3 = $120.70/2 gallon = $120.70/256 oz= $0.47/ oz x 2.56 oz = $1.21/gallon solution
DuraCor = $104.50/gallon= $104.50/128 = $0.82/oz x 1.28 oz $1.05/gallon solution
PastureGuard = $140.88/gal = $140.88/128oz = $1.10/ounce x 2.56 oz/gal = $2.82/ gallon solution
MezaVue = $166.45/gal = $166.45/128oz = $1.30/ounce x 2.56 oz/gallon = $3.33/gallon solution

Conclusions

This is the first year of a multi-county research trial to control greenbrier in fence lines. Very positive results have occurred with the fall herbicide application. More research needs to be conducted to get an accurate account on which herbicides would be effective in controlling greenbrier in forage systems over a multiple year period.

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