



Vista vs Tordon 22K vs Surmount

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Summary

This project was designed to compare the three individual plant treatment herbicide options, Vista, Tordon 22K and Surmount, for control of pricklypear in Texas.

One year after treatment, pricklypear canopy cover was reduced from an average 59% to 73% depending on the herbicide used. There were no significant differences in control between the herbicides.

Two years following treatment there were no significant differences in control between treatments (58% to 81%). The trend was toward higher and less variable control with Tordon 22K and Surmount as compared to Vista.

Problem/Introduction

There are three herbicides labeled for pricklypear control in Texas. The first is picloram sold under the trade names Tordon 22K, Triumph 22K and Picloram 22K. Picloram is applied at a rate of 1 qt/ac broadcast or 1% when applied as an individual plant pad spray. Picloram kills pricklypear slowly over 1 to 2 growing seasons. This herbicide has soil activity and can harm not-target species such as oak if applied in high concentrations under the drip line of the plant. Currently this herbicide sells for approximately \$90/gallon.

Surmount has been labeled for only a few years as a control option for pricklypear in Texas. The active ingredients are a mixture of picloram and fluroxypyr. The broadcast rate of Surmount for control of pricklypear is 2 qt/ac. When applied as an individual

plant leaf spray Surmount is used at a 1% concentration, the same as picloram. This herbicide sometimes kills pricklypear faster as compared to picloram alone. Since it has less picloram in the mixture, it is also some safer to use under desirable trees. Currently Surmount sells for approximately \$55/gallon.

Vista was recently labeled for use on pricklypear in Texas. The active ingredient is fluroxypyr. It is labeled only for individual plant applications, where it is applied at a concentration of 1%. This herbicide has no soil activity and thus is safe to use under desirable trees. It is not a restricted use herbicide as compared to Surmount or picloram, and can be purchased and used without a pesticide applicators license. Currently this herbicide sells for approximately \$100/gallon.

Objectives

The objective of this herbicide trials is to compare the efficacy of picloram (Tordon 22K), Surmount, and Vista when applied as an individual plant pad spray to control pricklypear.

Materials/Methods

The herbicide trials were established at 5 locations during the summer of 2007 (Table 1). All treatments were applied as an individual plant pad spray and a concentration of 1% using a 4-wheel ATV, 10 gal spray tank, 1.8 gpm Surflo pump, and spray wands tipped with X-8 adjustable conejet nozzles. Herbicides were mixed with water. Surfactant was added at a concentration of ¼%. Hi-Light Blue Dye was added to each treatment at a rate of 1/3 oz/gal of spray mix. Pads of the target plant were sprayed to wet but not to the point of dripping.

Table 1. Location and date established for each replication.

County	Ranch	Date
San Saba	Stewardson	7/12/2007
Taylor	Richards	6/12/2007
Llano	Slater	6/18/2007
Callahan	Clear Creek	7/25/2007
Mason	Jordan	8/8/2007

Results/Discussion/Economic Impact

Percent reduction in pricklypear canopy cover one year after treatment is presented in Table 2. Although there were no significant differences between treatments at this time, there was a trend toward higher control with Tordon 22K or Surmount as compared to Vista and less variability in control.

Two years following treatment (Table 3) control using Tordon 22K and Surmount improved slightly, although there continued to be no significant differences between

treatment means. The trend was toward higher and less variable control with Tordon 22K and Surmount as compared to Vista.

Table 2. Percent reduction in pricklypear canopy cover 1 year after treatment.

Herbicide	Rate	County					Average ¹
		Mason	Llano	San Saba	Taylor	Callahan	
Vista	1%	20%	40%	90%	75%	70%	59%
Tordon 22K	1%	50%	90%	85%	50%	60%	67%
Surmount	1%	60%	50%	95%	80%	80%	73%

1 – There were no significant differences between treatment means (95% confidence level).

Table 3. Percent reduction in pricklypear canopy cover 2 years after treatment.

Herbicide	Rate	County					Average ¹
		Mason	Llano	San Saba	Taylor	Callahan	
Vista	1%	25%	80%	65%	50%	70%	58%
Tordon 22K	1%	70%	90%	95%	40%	85%	76%
Surmount	1%	80%	90%	99%	60%	75%	81%

1 – There were no significant differences between treatment means (95% confidence level).

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