



Generic Picloram for Pricklypear and Cedar Control

Wittenburg and Jones Ranches 2003

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SUMMARY

Picloram is the recommended herbicide for control of pricklypear on Texas rangelands and is also used as a leaf spray for small cedar. Currently, there is only one source of picloram, sold under the trade name Tordon 22K® by Dow AgroSciences. Micro Flo has recently developed a generic picloram they may market in the future for use on Texas rangelands.

To compare the MicroFlo generic picloram to Tordon 22K®, herbicide trials were established in Burnet and Lampasas counties during the summers of 2002 and 2003. These trials include both individual and broadcast rates for control of pricklypear and individual plant leaf sprays for control of cedar.

The first evaluation of the trials established in 2003, will not take place until 2004. Pricklypear treated in 2002 exhibited only minimal control one year following treatment. This is expected for all pricklypear treatments. Pricklypear dies slowly following picloram applications, taking 2 to 3 years before final control is achieved.

Ashe juniper treated with 1% Tordon 22K® or the Micro Flo picloram exhibited a high degree of control one year following application (100% and 96%, respectively). There was no significant difference in ashe juniper control between the two herbicides.

Both 2002 and 2003 applications will be re-evaluated in 2004.

PROBLEM/INTRODUCTION

In the past there have been very few generic herbicides for use on Texas rangelands. For example, the popular herbicide triclopyr which is used for basal stem applications on woody plants

is available only under the trade name Remedy, manufactured and sold by Dow AgroSciences. One exception is the herbicide 2,4-D, which has been out of patent for many years. This herbicide can be purchased under a variety of trade names from different sources.

Generic herbicides contain the same active ingredient as the original trade name product they compete with. But the many inert ingredients contained within a herbicide formulation may vary from the original product and impact how the herbicide mixes or its stability over time, affecting the control achieved.

Tordon 22K® is a herbicide manufactured by Dow AgroSciences that contains the active ingredient picloram. For many years Tordon 22K® has been the only herbicide recommended for control of pricklypear. The recommended rate is a 1% concentration for individual plant treatment and 1 qt/ac (1/2 lb ai/ac) for broadcast applications. This herbicide is also effective as an individual plant leaf spray when applied to small cedar (juniper).

Recently Micro Flo has developed a generic picloram, they may market in the future. This herbicide does not have a trade name at this time. If Micro Flo decides to market this product, users will have a choice as to the source of the picloram they use. To make an informed choice, users must consider costs, company support and effectiveness of the generic picloram versus the trade named product.

OBJECTIVES

The objective of these trials is to compare the Micro Flo generic picloram to Tordon 22K® when applied as a broadcast spray or individual plant treatment for control of pricklypear and as a leaf spray for cedar.

MATERIALS/METHODS

Both broadcast and individual plant treatments (pad spray) were included in these trials. Table 1 lists the location, date of application and treatments applied at each site.

Broadcast rates included 1 qt/ac of Tordon 22K® or Micro Flo generic picloram. All broadcast treatments were applied using a 4-wheel ATV, equipped with a 20 gal tank, 1.4 gpm Shurflo pump and a single KLC-9 Fieldjet nozzle. This is a boomless nozzle producing a 15 ft swath.. All herbicides were mixed with water. A non-ionic surfactant was added at a concentration of 1/4%. A total volume of 11.8 gpa was used for all applications.

Individual plant treatments (pad spray and leaf spray) were applied using the same 4-wheel ATV, equipped with hand wands and X-8 adjustable cone nozzles. Herbicides were mixed with water at the appropriate concentration. A non-ionic surfactant was added at a concentration of 1/4%. Hi-Light Blue Dye was also added to the spray mix at a concentration of 1 oz/3 gal of spray.

Table 1. Location, date of treatment and type of treatments applied.

| County | Ranch | Application Date | Species | Broadcast | | Individual Pad Spray | |
|----------|-------------|------------------|-------------|---------------------|----------------------------|----------------------|-----------------------|
| | | | | Tordon 22K® 1 qt/ac | Micro Flo Picloram 1 qt/ac | Tordon 22K® 1% | Micro Flo Picloram 1% |
| Lampasas | Wittenburg | 7/24/02 | Cedar | | | T | T |
| Burnet | Ronhaar | 7/23/02 | Pricklypear | T | T | T | T |
| Burnet | Crutchfield | 6/25/03 | Pricklypear | T | T | | |
| Burnet | Ronhaar | 6/25/03 | Pricklypear | | | T | T |
| Lampasas | Jones | 6/5/03 | Pricklypear | | | T | T |

RESULTS/DISCUSSION/ECONOMIC IMPACT

Preliminary results from trails established in 2003 will not be available until 2004. Ashe juniper treated in 2002 with 1% Tordon 22K® or the Micro Flo picloram exhibited a high level of control one year after treatment (Table 2). There was no significant difference in ashe juniper control between the two herbicides.

As expected, pricklypear treated in 2003 exhibited minimal control one year later. Control for all pricklypear treatments can be expected to improve significantly over the next growing season. All treatments will be re-evaluated in 2004.

Table 2. Percent apparent mortality for cedar and pricklypear one year following treatment.

| County | Species | Broadcast | | Individual Pad Spray | |
|----------|-------------|---------------------|----------------------------|----------------------|-----------------------|
| | | Tordon 22K® 1 qt/ac | Micro Flo Picloram 1 qt/ac | Tordon 22K® 1% | Micro Flo Picloram 1% |
| Lampasas | Cedar | | | 100 | 96 |
| Burnet | Pricklypear | 0 | 0 | 16 | 10 |

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