



## Recommendations for Spot-Spray Treatment of Tropical Soda Apple with Milestone<sup>1</sup>

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Jason Ferrell, Brent Sellers<sup>2</sup>

Tropical soda apple (TSA) is a troublesome pasture weed commonly found throughout Florida. For many years, IFAS recommended controlling TSA by either broadcasting or spot-spraying the herbicide Remedy (triclopyr). However, more herbicidal options have recently become available. In 2005, Milestone (aminopyralid) was registered for TSA control and has since been proven to be highly effective with pre- and post-emergence broadcast applications at 5 to 7 fl oz/acre. Milestone provides more consistent control than Remedy because it acts more thoroughly on the root system. Spot-spray recommendations for Milestone, however, have not been well developed. This document reports the results of a field experiment to determine the rate and application procedure necessary to maximize TSA control with spot-treatments of Milestone.

Since TSA plants tend to be scattered throughout a pasture, under trees or in common milling areas, the easiest way of eradicating them is often to mix a spot-spray solution based on a certain percentage of the herbicide per volume of water (% v/v). The Milestone label only indicates its usage proportions

in terms of amount per 1,000 ft<sup>2</sup>. In order to determine the most effective percentage of Milestone per volume of water, spot treatments were performed with Remedy at 0.5% v/v and Milestone at 0.04, 0.11, 0.18 and 0.25% v/v.

Remedy acts very quickly on the plant itself, resulting in complete brown-out or kill within a 2 week period. However, Remedy has no soil action and benefits from 1 or 2 mowing cycles for complete control. Milestone, in contrast, has soil action and long residual control; it takes 4-6 weeks to kill the entire plant, but has greater movement into the root system (translocation), which results in better control over the long-term. Because Milestone is slow acting and extensively translocated, it is unknown whether complete foliar coverage is essential for optimum control. Therefore, the experiment applied each herbicide to both 50% and 100% of the TSA foliage.

### Results

Seven weeks after treatment, Remedy and Milestone (0.11 to 0.25% v/v) applied to the whole

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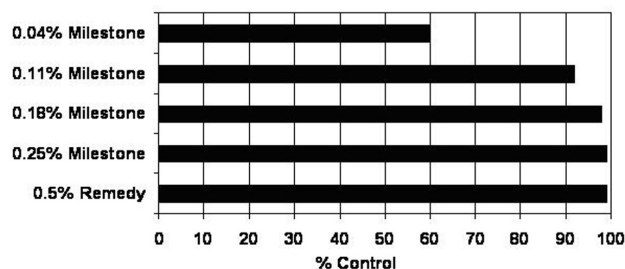
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2. Jason Ferrell, assistant professor, Agronomy Department, Gainesville, FL; Brent Sellers, assistant professor, Range Cattle Research and Education Center--Ona, FL; Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611.

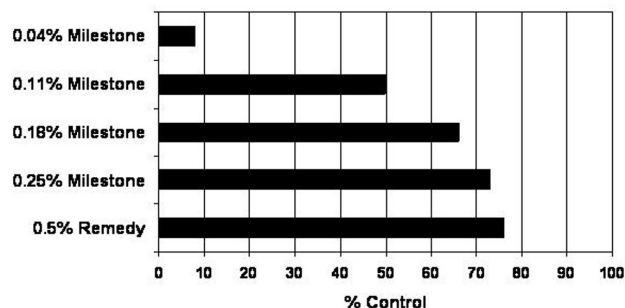
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plant resulted in greater than 92% control (Figure 1). Milestone at 0.04% v/v sprayed onto the whole plant provided only 60% control. When applied to only half the plant, control ranged from 8 to 76% for both herbicides (Figure 2).

From these data, we recommend Milestone to be applied at no less than 0.11% v/v when spot-spraying TSA plants and the entire plant should be thoroughly covered with the spray solution. A 0.11% solution would result in 2-1/2 teaspoons (13 ml) of Milestone per 3 gallons of water.



**Figure 1.** Response of TSA to whole-plant applications of Remedy and Milestone 7 weeks after treatment.



**Figure 2.** Response of TSA to half-plant applications of Remedy and Milestone 7 weeks after treatment.

## Conclusion

Considering the application rates of Milestone and Remedy, the cost for either product will be similar. Therefore, equivalent control and price can be expected from either herbicide when it is properly applied.

## For More Information

### EDIS publications:

SS-AGR-50 Tropical Soda Apple (*Solanum viarum*, Dunal) in Florida  
(<http://edis.ifas.ufl.edu/WG201>)

SS-AGR-77 Tropical Soda Apple: A Noxious Weed in Florida (<http://edis.ifas.ufl.edu/UW097>)

SS-AGR-78 Shipping Cattle, Not Tropical Soda Apple Seed (<http://edis.ifas.ufl.edu/UW187>)

SS-AGR-130 Management Practices to Control Tropical Soda Apple  
(<http://edis.ifas.ufl.edu/UW188>)

SS-AGR-129 Tropical Soda Apple Control: Sorting Through the Options  
(<http://edis.ifas.ufl.edu/AG261>)

ENY-826 Biology of *Gratiana boliviana*, the First Biocontrol Agent Released to Control Tropical Soda Apple in the USA  
(<http://edis.ifas.ufl.edu/IN487>)

ENY-824 Classical Biological Control of Tropical Soda Apple in the USA  
(<http://edis.ifas.ufl.edu/IN457>)

### West Florida Research and Education Center:

Tropical Soda Apple (<http://tsa.ifas.ufl.edu/>)

Tropical Soda Apple Best Management Practices:

North Florida

(<http://tsa.ifas.ufl.edu/00Slides/NorthFlorida/index.html>)

South Florida

(<http://tsa.ifas.ufl.edu/00Slides/SouthFlorida/index.html>)