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Spot-spraying Tropical Soda Apple

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Tropical soda apple (TSA) is a troublesome pasture weed that is commonly found throughout Florida. For many years, our control recommendations were to either broadcast or spot-spray Remedy at 2 pt/acre or 0.5% v/v, respectively. Although Remedy was effective, it possessed no soil activity and commonly required 1 or 2 mowing cycles for complete control. In 2005, Milestone was registered for TSA control. Pre- and post-emergence broadcast applications were found to be highly effective at 5 to 7 fl oz/acre. Although broadcast application rates of Milestone are well established, spot-spray recommendations have not been well developed. Additionally, it is not known if thorough foliar coverage with Milestone will be required to obtain satisfactory control of single plants when spot-spraying.

The Milestone label suggests a certain amount of Milestone per 1,000 ft². However, TSA plants tend to be scattered throughout a pasture, under trees or common milling areas and mixing a solution of Milestone based on 1,000 ft² is quite confusing. It is easier for most people to mix a spot-spray solution based on a certain percentage of the herbicide per volume of water. Therefore, it was necessary to determine what percentage of Milestone per volume of water (% v/v) is needed to obtain satisfactory control of TSA when spot-spraying.

It is necessary to understand the differences between Milestone and Remedy. Remedy, which is a great product for TSA control, is very fast acting with complete brown-out or kill within a 2 week period. Milestone works much more slowly taking 4 to 6 weeks to kill the entire plant. The length in time that Milestone requires to kill the plant actually allows for more movement (translocation) of the herbicide into the root system, resulting in more consistent control with Milestone than we observed with Remedy

Considering that Milestone is more slow-acting with greater translocation into the root system compared with Remedy, it is unknown if complete foliar coverage is essential for complete control when spot-spraying with Milestone. Therefore, an experiment was conducted to determine the rate and application procedure necessary to maximize TSA control with spot-treatments of Milestone. Remedy at 0.5% v/v and Milestone at 0.04, 0.11, 0.18 or 0.25% v/v were applied to either 50 or 100% of TSA foliage.

At 7 weeks after treatment, Remedy and Milestone (0.11 to 0.25% v/v) applied to the whole plant resulted in greater than 92% control (Figure 1). Milestone at 0.04% v/v sprayed onto the whole plant provided only 60% control. Conversely, control ranged from 8 to 76% control when applied to only half of the plant for both herbicides (Figure 2). Therefore, Milestone should 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 tropical soda apple to whole-plant applications of Remedy and Milestone 7 weeks after treatment.

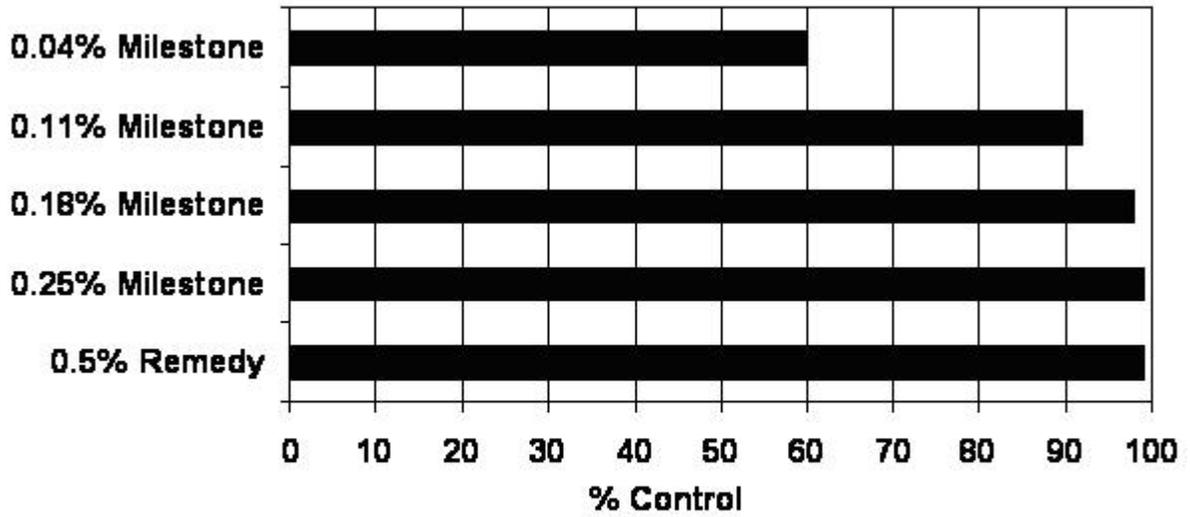


Figure 2. Response to tropical soda apple to half-plant applications of Remedy and Milestone 7 weeks after treatment.

