

# **Ground Broadcast Juvenile Huisache Control Final Report**

**Atascosa County  
Guadalupe County**

## **Cooperators:**

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## **Summary**

Four treatments with Invora herbicide were applied at sites in Atascosa and Guadalupe Counties in October and November 2021. At one- and two-years post-treatment, apparent plant-mortality for all treatments was above 80%. However, the 12 oz/acre rate of Invora appears to be less consistent than other treatments.

## **Objective**

This project explores followup treatment options for controlling juvenile huisache plants.

## **Materials and Methods**

Treatments were established in October and November 2021. Treatments were applied with an ATV equipped with a boom-sprayer with 6, Teejet Turbo Twin TTJ11003 nozzles and a 5 gallon/minute electric pump operating at 30 psi. The spray-boom was mounted on a frame that allowed boom-height to be adjusted 20 inches above tree canopies. Boom-height was set at 6 feet at both sites. All treatments included Dyne-Amic surfactant at 4 oz/acre and were applied at 19.3 gallons of spray-volume/acre.

Soil moisture was measured with a Lincoln soil moisture meter. Cumulative rainfall was estimated using the FarmLogs app. Soil temperature was measured at 12-inches deep.

About two weeks after applications, juvenile plants that appeared to be completely defoliated were tagged. At the Guadalupe site, some plants that were 99% defoliated had to be flagged because of lack of completely defoliated plants. Total plants in each treatment were counted for reference.

## **Results and Discussion**

Application conditions are shown in Tables 1. Soils and ecological sites are shown in Table 2. One and two-year apparent plant-mortality are shown in Tables 3 and 4.

**Table 1.** County location and application conditions.

Location/Application Date	Air temp, F	Relative Humidity, %	Wind speed, mph/direction	Soil temp, F	Soil moisture, 0-10 scale	Cumulative rainfall, inches	
						2-week	4-week
Atascosa County 10-29-21	62	54	3.3 NW	70	10	0.05	3.6
Guadalupe County 11-12-21	60	65	1.1 E	64	8	0.74	6.33

**Table 2.** Soils and ecological sites.

County	Soils	Ecological Site
Atascosa	Monteola clay	Blackland
Guadalupe	Houston Black clay	Blackland

**Table 3.** Apparent one-year plant-mortality by treatment and county.

		Apparent Plant-Mortality, %		
		One-year		
Treatment	Herbicide Rate, oz/ac	Atascosa	Guadalupe	Average
1	Invora, 12 oz	100	66	83
2	Invora, 18 oz	100	83	92
3	Invora, 24 oz	100	90	95
4	Invora, 12 oz + Cimarron Plus 0.75 oz	95	80	88

**Table 4.** Apparent two-year plant-mortality by treatment and county.

		Apparent Plant-Mortality, %		
		Two-year		
Treatment	Herbicide Rate, oz/ac	Atascosa	Guadalupe	Average
1	Invora, 12 oz	100	70	85
2	Invora, 18 oz	100	83	92
3	Invora, 24 oz	100	90	95
4	Invora, 12 oz + Cimarron Plus 0.75 oz	100	80	90

**Conclusions**

At one-year and two years post-treatment, average apparent plant-mortality was above 80% for all treatments. Treatments 2-4 appear to be more consistent than the 12 oz/acre rate of Invora. Further testing is needed to verify these results.

**Acknowledgements**

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