

LONG TERM EFFECTS OF SMUTGRASS CONTROL

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Situation:

Giant Smutgrass (*Sporobolus jacquemontii*) is a perennial bunch- type grass that produces over 45,000 seeds per plant per year. Weeds in pastures and rangelands cost ranchers and livestock owners in excess of \$180 million annually in Florida. Chemical control for smutgrass is a great option for producers and is important to complete during the rainy month since hexazinone is highly dependent on rainfall.

Materials and Methods:

The smutgrass control trial was completed to determine the percent control of smutgrass using the herbicide hexazinone. The research trial was completed on a 2.0 hectare complete randomized block design with three replications. Each individual plot was 0.093 hectares. The two variables measured a cut and uncut method of application.

Blocks represented:

- cut wipe method with a 30% solution one direction
- uncut wipe method 30% solution one direction
- cut spray method 2.34 L/Ha
- uncut spray method 2.34 L/Ha,
- uncut control
- cut control

The trial began in August 2018 with recommended rainfall. A visual percent control of plant density was completed by multiple agents before, 30, 60, and 540 days post treatment. At 540 days the percent control for post treatment was to determine the long term effects of chemical and mechanical control.



Figure 1: Weed wiper

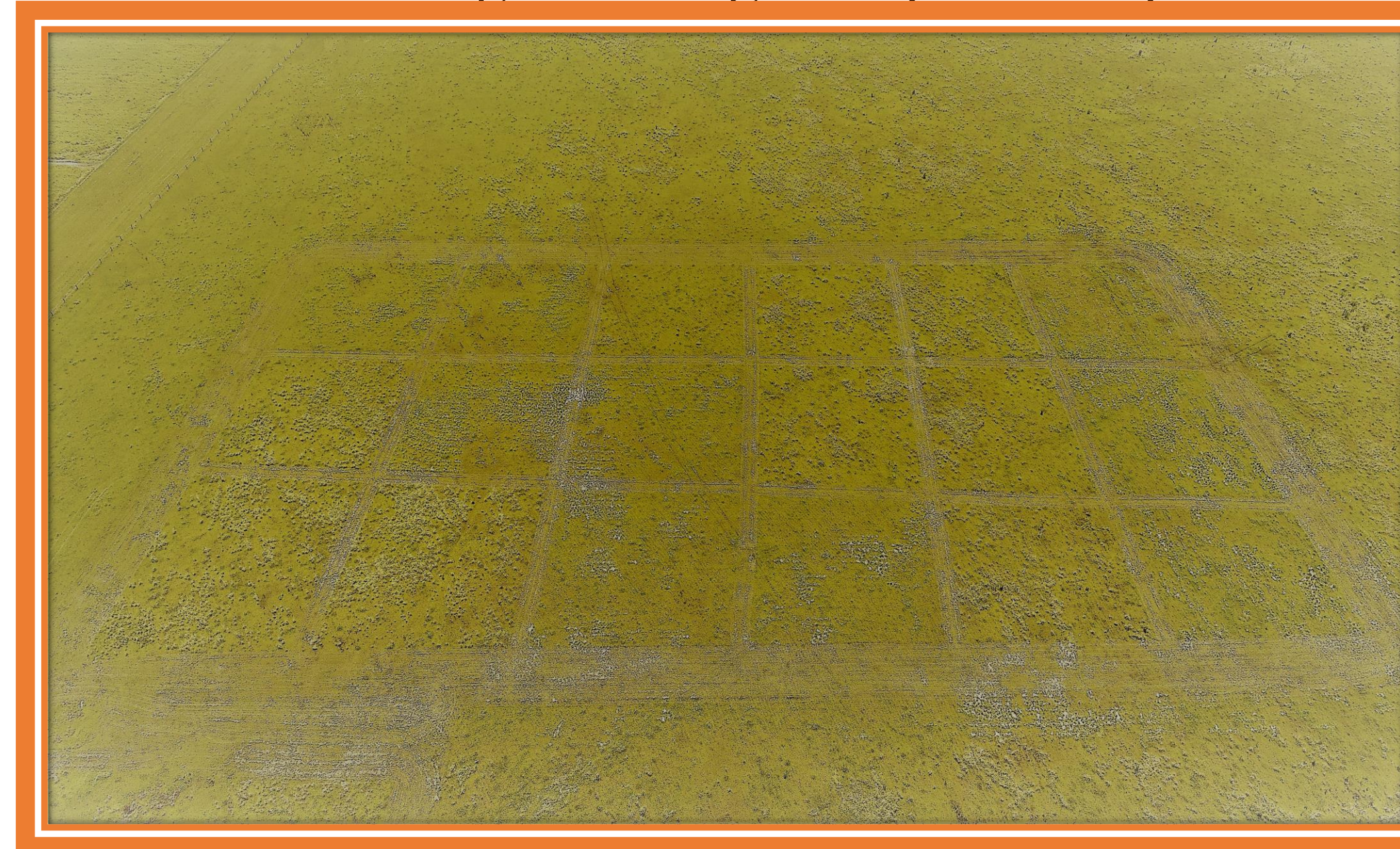


Figure 2: Enhanced view to show smutgrass coverage



Figure 3: Ariel view of results of 2.0 hectare randomized block design 30 days post herbicide trial



Figure 4: Smutgrass trial 540 days post herbicide application

Results:

Visual measurements were taken a year and half post herbicide application. The cut wipe method showed the largest percent control with a 55% reduction. Uncut wipe shows the second-best method with 32.5% reduction.

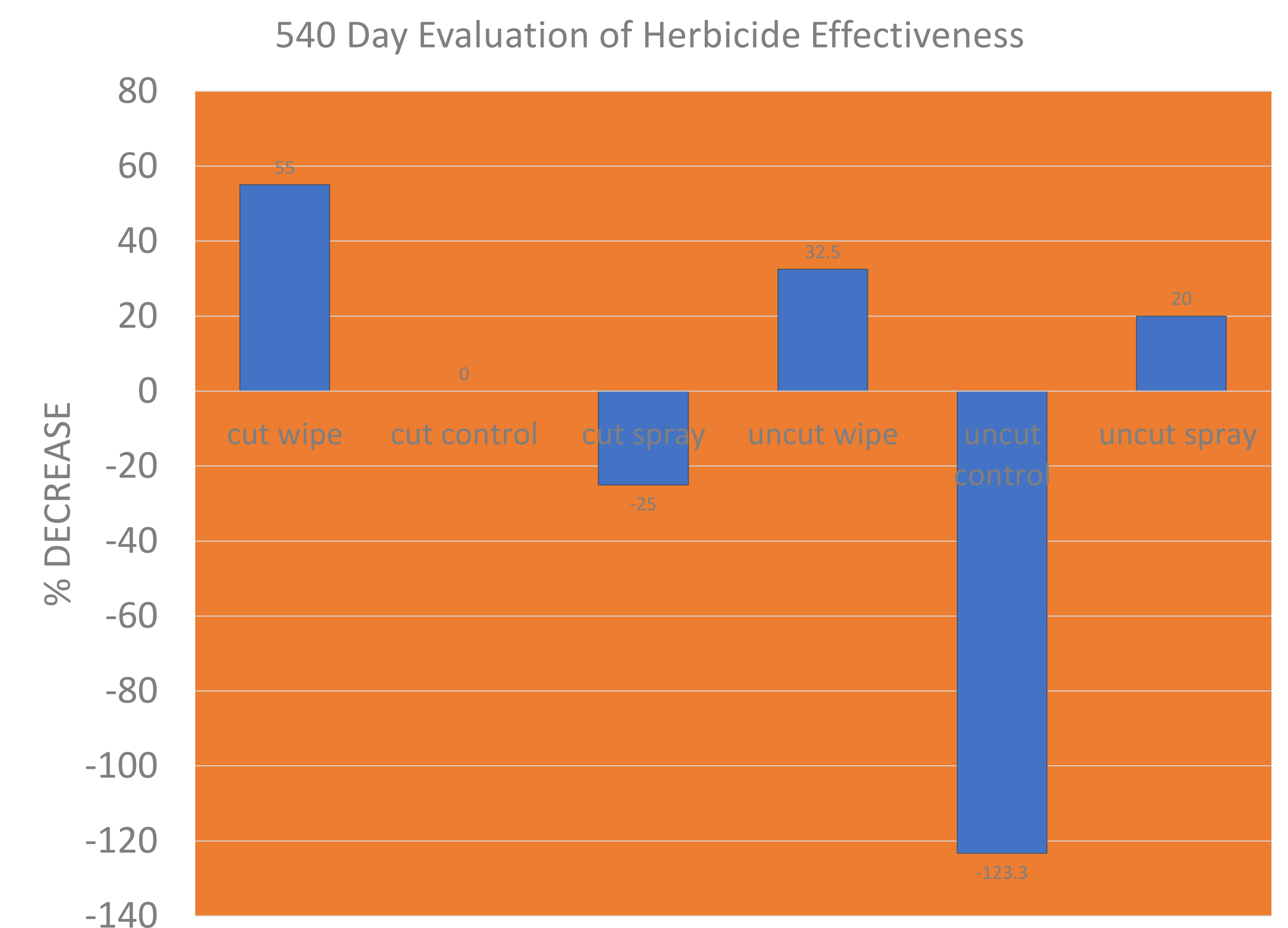


Figure 5 Percent control of smutgrass by application type and effect of cutting at 540 days post application.

Conclusion:

Long-term results indicate that management of the invasive bunch grass is possible with proper chemical and mechanical control methods. Interestingly, the wiper was far more effective than the traditional spray method.