

## **Rangeland Pasture Cost-Share WMA Cost Share Program for Invasive Thistle Control**

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Few noxious weeds have caught the general public's attention as has yellow starthistle in California. Yellow starthistle (YST) (*Centaurea solstitialis* L.), was introduced into California in the mid-1800. YST proliferation is a serious threat to the biodiversity and the productive potential of California's rangelands. In 1985, over 8 million acres were infested, and by 1995 an estimated 12 million acres were infested. YST has continued to rapidly colonize susceptible habitats including an estimated 20,000 acres of Tulare County foothill range. UC Cooperative Extension and Agricultural Commissioner, Tulare County; RCD; and USDA NRCS formed the Tulare County Noxious Weed Task Force. YST proliferation raised public awareness of noxious weed issues and the need for control and brought many stakeholders to the task force. This early organization led to official designation as a Weed Management Area (WMA), bringing together landowners and managers (private, city, county, state, and federal) in a county, multi-county, or other geographical area to coordinate efforts and expertise against common invasive weed species. The WMA status enabled the task force to coordinate research, education, and outreach efforts across many jurisdictional boundaries and to broaden the focus to address several invasive noxious weeds. Results included securing a \$70,000 three year state grant to develop educational brochures; conduct seminars and weed tours; collaborate in research on control strategies and field demonstrations; population inventory, monitoring and mapping; equipment acquisition and labor for implementing a control program. The WMA provides a structure to coordinate and collaborate in a local successful weed management effort, with key areas of research, education, outreach, inventory, control program, and monitoring.

Research trials have been conducted from 1997 to 2008 to determine best strategies for YST control in Tulare foothill range. Based on research trials, from 2002 thru 2005 Transline<sup>®</sup> was used in the control program. However due to research trial results, from 2006 to the present that demonstrated a broader spectrum of control and longer pre-emergent activity, the control program has used Milestone<sup>®</sup>.

Education and Outreach programs have been conducted at county and community levels, with field days, newsletters, news releases, and community events. Inventory and monitoring data has been collected utilizing GPS and GIS since 1998.

In 2002, a rangeland YST cost-share control program was initiated with the initial three-year grant for \$70,000. Grant funding has varied annually from a high of \$46,000 in 2009 to zero funding in 2007. From 2002 to 2008, six out of seven years, the TCWMA has

conducted a cost share program for YST control. During this same period, 209 sites/properties have been treated for a total of 1,219.5 acres. Eighty one percent of sites were treated once during this period, with 16% and 10% treated 2 and 3 times, respectively in the seven year period. Sixty-six percent of the acreage was treated once, and 15% and 13% treated twice and three times respectively in the seven year period.

Share cost has varied based on the amount of grant funds to offset In-Kind cost. From 2002 thru 2004 the property owner cost share was \$20 per acre, with an average annual treatment of 34 sites and 160 acres. With reduced grant funding in 2005, cost-share was increased to \$45, with a resulting decrease in cost-share participation to only 15 sites/properties for a total of 86 acres. Due to no funding in 2006 and based on reduced participation in 2005 at the higher cost-share rate, there was no control program in 2006. In 2007 and 2008, funding was re-established and a share-cost was set at \$15/acre, with an average of 47 sites/properties and 325 acres treated.

### **Conclusions**

- There are several variables that affect the success of the WMA Invasive Thistle Control program:
- Weather and resulting thistle growth rate must determine program start time. Temperature and rainfall will affect the noxious weed complex as well as the potential for competition from desirable species.
- Cost-share amount will affect the number of participants at and above \$45/acre, and grant funds to offset participant costs are essential to the success of the program.
- The use of Milestone<sup>®</sup> has enhanced the control program with a broader spectrum of control and longer pre-emergent activity.
- Grazing factors are important to control success, late and deferred grazing increases competition by desirable species and enhances the program success.
- In most cases, a single treatment is not as effective as multiple year treatments.
- A competent technician that can relate to the clientele and can work independently is essential.