



Yellow Starthistle in Sierra Nevada Foothill Rangeland: Control Barriers and Potential Solutions

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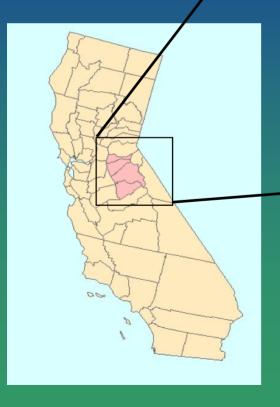
Overview of Project

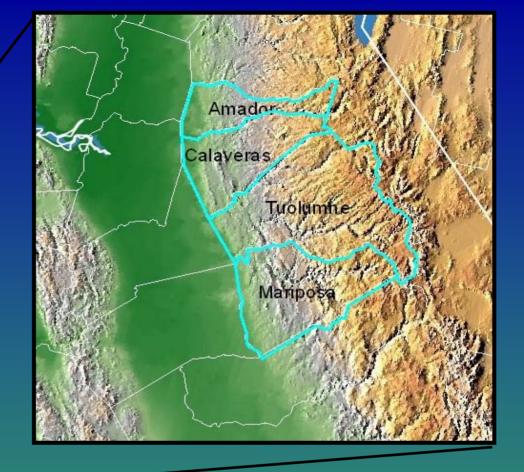
- Part of the National Science Foundation's IGERT program for biological invasions
- 6 graduate students (ecology, economics, history)
- Interviews and Surveys in four counties to characterize
 YST problem in Sierra-Nevada foothills



- Symposium and Solutions Workshop
- Products are symposium white paper, academic publications, policy briefs

Study Region

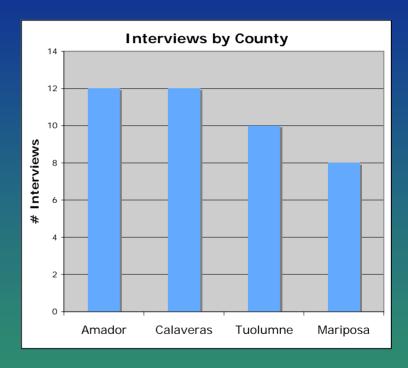




Interview Methods

• Sample

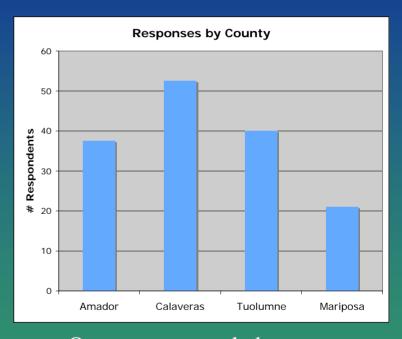
- 40 Individuals
- Bureau of Livestock ID
- Random + large scale ranches
- Components
 - Ranching History & Future
 - Weed/YST Management
 - Information Sources



Survey Methods

Sample

- Same List minus Interviewees
- Sent 850+
- Received 187 (~20%)
- Survey Components
 - Weed/YST Management
 - Decision Making
 - Demographic & Background



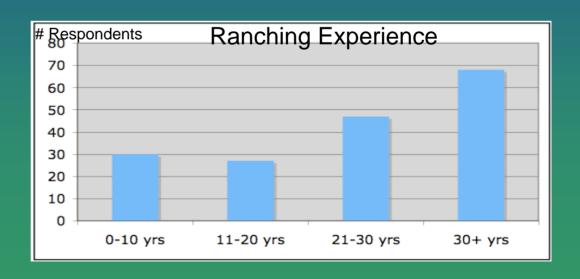
Our survey sampled:

~275,000 non-irrigated
acres

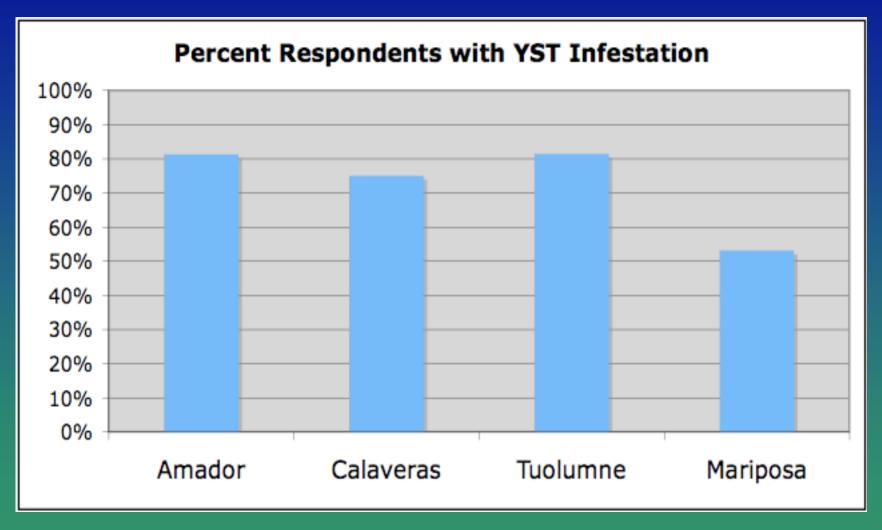
~25,000 cattle

Survey Respondents

- Mostly Cow-Calf Operators (85%)
- Only 31 (20%) counted ranching as their primary income
- Median Age of 58
- Highly experienced population

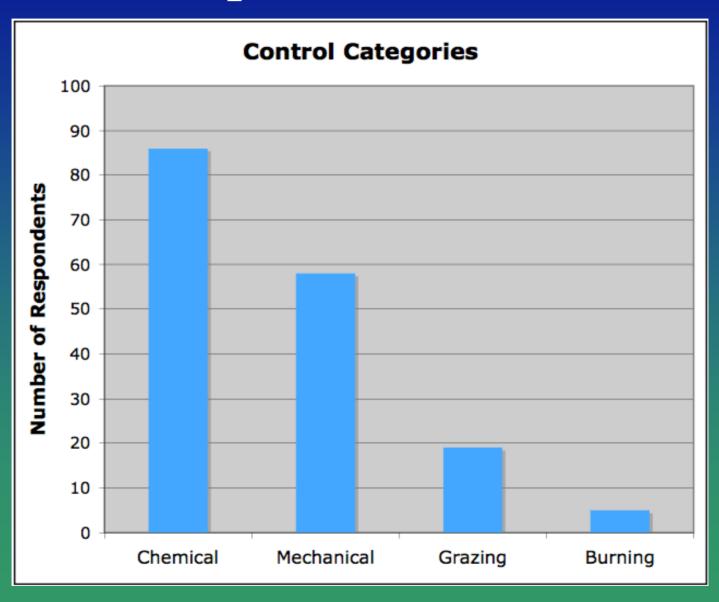


Survey Respondents

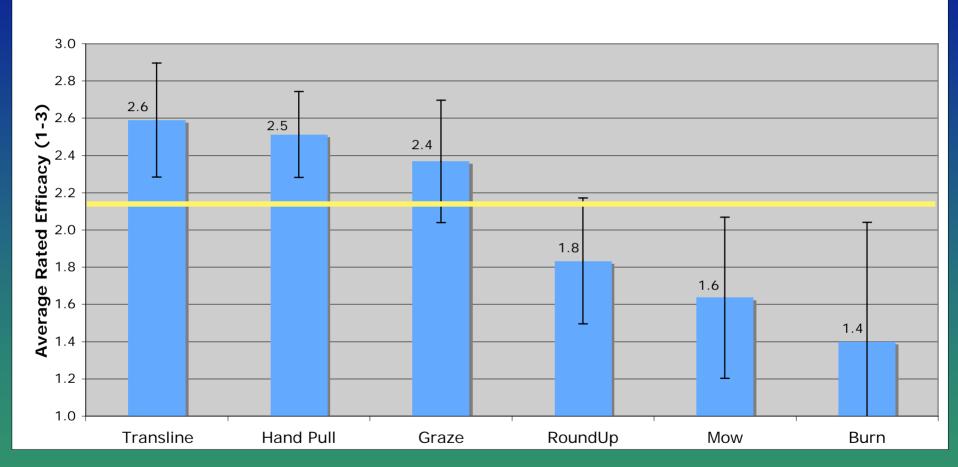


Rancher on YST: "It's going to be a part of life until I croak or sell the ranch."

Responses to YST



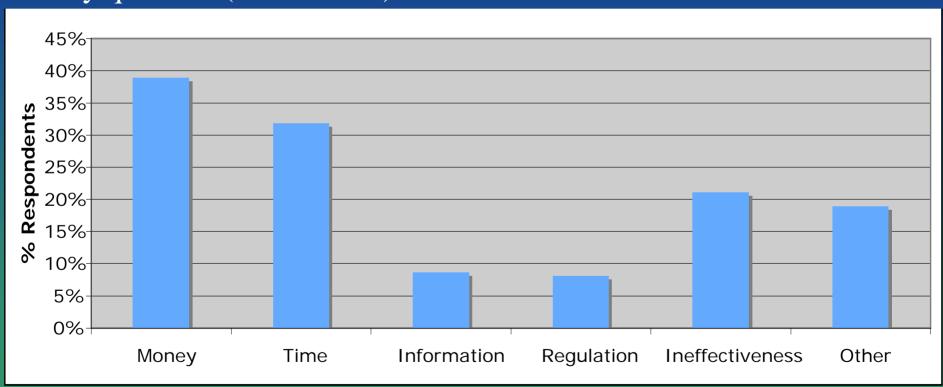
Control Effectiveness



95% Confidence Intervals. (ANOVA, R²=0.175, F = 4.86, p<.0001) High = 3, Medium = 2, Low = 1.

What factors make YST control most difficult for ranchers?

Survey question (checkboxes):



Other: includes spread of YST from neighboring lands and roads

What factors make YST control most difficult for ranchers?

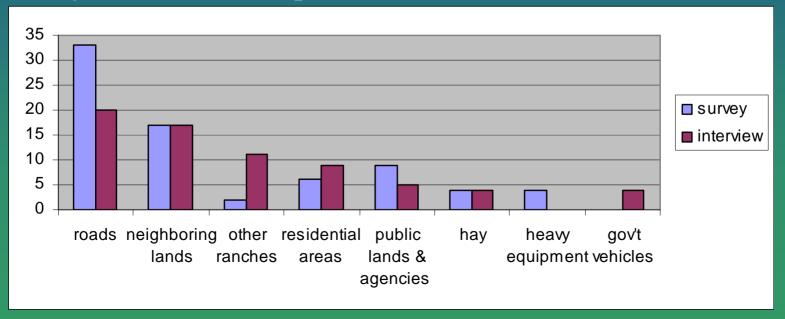
Interview results (open answer):



Sources of YST spread:

- 51 survey respondents
- 73% of interviewees
 - -YST spreads across property boundaries
 - Need increased cooperation/coordination
 - -Cited sources of YST onto their land and need for these sources to be controlled

Survey and interview open comment:

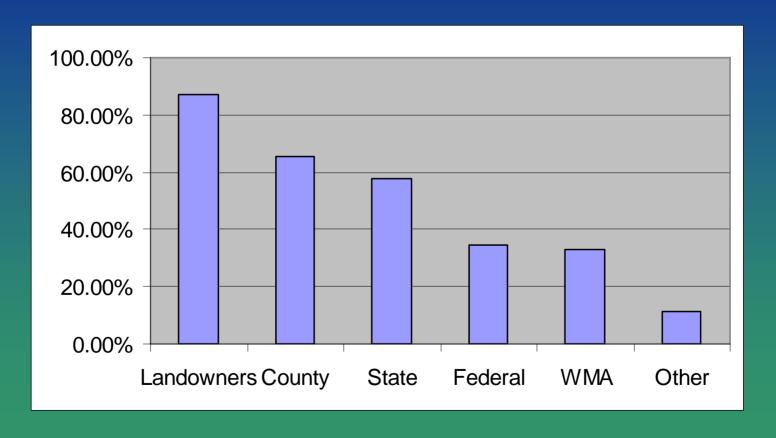


Sources of YST spread:

Survey question (checkboxes):



Whose responsibility is it to control weeds?



Coordination and Cooperation are KEY!!

Symposium:

Yellow Starthistle: Problems and Solutions

- Multilateral attendance
- Workshop format
 - Identification of key challenges
 - Development of recommendations

Symposium: Challenges

- Panel discussion
 - Cooperation/coordination: inactive neighbors,
 public lands
 - Education and awareness
 - Funding

Symposium: Recommendations

- Audience: Legislators
 - Value and funding of WMAs, RCDs, and other intergroup efforts.
 - Professional development in area of coordination
 - Education and awareness
- Audience: WMAs
 - Increased stakeholder diversity and involvement
 - Interchange of ideas and suggestions
 - Education priorities, volunteer coordination
- Audience: Resource Conservation Districts
 - Education priorities, volunteer coordination
 - Local organizing, regional communication

Next steps:

- Policy recommendations
 - Work with signatories
- Further survey analysis
- Interview analysis

Acknowledgements

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