Watch It Burn

Using fire as a tool to address reinvasion of juniper trees after initial treatment and promote healthy sage-steppe ecosystems

Laura Snell

University of California Cooperative Extension Modoc County

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Background

Partners in Research

- David Lile UCCE Lassen
- Tom Getts UCCE Lassen
- Janyne Little UC Davis

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Background

- Over 3 Million Acres in Northern California
- Affects Habitat, Forage, and Hydrologic Function
- Perils of the Chipping Market

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Background – Research Holes

- Targeting re-invasion
- Trials for fast and efficient juniper control
- Private land verse public land control methods
- Field test Miller et. al. resilience and resistance
- Quantify forage production changes

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Methods

- 2 Field Sites
  - Private Land
  - Modoc, Lassen County
  - Reinvasion of Juniper after Prior Treatment
  - Spring 2016 Treatment

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Methods

- 6 Treatments
  - EZject
  - Glyphosate
  - Method
  - Milestone
  - Lop
  - Propane Torch
- Timed
- Effectiveness (% dead)

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Methods




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Effectiveness



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Effectiveness

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Effectiveness

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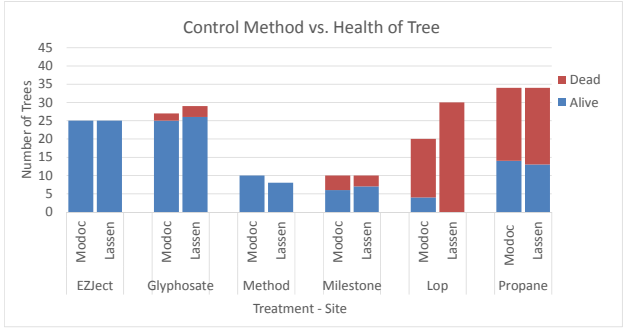
Preliminary Results



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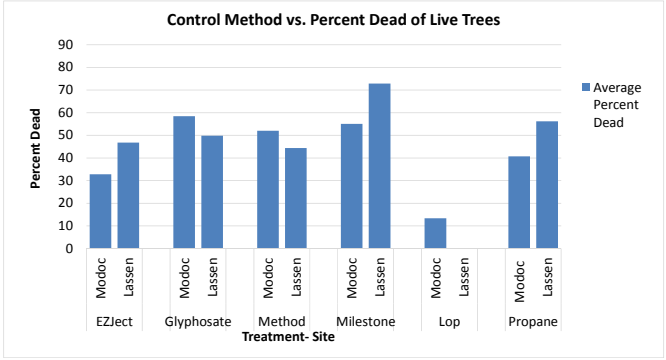

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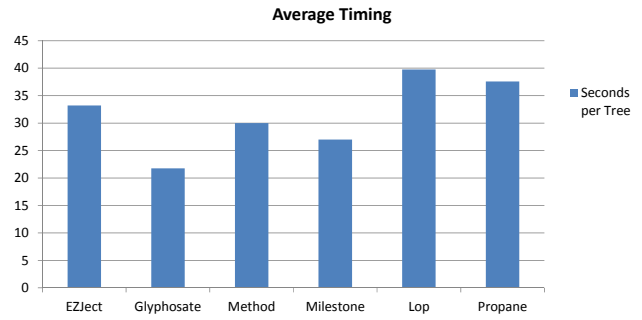

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Conclusions

Ezject

- Expired herbicides do not work
- 22 shells are not as economically viable as once were

Hack and Squirt

- Very quick application
- Not as effective on conifers
- Timing may be a factor
- Hack around the tree?
- More herbicide?

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Conclusions

Lopping

- Longest time involved
- Size of tree restrictions
- Problems with resprout
- Physically challenging
- Is stump treatment needed?

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Conclusions

Propane Burner

- Not much quicker than lopping
- Leaves dead tree
- Less physically demanding
- Possibly more fun

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Conclusions

We have not solved the problem.

Good thing there are plenty of juniper trees out there.

We have learned some important lessons though.

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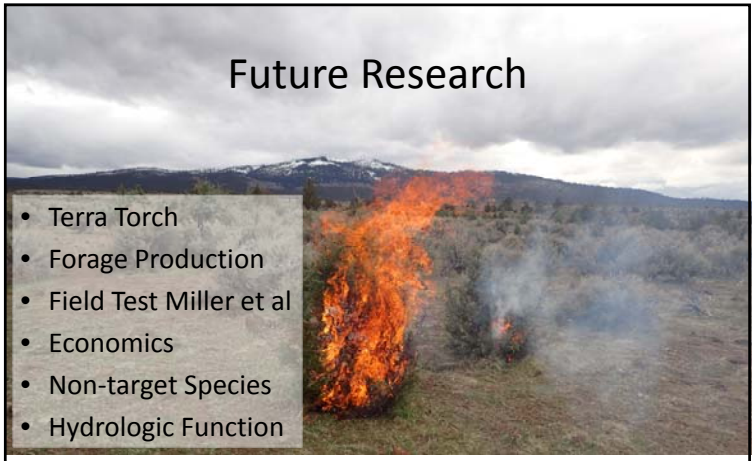
Future Research



- Terra Torch
- Forage Production
- Field Test Miller et al
- Economics
- Non-target Species
- Hydrologic Function

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Thanks!

- Questions?

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