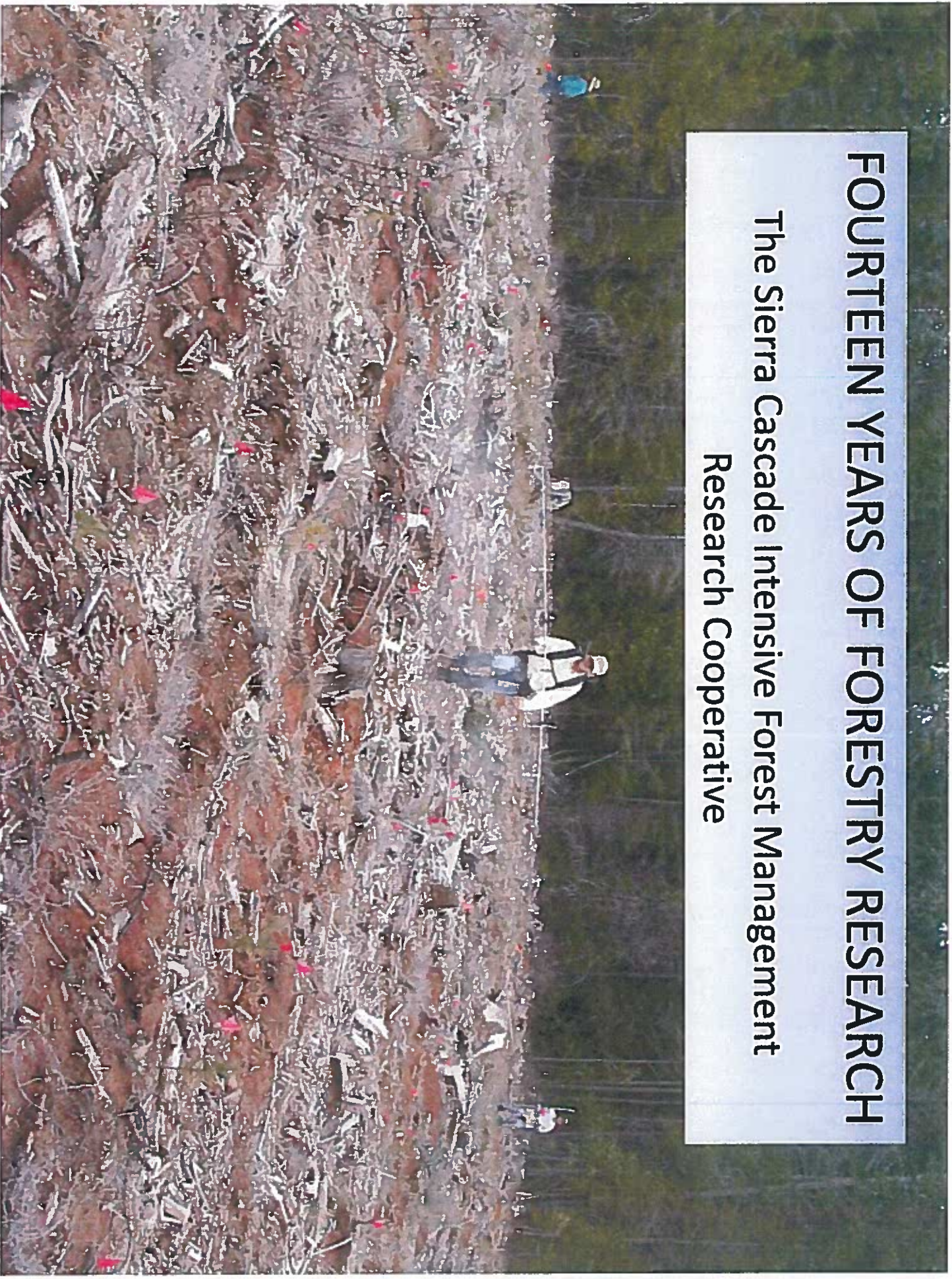


FOURTEEN YEARS OF FORESTRY RESEARCH

The Sierra Cascade Intensive Forest Management
Research Cooperative



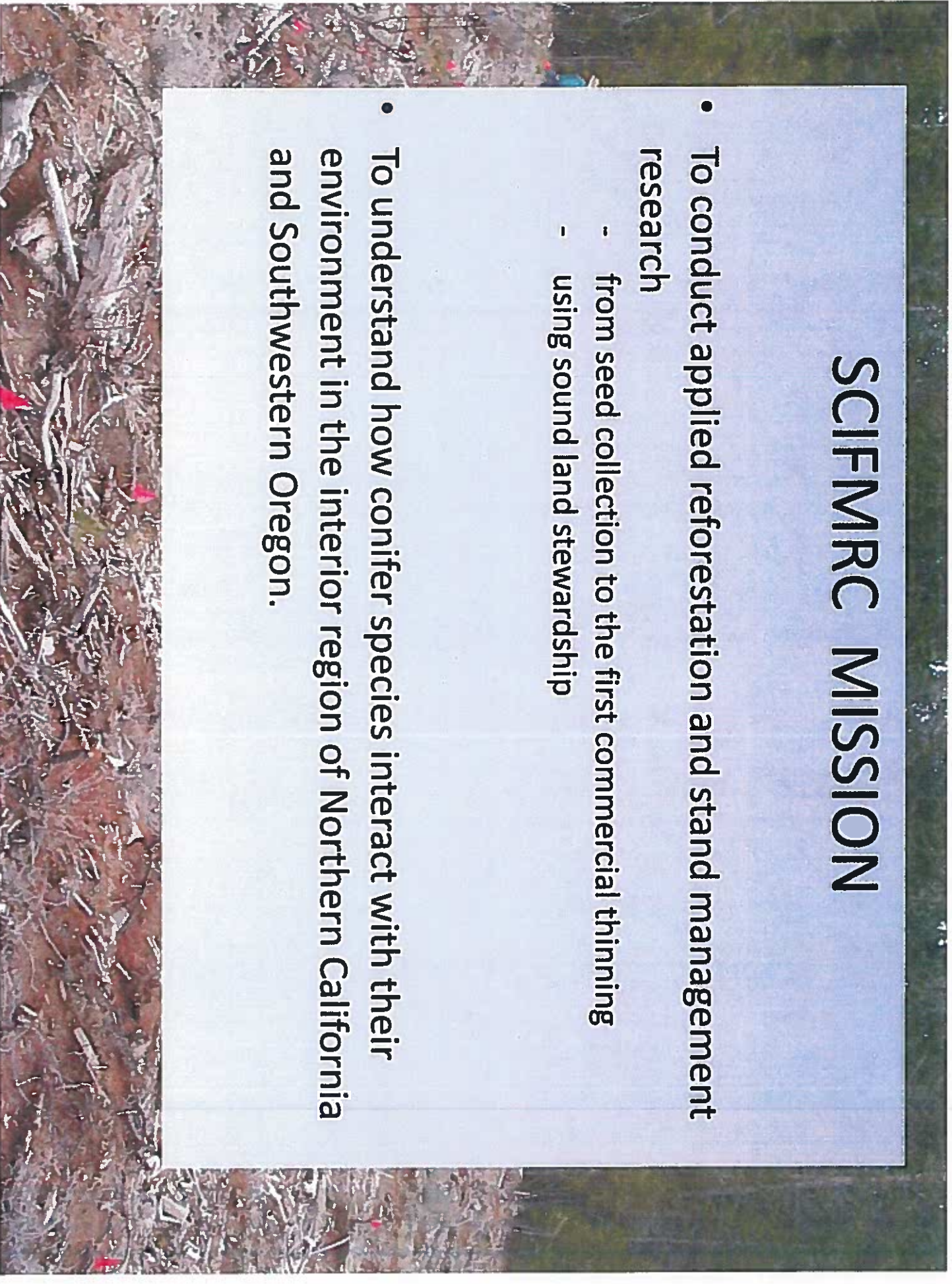
Talking points

- SCIFMRC background
- Update on current work
- A tour of past studies
- How to get involved



SCIFMRC MISSION

- To conduct applied reforestation and stand management research
 - from seed collection to the first commercial thinning
 - using sound land stewardship
- To understand how conifer species interact with their environment in the interior region of Northern California and Southwestern Oregon.



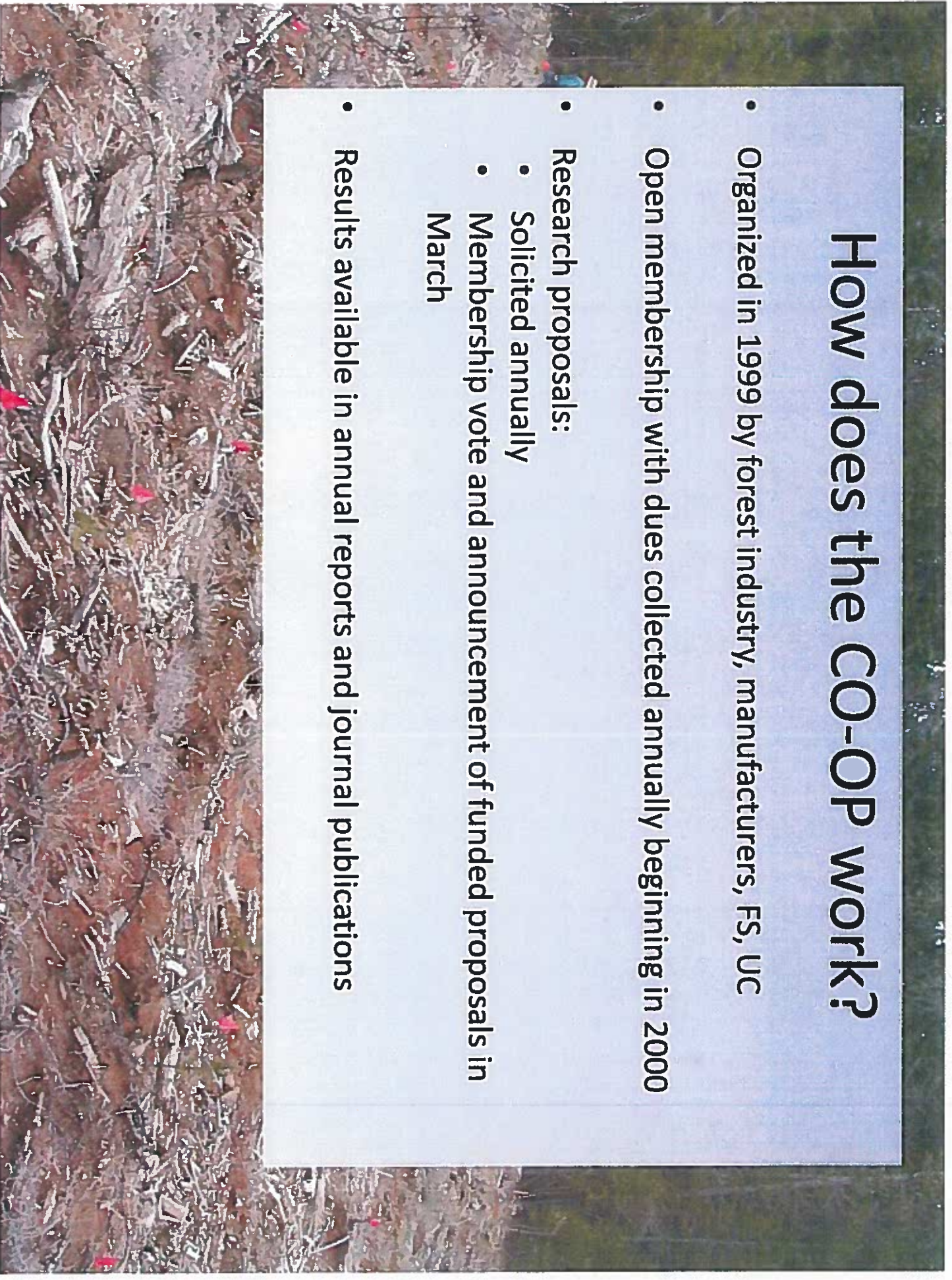
OBJECTIVES

- To help **answer local issues** associated with young stand management in the Sierra Nevada and Cascade Mtns.
- To provide research findings on plantation establishment and growth for use in **decision processes**.



How does the CO-OP work?

- Organized in 1999 by forest industry, manufacturers, FS, UC
- Open membership with dues collected annually beginning in 2000
- Research proposals:
 - Solicited annually
 - Membership vote and announcement of funded proposals in March
- Results available in annual reports and journal publications



MEMBERSHIP

2000

Roseburg Resources
Sierra Pacific Industries
Fruit Growers Supply Co.
W.M. Beaty & Associates
Soper-Wheeler
Collins Pine Co.
Boise Cascade

Cal Forest Nurseries

Monsanto
Wilbur-Ellis
PRT
Dupont
Pro-Source One
American Cyanamid (BASF)

Silver Butte Timber
Dow Agro Sciences
Pelton Reforestation
UAP Northwest

2013

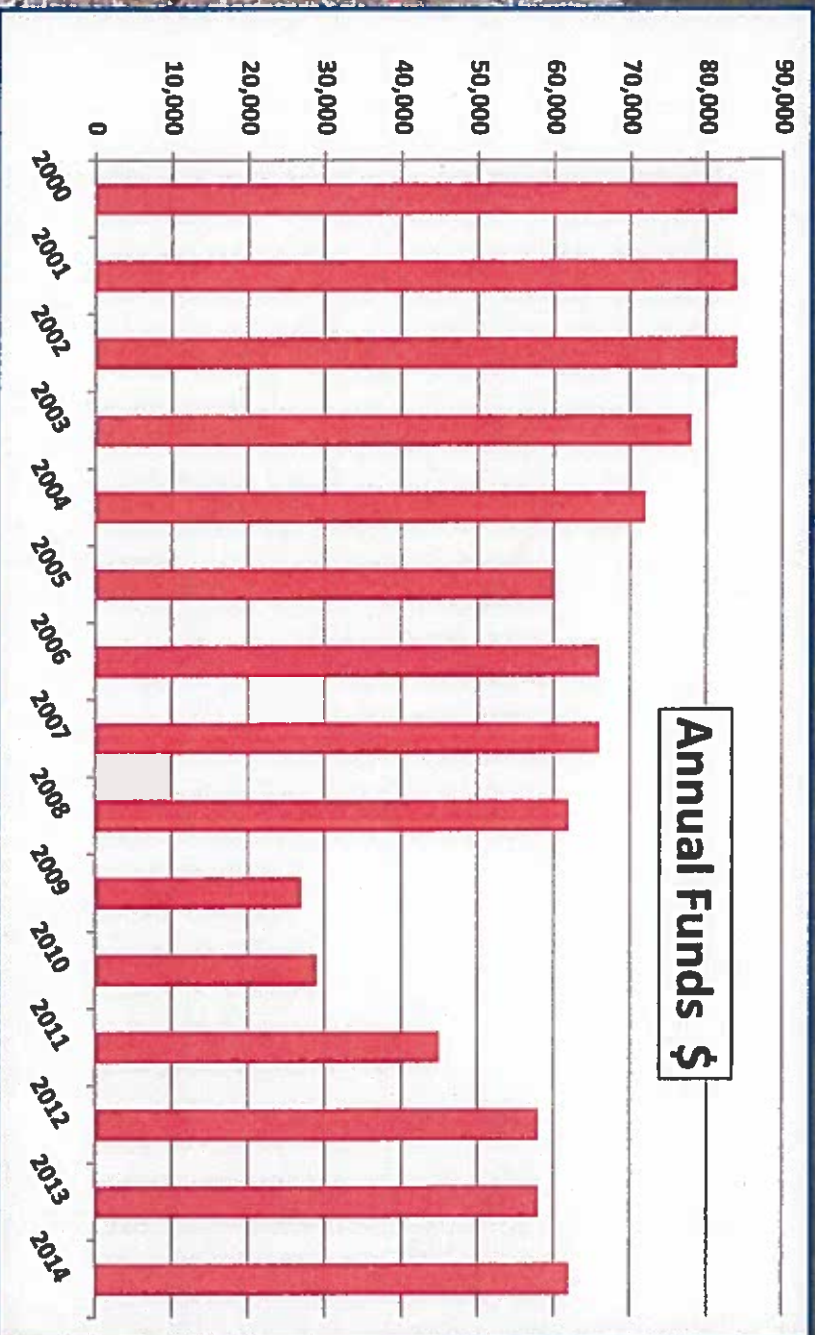
Roseburg Resources
Sierra Pacific Industries
Fruit Growers Supply Co.
W.M. Beaty & Associates
Soper-Wheeler
Timber Products Co.
Cal Fire

Cal Forest Nurseries & Mountain Gate Gardens

Silver Butte Timber
Dow Agro Sciences
Thunder Road Resources

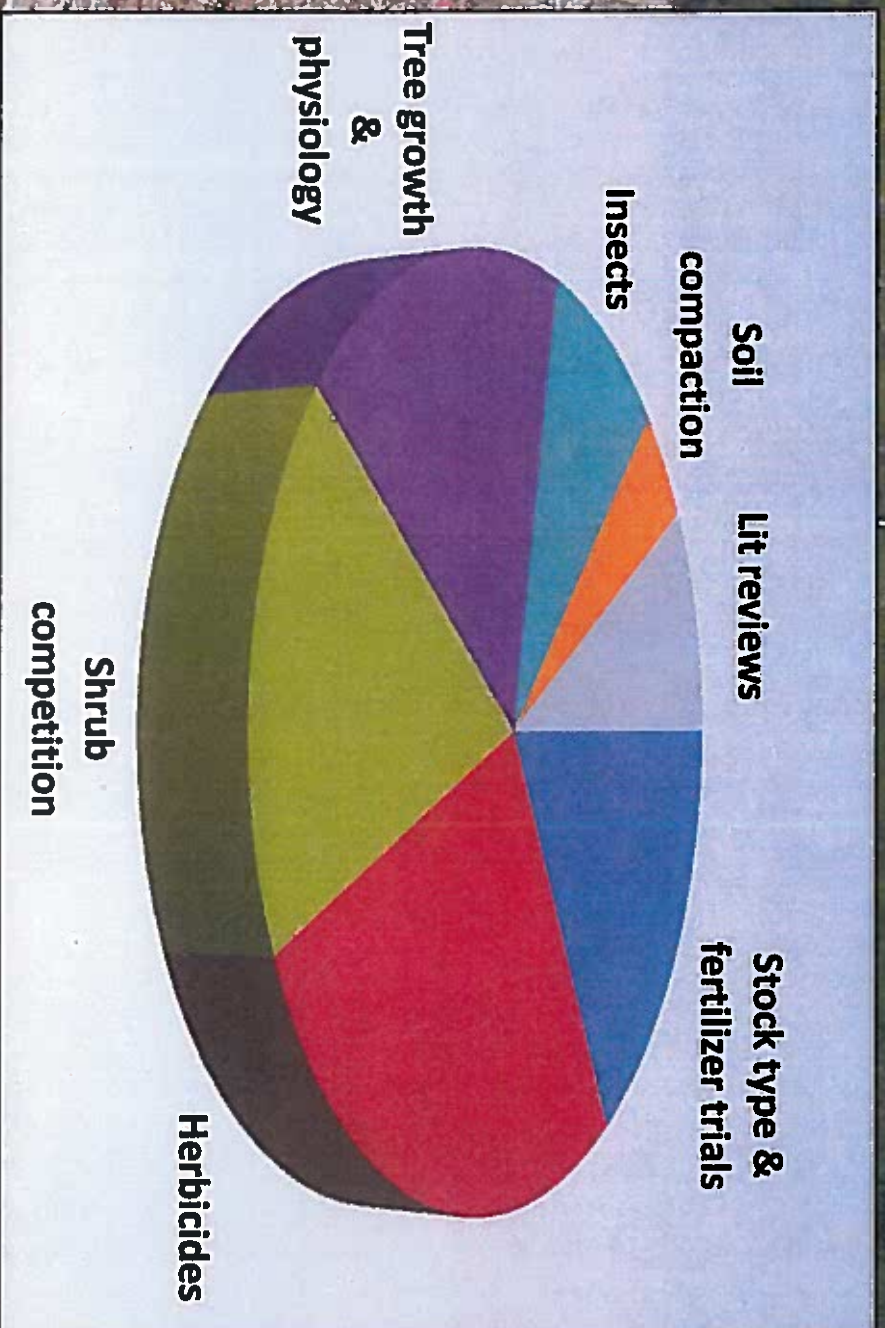
HOW'S IT GOING?

- \$853,000 program
- Approaching steady level of \$60k per year



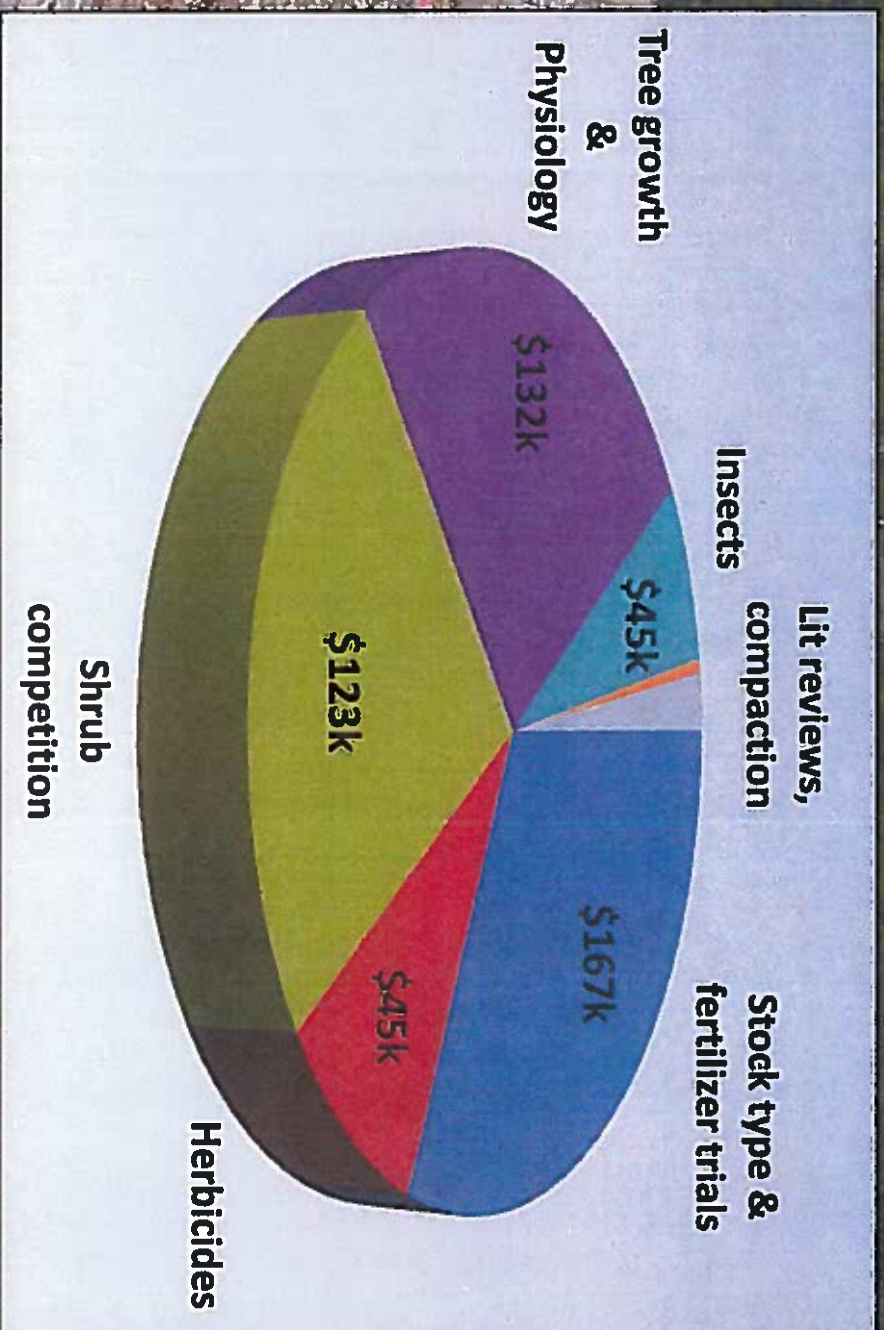
Co-op funded research

- 19 completed studies
- 5 on-going studies



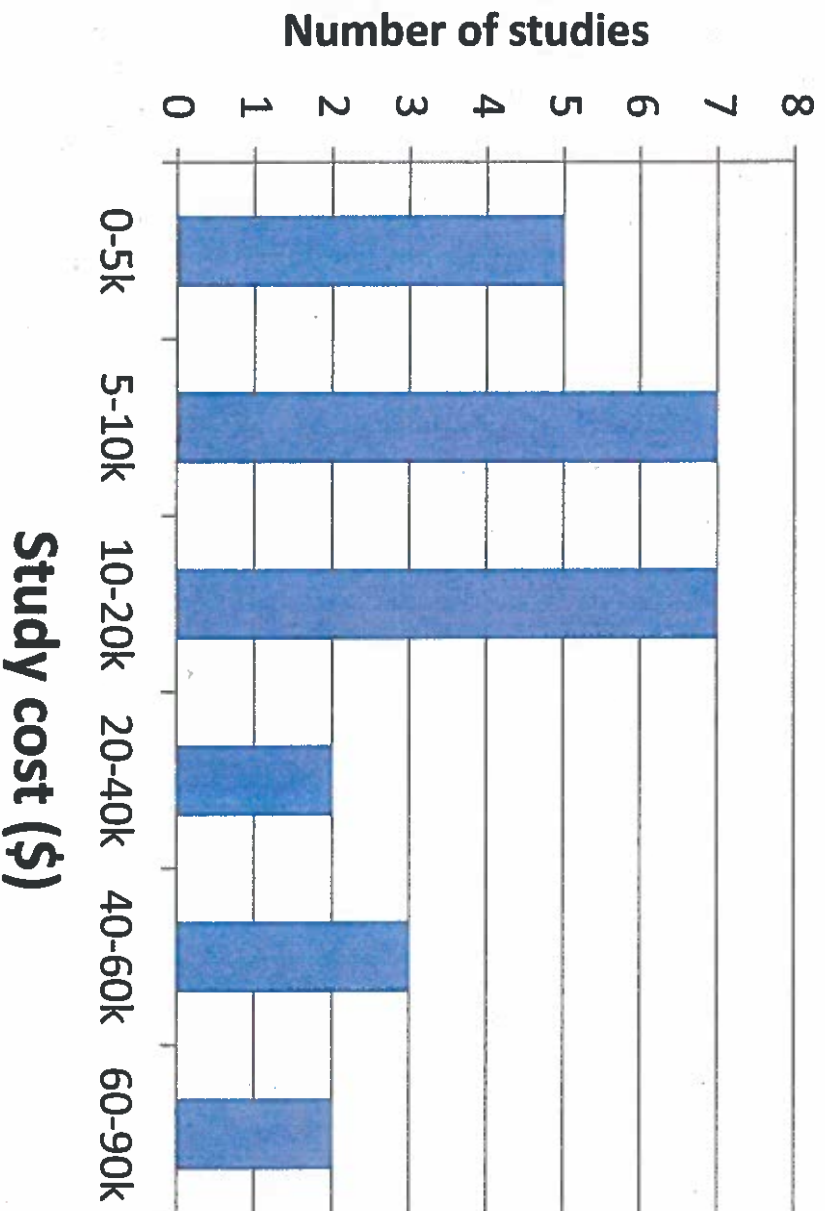
Dollars spent on research

- 70% of total budget
- Herbicide studies are relatively inexpensive



Dollars spent on research

- Average study cost: \$19,772



Talking points

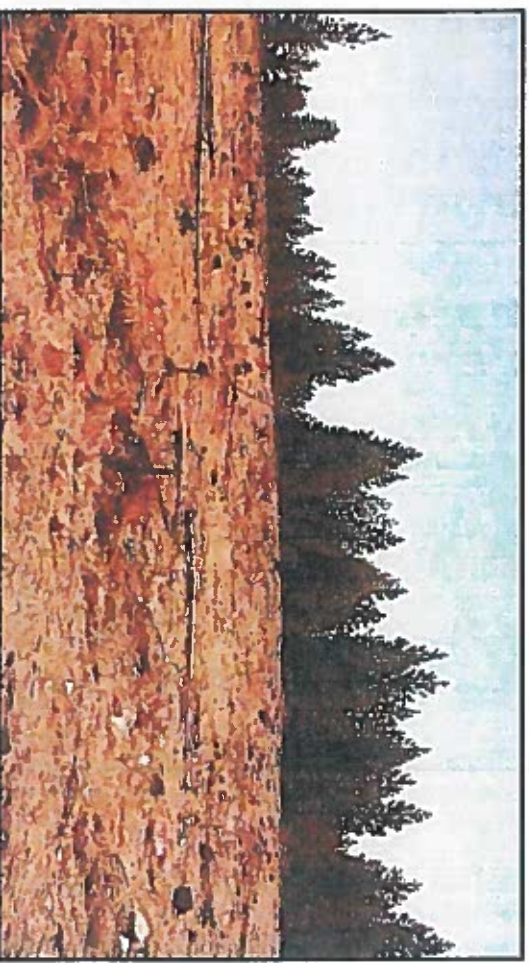
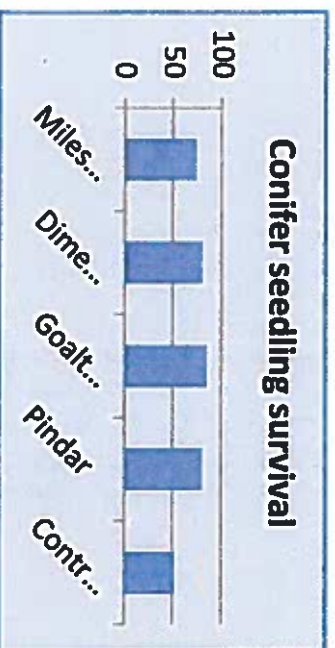
- SCIFMRC background
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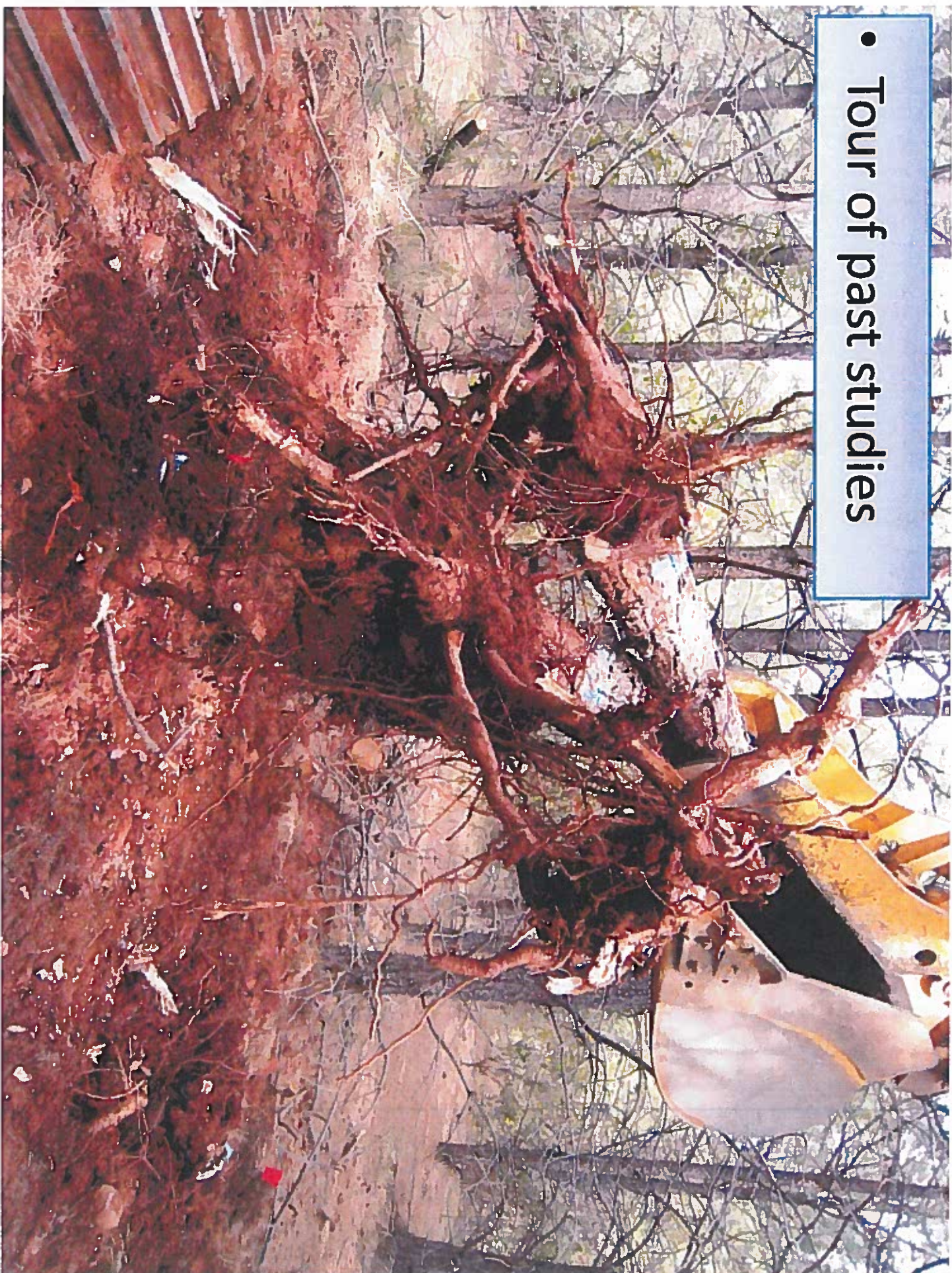
CO-OP update

On-going work

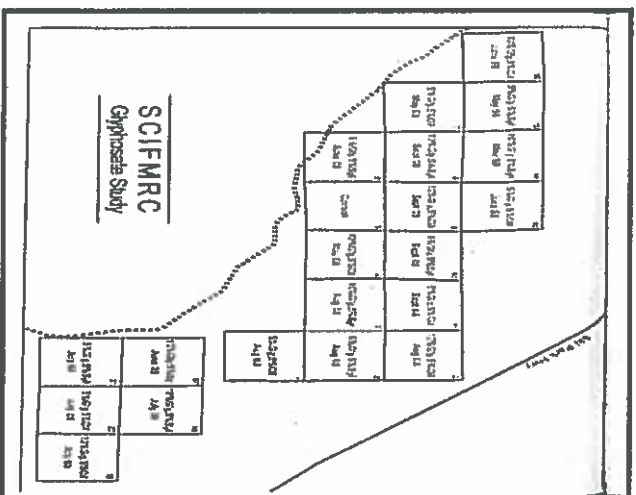
- ✓ Herbicide trials – Matrix site prep, Pindar (Fredrickson)
- ✓ Garden of Eden – second time around (Zhang and Powers)
- ✓ Pondosa subsoiling study - tree remeasurement (Webster and Powers)
- ✓ Geospatial mapping of all CO-OP study sites



- Tour of past studies



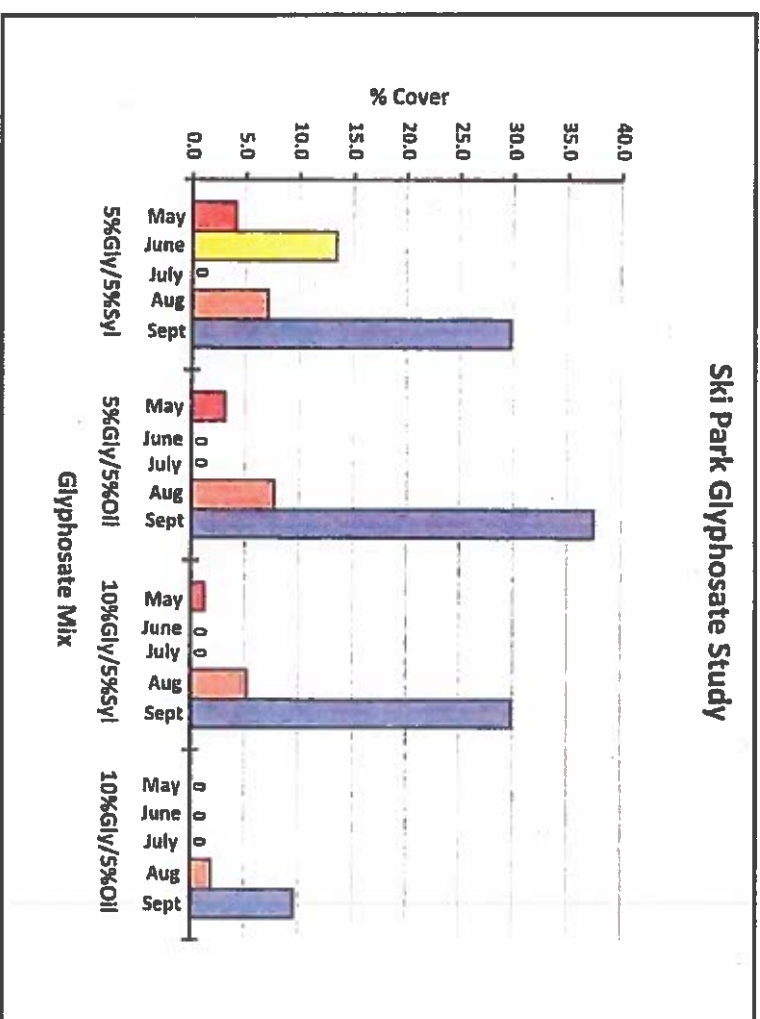
Glyphosate formulation and timing of application



Glyphosate formulation and timing of application

Findings

- Late-summer application was only slightly better than no treatment
- Best success with June or July application
- 10% a.i. plus oil is optimal for shrub control



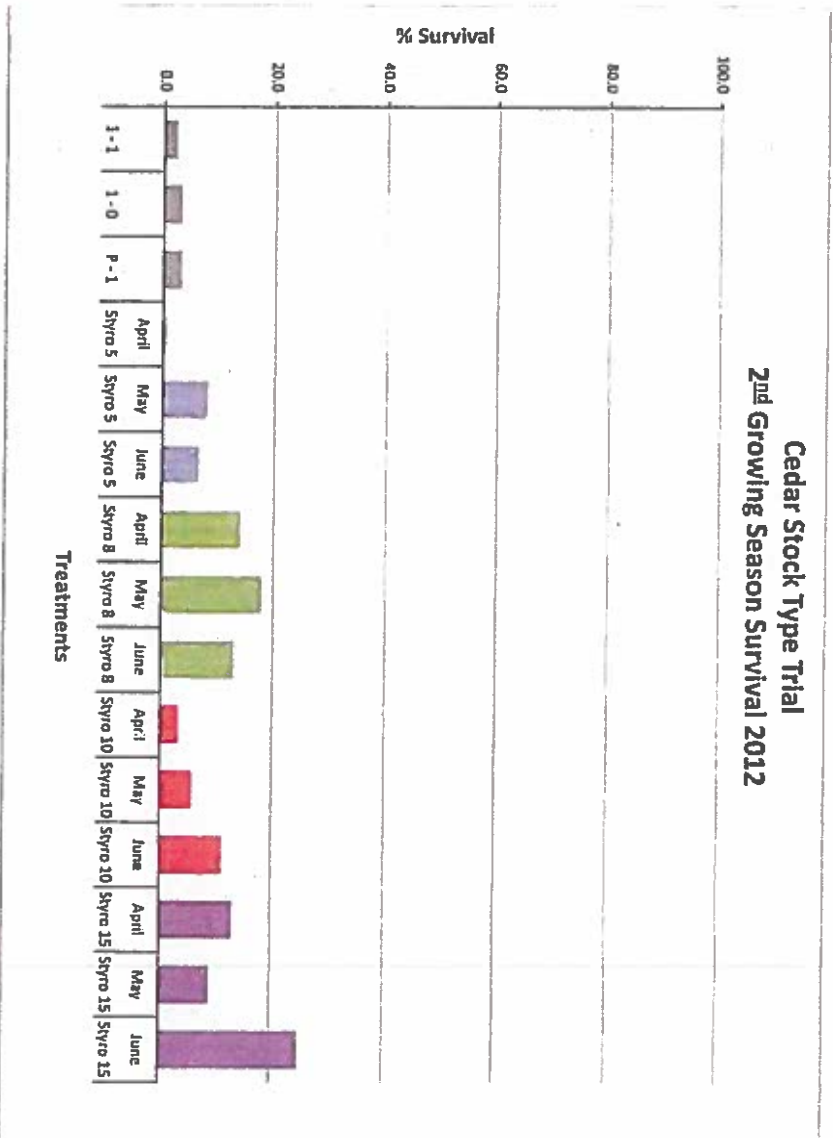
Cedar Stock Type Trial Stock Types At Time Of Planting May 2011



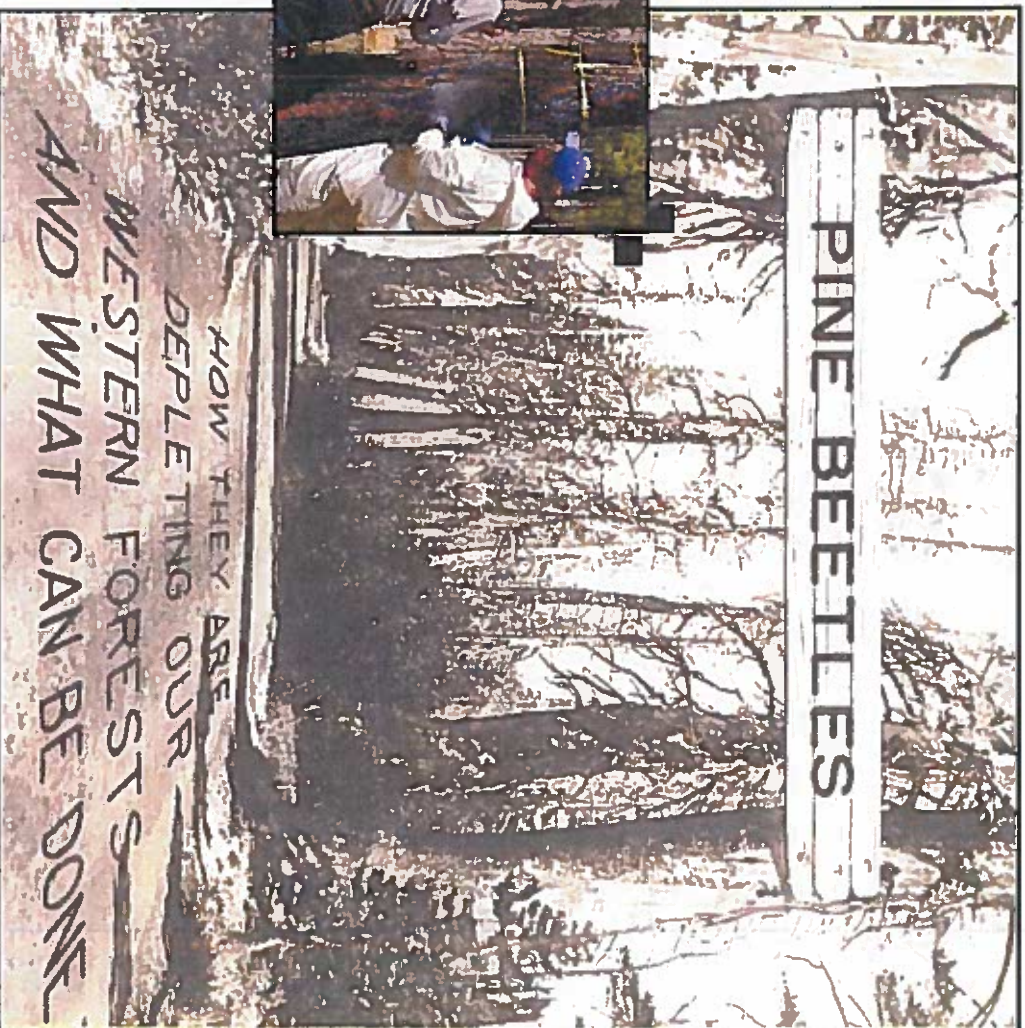
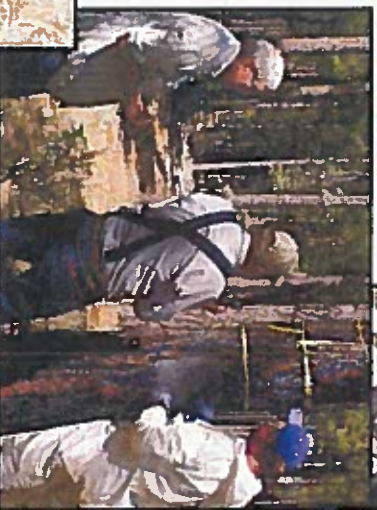
Incense Cedar Stock Type Trial

Findings

- Excellent survival in 1st year
- All styro stock types and planting dates successful
- Poor survival in year 2 due to extremely cold weather



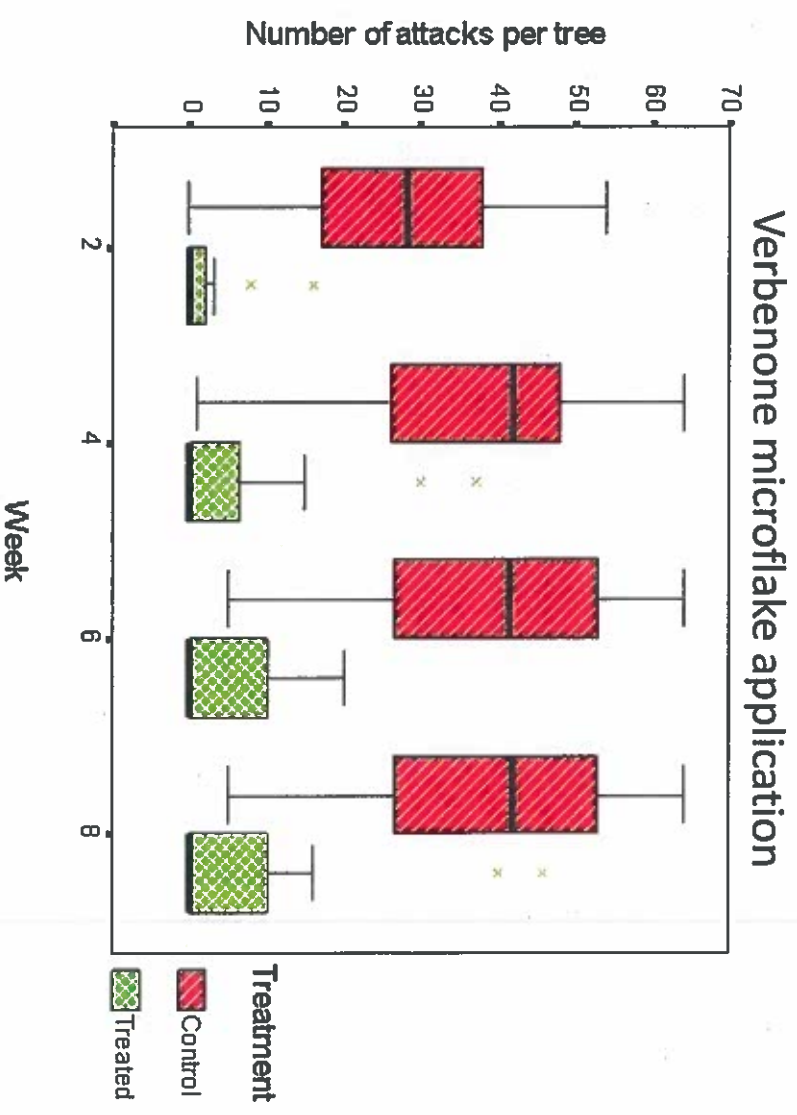
Bark beetle control: pheromones and application methods



Bark beetle control: anti-aggregation pheromones and application methods

Findings

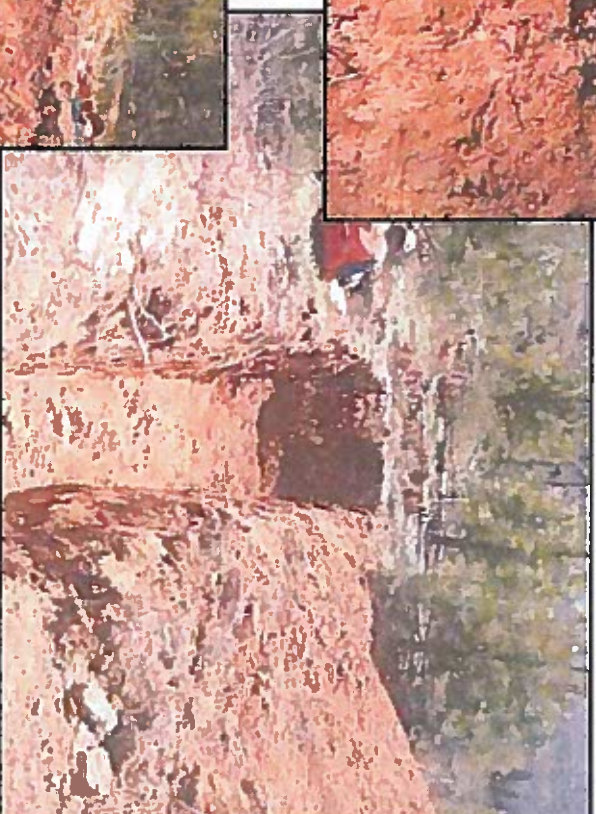
- Effective ground or aerial application
- Reduced tree mortality
- Successful for MPB and RTB
- Inconsistent response for WPB control



Does subsoiling affect seedling survival or growth?

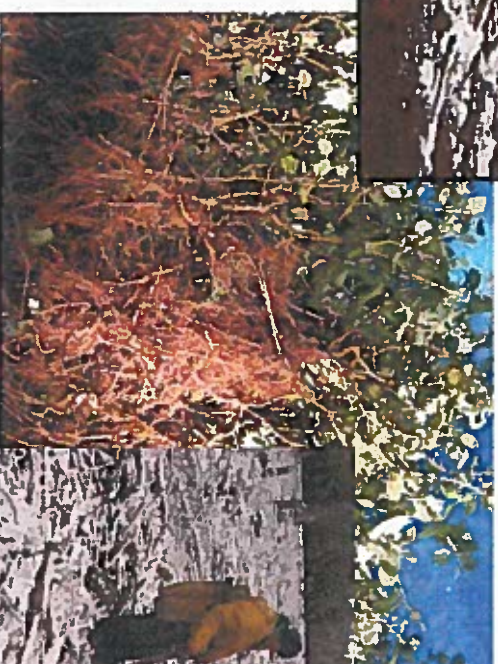
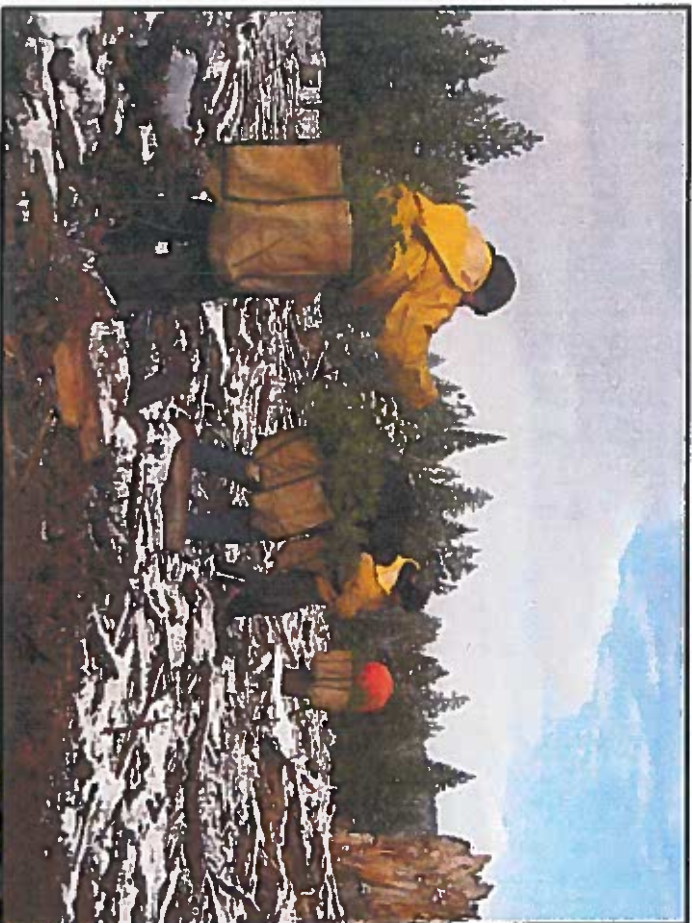
Findings

- No apparent benefit to soil properties or veg at CO-OP site
- Know the soil water holding capacity, soil depth, and extent of compaction before deciding to subsoil



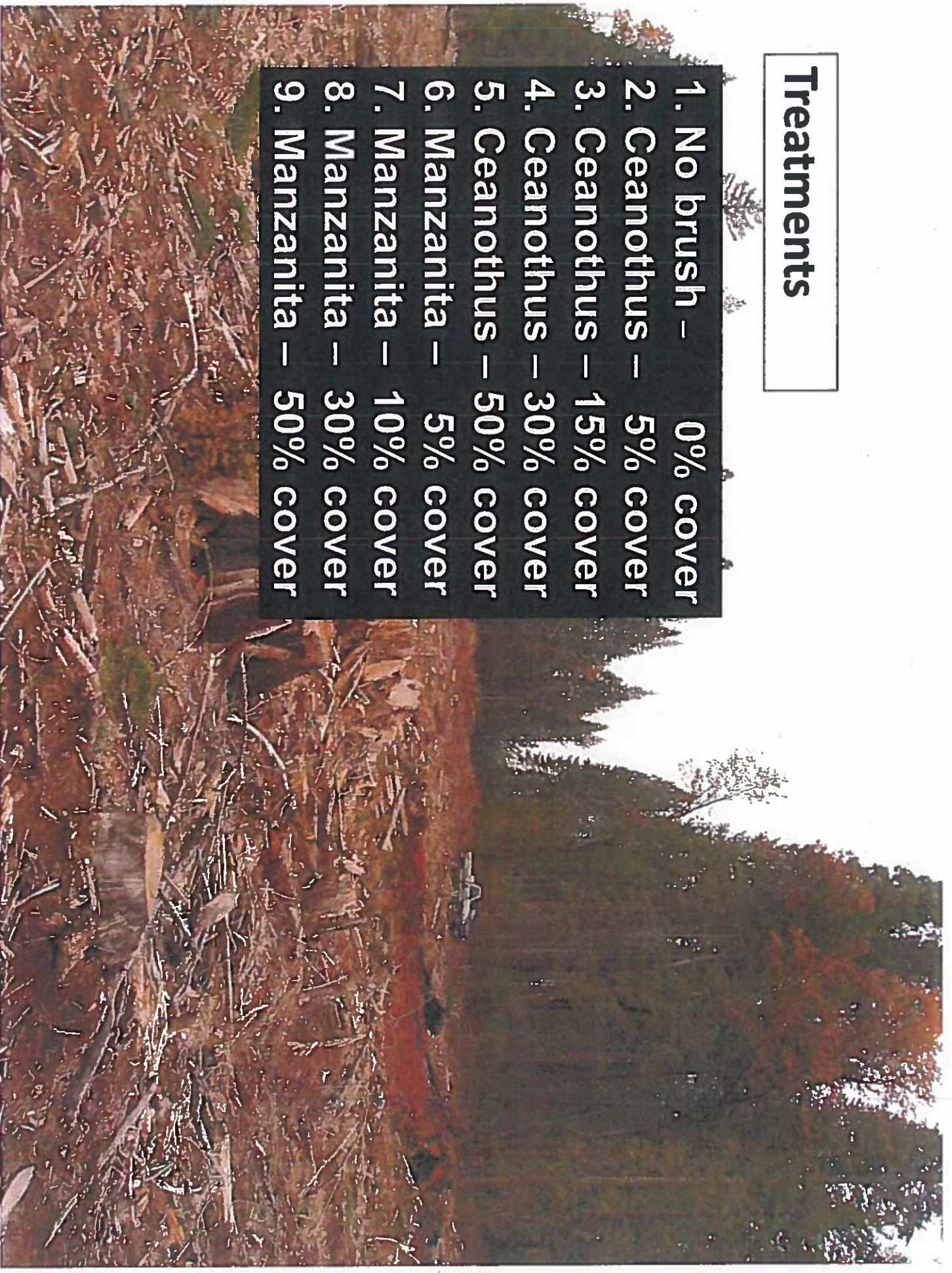
Agenda 2020

Defining the limits of shrub competition



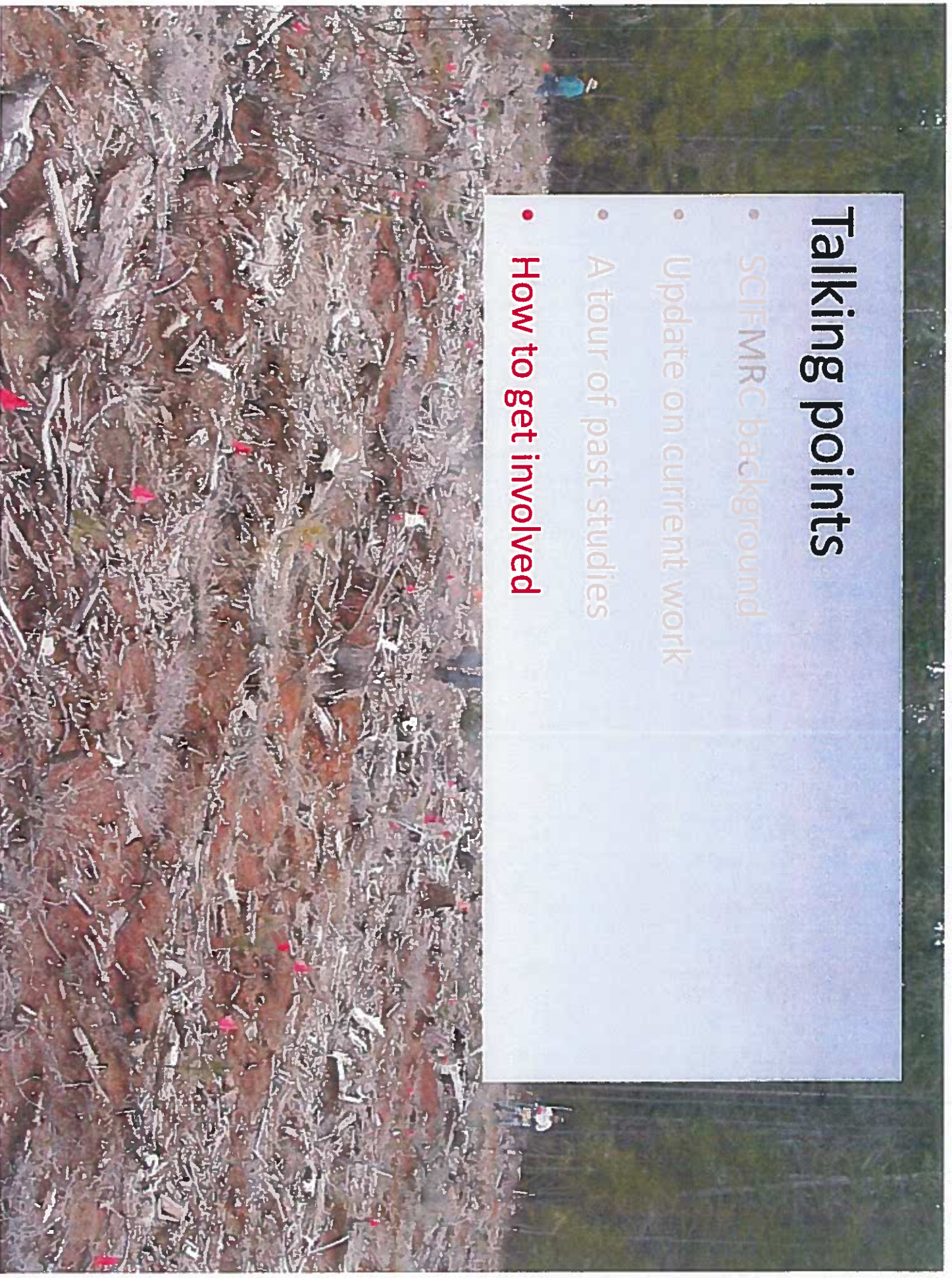
Treatments

1. No brush - 0% cover
2. Ceanothus - 5% cover
3. Ceanothus - 15% cover
4. Ceanothus - 30% cover
5. Ceanothus - 50% cover
6. Manzanita - 5% cover
7. Manzanita - 10% cover
8. Manzanita - 30% cover
9. Manzanita - 50% cover



Talking points

- SCIFMRC background
- Update on current work
- A tour of past studies
- **How to get involved**



Get involved

- Submit a research proposal by early March
- Attend the March 2014 CO-OP meeting
- Help develop a CO-OP website
- Contact Gary Fiddler, CO-OP manager
gfiddler@fs.fed.us 530-226-2542

