BARRIERS TO MANAGEMENT OF INVASIVE ANNUAL GRASSES IN OREGON

Survey of SageCon Partners Implementing Invasive Grass Management in Oregon

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SageCon Invasives Initiative website

SageCon Partnership website

PURPOSE

- Interview a range of practitioners implementing invasive grass management in Oregon to better understand the current barriers to invasive grass management
- Use this information to help guide the SageCon invasive grass strategic effort

INTERVIEWEES

20 participants:

- Agricultural Research Service (2)
- Bureau of Land Management (4)
- Local collaboratives (1)
- Natural Resources Conservation Service (1)
- Non-profits (1)
- Oregon Dept of Agriculture (1)
- Oregon Dept of State Lands (1)
- Ranchers (2)
- Soil & Water Conserv Districts (3*)
- US Fish & Wildlife Service (1)
- Weed management areas (3)

* Some participants ranked barriers but did not conduct full interviews

RANKING OF TOP BARRIERS

	Overall Ranking	Number in Top 3	Range*
1. **Financial** (need more money for implementation)	**#1**	14	1-7
2. **Policy** (policy or bureaucratic barriers to more effective management)	**#2**	10	1-7
3. **Technological** (availability of effective techniques & technologies)	**#3**	8	1-6
4. **Coordination** (creating and maintaining relationships, engaging partners in a coordinated way, crossing jurisdictional boundaries)	**#4**	9	1-7
5. **Logistical** (logistics of doing the right things at the right time and place)	**#5**	6	1-7
6. **Information** (basic knowledge, best practices, decision support frameworks, etc)	**#6**	7	1-7
7. **Capacity** (need more staff or contractors)	**#7**	6	2-7

* Rankings for almost all topics ranged from largest/most important barrier (ranked #1) to smallest barrier (ranked #7) across participants, except technological (never rated as the smallest barrier) and capacity (never rated as the largest barrier)

SUMMARY OF MAIN INTERVIEW FINDINGS

- Rankings of the limitations to invasive annual grass management were highly variable across participants – likely based on geography, scale of work, experience, agency perspective, etc. It was often difficult for participants to rank several factors that were all limiting in some way.
- Funding ranked as the top barrier, but participants acknowledged that increased funding alone would not solve the problem. There is a need to apply funding more strategically and ensure long-term adaptive management is funded to improve success rates of projects.
- Grazing flexibility was mentioned by almost all participants as a primary barrier. This affects the ability to apply treatments (usually requiring subsequent grazing rest), using grazing as a pre-herbicide treatment, and using grazing more generally as tool to manage for desirable vegetation.
- Technological barriers to re-establishing native perennial grasses are highly limiting at present. However, participants varied in their perspective on the current success rates of other interventions, such as spraying herbicide in areas with existing perennial grasses.
- Coordination was recognized as an important factor by almost all participants, and is an important factor in deciding where to work. Coordination has improved in many areas.
- It is important to build from the existing local capacity in Oregon – weed management entities, federal and state agency district offices, Soil & Water Conservation Districts, etc. These entities have important established relationships among agencies and with local landowners.
- Decision support and prioritization tools are needed to more wisely invest limited funds. Tools should be fine-tuned to individual sites as much as possible to have maximum impact.

TOP THEMES FROM INTERVIEWS

FUNDING

- Need funding for long-term management. Finding funding sources for re-treatment and ongoing maintenance becomes more difficult over time
  - Tendency to want to spread funding around and move on to new projects after a few years
- Prioritize funding to protect intact areas, but don't forget about preventing spread and potential for repeated burning
- Invest in early detection and rapid response where possible, which we can do well with current technology
- It can take a lot of work to cobble together different funding sources for landscape-scale projects. Some instructive examples:
  - Harney County Wildfire Collaborative
  - Crooked River Weed Management Area multi-year medusahead project
- Many weed management entities are entirely grant funded, spend a lot of time applying and reporting for grants, and have to include full operations costs
- Annual allocation of funding and federal fiscal year timing (immediately before the fall treatment window) make commitment to long-term projects particularly difficult

TOP THEMES FROM INTERVIEWS

POLICY

- Flexibility in grazing was the most commonly mentioned barrier
  - Need grazing rest after herbicide and even longer rest after seeding, but requires flexibility in grazing policy and a place to put the cows. This can be a major barrier to applying treatments and improving grazing management.
  - Grazing flexibility can also be an issue on private land if season of use remains the same each year
- Fire and fuels management policy is also limiting
  - Fall/winter grazing may help reduce fuels and thatch (pre-treatment) and reduce the competitive advantage of invasives, but need flexibility to do so
  - Managed fire can be an important and effective tool but is often discouraged by fire policy and risk-averse culture
- Federal contracting procedures and fiscal year timing are a challenge for post-fire treatments
- Pace of treatments on federal lands is limited by bureaucracy. Different policies among agencies adds more complexity to bureaucratic hurdles.
- Herbicide labeling policy can be time-consuming and delay adoption on public lands

TOP THEMES FROM INTERVIEWS

TECH-NOLOGY

- Success rates of invasive grass treatments are highly variable, often due to factors outside of management control
- Overall optimism varied widely among respondents, with some expressing that current technology can be fairly effective, and some listing technology (especially seeding) as a major barrier with few viable options
- None of the participants ranked technology as the lowest/least important barrier
- There are many technological needs, particularly for re-establishing native plants
  - Improve seeding success rates
  - Technology to get herbicides through the thatch layer (esp. medusahead)
  - Experimentation with grazing techniques and technology to control livestock behavior
  - Improvements in equipment, etc…
- Some entities are currently not using seeding treatments much or at all due to low success rates and high costs
- Need research on transitioning non-native perennials to native perennials – this process is largely unknown and untested

TOP THEMES FROM INTERVIEWS

COORD-INATION

- There is wide agreement that coordination across partners and boundaries is essential
- Several respondents acknowledged the importance of coordination but ranked it low as a barrier because it is already being done well
- Willingness and ability to coordinate across entities (especially public-private boundaries) is variable across Oregon
- For some entities, coordination is one of the first considerations - if nothing is being done across the fenceline, they will not work there
- Building trust with landowners and permittees is extremely important and can limit the ability to make positive changes
- Existing entities (e.g. weed management areas) have built the foundation for coordination
- Coordination efforts need to be sustained in the long term
- High staff turnover impedes building relationships needed for coordination. Build projects to be successful despite staff turnover, if possible.

TOP THEMES FROM INTERVIEWS

LOGISTICS

- Fall treatment window is limiting - need to do lots of work on the ground in a short time
- Logistical challenges with treatments: equipment, contractors, weather, timing, etc. Effectiveness is highly variable based on conditions outside of management control.
- Logistical challenges related to grazing management: infrastructure, access, availability of places to move cows, ability to move or keep animals in place, etc
- Assess why condition is poor and adjust ongoing management to avoid recurrence. Tailor treatments to individual sites; one-size-fits-all approaches often fail.
- Need a long-term mindset. Need to be diligent, persistent and patient. It can take years to see results, and the tendency can be to treat too much if immediate results are not achieved. This can waste time and resources.
  - One-and-done treatments are not effective, and even can introduce worse problems (e.g. noxious weeds)
  - Change is slow in semi-arid climates. Sometimes the best option is to sit back and wait

TOP THEMES FROM INTERVIEWS

INFORM-ATION

- Many respondents felt there was progress in delivery of information, but there is still a need for better decision support and prioritization
  - Need tools to determine when/where impacts will be most beneficial, tailored to specific sites
  - Need to be willing to give up on some places (and know where those places are) – recurring heavy use, non-restorable condition, low resilience, etc
- Outreach and education (not mentioned specifically in the question list) is important but often inadequately funded
  - Herbicide application rates - small adjustments can make a big difference in effectiveness
  - Plant IDs (especially Ventenata), adaptive grazing management, reducing spread
  - Quantifying the cost of doing nothing and the benefits of restoration for working lands
  - Nuances of good fire (fire use) vs bad fire
  - Educate decision makers and funders on the need to fund re-treatment and long-term management
- Need better ways to capture knowledge and adaptively manage
- With more flexibility in policy, you also need more information and education

TOP THEMES FROM INTERVIEWS

CAPACITY

- None of the participants listed capacity as the largest barrier, but components of capacity are also captured in other themes (funding, coordination)
- Build on existing capacity, infrastructure, knowledge, and relationships in weed management entities
- Weed management entities are doing good work, including cross-boundary coordination, prioritization and education. Need to scale existing work up.
- Structural changes may be needed to update current weed control systems in Oregon
- Fall treatment window is short - need a larger, trained workforce to increase on-the-ground implementation. Engage a seasonal workforce in work year-round to provide consistency and quality, if possible, and aid in job creation.
- Culture of organizations can reduce the ability to tackle problems strategically – e.g., narrow thinking within single specialties, risk-aversion to some tools such as managed fire
  - Foster a culture shift from reactive to proactive
  - Encourage thinking about the problem across bigger spatial scales and longer time frames

INTERVIEW QUESTIONS: FULL LIST

Interview questions were sent by e-mail in advance, and most interviews were conducted by phone

- What currently works well for invasive annual grass (IAG) management?
  - What conditions are you generally working under (post-fire, level of IAG dominance, level of residual bunchgrasses, grazing mgt)?
  - Do the most effective techniques vary depending on the species of IAG (cheatgrass vs ventenata vs medusahead)?
  - How often is re-treatment necessary?
  - What contributes most to the effectiveness of IAG treatments? What contributes most to the effectiveness of IAG treatments that can be influenced by management?
- What currently works well for perennial bunchgrass restoration?
  - When seeding, are you generally using native grasses, non-native grasses, or a mix? How do you make the decision on which seed mix to use?
  - How often is re-seeding (repeat treatment from previous seeding) necessary, and how do you make the decision about when re-treatment is needed?
  - What contributes most to the effectiveness of seeding? What contributes most to the effectiveness of seeding that can be influenced by management?
- In an ideal world, what would you do differently to be more effective in reducing IAG and maintaining or restoring perennial grasses? What would need to change to make that happen?
- What would need to change to effectively restore large landscapes (>500,000) acres in size across jurisdictional boundaries?
- If you were given unlimited funding to address the IAG problem, what would you do with it?
- If you could decide where to prioritize work, would you focus on restoring degraded acres or protecting existing high quality habitat, and why?
- Rate the barriers under these categories from 1 (largest or most important barrier) to 7; please expand on the reasoning of the top choices if not covered in the answers above.
  - Technological (availability of effective techniques/technologies)
  - Information (basic knowledge, best practices, decision support frameworks, etc)
  - Logistical (logistics of doing the right things at the right time/place)
  - Financial (need more money for implementation)
  - Capacity (need more staff or contractors)
  - Policy (policy or bureaucratic barriers to more effective management)
  - Coordination (creating/maintaining relationships, engaging partners in a coordinated way, crossing jurisdictional boundaries)