From: dave pranger
To: JWMNR Exhibits
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February 23, 2017

Members of Joint Committee on Ways and Means for Natural Resources

While watching the testimony yesterday (Feb. 22, 2017) for SB 5502 and SB 5503 (Oregon Dept. of Ag. Budget), Rep. Witt asked a question as to how Oregon's Biological Weed Program comes up with the distinction of being ranked as a national and world leader when it comes to biological control programs. I want to share some additional information regarding this program that I have attached to this email that can shed some light on that subject and help answer that question. Please feel free to contact me if you have any questions. Thank You!

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Oregon Department of Agriculture

Noxious Invasive Weed Program
Biological Control Program

Biological Control of Noxious Weed

Classical biological control is the purposeful introduction of selected natural enemies for the purpose of reducing the population of targeted noxious weeds. Since 1947, there have been 77 species of classical biological control agents introduced against 27 species of noxious weeds in Oregon. ODA manages over 120 biocontrol projects.

Several biocontrol projects in Oregon have been successful in controlling targeted weeds, including: tansy ragwort, St. Johnswort, musk thistle, Mediterranean sage, purple loosestrife, yellow starthistle, Dalmatian toadflax, and diffuse knapweed; especially at sites that are managed to improve competitive vegetation. Our goal is to protect our natural resources by managing approved biocontrol agents, redistribute them to major infestations, and monitor their impacts on the target weeds. At the end of 2016, the percentage of established biocontrol agents that are widespread on their target weeds by county is 41%.

Cost/benefit of Biocontrol

Biological control of weeds has a good safety record, significantly reduces the need of herbicide applications, improves watershed protection, and has a significant economic benefit for farmers and ranchers. Because biological control is a public good, it is best coordinated by public agencies, as it would be impossible for private enterprise to recuperate the development costs of each project. Reported cost/benefit ratios from around the world vary from 1:112 to 1:2. **Biocontrol of tansy ragwort in Oregon yielded an 85% internal rate of return and a 1:15 cost/benefit ratio**. On successful long-term projects, such as the tansy project benefits are estimated at $5 million/year. By actively redistributing ragwort biocontrol agents, ODA accomplished a successful regional project 5-10 years sooner than by the natural spread of the insects, thus averting $25-$50 million in losses to agriculture.

A partially successful biocontrol project, i.e., one that reduces weed infestations by variable percentages over large areas, can provide a positive cost/benefit ratio, even though the degree of weed control may be less than desired. **If biocontrol in Oregon reduced the top 12 weeds by 30%, annual economic losses to farmers could decrease by $20 million.** A 10% reduction of Scotch broom alone by biocontrol agents would yield $1.5 million in annual benefits. **An estimate of the net economic benefit of biocontrol agents in Oregon was valued at $12 million/ year.**

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Significant Accomplishments for 2016

Eric Coombs, the Weed Program's longstanding biocontrol entomologist retired this summer after 29 years of outstanding service. His work has covered four decades and has contributed greatly to Oregon's standing as a world leader in biological control of invasive noxious weeds. **ODA has released more species of biocontrol agents than any other state program and the number exceeds that of most countries.**

In 2016, 9 species of biocontrol agent (over 95,000 biocontrol agents) were released against 6 species of targeted weeds at more than 43 sites, a treatment of more than 215 acres. Over 35 biocontrol sites were monitored to determine establishment and impact of biocontrol agents. Releases of biocontrol agents were provided to cooperators in Oregon and neighboring states.

Field bindweed: A cooperative research project is being conducted in conjunction with Dr. Ed Peachy and Jessica Green (OSU) to determine the distribution of the gall mite and the field bindweed moth *Tyta luctuosa* in western Oregon. Additional monitoring did not reveal establishment at any of the release sites in Eastern Oregon.

Gorse: In 2008, testing of the gorse shoot moth *Agonopterix ulicitella* and the gorse thrips *Sericothrips staphylinus* began at the OSU Quarantine. Insects were collected near Hilo, HI and brought to Oregon. A petition for field release of the gorse thrips was submitted in 2012, and prerelease studies conducted along the SW Coast. We are hoping for a 2017 field release, as the Technical Advisory Group (TAG) approved its release to APHIS and we are awaiting the final Environmental Assessment.

Japanese Knotweed: Host specificity tests at the OSU Quarantine Lab were finalized and a petition for field release of the plant sucking psyllid *Aphalara itadori* was submitted to TAG. Pending approval by USDA APHIS, release could be made in 2017.

Russian knapweed: The gall midge *Jaapiella ivannikovi* was extensively collected and redistributed throughout Oregon. An extensive redistribution program was conducted in 2015 and 2016, which provided 57 releases throughout infested areas in Oregon. This is the first wasp used as a biocontrol agent in the USA.

Yellow starthistle: In 2014, the rust fungus *Puccinia jacea* var. *solstitialis* was recovered for the first time in Oregon in Douglas County. The rust was confirmed to be established and had spread nearly three miles from the original release site as of 2016.