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February 28, 2013

To Members of the Joint Committee on Ways and Means Subcommittee on Natural Resources

Co-Chairs Representative Ben Unger and Senator Chris Edwards
Members Senator Chuck Thomsen, Senator Jackie Dingfelder, Representative Jules Bailey, Representative Bruce Hanna

Subject: Testimony in support of SB 5502

Good afternoon Honorable Co-Chairs Representative Ben Unger and Senator Chris Edwards, and Members of this Committee – thank you for your time.

(See Attachment 1.)

I am Hans Radtke, a natural resource economist living on the Oregon coast (6340 Tenmile Creek Road, Yachats). For the past 30 years I have worked as an independent consulting economist on a variety of natural resource projects. I am here to support continued funding for a comprehensive program to deal with invasive species that has been developed and managed by the Oregon Department of Agriculture.

(See Attachment 2.)

In 1970, as a graduate student at Oregon State University, I completed an econometric model of the most cost effective program to manage Tansy Ragwort (a weed that is poisonous to horses and cattle). Looking at the probabilities of controlling this weed by three alternatives (mechanical, chemical and biological), my economic analysis determined that the most cost-effective means was to develop and expand statewide biological control of Tansy Ragwort.

Twenty years later in 1990, ODA asked for a retrospective analysis of the program which showed that biological control has been by far the most cost effective, with a benefit/cost ratio as measured by increased agricultural productivity to cost of the program of 13/1.

(See Attachment 3.)

In 2000 ODA asked The Research Group in Corvallis (where I was a consultant economist) to take a broader look at weed control in Oregon. Taking the best available information about present infestation and future risks and avoided production loss , it was

calculated that the weed control program avoided the loss of an additional annual \$100 million in personal income (about 3,000 jobs) to the state economy.

ODA has recently contracted with The Research Group to update this analysis to 2011. Based on better information (satellite imagery etc.) on existing invasion sites and potential spread areas, a better overall picture of the economic damage done by weeds and insects will be developed. The preliminary estimate is that the personal income loss to the state's agricultural and other productivity as a result of such damage would more likely be closer to \$150 million annually.

(See Attachment 4.)

I have just returned from Australia, where I attended the annual meeting of the Australian Agricultural and Resource Economics Society. Control of invasive species on that continent is an important issue. Some observations that may apply to Oregon:

1. Many species are becoming tolerant to repeated chemical application (Roush 2013). It takes a regional and coordinated approach to control weeds and insects. This includes refuges that allow tolerant species to reproduce with the intolerant ones so that management can be maintained at a less intensive level. But only a regional (state) level approach can accomplish this.
2. Biological control programs are an important part of regional approaches. An economic analysis in Australia estimates that for every dollar invested in biocontrol effort, a benefit of \$23 is generated. (Page and Lacey 2006)
3. Several invasive species in Australia that are of high concern also occur in Oregon, such as Blackberry Vine and Paterson's Curse (poisonous to horses and cattle and recently detected in Douglas and Linn counties).

Only a coordinated statewide program that includes biological control agents will curtail the spread of these invasive species that can lead to negative economic and environmental consequences.

Thank you for your time. I am happy to answer any questions now, or if you wish to contact me later.

Sincerely,



Hans Radtke, Ph.D.

***Presentation to Oregon
Legislature
78th Regular Session***

***Joint Committee on Ways and
Means, Subcommittee on Natural
Resources***

***Oregon's Invasive Species Control
Program Economic Benefits***

***Hans D. Radtke, Ph.D.
Natural Resource Economist***

February 2013

ATTACHMENT 2

**BIOLOGICAL CONTROL OF TANSY RAGWORT IN WESTERN
OREGON FROM 1974-1992**

BENEFIT-COST EVALUATION

Discount Rate (percent)	Program Costs	Net Present Value	Benefit-Cost Ratio
Seven	\$1.5	\$23.2	15.0 to 1
Ten	\$1.2	\$16.2	13.0 to 1

Internal Rate of Return = 83.0%

Notes: 1. Dollar amounts are in millions of 1974 dollars.

ATTACHMENT 3

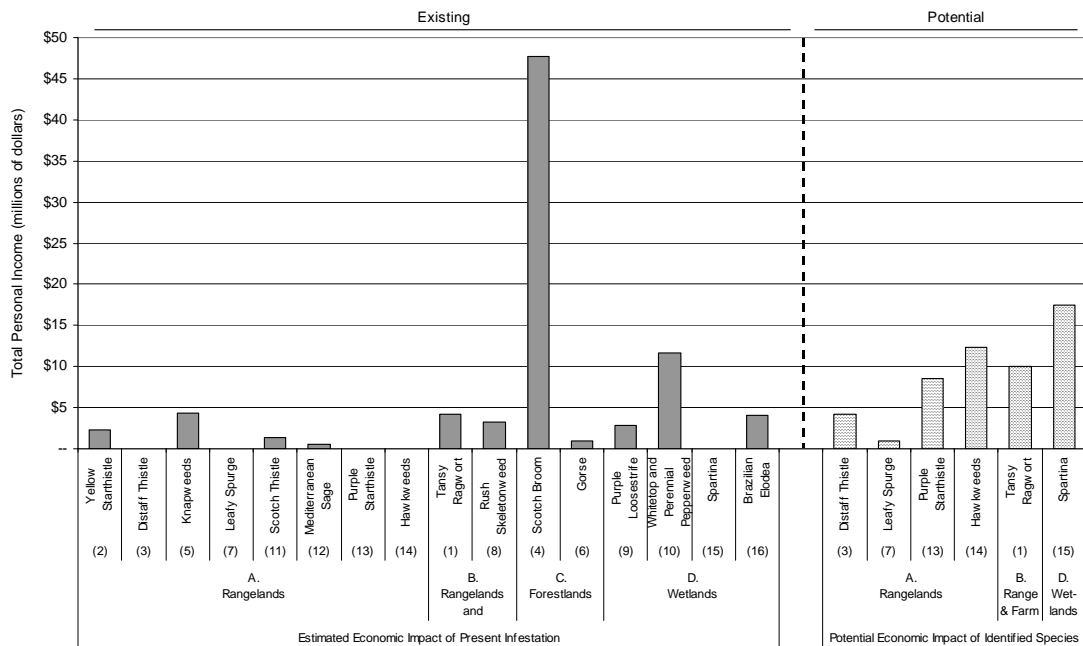
Economic Analysis of Containment Programs, Damages, and Production Losses From Noxious Weeds in Oregon



Oregon Department of Agriculture
Plant Division, Noxious Weed Control Program

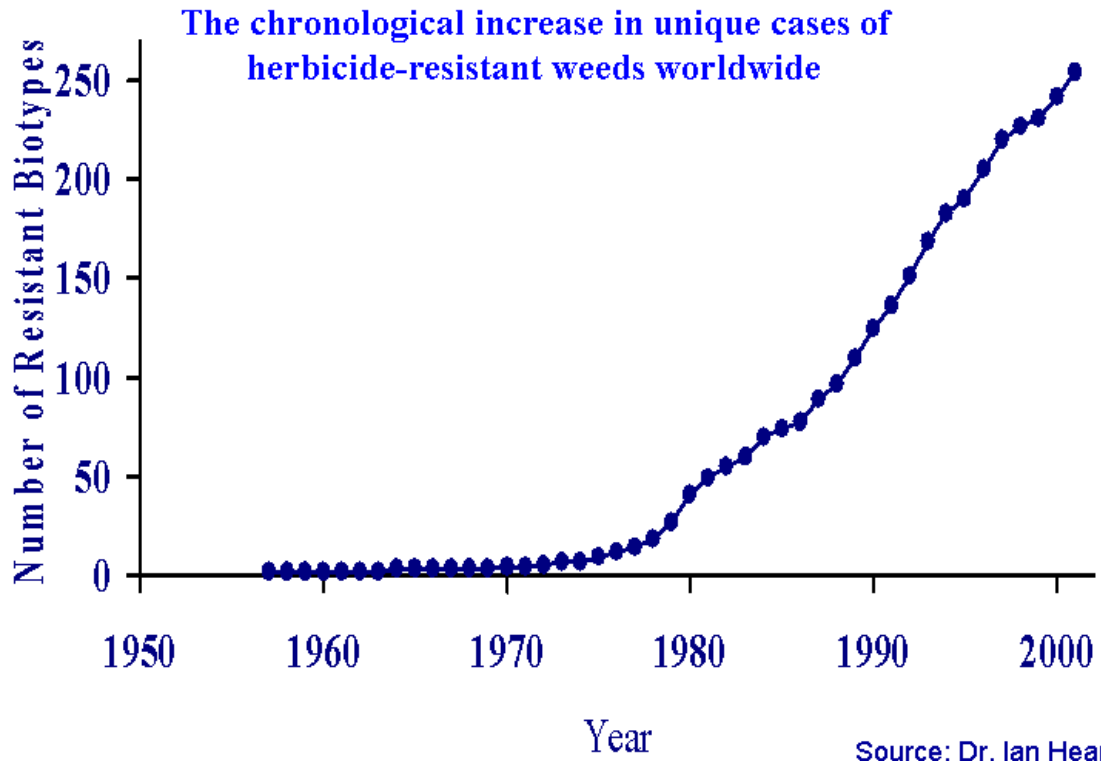
November 2000

Annual Economic Impact of Existing and Potential Noxious Weed Infestation



ATTACHMENT 4
(Page 1 of 2)

(Roush 2013)



An economic analysis in Australia estimates that for every dollar invested in biocontrol effort, a benefit of \$23 is generated.

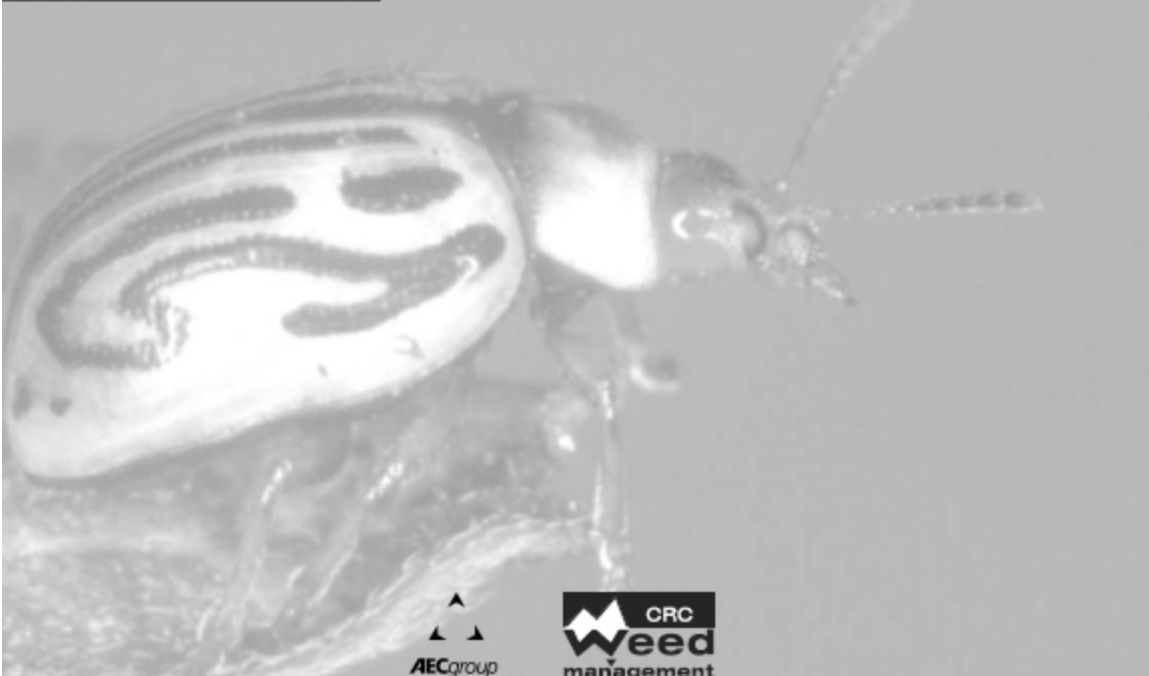
Economic impact assessment of Australian weed biological control

Report to the CRC for Australian Weed Management

By: A.R Page and K.L Lacey, AECgroup

January 2006

Prepared by the AECgroup for the CRC for Australian Weed Management



HANS D. RADTKE, PH.D.

- **Doctorate, Oregon State University Agricultural and Resource Economics – 1972**
- **Independent Resource Economist – 30 years**
- **Oregon Governor's Council of Economic Advisors – 12 years**
- **Pacific Fishery Management Council – 6 years including chairman; 3 years on Scientific and Statistical Committee**
- **Northwest Power and Conservation Council, Independent Economic Analysis Board (IEAB) – 8 years**
- **Marine Protected Area Federal Advisory Committee – appointed July 2009 for a 4 year term**