

Puncturevine Patrol

Puncturevine is on the loose in western Oregon. Puncturevine is an annual in our climate, and it produces seeds that can contaminate snap beans headed to the cannery. Puncturevine also has very persistent seed with erratic emergence over several seasons. When spotted, puncturevine should be eradicated.

Step 1—Identification. The first step to preventing this weed from getting a foothold on your farm is to know what you are looking for. Puncturevine is easy to identify because of its unique cotyledon and first true leaves (Figure 1). The plant is usually low-growing with yellow flowers (Figure 2). Seeds are held in woody burs that have five sections, each with two to four seeds (Figure 3). Two long, woody spines protrude from each section of the bur.

Step 2—Prevention. The second step is to become aware of infested areas so that you can minimize the risk of transporting puncturevine seeds to your site. Seeds of puncturevine are sometimes distributed by equipment because the seeds stick in tires. Note that puncturevine often establishes first along field margins where



Figure 1. Seedling with cotyledons and two true leaves.



Figure 2. Mature plant with yellow flowers.

competition from crops is low.

We are recording infested sites so that additional precautions can be taken to prevent the spread of this weed. Visit <http://oregonstate.edu/dept/hort/faculty/PeacheyNewFormat.htm> for an updated map of locations where puncturevine has been spotted.



Figure 3. Puncturevine bur.

Step 3—Control and eradication.

Research was conducted in 2005 in snap beans at a site infested with puncturevine seeds. The goal was to evaluate the efficacy of commonly used herbicides for puncturevine control.

Raptor plus Basagran provided moderate to good control of puncturevine in 2005 in beans that were planted in mid-June (see table on back). Although this was the first year that we have

Please call the puncturevine hotline at 541-737-3152 if you know of a site with puncturevine (see back).

Puncturevine control in snap beans, 2005

Herbicide	Timing	Plots (of 4) that had:		
		No control	Partial control	Good control
Basagran (1 qt)	POST	1	1	1
Raptor + Basagran (4 oz + 1 qt)	POST	—	1	2
Cobra (12 oz)	PRE	3	—	—
Dual Mag (16 oz)	PRE	3	—	—
Eptam (4 pt)	PPI	1	—	—
Treflan (1 pt)	PPI	2	—	—

tested Raptor and Basagran for control of puncturevine, these results concur with reports from other areas.

Dual Magnum, Treflan, and Cobra appeared to have little effect on puncturevine emergence. Because of the low density of puncturevine at the site, it was unclear whether Eptam controlled puncturevine. Puncturevine also is known to emerge through Atrazine.

Prevention of seed production is essential to long-term control or eradication of puncturevine. The seed is long-lived in the soil and emerges inconsistently over several years.

Even though a snap bean crop typically is in the field for 10 weeks or less, observations indicate

that puncturevine can easily produce seeds during the bean season in western Oregon. Puncturevine produces seed faster during late summer, sometimes in as little as 4 weeks.

Scouting infested areas after herbicide treatment or cultivation may help you identify areas that would benefit from further intervention such as hand removal. If escapes are noted in the field, it is best to pull the plants, carry them out of the field, and burn them.

Two insect pests of puncturevine are available commercially. They may help to reduce seed production but may need to be released annually (www.goatheads.com).

If you have questions, suggestions, or comments, contact Ed Peachey, Horticulture Department, OSU, 541-737-3152, peacheye@hort.oregonstate.edu

Puncturevine Locations

Fax to 541-737-3479 • Attn: Peachey

Your name _____ Telephone _____

Site address _____

GPS coordinates (if available): LAT _____ LONG _____

Density of puncturevine: _____ Low (<1/100 sq ft) _____ Moderate _____ High (>1/sq yd)

Size of infested area (acres) _____

Soil type _____

Comments _____