

## **Dodder control in Roundup Ready® alfalfa.**

Peter Reisen<sup>1</sup>, Nolan Johannsen<sup>1</sup>, and Mark McCaslin<sup>2</sup>.

Dodder (*Cuscuta suaveolens* Ser) is a parasitic plant that can girdle alfalfa stems causing reduced vigor and forage yield. Dodder seed is very similar in both size and shape to alfalfa making it a particular problem in alfalfa seed production fields. A greenhouse study was conducted to examine the effectiveness of Roundup Ultra Max® to control dodder in Roundup Ready® alfalfa.

The experiment was seeded in the greenhouse using Roundup Ready® alfalfa that was developed in a collaborative project between Forage Genetics International and Monsanto. Roundup Ready® alfalfa varieties have >90% of the plants exhibiting tolerance to Roundup. The treatments used were Control (no spray), Spray (Roundup Ultra Max® applied at 4 weeks to alfalfa plants infected with dodder), and Post-spray (Roundup Ultra Max® applied at 4 weeks to non-infected alfalfa plants). Seeding was done in 1 \_" by 2" deep Jiffy Strips®, four flats per treatment (ca 50 alfalfa seeds per flat). The Control and Spray treatments had two dodder seeds per pot seeded (ca 100 seeds per flat). Alfalfa and dodder plants were scoured at four weeks post planting. The Spray and Post-spray treatments were sprayed with Roundup Ultra Max® at a rate of 2 2/3 oz/gallon (2% by volume). One week after herbicide application, the Post-Spray treatment had two dodder seeds per pot seeded each week for the next four weeks. Live dodder plants that were attached to alfalfa were counted each week post spray.

All dodder plants died within two weeks in the Spray treatment (Table one). The Control had 100% of alfalfa plants infected by week two post-spray. Dodder plants germinated in the Post-Spray treatment but died within one week of attaching to the alfalfa.

Table one: Percent alfalfa plants infected with dodder day 0 to 5 weeks post spray with Roundup Ultra Max® .

	% Infected Week 0 3/26/02	% Infected Week 1 4/03/02	% Infected Week 2 4/15/02	% Infected Week 3 4/22/02	% Infected Week 4 4/29/02	% Infected Week 5 5/06/02
Control	57%	86%	100%	100%	100%	100%
Spray	54%	28%	0	0	0	0
Post-Spray	0	0	2%	4%	3%	0

<sup>1</sup>Forage Genetics International, 8770 Hwy 20/26 Nampa, ID 83687 and <sup>2</sup>Prior Lake, MN