

## HOW MUCH IS CANADA THISTLE COSTING ME IN MY PASTURES?

Mark J. Renz<sup>1</sup>

Canada thistle (*Cirsium arvense*) has been identified as a weed of concern in Wisconsin pastures. It can reduce forage yield and utilization, both of which can have a negative impact on animal performance (Undersander et al., 2002). Control typically involves the use of herbicides, an effective control that has been well-researched and documented. Though effective in controlling Canada thistle, herbicides also kill clovers, which are highly desired in Wisconsin pastures. Thus graziers are often left wondering if they should manage Canada thistle infestations in pastures with an herbicide, knowing it will remove the clovers, or if they should allow this problem weed to persist. To answer this question it is important to understand how much forage is being lost due to direct competition with Canada thistle and how much forage utilization is reduced by this spiny weed.

Forage quantity reductions from Canada thistle. Several studies have estimated losses in forage quantity from Canada thistle. Research has documented losses in forage from as few as 1 shoot/ft<sup>2</sup> with losses ranging from 0-96 % forage loss depending on the level of infestation and other site-specific variables (Grekul and Bork, 2004). It is important to realize that these values do not include Canada thistle biomass in the forage calculation. Canada thistle is eaten in pastures, and does have high forage quality, but its spiny nature decreases its palability. This needs to be considered.

Forage utilization of Canada thistle and adjacent forage. Few studies have evaluated the utilization rates of Canada thistle and forage adjacent to infestations. Work out of Alberta, Canada suggests that Canada thistle utilization is between 0-40% in pastures, depending on the time of grazing, other forage present, and grazing method utilized deBruin and Bork (2006). While others have shown that utilization of weeds can be increased by training animals, this is an uncommon practice rarely seen in the upper Midwest (Undersander et al. 2002). In addition to the reduced utilization of the Canada thistle, forage adjacent to this spiny plant is not heavily utilized. Research indicates utilization of other forage ranges between 47-88% (deBruin and Bork, 2006).

Thus Canada thistle has the potential to reduce the amount of desirable forage as well as the use of that forage, but no information is available from Wisconsin or similar areas in the upper Midwestern United States. This presentation will discuss results from trials at three locations across Wisconsin in 2012 that utilized Management Intensive Rotational Grazing with and without an herbicide application. Results will summarize the costs and benefits of an herbicide application and also compare results to a mob grazing.

---

<sup>1</sup> Extension Weed Scientist. Department of Agronomy, 1575 Linden Drive, University of Wisconsin-Madison. [mrenz@wisc.edu](mailto:mrenz@wisc.edu)

## REFERENCES

- Grekul, C., D. and E. W. Bork. 2004. Herbage yield losses in perennial pasture due to Canada thistle (*Cirsium arvense*). *Weed Technology* 18:784–794.
- S. De Bruijn & E. Bork. 2006. Biological control of Canada thistle in temperate pastures using high density rotational cattle grazing. *Biological Control* 36:305-315.
- Undersander, D.J., B. Albert, D. Cosgrove, D. Johnson, and P. Peterson. 2002. Pastures for profit: a guide to rotational grazing. Publication A3529, University of Wisconsin Cooperative Extension Publishing, Madison.