



How to cut non-test buckthorn

Overview: During summer, occasionally cut non-test buckthorn at your experimental site. Carry out these instructions a total of 2 to 3 times each year between June and August.

Why cut? The goal of this activity is to maintain an area in which we compare how test buckthorn grow in the presence and absence of native seed mix. This comparison depends on minimizing interference from non-test buckthorn. “Non-test” means all buckthorn that are not from test seeds. This includes re-sprouts from stumps; buckthorn that survived your original removal efforts (*e.g.*, they might have been either too small or overlooked); and buckthorn coming up from seeds in your site’s soil (*i.e.*, *non-test* seeds).

Priority: Leave test buckthorn undisturbed.

In 2022, look for:

- surviving test buckthorn that emerged in 2020 or 2021
- as well as any new test buckthorn that emerge this year

All buckthorn growing within 3 inches of a white flag can be considered “test buckthorn.” We will measure them throughout the study. Do not cut or uproot them *until* asked to do so. (Yes, we will eventually uproot test buckthorn.)

Action steps (record your actions on page 2):

1. Cut non-test buckthorn *within* squares

Look for and cut at ground level all buckthorn, *except test buckthorn*, that are taller than 6 inches.

- Do this *uniformly* within all 6 squares.
- *Cut* buckthorn rather than uproot them. Leave dead stumps.
- When you start cutting, complete all 6 squares within 1 week. That is, for example, do not start with 2 squares today and come back 3 weeks later to finish the remaining 4.

2. Cut non-test buckthorn *outside* squares (gray area, see right)

Look for and cut at ground level all buckthorn that are at least 1 foot tall.

3. If site is fenced, remove creeper plants from fence.

Most sites are not fenced and this is okay.

Tools:

Scissors, ruler, and pruning shears (single-handed or two-handed shears, depending on the sizes of buckthorn)

Guidelines:

- Follow steps every 4 to 6 weeks.
- Record efforts on page 2, even if there are no non-test buckthorn to cut.
- Keep WHITE pin flags in place.
- Do not disturb test buckthorn.

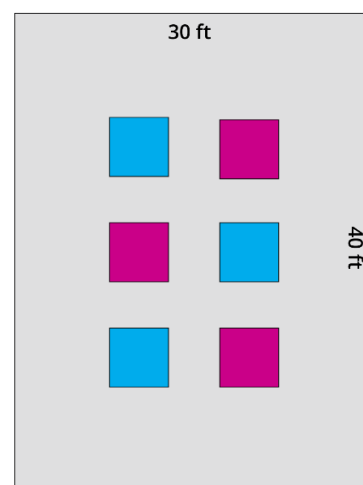


Diagram of experimental site

Optional

If you have a need or strong preference to remove other invasive plants (*e.g.* garlic mustard) at the site, you may clip them. Please be sure you can confidently identify plants before removing. Do not disturb native seed plants. If you do this step, use the log and remove uniformly across all squares or entire site.



Log for cutting non-test buckthorn

Site name: _____

Participant name(s): _____

Questions? Please contact Abbie at coveritup@umn.edu

At the end of summer, we will ask you to either mail this log to the office, or transcribe your records into an online survey.

Effort start date: MM/DD/YY	Effort end date (within 1 week of start): MM/DD/YY	Activity: Look for and – if present – cut non-test buckthorn <ul style="list-style-type: none"> • Within squares (all buckthorn ≥ 6 inches) • And outside squares (all buckthorn ≥ 1 foot) 	Describe additional cutting (see reverse, under “Optional”)
<i>06/28/21</i>	<i>07/01/21</i>	<p><i>Yes</i></p> <p>Answer “Yes” if you check for non-test buckthorn (within and outside of squares) and cut it where it exists. Additional details are optional. Some sites will have a lot to cut back. Others will have virtually none. This log organizes evidence that the site is being maintained.</p>	<p><i>Removed creepers from fence</i></p> <p><i>Cut garlic mustard from 6 squares but not whole site</i></p>

Thank you! We value your participation!