

## Cover it up! Citizen Science Project

# Cutting how-to

**Overview:** During summer, occasionally cut re-sprouting buckthorn at your experimental site. A good target is to 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 **test competition between native plants and new buckthorn plants** (“test seedlings”). To do this, we will compare how test seedlings grow in the presence of native plants against how test seedlings grow where no native seeds were spread. Our process includes minimizing interference from residual buckthorn. “Residual” in this case means buckthorn that did not freshly emerge this spring or summer. This includes buckthorn plants that you cut in the past and are now re-sprouting. It also includes buckthorn plants that survived earlier removal efforts because they were overlooked or too small (<1 foot tall). (Photo on page 2 shows an example residual buckthorn.)

## Priority: Leave *test seedlings* undisturbed. Test seedlings are a focus of our test.

A buckthorn that emerges about 2–2½ inches from a **WHITE** pin flag may be a **test seedling**.

What does an **emerging buckthorn** look like? Pictured right. →

Throughout the study, **look carefully** for buckthorn plants emerging close to **WHITE** flags.

By any one **WHITE** flag, there can be as many as 6 test seedlings.

**Leave test seedlings to grow.** We will measure their growth later.

Do not uproot test seedlings *until* asked to do so. (Yes, we will eventually uproot them.)



Buckthorn that freshly emerge from seed this spring or summer look like this. The first two green leaf-like structures are called cotyledons.

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**Tools:** Scissors, ruler, & pruning shears (Depending on the sizes of buckthorn you are cutting, you may prefer a single-hand or two-hand pruning shears.)

### Cutting guidelines:

- Every 4 to 6 weeks, follow the steps in this document.
- Track your work (see grid on page 3).
- Keep **WHITE** pin flags in place. This way, you can be careful **not to disturb buckthorn test seedlings**.



Cut residual buckthorn at ground level.

### Cutting *inside* squares:

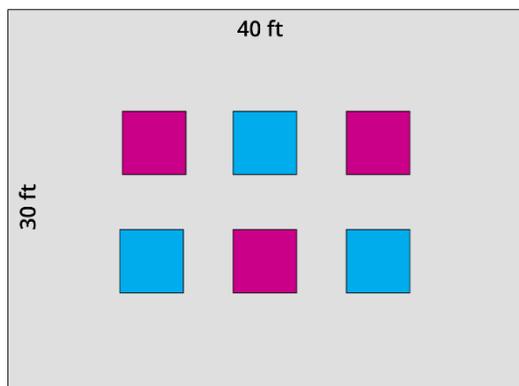
- *Within Squares 1–6*, cut at ground level all buckthorn that are taller than 6 inches. (You may leave **dead** stumps.)
- Carry out cutting *uniformly* across all 6 squares.
- *Cut* buckthorn rather than uproot them, to avoid disturbing soil.
- When you start cutting, complete all 6 squares within 1 week. That is, for example, do not start with 2 squares today and come back 3 weeks later to finish the remaining 4.

### Also cut buckthorn *outside* squares:

*Outside* the squares (pictured left, gray area), cut at ground level all buckthorn that are taller than 1 foot tall.

### Optional:

- If you are comfortable identifying other invasive plants (e.g., garlic mustard), you may clip those too, removing them from the squares *or* removing them from the entire site.
- If you have a fence around your site, remove “creeper” plants. Creeper plants can unevenly shade the site. (Most sites will not have a fence and this is ok.)





Department of Forest Resources

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# Track work at your site

Site name: \_\_\_\_\_

Participant name(s): \_\_\_\_\_

**Questions?** Please contact Abbie at [coveritup@umn.edu](mailto:coveritup@umn.edu)

Date start MM/DD/YY	Date end MM/DD/YY	Cut residual buckthorn • <i>Within squares</i> (all buckthorn ≥6 inches) • <i>And outside squares</i> (all buckthorn ≥1 foot)	Describe additional cutting (e.g., did you cut other species or remove creepers from fencing? etc.)
<b>EXAMPLE ROW</b> - - - - -			
06/28/20	07/01/20	Yes	Removed creepers from fence. Cut garlic mustard from 6 squares but not whole site

**Thank you! We appreciate your work and participation!**