Killing Cover Crops in Urban Farms and Gardens

Build your cover crop plan with an effective termination strategy

By Abigail Harper and Vicki Morrone

A cover crop left to seed can become a weed when growing your next crop. Make sure to plan your cover crops for the year and know how you will cut, turn in or mow the cover crop before it sets seed.

Kill cover crops shortly after flowering and before they set seed. This allows cover crops to grow to their maximum size and their soil health benefits, but not produce seed. Remove plant matter or turn in for planting finely seeded crops, like lettuce and carrots. If you do not turn in the cover crop, it can serve as a mulch for larger transplants, like squash. Chop cover crops smaller to speed the break down process.

Urban farms rarely have large equipment. When growing cover crops, make a plan of how you will kill or terminate the crop before it sets seeds. If the area is small or in a raised bed, you can pull the cover crops by hand. The chart below shares other ideas with materials you may already have on hand.

Tool	How it works	How to use
Winter-kill	Crops that are unable to survive temperatures below freezing naturally die during winter.	Crops planted late in the season will winterkill if left in the field. Cover crops that typically winterkill in Michigan include oats, buckwheat, radish and mustard.
Mower or weed whip	Mowing a cover crop after it sets flower kills the crop and adds a layer of mulch, preventing future weeds.	Set the mower at its maximum height for an initial pass, and then lower for a second pass at ground level. Double mowing helps reduce the residue size and quicken the break down. A weed whip can also work well for this purpose.
Black tarps	Covering crops with a dark-colored tarp or barrier prevents sunlight and airflow, killing cover crops and other weeds.	Place heavy weave tarp over cover-cropped area and secure to ground for 3-4 weeks in summer. Then, remove and rake dead plants to prepare soil. To grow direct seeded crops, it is best to rototill or use a broadfork to incorporate plant material.
Clear plastic	Covering cover crops with clear, old row or hoophouse cover traps heat and stops airflow, which kills plants.	Place plastic over cover-cropped area and secure to ground for 3-4 weeks. Clear plastic is best if applied immediately following a rain when soil is moist during warm months.
Rototiller	Rototilling chops and turns in cover crop plants, but may break up soil aggregates.	Rototillers can be rented from most major hardware stores. Taller cover crops may require multiple passes or a preliminary mowing to incorporate fully.
Herbicides	Herbicides are often recommended for non-organic, no-till growers, but can contaminate waterways and limit future growth of crops.	Where urban farms border homes or share land with other gardeners, herbicides are not recommended. For more information on safely using herbicides to kill cover crops, please see the MSU Extension Bulletin on Cover Crop Termination.

For more resources on cover crops, visit the MSU Extension Cover Crops Website: https://www.canr.msu.edu/cover_crops/

To contact an expert in your area, visit msue.anr.msu.edu/experts or call 888-MSUE4MI (888-678-3464)