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Photo Cutline: This winter wheat has grown well during the mild winter, but will need to be terminated prior to planting this year’s vegetable garden.
Photo Credit: MU Extension

Terminate Cover Crops Before Planting Vegetables
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Winter annual cover crops offer a number of benefits to vegetable gardens. They reduce soil erosion, increase soil organic matter content, maintain soil fertility, and suppress weeds. All of these benefits come about while the cover crop is growing, but the effects continue well into the season. How well some of these benefits extend into the season depends primarily on how the cover crop is terminated.

Gardeners have several choices when it comes to terminating cover crops. Tilling the cover crop into the soil prior to planting is the most common of these. This is the most effective approach as it results in the least amount of regrowth, but it does not take full advantage of the weed suppressing ability of the cover crop. Additionally, tilling in a cover crop negates its soil structure building capability. In order to gain maximum weed suppression, consider an alternative method to terminate your winter annual cover crop.

Rolling or laying down the cover crop is a great way to terminate it. This is because the roots remain in place in the soil and the crop remains attached to the crown, keeping it in place. Once the cover crop is lying down it acts as mulch: preserving soil moisture, moderating soil temperature fluctuations, and reducing weed establishment. Because taller cover crops try to stand up after being rolled, using a device that crimps the stem will give better results. Keep in mind that this method rarely terminates all established plant in the cover crop, so repeating this process will be necessary before planting the vegetable crop.
A second option to tilling is mowing. Cover crops can be mowed at any point in the growth cycle, but mowing may not terminate some cover crops until they reach a certain stage of growth. With this, mowing is also a termination method that will need to be repeated. The disadvantage to mowing is that it does not result in weed suppression as well as rolling. This is because the mulch left behind from the mower is chopped up, and does not necessarily stay in place. Additionally, this chopped up mulch tends to disintegrate more quickly, resulting in a shorter period of protection than a rolled cover crop will provide.

Regardless of the termination method that you use on your cover crop, be sure to do it at least 2 weeks prior to planting any seeds or transplants. This will prevent the seedlings and transplants from being “burned” by the quickly decomposing plant material in or on the soil.

If you did not plant a cover crop last fall, it is not too late to get one in. Annual ryegrass is an easy cover crop to spring seed, and it is readily available to homeowners. It grows fast and will contribute to your soil’s organic matter content before dying off later in the spring. Left in place, the residue from a terminated annual ryegrass stand could provide good weed suppression in this year’s summer vegetable garden.

For more information on cover crops in vegetable gardens, see MU Extension Publication “Organic Vegetable Gardening Techniques” available at this website: http://extension.missouri.edu/p/G6220