



Putting the Garden to Bed with Cover Crops

By Dr. Matthew Lisy, UConn Adjunct Faculty

It is almost that time of year again! Fall is in the air – make way for pumpkin spice everything and lots of apple-flavored desserts. Unfortunately, this is a time when the garden is most often overlooked. No matter how big or small, now is the time to do one of the best returns for your gardening efforts by putting in a cover crop.

At first glance, it seems counter intuitive. Cover crops have all the appearance and earmarks of weeds. They grow fast, choke out everything else, and literally look like the weeds we spend the majority of the summer pulling out. In reality, we want cover crops to grow quickly and exclude anything else that wants to grow, namely weeds! Unlike the weeds we struggle to pull, however, cover crops are not a burden, but a blessing. In fact, some species of cover crops are allelopathic, which means they negatively impact the growth of other species. The plants secrete natural chemicals that may inhibit germination of weed seeds, or negatively impact growth of existing weeds. Some cover crops even inhibit the growth of nematodes or fungi. But this is not where the benefit of cover crops ends.

What is not known from a quick glance is what they are doing below the surface. Cover crops significantly benefit the soil in multiple ways. First, they stop soil erosion by physically holding the soil in place. The roots also grab and hang on to the nutrients, so those are not leached away (washed out of the soil by precipitation). In addition, the roots penetrate deep into the ground to help break up hard subsoil. When the cover crop dies or is killed by the gardener, the roots and above ground parts degrade and enrich the soil with organic matter (nutrients).

There are many different types of cover crops from which to choose. A few general rules I usually tell people is that any cover crop is better than no cover crop – use what is easily available locally. Second, use more than one variety of cover crop if you can, or get a mix. More diversity is generally better but one will work fine too. A variety of cover crops can be purchased from Johnny's Selected Seeds (www.johnnyseeds.com) or your local feed/garden store. Unfortunately, not all places carry these seeds so I would recommend calling first. Lastly, if you include some legumes in the cover crop mix, they will add beneficial nitrogen to the soil. Legumes have special root nodules that house symbiotic bacteria. This is a mutualistic

relationship (both species benefit) where the bacteria get a place to live and the plants get nitrogen.

Cover crops can be divided into two main types – annual and perennial. Annuals will die when the weather gets cold, and are best put in at the end of the summer to give them some time to grow before the really cold weather sets in. This kind has the advantage of not having to be killed off in the spring by the gardener, but the disadvantage of not carrying the benefits discussed above throughout the winter. Annual types work well for no-till gardeners. The perennial kind lasts throughout the winter, but the gardener may need to mow the tops and then till the bottom portions under in the spring, or cover with a tarp to kill it. Use of herbicides is not recommended.

So this fall, go ahead and try something new! Get some cover crops and add them to your garden. The benefits to the soil will show up next spring when you have less weeds and more productive crops. If it has been more than a few years, don't forget to have your soil tested this fall too!

For your gardening questions, feel free to contact us, toll-free, at the UConn Home & Garden Education Center at (877) 486-6271, visit our website at www.ladybug.uconn.edu or contact your local Cooperative Extension center.



1 "A large bag of winter rye seed in the fall waits to be broadcast into the garden (photo by M. Lisy)."



2 'A plot of winter rye (center) in the spring that will be first mowed, then the bottoms tilled under before planting the bed with a vegetable crop (photo by M. Lisy).'