

Overseeding Oats and Crimson Clover as Cover Crop in a Vegetable Garden



Overseeding Procedure

To properly start cover crops, they need to be seeded prior to the end of the vegetable harvesting season. Because of this overlap, a procedure called overseeding is necessary. Overseeding is planting a direct-seeded crop or cover crop into an already established crop, usually by surface sowing of the seeds.

Fall Directions

1. Remove weeds.
2. Remove necessary vegetable plants that are diseased or finished for the year. Note, you can keep vegetable plants that don't pose a disease or pest risk. Keeping dead plants can provide necessary nesting habitat for beneficial insects. If you are a member of a community garden, consult with your garden manager or guidelines first.
3. Trim dead leaves off vegetable plants to allow more sunlight to reach the ground.
4. Broadcast the oat and crimson clover seed evenly throughout the garden bed and between vegetables.
5. Rake in to ensure adequate soil contact with the seed.
6. Cover crops typically germinate easily and quickly but watering may be necessary during dry spells to establish a good stand.

Spring Directions

1. Oats will winter-kill; they die after a hard frost. Under usual conditions, Crimson Clover will survive the winter and continue growing in the spring. If planted around mid to late September, Crimson Clover should mature between May 1 and June 1. This is important because Crimson Clover will fix the most nitrogen into the soil while it is flowering. Therefore, it is advised to terminate by cutting or tilling (cutting is preferred for soil health reasons) just prior to the clover crop going to seed. However, if this is not possible, or you need to get into the garden sooner, tilling or pulling by hand will be the best method to terminate Crimson Clover. It is best for soil health to leave the cover crop residue as mulch for the garden bed. Simply seed or install your starts between the cover crop residue.

Mid-September Seeding Rates

Cover Rate Formula*

[Square Feet of Seeding Area] x [.0025 lbs. or .04 oz.] = Amount of Oat Seed by weight

[Square Feet of Seeding Area] x [.00069 or .012 oz.] = Amount of Crimson Clover by weight

Cover + Weed Suppression Rate*

[Square Feet of Seeding Area] x [.0032 lbs. or .05142 oz.] = Amount of Oat Seed to Broadcast by weight

[Square Feet of Seeding Area] x [.00069 or .012 oz.] = Amount of Crimson Clover by weight

**A seed packet from the HCSWCD contains approximately 4 oz. (1/4 lb.) of oat seed and 3 oz. of Crimson Clover (totaling 4oz. with the bacterial inoculant coating) which is the minimum to average seeding rate for 100 square feet or a 10' by 10' plot. A typical raised bed at 4' x 8', or, 32 square feet, will require between 1.28 oz. of oats and .5 oz. of Crimson Clover (this accounts for the bacteria inoculant coating on the seed). This is obviously a very small amount. To keep it simple, on a 4' x 8' raised bed, simply mix 1/3 of the Crimson Clover and 1/2 a bag of Oats together and broadcast evenly over the garden. This will provide a denser coverage but may slow down maturity. Refer to point number 3 in the "Troubleshooting and Thoughts" section below for guidance.*

Troubleshooting

1. If the oats go to flower prior to the first killing frost, you will need to terminate the oats by cutting the flower head off (keep the rest of the plant) before the oats go to seed.
2. It is possible to seed cover crops after mid-September. In fact, they can be planted as late as mid-October (or later depending on seasonal variability) in Indiana. If this is the case, increase the seeding rate by 10% between 10/1 and 10/15 and 20% after 10/15. These numbers have not been verified scientifically and are anecdotal only.
3. While there has been a vast amount of research on cover crops, it is not an exact science. Learning through experience is the best teacher. Sowing dates and seeding can vary based on many variables like weather, climate, soil quality, soil temperature, etc.
4. Many gardeners and farmers have a certain expectation, or aesthetic, that assumes that a good garden bed is one that looks perfect and tilled. While it may look perfect, and convenient for planting and seeding, in fact, what is really happening is that soil organic matter is being lost as CO₂ in the atmosphere, the soil will eventually become more compact, and the soil microbiology, which plants depend on, is experiencing a decline. Tilling is okay at times to achieve certain benefits or disturb a certain pest or weed. In general, however, tilling is destructive and harmful to a garden bed unless you are making great strides to replacing lost organic matter, nutrients, and soil microbiology.

Further Questions?

Contact the Urban Agriculture Conservationist at the Hamilton County Soil and Water Conservation District with other questions at (317) 773-2181 or andrew.fritz@hamiltoncounty.in.gov.