



URI COLLEGE OF THE
ENVIRONMENT AND LIFE
SCIENCES (CELS) OUTREACH
CENTER

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For more information:

Call:

In RI: URI MGA Hotline
1-800-448-1011
Mon.-Thurs. 9:00 a.m.—2:00 p.m.

In MA and CT: 401-874-2900

Outside New England please
contact Cooperative Extension in
your county.

Websites:

URI Master Gardener Association
www.urimga.org

CELS Outreach Center
www.uri.edu/cels/ceo

COVER CROPS

Cover cropping can be an important practice for the end of the garden season. Even small gardens will benefit from the use of cover crops, or "green manures." Activities such as tilling, weeding, harvesting, and foot traffic in most home gardens tend to destroy soil structure. Planting cover crops is an easy way to revitalize the soil as well as help soil tilth and subsequent plant growth.

Cover crops are planted in vacant space and worked into the soil after they grow instead of being eaten. They provide a number of advantages to the otherwise wasteful use of space during your garden's off-season. Cover crops help to retain the soil, lessen erosion, and decrease the impact of precipitation on the garden by slowing the runoff of water. They also reduce mineral leaching and compaction and suppress perennial and winter annual weed growth. The top growth adds organic matter when it is tilled into the garden soil. The cover crop's root system also provides organic matter and opens passages that help improve air and water movement in the soil.

Success in growing cover crops requires proper selection of the kind of cover crop, correct timing of seeding, and good management techniques. There are many traditional cover crops to select from, including annual ryegrass, winter rye, winter wheat, oats, white clover, sweet clover, hairy vetch, and buckwheat. Grasses are easier to grow than legumes such as clover because they germinate more quickly and do not require inoculation. Small seeded crops are more difficult to establish than large seeded types such as oats and buckwheat. In poorly drained areas, grasses may be easier to get started. Winter rye and ryegrass grow in a very dense habit and are much more effective at shading out weeds than oats or small seeded legumes. Availability of seed and cost are other important considerations.

If sections of the garden are free during late spring or early summer, clovers, fescue, or buckwheat can be planted. If garden space is available in August, barley, annual ryegrass, oats, and clover can be successfully established. The last date when cover crops can be planted in the Northeast will vary with the region, but most gardeners should plan to plant cover crops by the end of September. By the beginning of October, only rye and winter wheat can be productively started.

Cover crops such as annual ryegrass, oats, and buckwheat do not overwinter.

PESTICIDES ARE POISONOUS!! Read and follow all safety precautions on labels. Handle carefully and store in original containers out of reach of children, pets, or livestock. Dispose of empty containers immediately, in a safe manner and place. Pesticides should never be stored with foods or in areas where people eat.

When trade names are used for identification, no product endorsement is implied, nor is discrimination intended against similar materials. Be sure that the pesticide that you wish to use is registered in the state of use.

The user of this information assumes all risk for personal injury or property damage.

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Note: The Hotline is open Monday—Thursday, 9:00 a.m.—2:00 p.m. from March 1 to November 1.



These crops are the easiest to work with when spring arrives since their tops have died back during the winter. Perennial ryegrass and winter rye produce a massive amount of top growth in the spring and may be difficult to incorporate. However, perennial grasses are an advantage in wet areas since the soil will dry more rapidly than a soil with winterkilled crops. If this is the case, the leaves should be cut back once with a mower or scythe before they grow too tall in the spring.

How does one choose an appropriate cover crop with all of these choices? For Northeastern conditions, annual ryegrass should be considered first for a garden cover crop. It is a vigorous grower with an extensive root system that occupies the same root zone as the garden plants. Winter rye is another good choice that is best for late planting.

To plant a cover crop, rake the garden area smooth and remove debris or large stones. Broadcast the seed according to the rates on the chart below. Lightly rake again, and water-in the cover crop with a hose set at a fine mist.

The following chart provides an overview of the cover crops at a glance. Seed can be purchased at your local garden center or farm store.

CROP	PLANTING TIME	SOIL STRUCTURE IMPROVEMENT	APPLICATION RATE (oz/100 ft)	COMMENTS
Annual Ryegrass	August-September	***	2	Easy to establish
Perennial Ryegrass	August-September	**	1	Faster establishment than other perennials; extensive root system
Winter Rye	August-October	**	3	Can grow at low pH and cool temperatures
Oats	August-September	*	4	Requires good soil drainage; tolerates low pH
Winter Wheat	August-October	**	3	Requires fertile soil; avoid wet or low pH soil
Sweet Clover	Summer	**	1	Better with high pH than other clovers
White Clover	Summer	**	1	Good for low pH soil; treat with inoculant
Tall Fescue	Spring	**	1	Persistent, may become weed-like
Buckwheat	Spring	*	3	Reseeds if allowed to mature

*** = Relatively High; ** = Moderate; * = Relatively Low

Note: Packages of ryegrass usually contain a mixture of annual and perennial types.

Adapted from the Cornell Cooperative Extension EcoGardening Factsheet Series, 2001