

Interplanting or companion planting. Plant the cover crop in early spring. After germination, till a strip out of the cover crop and sow garden plants in this strip. Mow the remaining cover crop periodically to provide a pathway between garden strips. This practice may not be suitable for plants grown on hills or in narrow rows. Also, fast growing cover crops may produce too much organic matter and interfere with the garden crop.

MANAGING COVER CROPS

Test the soil. While cover crops can be used to “catch” nutrients and keeping them from leaching out of the soil, they do require adequate levels of nutrients to establish and produce large quantities of organic matter. Test the soil to determine if nutrients are deficient, or if there are other soil problems such as high levels of soluble salts. Select cover crops suited to the soil conditions and fertilize as recommended.

Prepare the soil. Prepare the soil by plowing or tilling to incorporate surface organic material and loosen and smooth the soil to provide a uniform seed bed.

Sow Seed. Seed can be planted in furrows or rows, or broadcast and covered with a thin layer of soil. It is important to have good soil-seed contact and to plant at the correct depth. Seeding depth varies with seed size but a general rule-of-thumb is to plant seed at a depth no more than three times its diameter. For small seeded plants such as clover this may be as shallow as 1/4 inch. Seeding rate recommendations are summarized in Table 1.

Irrigating cover crops. Irrigate cover crops similar to other garden annuals. Cover crops will deplete soil moisture so the site may need to be pre-irrigated before planting the garden.

Incorporating A Cover Crop. Turn the cover crop under before it blooms. Immature plants decompose and release nutrients faster than mature plants, although mature plants produce more organic matter. Cover crops should not be allowed to go to seed or they may become a weed in the garden. Treating with an herbicide like glyphosate before the cover crop is incorporated will insure that the plants will not regrow. Cover crops can be mowed or chopped to aid in incorporation and enhance decomposition. Garden tillers or tractor-mounted tillers work better than hoeing or hand-spading to fully incorporate the cover crop organic material.

TYPES OF COVER CROPS

Table 1 summarizes some commonly used cover crops, their growth habits, and seeding rate recommendations. Cover crops are divided into three broad categories based on growth habits:

Perennials. Perennials persist for several years without replanting. Perennials can be maintained for several years or grown as a cover crop for one season. Perennials must be killed before incorporating so that they will not regrow and become weeds. Perennials may be seeded in spring or late summer to early fall.

Summer Annuals. Summer annuals are seeded in spring or summer and grown until the end of the season. Although a few annuals will survive frosts, most will die over winter.

Winter Annual. Winter annuals are normally seeded in the fall, 30 to 40 days before killing frost. Most will survive the winter. Depending on the time of seeding, some growth will occur in the fall and early spring before incorporation.

Table 1. Commonly used cover crops, their growth characteristics and seeding rate recommendations.

Name	Type	Growth characteristics	Seeding rate
Alfalfa	Perennial	Cold tolerant, nitrogen-fixing legume. Low shade tolerance; deep rooted; drought tolerant.	½ - 1 lb per 1000 sq ft
Hairy indigo	Perennial	Short-lived, not cold tolerant (killed by frost) legume. Low shade tolerance; drought tolerant. Slow establishment.	½ lb per 1000 sq ft
Red clover	Perennial	Short-lived, cold tolerant, nitrogen-fixing legume. Shade and drought tolerant.	½ - 1 lb per 1000 sq ft
Sweetclovers	Annual or biennial	Short-lived, cold tolerant, nitrogen-fixing legume, strong tap root.	½ to 1 lb per 1000 sq ft
Buckwheat	Summer annual	Cold sensitive; moderate shade and drought tolerance; rapid establishment and growth.	1 - 2 lb per 1000 sq ft
Garden pea	Summer annual	Cold sensitive, nitrogen-fixing legume. Low shade and traffic tolerance.	5 to 15 lbs/1000 sq ft
Mustards or turnips	Summer annual	Cold tolerant; tap rooted.	1/4 lb per 1000 sq ft
Spring grains	Summer annual	Includes wheat, barley and oats. Cold tolerant; rapid growth rate. Inexpensive seed.	2 - 4 lbs/1000 sq ft
Austrian winter peas	Winter annual	Moderately cold and drought tolerant, nitrogen-fixing legume. Low shade and traffic tolerance.	2 - 4 lbs/1000 sq ft
Hairy vetch	Winter annual	Cold tolerant, nitrogen-fixing legume. Moderately shade and drought tolerant.	1-2 lbs/1000 sq ft
Winter wheat	Winter annual	Cold tolerant and rapidly establishing; inexpensive seed.	2 ½ lbs/1000 sq ft
Winter rye	Winter annual	Cold tolerant and rapidly establishing; drought and shade tolerant; inexpensive seed.	2 ½ lbs/1000 sq ft

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