



UNIVERSITY OF MINNESOTA
EXTENSION

Carver/Scott Master Gardeners

Cover Crops/Green Manure Crops

General Directions

- **Hand sow seed** – Using half the suggested amount of seed, toss out handfuls of seed walking back and forth in one direction – north to south. Repeat walking east to west until all seed is broadcast evenly over the planting area
- **Plant seed** – Lightly till into soil (preferred) or rake by hand for good seed to soil contact
- **Incorporate into soil while fresh and before plants set seed** – Green plants are more easily worked into the soil than when they are dry. Use a rototiller (preferred) or chop tops and hand dig to work plants into the soil. Green plants will decompose more quickly than dry, and add more nutrients to the soil. Be aware that any seed will re-sprout - which may or may not be desirable.
- **Wait two weeks to plant** – this allows time for the cover crop to break down and release some nutrients. It also allows enough time for weeds to sprout. A second tilling just before planting will kill off the first flush of weeds.

Cover Crop Types

Legumes – fix nitrogen

- **Alfalfa** – perennial that overwinters well, produces a lot of biomass, but can be very tough to kill after one year of growing. Sow very early spring, or mid-August through mid-September.
- **Hairy Vetch** – winter annual that stays green all winter and begins new growth very early in the spring. Turn under early or mow first – extensive top growth in spring can tangle tiller tines. Sow mid-August to mid-September
- **Clovers** – many annual and semi-tender perennial kinds with a range of heights. Sow early spring and plan to grow until the following spring.

- **Edible Beans** – annuals that need warm soil to germinate. Sow when weather is warm and settled. Plan to till under at bloom or shortly thereafter. You can grow another fall succession crop following cover crop destruction.

Grains

- **Oats** – annual that grows well in cool soil. Plant in early spring and turn under at start of bloom. Or plant in fall and allow winter to kill top growth.
- **Wheat, barley, other grains** – winter and spring varieties should be handled differently. Plant winter wheat in fall; turn under before bloom in spring. Plant spring wheat in early spring and destroy crop before it sets seed.
- **Rye** – similar to wheat in culture, rye also has allelopathic properties which prevents germination of seeds. Consequently, use rye preceding transplants rather than direct seeded crops.

Other

- **Buckwheat** – great biomass production happens quickly from seed. Sow when soil is warm since buckwheat is very frost tender. Turn under any time from early bloom to just past bloom, when the plant will happily reseed. With luck, you can regrow buckwheat three times in one growing season from one initial seeding.
- **Weeds/Any Other Plant** – plant mass adds to the organic matter in the soil, no matter the source. Just be sure to turn under all weeds before they set seed.

