



K-STATE

Research and Extension

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Above: Winter Wheat in Spring

Below: A mix of Crimson Clover and Winter Rye



Cover Crops For the Vegetable Garden

There are many reasons to consider growing winter annual cover crops in the vegetable garden. These crops are not grown for harvest, but rather as a means to reduce erosion, reduce weed establishment, increase drainage, maintain soil fertility, and increase habitat for beneficial insects and organisms. Legume cover crops can also increase soil nitrogen content, reducing the need for fertilizer inputs in the spring. Small grain or grass cover crops are good at smothering weeds. Using a combination of legume/small grain or grass cover crops is usually more beneficial than just using one or the other on their own.

Planting an overwintering cover crop now can be an attractive and productive way of protecting and increasing the health of your garden soil. Each of these crops has their own nuances for how/when termination should occur to allow for good vegetable crop growth next year, so be sure to know the management techniques for the crops that you choose.

For cool-season vegetable gardens:

Small grains like winter wheat, barley, and grain rye, or even annual ryegrass are good choices for gardens that will be planted to cool-season vegetables in late March/early April. Each of these will produce a small, but meaningful amount of biomass this fall before going dormant into the winter. Then in late winter/early spring, the plants will begin to grow

quickly after which they can be mowed and/or incorporated into the soil.

Legumes would need to be planted very early (August or early September) to fix any meaningful amounts of nitrogen prior to termination, so they are generally not used in gardens that will be planted to cool-season crops.

For warm-season vegetable gardens:

Hairy Vetch is a legume crop that will produce long vines that benefit from the scaffold of a small grain crop like winter wheat, fall barley, or oats. The small grain crop will also protect the vetch from being heaved from the soil. Hairy vetch should be seeded at a rate of 1 lb per 1000 square feet of garden space. The ratio of hairy vetch to small grain seed should be 1:1 or 1:2 by volume, but any amount of hairy vetch will be beneficial to the soil. These crops will need to be mowed multiple times in the spring and incorporated in April.

Instructions for a Wheat Cover Crop:

- Plant wheat at a rate of 1 lb/1000 square feet of garden space
- Ensure good germination by maintaining moist conditions until germination has occurred
- Allow wheat to grow through the remainder of this year and the beginning of next year
- Terminate wheat by tilling in 10-14 days prior to vegetable planting to allow for degradation
- You may supplement the wheat with a legume like hairy vetch

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