

GETTING THE MOST VALUE OUT OF SUMMER COVER CROPS BY PLANTING AND KILLING AND INCORPORATING AT THE RIGHT TIME

Thomas Björkman, Associate Professor
Dept. of Horticulture
Cornell University, NYSAES
Geneva, NY 14456

Summer cover crops are valuable for vegetable growers to conserve soil quality, return organic matter to the soil, suppress warm-season weeds that go to seed and retain nitrogen in the production system. To obtain these benefits, the cover crops must be planted when they will do the intended job. The planting window in New York is usually quite short of each cover crop. The cover crop should not interfere with raising the subsequent vegetable, and that goal requires careful timing and technique.

Summer cover crops are usually sown after a vegetable is harvested. In July, buckwheat and sudangrass establish well, and provide the desired benefits. In August, the various crucifers work well. In September, small grains and ryegrass are the possibilities. We have consistently found that sowing later than these time fails to be useful. With crucifers, including the trendy radishes, every day of delay during August reduces production substantially. On the other hand, planting too soon risks seed production. Specific dates are available at my website: covercrop.net.

There are three general times for killing and incorporation: in the fall while they are still green, before much regrowth in spring (including winter-killed covers), and after significant spring growth. Fall incorporation makes spring planting easy, but is also associated with erosion and loss of organic nitrogen. After spring growth (typically late May), many cover crop benefits are obtained, but crop suppression can be substantial through much of the normal planting period. Getting the greatest benefit for both and the long term, but not suppressing this year's crop, requires nuanced adjustment. For vegetables, some of the better solutions involve producing most of the biomass in the fall, having some live cover over winter, and incorporating a month or more before spring vegetable planting.