

# MESSENGER-INQUIRER



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## Cover Crop Utilization

Cover crop utilization on cropland has increased in popularity with several thousand acres planted across the county each year. Cover crops certainly have their place and the expense of planting, which includes the time required and capital investment, should be valued against soil loss and the overall cost of erosion in terms of decreased productivity. Ultimately, the number one goal of cover crops in Kentucky should be soil erosion control. There are widespread benefits to whole farm cover crop utilization in Kentucky, but if the time and cost of whole farm planting are not feasible, focus planting on fields and areas within fields which are most at risk of overwinter soil erosion.

Before you read further, the first step to reducing overwinter soil erosion is ending fall tillage, especially on rolling land. With the rain events this summer, growing season erosion has been substantial and producers will find all of the areas that were severe with combines and grain carts. The bumps will be a constant reminder of this and the temptation to till fields down to smooth them over will be great. If corn is harvested early enough and time allows, the opportunity provided with the soil moisture would serve as an excellent time to permanently install some grass waterways. However, if that isn't an option, overseeding some wheat to prevent additional erosion this winter would be a better option than fall tillage.

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Cover crops take up and hold nutrients, especially nitrogen, which was not used by the previous crop. Because they remove water from the soil, they may reduce the risk of nutrients moving through the soil. Cover crops may also reduce winter annual weeds by competing with them for space and nutrients and by providing a mulch to cover the soil surface.

In addition to the general cover crop concept of planting in the fall and killing it out in the spring, wheat planted for grain is also an excellent cover crop. If the straw is left on the field after wheat harvest and no-till crop production is implemented, there's no other winter planted crop that has the likelihood of increasing soil organic matter and reducing winter and early spring soil erosion better than growing wheat for grain.

Cereal rye is perhaps the best overall small grain cover crop. It can be seeded from August to mid-November. Rye germinates quickly, grows fast, and provides good winter cover if not planted too late. Early planting is important for soil protection and uptake of nutrients left over from the previous crop. Rye is effective in suppressing weeds. It resumes growth early in the spring and may produce too much top growth if not killed soon enough. For seeding as a cover crop, use two bushels of seed per acre. Up to three bushels of seed per acre should be used if the rye is to be grazed.

Hairy vetch is probably the most reliable and productive winter legume cover crop adapted to Kentucky. It is easy to establish and is winter hardy throughout the state. Hairy vetch has the disadvantage of producing a significant percentage of hard seeds that do not germinate the first year but will often germinate later. This can create problems with it volunteering into future crops. Also, to provide good winter cover, plant hairy vetch in late August or early September; use 20 to 30 pounds of seed per acre and cover about 1-inch deep. Hairy vetch can be

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difficult to kill early in the spring, although glyphosate or gramoxone with a small amount of dicamba can be effective.

Daikon radishes have gained much popularity and are widely planted in the fall as a winter cover crop. Daikon radishes are known to grow large tap roots in the fall when planted early with the intent of reducing surface soil compaction. They can be effective in this but are expensive, winter kill, and rot quickly exposing loose, bare soil subject to erosion during late winter. If planted on slopes or with the intent of reducing winter soil erosion, a small grain such as wheat should be planted as a companion crop. Their use is most effective in fields where surface compaction is an issue.

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