Cover Crops Protect And Improve Soil

COLUMBIA, MO.

O ne of the most important crops is the one not to harvest, but to protect and improve the soil. Cover crops can enhance soil biology, improve organic matter content and may reduce the need for commercial fertilizer and pesticides, said Bob Broz, University of Missouri Extension water quality specialist.

"Grown between cash crop cycles, these crops act as a physical barrier between rainfall and the soil surface, preventing soil breakdown and lessening soil erosion by reducing the rate of water draining off fields," Broz said.

"The crop itself can form a barrier to prevent or retard weed growth and provide nutrients for the cash crop to be planted. Another benefit of cover crops is soil pores created by the roots, which allow for higher infiltration of water."

By slowing or lessening the flow of water from planted fields, cover crops reduce pesticide and nutrient runoff into surrounding bodies of water, he said.

"As the costs of fertilizer and herbicides con-

tinue to increase, the benefits of using cover crops in a sustainable farming system will become attractive to modern farmers and producers," he said.

Selection of a cover crop depends on possible planting dates and farm goals.

Legume cover crops such as hairy vetch fix atmospheric nitrogen into a form plants and microorganisms can use.

Non-legume species, including cereal rye and wheat, recycle existing soil nitrogen and other nutrients and can reduce leaching losses. In many cases, a combination of two or more types of cover crops may be beneficial for quick establishment and improved nutrient utilization.

Weather and timing are important for good cover crop establishment. Understanding the benefits of cover crops and how to manage them is as important as understanding your main cash crop, Broz said. Δ



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