Not only can cover crops planted in no-till fields fix nitrogen in the short term, they can also reduce soil erosion and mitigate the effects of drought in the long term, said a Natural Resource Conservation Service agronomist at a recent extension to-till conference in Holdrege.

Cover crops have always been valuable for erosion control, said Barry Fisher, NRCS Indiana state agronomist. But if we look at it from a no-till standpoint, especially a never-till standpoint, cover crops have a whole new host of benefits that they never had in conventional tillage. They give us the ability to build vertical soil structure. They build deep macropores in the soil, which allow more water to penetrate during the winter months. They're at work when there's nothing else out there working on the soil.

"For years we've known that competition from the cover crop alone helps control weeds," Fisher said. There's a lot of evidence that some of the oilseed radishes, some of the brassicas, and annual rye grass are very effective at controlling soybean cyst nematode as well as other pests.

Some producers are aerial seeding cover crops directly into standing corn or soybeans sometimes in September. That way it can get established, but not create a problem with harvesting the cash crop. Fisher advised producers to time the cover crop with the cash crop so that it can conserve and trap nitrogen and protect the soil from erosion during the fallow period.

"If I were going to harvest these crops, I would do it through an animal," he said. "Certainly there's a good opportunity, especially in this part of Nebraska where grazing cornstalks is very much a part of the culture, for having a cover crop to provide extra nutrition and also a network of roots to support the hoof traffic."

Fisher doesn't think of these cover crops as another cash crop, though. Instead, he's focused on the benefits to the soil, trapping nitrates and nitrogen during the off season. Tests show that a lot of the cover crops can scavenge 60 to 70, maybe as much as 80 pounds of nitrogen per acre, Fisher said. That's the immediate economic payoff for growing these crops.

Soil quality is a long-term benefit, he said. Cover crops provide risk protection in dry, hot years; they build soil nutrients and better biological activity.

Fisher recommended a book called Managing Cover Crops Profitably that's available on the Sustainable Agricultural Research and Education organization's Website at http://www.sare.org/publications/covercrops.htm. Fisher also listed the NRCS electronic Field Office Technical Guide, available at http://www.nrcs.usda.gov/technical/eFOTG/ as a reliable resource.