

Cover Crops Basics and Benefits

The National Wildlife Federation supports increased use of cover crops on farmland because they are a great investment for farms and water quality. Cover crops increase profits and savings for farmers, boosts carbon sequestration and benefits wildlife, and water quality.

Cover crops are non-commodity crops planted in between rows of crops or on bare fields during fallow periods to prevent soil erosion and nutrient loss.



Lynn Betts NRCS

Cover crops improve farm profitability

Increased yields, reduced fertilizer costs, and reduced weed management costs benefit producers and landowners directly. Cover crops retain nutrients that would otherwise leave the field via runoff, leaching, or evaporation, making those nutrients available for the next crop. Some cover crops can supply over 100 pounds of nitrogen per acre for the next crop, resulting in significant reduces fertilizer costs to farmers. For example, in one case cover crops resulted in an 11% increase in yields compared to fields without cover crops, leading to a \$25 per acre increase in profits.

Cover crops help prevent and suppress weeds that can be difficult to control. By out-competing weeds for nutrients and sunlight,

cover crops have demonstrated reduced weed management costs of \$28 per acre. Many cover crops can be grazed or harvested, providing additional income streams for farmers.

Cover crops reduce carbon pollution

Climate change threatens wildlife, water, and all natural resources. Cover crops remove carbon dioxide from the atmosphere, storing it safely in soils. Scientific literature has determined that cover crops sequester an average of 0.54 metric tons of carbon dioxide per acre. However, some farmers have removed as much as 1.29 metric tons of carbon dioxide per acre per year; this carbon savings is the equivalent of 131 gallons of gasoline consumed. If all US acres that could be planted in cover crops were planted, up to 5% of US greenhouse gas emissions would be removed from the atmosphere. In addition, by suppressing weeds and improving soil health, cover crops also make it easier for producers to practice No-till farming, which further reduces carbon pollution and erosion.

Cover crops improve water quality

By keeping soils covered, cover crops significantly reduce nutrient runoff and associated water pollution. Cover crops can reduce soil erosion by 90%. Reduced soil erosion significantly reduces the amount of nitrogen, phosphorus, and sediment pollution in water bodies that contributes to dead zones and impaired water habitat.

In some results, nitrate levels in the soil following cover crops were only 7 parts per million, compared to 23 parts per million on non-cover cropped fields. The absorbed nitrates are prevented from escaping to nearby rivers and eventually return to the soil as the cover crop decays, benefiting the next crop.

Cover crops also improve the soil structure, leading to greater water infiltration and increased groundwater recharge, an important benefit in arid regions that depend on the groundwater supply for crop irrigation and drinking water.



Keith McCall NRCS

Cover crops provide food and habitat for wildlife



Ryan Stockwell

Wildlife viewing and recreation activities, including hunting and fishing, are a multi-billion dollar industry in the United States, providing considerable economic benefits and enjoyment for millions of Americans. Cover crops provide habitat and an additional food source for wildlife in the winter because they often continue to grow after the harvest of commodity crops and rejuvenate much sooner in the spring. By improving water quality, cover crops improve habitat in streams, rivers, lakes, and oceans. Research shows that cover crops can increase bird population by 80%, multiply land-bird nest density by a factor of 8, and increase nest survival by 50%.

Increased cover crop use is good for farmers, the land, and society.

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