

Winter Wheat as a COVER CROP

Cover crops and other practices that have been termed “climate-smart” have been regarded as emerging tools to help farmers continue to be the best stewards of their land and to help combat effects of climate change. In keeping with the spirit of these tools, winter wheat has been overlooked as a vital tool in both conservation and global food security.

Currently, winter wheat can be utilized as either a cover crop or as an insurable cash crop. This current stance neglects to account for the fact that winter wheat accomplishes the goals of a cover crop without negatively affecting its viability as a cash crop when grown with good agronomic practices. Wheat is already recognized by farmers across the country for its benefit for soil health, erosion control and rotational benefits to other crops. When evaluating the viability of properly managed wheat as both a cover crop and an insurable cash crop, the only hindrance is bureaucratic.



NAWNG recognizes the soil and environmental benefits of wheat

in a crop rotation and therefore supports intentionally-seeded winter wheat being eligible for classification as a cover crop for NRCS and other climate-smart programs, while not impacting its eligibility as a harvestable cash crop insurable through crop insurance and other safety net programs.



“As it stands, I am more incentivized in my arid area to plant a cover crop, terminate it and replant another crop than I am to simply finish the crop I have planted.”

Clay Schemm
western Kansas
wheat farmer



With more support gathering for increased environmental stewardship and more efficient farming practices, the idea that terminating a crop, further disturbing the soil with new planting and using water that many areas do not have to spare seems to be backwards in accomplishing its goal, when winter wheat could be taken to harvest without adverse effects on either of these goals.

There is a clear drive on both a political level and among the general public to emphasize environmentally-conscious agronomic practices. Just take a look at cover crops, the partnerships for climate smart commodities, EQIP and CSP funding boosts through IRA and the Renewable Fuel Standard. All of these programs provide for some sort of incentive to improve the environment or combat climate change.

A cover crop is a plant that is used primarily to slow erosion, improve soil health, enhance water availability, smother weeds, help control pests and diseases, increase biodiversity and bring a host of other benefits to the soil.

— Kansas State University Soil Microbial Agroecology Lab



Chris Tanner
western Kansas
wheat farmer

“This would allow me, as a producer, to participate in cover crop programs. The area of western Kansas where I farm has limited rainfall. I have seeded modern cover crop blends, and typically I have experienced a yield drag of the following crop, or complete crop failure, due to the depletion of subsoil moisture.

Wheat in the crop rotation actually improves the following crop yields, and also allows me to use less chemicals, due to the fact that the residue left behind after harvest provides an ideal, protected seedbed for a row crop.

This basically allows wheat to be recognized for what it is, the great plains original cover crop. It protects the soil, conserves moisture, sequesters carbon, provides habitat for wildlife and feeds a hungry world.”

Wheat Residue Management

- Erosion control — Standing wheat stubble had c.a. 9- and 6-times greater wind-erosion protection compared to standing corn and sorghum stubble
- Water conservation — About 1 inch more soil water at corn planting after wheat (~20% increase) than following sorghum
- Reduced temperature fluctuations
- Increased soil organic matter levels
- Improved soil structure — a consequence of increased organic matter
- Suppression of weeds — Wheat stubble provides a physical barrier for weed growth. Wheat residue is among the crops with the highest allelopathic potential for weed control.

Wheat Increases Yield for Corn and Soybeans

- Long-term (44 year) study in central Kansas showed 11.6 bushel per acre increase in soybean yields following winter wheat as compared to continuous soybeans.
- Long-term (16-yr) study near Tribune showed summer crop yields were greater when the summer crops followed wheat rather than following a summer crop.
- Long-term (31-yr) experiment in two locations of Ontario, Canada showed 6.5 bushel per acre increase in corn yields following winter wheat as compared to continuous corn.