

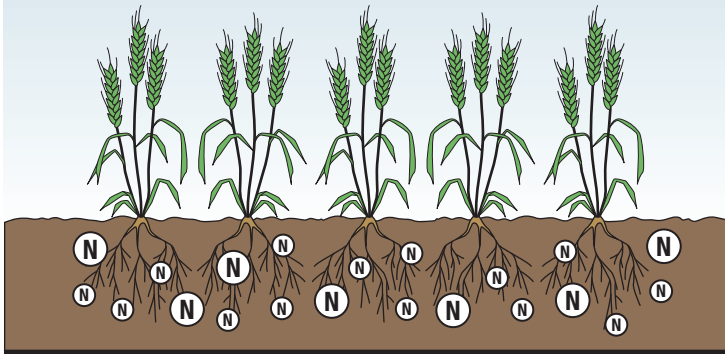
Improves soil nitrogen use efficiency

Reduce your dependence on nitrogen fertilizer for corn by adding a small grain cereal (e.g., winter wheat) to your farm's corn-soybean rotation and underseed it to red clover. Research shows that rotations with wheat and red clover have more available soil nitrogen for your corn crop. Reduce expenses and avoid paying for increasingly costly fertilizer by improving your rotation.

Benefits of adding a small grain cereal to your corn-soybean rotation:

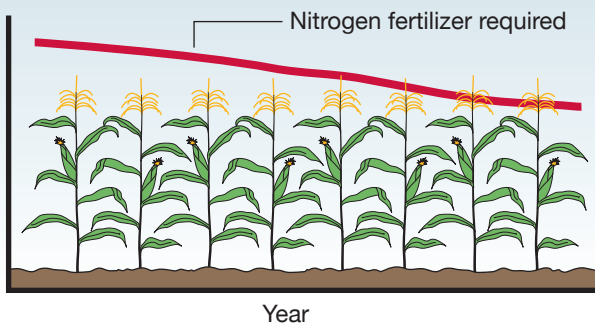
Increases available soil nitrogen

partly because winter wheat increases soil organic matter and improves soil health



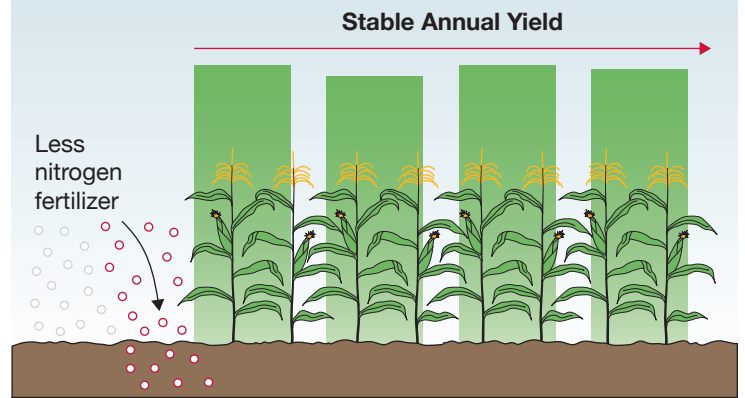
Reduces fertilizer costs

thanks to reduced dependence on nitrogen fertilizer



Maintains crop yield

with less nitrogen applied



Sources:

- 1 Van Eerd L.L., Congreves K., Hayes A., Verhallen A., Hooker D. (2014). Long-term tillage and crop rotation effects on soil quality, organic carbon, and total nitrogen. *Canadian Journal of Soil Science* 94:303-315.
- 2 Gaudin A.C.M., Janovicek K., Deen B., Hooker D.C. (2015). Wheat improves nitrogen use efficiency of maize and soybean-based cropping systems. *Agriculture, Ecosystems and Environment* 210:1-10.



Want to dig deeper?

Read the scientific papers, available at uoguel.ph/crop-rotation.

40
Years
Elora

25
Years
Ridgetown

Celebrating 65 years of long-term crop rotation field research

Some innovations take time. Long-term crop and soil research generates the evidence farmers need to be competitive and sustainable. The Elora Research Station and Ridgetown Campus have housed applied long-term crop rotation, tillage system and nitrogen management experiments since 1980 and 1995, respectively, generating results that benefit the agri-food sector and farmers in Ontario and around the world.

