



Transitioning to *no-till*



No-till is the practice of planting and growing crops, as well as controlling weeds, without the use of tillage. No-till emphasizes keeping the soil covered with maximum crop residue and not disturbing the soil outside of planting.

Benefits of no-till

Soil Health benefits

- Builds soil structure and reduces erosion
- Increases soil organic matter
- Increases water holding capacity
- Increases water infiltration rates
- Increases worm counts
- Allows the other living organisms in the soil to thrive

Economic benefits

- Reduces fuel, time and labor costs by requiring fewer trips across the field

Overall benefits

- Increases overall farm resiliency to withstand extreme weather events including floods and droughts
- Improves overall water quality

Considerations before committing to no-till

Short-Term

You may have to invest in new machinery depending on your current planter setup. You may also see an increase in chemical costs depending on weed species, as tillage can no longer be used for weed control.

Consider starting your no-till management after harvest, so crop residue can aid in earlier weed pressure. By starting in the fall, you will also have time to develop your fertilization plan and select germplasm for the following year.

Long-Term

No-till will reduce soil compaction by building soil structure over time. However, during the transition stage, the soil is susceptible to compaction as tillage operations are reduced. Therefore, proper management should take place during the transition to no-till in order to avoid creating compaction in the field.



In the long-term, no-till will reduce soil compaction by building soil structure over time.

Tips for transitioning acres to no-till

1

Start small

In order to reduce risk with a new practice, start with a few acres at a time. By monitoring these acres throughout the growing season, you'll get an idea of how no-till will work on your farm.

5

Change your mindset

Remember that tillage and no-till are completely different soil management systems and that it can take many years to fully realize the benefits of no-till. Planting dates may be pushed back in the beginning as the structure is changing to better infiltrate water.

2

Try no-tilling soybeans first

Soybeans are more adaptable than corn in terms of seed placement. Because no-tilling requires planting into a different kind of seedbed, many farmers find it easier to start no-tilling with soybeans.

6

Prevent compaction

Use the same wheel tracks for each field pass. Evaluate your tire size and air pressure; larger tires and lower air pressure spread out the weight of the machinery and reduce the amount of pressure applied to the soil surface.

3

Try strip-tilling first

Strip-tilling disturbs the soil less than full tillage, allowing soil structure to be built up over time and creating the seedbed you're used to.

7

Communicate your change to your retailers

Confirm with your retailers that you've purchased the correct products for your new soil management practice. Discuss with your agronomist how this management system will change your seed, chemical, and fertilizer inputs.

4

Incorporate cover crops

Combining cover crops with no-till helps reduce soil compaction by keeping the soil loose and breaking up old plow layers. Cover crops also enhance soil microbiology by keeping living roots in the soil.

8

Develop a plan

Challenges are inevitable; however, you can stay one step ahead by having a plan. Take time in the winter to develop a plan before experimenting with no-till.

Visit soilhealthpartnership.org to learn more about transitioning to no-till.



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