Ridge tillage is a reduced tillage system that is somewhere between no-till and conventional tillage. Crops are planted on ridges that stay in the same location year after year.

Typical ridgetill operations include:
- fertilization
- planting with herbicide application
- cultivation
- cultivation with ridge building
- harvest
- weed control herbicide before planting

Advantages of Ridgetill

When compared to no-till, chemical costs are reduced with ridgetill because herbicide is banded at planting and post harvest herbicide is used only as needed. Machine power requirements are substantially lower with ridgetill than conventional tillage so smaller tractors are needed. Soil compaction in the root zone is reduced in part due to the lighter equipment used for ridgetill and controlled traffic lanes.

Because ridgetill leaves large amounts of crop residue on the soil surface, it greatly reduces erosion and runoff. While input costs are reduced, yields stay virtually the same, making ridgetill a profitable alternative.

Equipment Changes

Currently there is certainly a lot of interest in ridgetill. However, many farmers are reluctant to consider ridgetill because of the differences in equipment and perceived high costs of converting. Planter modifications (Figure 1), heavy duty cultivators, guidance systems, and dual tires for combines and grain carts can be expensive.

Though these options should be considered, not all of them are necessary to get started in ridgetill.

Planning Field Work

No good cookbook formula for ridgetill exists, however some steps can be followed to get started. To start, just plant your crop in the spring like you normally do. Remember that the rows will stay in the same location for many years to come, so use a layout that you like. Many ridgetill...
During harvest, set the combine to spread crop residue nearly the full width of the header. Even residue distribution will make next spring’s planting much easier.

The Second Year

Starting the second year, a ridgetill planter is needed. At planting, you have to shave the top off the ridge to remove crop residue and weed seeds while holding the planter steady. You can buy a ridgetill planter or modify your existing planter. Modifying your existing planter is probably the best option since it allows you to continue using the planter for conventional or no-till planting on other fields. There are several planter attachments for removing the top of the ridge. Costs will range from about $500 to $1,200 per row. Your planter should also be capable of applying herbicides, either banded or broadcast. Cultivation during the second year will be more difficult, since you have all the residue from last year’s crop on the soil surface. You will need a cultivator, similar to the one shown in Figure 4, to cut through this residue and build ridges.

Ridgetill is a profitable cropping system that usually meets or exceeds Conservation Compliance residue requirements for USDA farm programs.

farmers or equipment dealers can help you with the layout. Once the crop is planted, you’ll need a cultivator that can build ridges on your second cultivation. If your existing cultivator is capable of building ridges or can be modified to do so, then you’re set for the first year. Keep in mind that the cultivator needs to handle large amounts of crop residue in the coming years.

Precision driving during cultivation is important. Guidance systems are helpful with precision driving, but are not necessary to start ridgetill. Just drive a little slower (4 mph) if you choose not to invest in a guidance system. Don’t try to build the ridges too large; it may take two or three years to build ridges into their final form (Figure 3). Ridging wings that push the soil rather than throw it are the best choice; they will help form a rounded ridge that is easier to plant on next spring.

In the fall, before harvest, try to space your combine and grain cart tires to run between the ridges. You don’t need dual tires on your combine or grain cart to get started, but you should consider duals if you plan to continue ridgetill. You should try to stay off the ridges with your combine and grain cart to avoid crushing the ridge tops. If you crush the ridges, planting into them could be more difficult.