

FALL STRIP TILL

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I. Problem

Straight no-till corn has been vulnerable to slow starts and poor stands because untilled, residue covered soils warm up and dry out much more slowly than clean tilled soils. However, cooler wetter soils are a big advantage for no-till later in the season.

II. Solution

Fall Strip Till - the best of both worlds — Warm and dry in the seed zone in the spring and cooler and wetter in the row middles during the hot summer months. You just till and elevate strips in the fall which will match planter rows and plant corn directly into the strips in the spring.

III. Best Mound Building System

- A. Large (20-24") smooth and sharp coulters to cut residue and fracture the soil about 1 foot ahead of knife
- B. A heavy duty C shank with spring loaded up movement
- C. A B-33 "mole" knife mounted on the C shank running 7-10 inches deep at 5-7 mph
- D. Two large (17—20 inch) "dull" closing discs mounted on the C shank so the center is 4 - 8 inches behind the mole knife. It is critical that these disc blades be blunt (unsharpened) to avoid:
 - 1. Cutting residue and folding it into the mound
 - 2. Cutting a groove next to the mound which can cause severe erosion and loss of entire mound and nutrients even on gently sloping land.

IV. Row width and number of rows should match planter. Use a tine marker running on a reverse angle on the applicator to provide a more visible mark that doesn't cut a groove in the soil which can cause erosion like a sharp disc marker.

V. Indexing fertilizer - the mound itself provides the greatest benefit but secondary benefits can be obtained from adding NH_3 + a stabilizer deep and/or enough N, P and K up near the seed zone to act as a starter. In a corn/bean rotation, it is preferred to apply lime and broadcast P & K after corn, ahead of beans.

VI. Maintain consistent mound height by not driving on field between strip till operation and planting unless it is frozen solid.

- A. Strip till end rows last
- B. Plant end rows first
- C. Apply fertilizer or lime before strip tilling or on frozen ground
- D. Spray chemicals and/or N fertilizer after planting

VII. Planting

- A. Use spider wheel row cleaners set high and wide to clean residue and knock off high spots from the mound.
- B. Mount a stabilizing coulter in the row middle near each end of the planter to help keep the planter on top of the mounds.
- C. On a John Deere planter change the tires on the depth control wheels to the tires with the 1 inch indentation next to the disc opener. Most Case IH tires will fit these rims.
- D. Don't lower markers on planter. Most farmers will do better at staying on the mound if they don't have a mark to follow. It is difficult to see mounds at night, but because the mounds dry out and warm up so much quicker there are more days to plant so night planting may not be necessary.

VIII. Drilled or 15 inch row soybeans planted off the corn row centers will not be affected by last years strips and the land will be leveled Out completely after the beans. Without tillage the two year old corn rows should still be visible after beans harvest. Try to strip till directly between these rows especially if NH₃ is being applied each year.

IX. In corn after corn it is mandatory that the new strips be placed directly between the old rows. Corn stalk dragging potential will be reduced if the strip till machine travels in the same direction as the combine. The stalks are already heading one direction - don't try to turn them around with the strip till machine. If the combine head width is half the strip till width then combine in 2 pass lands.

X. Fall strip till with indexed fertilizer provides possibly the best agronomic conditions for corn production on most soils in the corn belt - especially in the northern part.