GET THE BEST OF BOTH CONSERVATION AND CONVENTIONAL TILLAGE

SITUATION

Strip-till is a conservation system that uses minimum tillage. It combines the soil-drying and warming benefits of conventional tillage with the soil-protection advantages of no-till by disturbing only the soil that will contain the seed row. Strip-till rows are usually about 8 to 10 inches wide. Since special equipment is required for this type of tillage, understanding what is needed for a strip-till system can help you determine if it's the right practice for your fields.

A grower using strip-tillage can take advantage of the warm soil in early spring, while still reaping the advantages of an undisturbed residue area between the rows.

FACTORS TO CONSIDER

- Conservation of crop residue
- Surface compaction
- Wind erosion risk
- Fertilizer placement needs
- Moisture infiltration while reducing evaporation

ACTION PLAN

1. **Consider the machinery investment required for strip-till.** Many machinery manufacturers have developed specialized strip-till equipment to allow for tilling a narrow zone along with placing fertilizer in a deep band in the tillage strip. Real-time kinematic (RTK) auto-guidance equipment is needed to place the seed in the middle of the strip to get maximum fertilizer usage. Horsepower requirements will vary depending on soil type and soil moisture. It is critical to place fertilizer 6 to 8 inches below where the seed will be planted to avoid fertilizer burn damage to the seedling.

2. **Select an appropriate herbicide program.** Since no tillage will be used in the areas between the stripped tillage zones, it is important to use a burndown herbicide program to control any early emerging weeds. Once these early weeds have been controlled, a postemergence herbicide program can control other weeds in the growing crop.

3. **Evaluate the planting advantages of strip-till.** A tilled seedbed warms up earlier in the spring, allowing for earlier planting. A grower using strip-tillage can take advantage of the warm soil in early spring, while still reaping the advantages of an undisturbed residue area between the rows, such as reduced potential for wind and water erosion. Along with a well-aerated seedbed and good seed-to-soil contact, strip-till gives germinating plants an advantage over plants in a no-till cropping system.

4. **Review fertilizer placement.** When the majority of the fertilizer is placed below the seed and in a concentrated band, crops can utilize more of the applied fertilizer. As plants grow, roots grow directly into the fertilizer band placed by the strip-till applicator.

5. **Understand the importance of timely moisture after strip-till operation.** Tillage dries the soil to the depth of the tillage, and strip-tillage is no exception. It is important to get enough rainfall or moisture through an irrigation system to refill the soil profile after the field has been strip-tilled and before planting. Moisture firms the seedbed by reducing the size of air pockets in the tilled zone and aids in timely and uniform germination after the seed is planted.

SUMMARY

Strip-till may not be a tillage option that will work for all growers, but it combines the benefits of residue conservation of a no-till system with the seedbed preparation advantage of a conventional tillage operation. For more information, contact your local Mycogen Seeds customer agronomist or trusted agronomic adviser.

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