**Conventional vs Conservational Tillage**

**Conventional Tillage - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Conservational Tillage - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**What is the goal of conservational tillage?**

**Common Methods-**

**1. No Tillage** - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**2. Vertical Tillage** – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**3. Strip Tillage** - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| Method | Description | Best Use | Advantages | Disadvantages |
| No Tillage | Seeds are planted directly into \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_ | all major row crops in \_\_\_\_\_\_\_\_\_\_\_\_\_ farming | Preserves soil \_\_\_\_\_\_\_\_\_, less passes over the field, saved \_\_\_\_\_\_\_\_\_ costs | Residue buildup can slow plant \_\_\_\_\_\_\_\_\_\_\_, may require herbicides for \_\_\_\_\_\_\_ control |
| Vertical Tillage | Uses straight, shallow \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ to manage residue without turning over soil | Best used for preparing soil while keeping \_\_\_\_\_\_\_\_ on the surface | Reduces \_\_\_\_\_\_\_\_\_ while improving \_\_\_\_\_\_\_\_\_ breakdown | Does not address deep \_\_\_\_\_\_\_\_\_\_\_\_\_ layers |
| Strip Tillage | Tills narrow strips while leaving most soil \_\_\_\_\_\_\_\_\_\_\_ | Crops like \_\_\_\_\_ and soybeans and in fields with \_\_\_\_\_\_\_ residue | Reduced runoff and soil loss, allows for \_\_\_\_\_\_\_ placement of \_\_\_\_\_\_\_\_\_\_\_\_\_ | Specialized equipment can be \_\_\_\_\_\_\_\_\_\_\_ |

Reflection Questions

1. Logan is planting corn in a field with heavy residue left over from last season. He wants to minimize soil disturbance while ensuring that his seeds are places in well prepared, tilled soil. He also wants to reduce runoff and soil loss while improving fertilizer placement efficiency. **What conservational tillage method should he use?**

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1. Maya is looking for a farming method that will maximize soil moisture retention while reducing the number of field passes she needs to make each season. She wants to plant her crops directly into last years crop residue and avoid disturbing the soil. She understands that weed control may require additional herbicide use. **What conservational tillage method should she use?**

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1. Ethan has been dealing with a lot of leftover residue from last season’s crop. He wants to use a tillage method that manages residue without turning the soil over. His goal is to reduce erosion while improving residue breakdown. **What conservational tillage method should he use?**

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