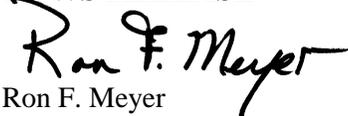


NEWS RELEASE


Ron F. Meyer
Area Extension Agent
(Agronomy)



Golden Plains Area

Kit Carson County

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REDUCED TILLAGE

Using no-till or ridge-till can save more than just fuel, labor, and equipment costs. The savings in soil moisture can be just as important, especially in a year when soil moisture and precipitation are limited.

Often, tilled soil will dry to tillage depth. An average silt loam soil can hold about 2 inches of available water per foot of soil. Tilling 6 inches deep and allowing the soil to dry to the tillage depth could result in a loss of up to 1 inch of soil moisture with each trip. Shallower tillage, even row crop cultivation, can still result in moisture losses of about ½ inch. By not tilling or cultivating, when weed pressures are low, moisture losses can be minimized. New herbicide packages also allow less tillage.

Greater yet are the soil moisture losses from evaporation when tillage destroys residue cover. Residue mulch reduces evaporation in several ways: by reducing solar heating of the soil, by reducing drying winds from the soil surface, by insulating the soil to keep it cooler, and by intercepting some of the waters as it evaporates. Research has shown that a residue mulch can reduce water losses from evaporation by as much as 3 inches during the season.

While flattened crop residue makes better mulch, standing residue is preferred in crop production. Any residue that is standing up and still anchored to the soil is more effective in keeping the wind off the soil surface, reducing both windblown soil losses and the dust storms common in the spring. In addition, anchored standing residue doesn't have to be cut or handled during subsequent field operations and is far less likely to move with the wind, or with surface water runoff. Unlike a flattened mat of residue, which may keep the soil surface too cold and wet for planting, air movement among the standing residue allows timelier field operations while maintaining the benefits of residue.

Some say the soil needs to be tilled to “open it up to let water in”. Unfortunately soil dries to the depth of tillage so the initial water let into the soil just replaces what was lost, rather than adding to the soil moisture reserve. Tillage also breaks up and pulverizes the soil surface, making the soil prone to crusting from raindrop impact.

Higher fuel costs this year also are a factor when considering tillage. By switching to no-till or reduced-till, fuel use decreases and soil moisture is held in place.

Washington County
181 Birch Ave
Courthouse Annex
Akron, CO 80720
(970) 345-2287

Kit Carson County
251 16th Street, Suite 101
Burlington, CO 80807
(719) 346-5571

Phillips County
127 E. Denver
P.O. Box 328
Holyoke, CO 80734
(970) 854-3616

Yuma County
310 Ash, Suite B
County Courthouse
Wray, CO 80758
(970) 332-4151

Sedgwick County
315 Cedar
County Courthouse
Julesburg, CO 80737
(970) 474-3479

<http://goldenplains.colostate.edu>

Source:
Paul Jasa, Extension Engineer
University of Nebraska