

**TITLE:** No-Till Rotation Systems for Winter Wheat Production

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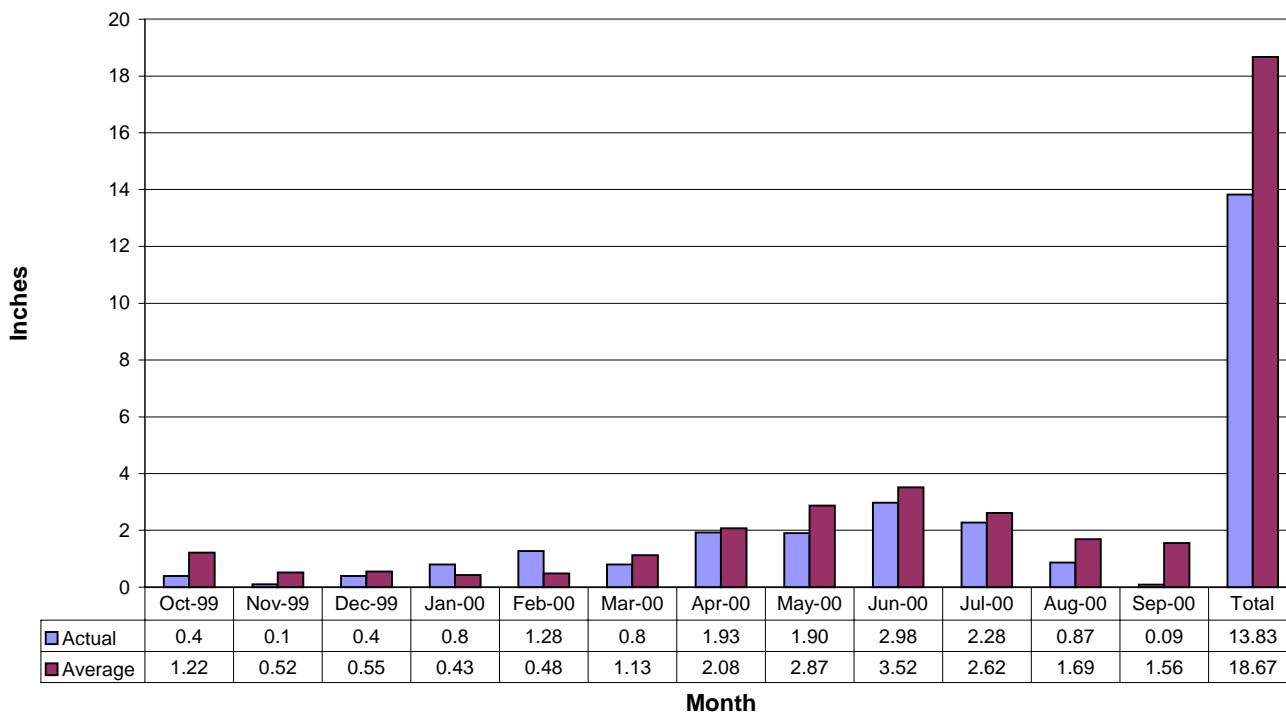
**OBJECTIVE:** Determination of the most profitable rotations for no-till production of winter wheat in central and western South Dakota.

**DURATION:** Present plans call for performing at least two rotation cycles (1991-2001).

**PROGRESS REPORT/ACCOMPLISHMENTS:** The no-till rotation study is located on a half section of land approximately 17 miles southeast of Ft. Pierre on an Opal-Promise soil series. Research procedures utilize field scale equipment, weigh wagon yields, and best management practices.

See the chart below for actual precipitation received at the research site from October 1999 through September 2000 versus average precipitation.

**Wheat Commission Rotation Study  
Precipitation vs. Average  
October 1, 1999 to September 30, 2000**



Fifteen no-till rotations are included in the study and **2000** yields are as follows:

(Click on the corresponding number to view inputs, operations, and economics.)

1. Winter Wheat - Fallow  
61.9 bu
2. Winter Wheat - Green Fallow  
52.7 bu
3. Winter Wheat - Chickpea  
56.8 bu 1,022 lbs
4. Winter Wheat - Canola\*  
50.4 bu 585 lbs
5. Winter Wheat - Corn - Fallow  
59.1 bu 53.6 bu
6. Winter Wheat - Corn - Canola\*  
51.8 bu 40.1 bu 703 lbs
7. Winter Wheat - Corn - Field Pea  
60.5 bu 47.0 bu 26.2 bu
8. Winter Wheat - Corn - Chickpea  
54.4 bu 41.6 bu 600 lbs
9. Winter Wheat - Corn - Soybean - Spring Wheat  
46.9 bu 44.9 bu 9.2 bu 37.7 bu
10. Winter Wheat - Soybean - Corn - Spring Wheat  
50.4 bu 10.9 bu 37.6 bu 35.6 bu
11. Winter Wheat - Corn - Soybean - Field Pea  
58.9 bu 47.9 bu 11.3 bu 15.3 bu
12. Spring Wheat - Corn - Canola\*  
41.3 bu 44.9 bu 570 lbs
13. Spring Wheat - Corn - Soybean  
39.6 bu 41.9 bu 11.5 bu
14. Winter Wheat - Soybean - Canola\*  
46.4 bu 10.0 bu 557 lbs
15. Corn - Soybean  
40.7 bu 10.2 bu

\* The canola experienced heavy shattering (estimated at 40 to 50%) due to the fact it wasn't swathed prior to the hot, dry, and windy weather in mid July.