



## USDA-CSREES 2006 National Water Quality Conference

### Improving Drought Tolerance of Rainfed Corn by Planting Strategy Involving Skipped Rows

A skip-row dryland corn plot at the University of Nebraska's West Central Res/Ext Center in North Platte provided a 32% yield increase over corn planted in 30-inch rows in 2003. The idea behind skip-row planting is to keep developing corn plants from using all of the available soil water too early in the growing season. In this trial, all rows of corn were planted and then either plants or one or two rows were removed. In 2004 IANR field trials were conducted at North Platte, Sidney, Scottsbluff, Clay Center, Concord, Lincoln, and near Hayes Center, in Nebraska; and also Tribune, KS and Akron, CO. Several farmers also tried the system in Nebraska, Colorado, and Kansas. Compared were conventionally planted and skip-row planted yields. Several locations in 2004 had above-average precipitation, including the plot at North Platte, where rainfall was 35% above average in June and 88% above average in July and average in August. Skip-row yields at North Platte ranged from 104 to 127 with a 116 bushel average. Yields in a plant 2 skip 1 were on the average 9 bu/A higher in all three plant populations than conventionally planted corn in the test. The conventionally planted dryland corn yielded 97 to 117 with an average of 107 bu/A. At Akron, CO the conventionally planted corn yielded 16 and 21 bu/A at seeding rates of 12,000 and 16,000, respectively, while plant 2 skip yields were 50 and 47 bu/A for the same seeding rates. At other locations, data suggests yields in a plant 2 skip1 are equal to those with conventionally planted corn up to 160 bu/A. Roundup Ready corn is ideally suited for use in a skip-row system. Potential weed problems also could be reduced by planting in a field with good amounts of residue.

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