

2008 Collaborative On-Farm Test (COFT) Results

Much of Colorado's 2008 wheat acreage was planted to winter wheat varieties that have been tested in the COFT program which is in its 10th year of operation. In the fall of 2007, twenty-three eastern Colorado wheat producers planted COFT trials in Baca, Prowers, Kiowa, Kit Carson, Washington, Phillips, Logan, Adams, and Weld counties. Each collaborator planted five varieties in side-by-side strips (approximately 1.25 acres per variety) at the same time and at the same seeding rate as they seeded their own wheat.

The objective of the 2008 COFT was to compare performance and adaptability of popular and newly-released CSU varieties (Hatcher, Ripper, and Bill Brown), and promising commercial varieties (Keota and NuDakota) under unbiased testing conditions. The COFT trial results are intended to be interpreted based on the average across all tests within a year and not on the basis of a single variety comparison on a single farm in one year. Interpreted as an average of 21 test results, the 2008 COFT results can be extremely useful to farmers making variety decisions. Grain yields of all five varieties in 2008, averaged over a wide range of agroclimatic conditions, were about the same, which is not overly surprising as all five varieties have passed through rigorous selection processes and were chosen because of strong performance records in Colorado dryland variety trials. Ripper and NuDakota proved to be statistically slightly higher yielding than Bill Brown, Hatcher, and Keota.

Both Ripper and NuDakota had significantly lower test weight than Bill Brown and Hatcher, which in turn, had lower test weight than Keota. Seemingly small differences in average test weight for different varieties resulted in remarkably large differences in the probability of obtaining at least 60 lb/bu test weight: Keota 57%, Bill Brown 49%, Hatcher 48%, Ripper 28%, and NuDakota 21%.

The largest differences in 2008 COFT yields were from farm to farm (three tests averaged below 10 bu/ac and four tests averaged above 60 bu/ac) which was indicative of highly variable climatic conditions. This variability resulted from wide differences in stand establishment due to dry seeding conditions, variable winter and spring moisture availability, duration of drought conditions, wind erosion, and hail. In 2008, farmers who practiced no-till farming were able to capture and keep more moisture in the soil. Yields from no-till fields were sometimes far superior to those from tilled fields.

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2008 Collaborative On-Farm Tests Results

County/Town	2008 Varieties										Test	
	Ripper		NuDakota		Bill Brown		Hatcher		Keota		Average	
	Yield bu/ac ¹	Test Wt lb/bu	Yield bu/ac ¹	Test Wt lb/bu	Yield bu/ac ¹	Test Wt lb/bu	Yield bu/ac ¹	Test Wt lb/bu	Yield bu/ac ¹	Test Wt lb/bu	Yield bu/ac ¹	Test Wt lb/bu
Adams/Bennett N.	39.5	58.3	35.4	55.5	31.7	57.8	29.4	57.6	33.0	58.5	33.8	57.5
Adams/Brighton E.	45.3	57.8	48.2	55.8	50.8	59.0	50.8	59.0	51.0	60.2	49.2	58.4
Adams/Last Chance	6.2	55.7	6.4	56.4	11.3	59.3	8.1	58.7	6.4	58.6	7.7	57.7
Baca/Walsh	5.2	55.8	4.7	55.7	4.8	58.2	2.7	56.3	4.5	57.9	4.4	56.8
Kiowa/Haswell	4.9	59.1	6.7	57.4	7.1	60.7	8.3	60.1	4.3	59.3	6.3	59.3
Kit Carson/Burlington	42.7	61.0	39.9	60.0	44.0	60.0	45.2	60.0	41.4	61.3	42.6	60.5
Kit Carson/Stratton	24.0	55.1	17.4	55.9	21.3	56.9	12.4	58.3	14.0	59.9	17.8	57.2
Logan/Fleming	46.6	61.0	42.3	60.6	45.7	63.2	39.9	62.4	37.9	62.8	42.5	62.0
Logan/Peetz	28.0	55.8	31.8	57.0	21.1	55.6	33.6	59.5	26.9	58.9	28.0	57.4
Logan/Sterling W.	21.7	59.4	24.3	58.9	17.9	60.3	18.9	60.2	21.8	60.9	20.9	59.9
Phillips/Haxtun S.	71.9	60.8	71.7	61.3	66.6	61.3	65.3	61.3	71.7	61.3	69.4	61.2
Phillips/Paoli	70.0	56.3	77.2	58.0	58.4	53.9	64.2	57.1	65.9	57.4	67.1	56.5
Prowers/Lamar	25.6	60.2	27.6	59.3	27.5	62.2	25.7	62.3	23.0	61.6	25.9	61.1
Prowers/Two Buttes	56.0	62.5	53.2	61.1	55.8	63.9	53.4	62.6	51.9	62.6	54.0	62.5
Washington/Akron	32.0	60.3	30.7	59.8	30.6	61.7	29.4	60.9	29.2	61.1	30.4	60.8
Washington/Woodlin	31.3	58.8	37.7	59.5	37.7	60.6	33.3	58.5	35.5	60.0	35.1	59.5
Washington/Woodrow	65.3	58.8	70.0	58.0	68.1	61.0	65.2	59.9	60.6	60.4	65.8	59.6
Washington/Yuma	64.5	61.0	67.5	60.3	58.1	60.0	61.0	59.9	62.8	59.5	62.8	60.1
Weld/Hudson E.	35.3	57.5	28.4	56.7	29.4	58.5	31.0	59.0	29.7	59.2	30.8	58.2
Weld/New Raymer	34.6	58.8	33.5	58.3	31.2	60.4	35.8	60.2	32.1	60.9	33.5	59.7
Weld/Nunn	30.1	58.8	28.2	57.8	29.8	61.0	27.9	61.1	26.3	61.1	28.5	60.0
Average yield	37.2	58.7	37.3	58.3	35.7	59.8	35.3	59.8	34.7	60.2	36.0	59.3

Significance Yield

a

a

b

b

b

a

Significance Test Wt

c

d

b

b

a

LSD_(0.30) for yield = 1.0 bu/ac LSD_(0.30) for test weight = 0.3 lb/bu

Comparison of Hatcher and Ripper Yield Performance in 2-yr Combined COFT (2007 & 2008, 43 tests)

Avg Hatcher yield 41.1 bu/ac

Avg Ripper yield 40.1 bu/ac

LSD_(0.30) is 1.05 bu/ac which indicates no significant difference in yield between Hatcher and Ripper

¹Yield corrected to 12% moisture