

2007 Collaborative On-Farm Test (COFT) Performance Trial Results

Much of Colorado's 2007 wheat acreage was planted to winter wheat varieties that have been tested in the COFT program which is in its ninth year of testing. With on-farm testing, wheat producers can evaluate new varieties on their own farms before seed of the new varieties is available on the market to all farmers. On-farm testing directly involves agents and producers in the variety development process, thereby speeding adoption of new, superior varieties.

Colorado State University Cooperative Extension specialists have a large responsibility for the success of this program - recruiting volunteer growers, delivering seed, planning test layout and operations, helping with planting, keeping records, coordinating visits, communicating with growers and campus coordinators, coordination of weighing plots and measuring yields. Equally important, COFT would not be possible without the collaboration of so many dedicated wheat producers throughout eastern Colorado.

Eastern Colorado Cooperative Extension Wheat Educators and On-Farm Test Coordinators

<u>Name</u>	<u>Title</u>	<u>Office Location</u>
Bruce Bosley	Platte River agronomist	Sterling
Scott Brase	SE Area agronomist	Lamar
Alan Helm	Golden Plains specialist	Holyoke
Ron Meyer	Golden Plains agronomist	Burlington

In the fall of 2006, nineteen eastern Colorado wheat producers (including the Plainsman Research Center at Walsh) planted 22 COFT trials in Baca, Prowers, Kiowa, Cheyenne, Kit Carson, Phillips, Logan, Adams, and Weld counties. Working with local Extension specialists, each collaborator received 100-150 pounds seed of each variety and planted the six varieties in side-by-side strips. The objective of the 2007 COFT was to compare performance and adaptability of newly-released varieties to varieties they might replace in Colorado for selection of the best performing hard red variety (Hatcher and Ripper), the best hard white variety (Avalanche and Danby), or the best Clearfield* wheat variety (Above and Bond CL).

Variety Performance in the 2007 Collaborative On-Farm Test

County/Town	HRW varieties		Clearfield Varieties		HWW varieties		Test Average	Comment
	Hatcher	Ripper	Bond CL	Above	Danby	Avalanche		
Yield (bu/ac) at 13% moisture								
Adams/Byers	82.1	77.7	77.6	72.1	72.1	69.0	75.1	Deep snow cover, no-till, high fertility
Weld/Keenesburg	53.6	45.8	41.5	37.5	38.6	39.0	42.7	Variable weed infestations by variety
Weld/New Raymer	41.6	41.9	37.8	39.0	37.5	38.5	39.4	No-till, good fertility
Logan/Sterling W	57.4	53.4	59.2	49.2	55.4	51.3	54.3	No-till, good fertility, fair finishing moisture
Logan/Fleming	36.3	37.4	34.7	36.9	31.9	34.5	35.3	Low soil moisture mid May to mid June
Logan/Peetz	45.2	46.1	39.1	40.0	41.1	36.5	41.3	Good finishing moisture
Phillips/Paoli *6	51.2	51.3	52.9	58.2	50.6	52.4	52.8	Fertilized for high yield
Phillips/Haxtun *6	37.7	38.6	27.2	36.4	33.3	37.2	35.1	Wheat Steak Mosaic Virus
Phillips/Haxtun *3	33.5	32.3	29.6	41.2	31.3	32.7	33.4	Wheat Steak Mosaic Virus
Yuma/Yuma *6	30.1	38.7	29.7	33.9	31.5	29.0	32.2	Low fertility
Yuma/Yuma *3	27.4	26.8	35.1	37.9	27.2	31.7	31.0	Low fertility
Washington/Anton	22.1	17.7	14.9	11.5	17.6	9.5	15.6	Severe hail 5/14
Kit Carson/Bethune	36.1	31.5	30.9	33.6	31.2	31.2	32.4	Dry in fall 2006.
Kit Carson/Burlington	62.1	56.2	56.6	51.6	66.0	54.4	57.8	Excellent soil moisture fall 2006 and early 2007
Cheyenne/Arapahoe	60.7	69.8	60.7	58.4	54.6	43.7	58.0	Little moisture after snow, late rust
Kiowa/Haswell	27.8	22.4	21.9	17.4	15.1	13.2	19.6	Severe hail 5/29, broken & heads stems
Kiowa/Towner	49.3	40.7	50.9	48.0	49.0	45.1	47.2	Stripe & leaf rust largest factor
Prowers/Two Buttes	76.6	52.0	60.3	55.5	76.7	61.5	63.8	Great moisture, heavy stripe & leaf rust
Baca/Springfield	58.0	55.1	56.1	57.1	53.9	53.7	55.7	Little moisture after snow
Baca/Walsh I	53.4	42.7	51.5	49.5	51.5	43.1	48.6	Deep snow cover, little moisture after snow.
Baca/Walsh II	49.5	43.1	46.2	46.0	45.3	39.8	45.0	Deep snow cover, little moisture after snow.
Baca/Vilas	33.2	21.9	32.9	30.3	38.0	28.0	30.7	Spring drought, leaf and stripe rust
Average Yield	46.6	42.9	43.1	42.8	43.2	39.8	43.0	
LSD _(0.30)	1.6		1.2		1.2			
Significance	A	B	NS		A	B		

1. *6 - Trials planted specifically at 600,000 seeds/acre

2. *3 - Trials planted specifically at 300,000 seeds/acre

3. LSD and Significance are specific to the intended variety comparisons