

## 2012 Collaborative On-Farm Test (COFT) Variety Performance Results

The objective of the 2012 COFT was to compare performance and adaptability of popular and newly released CSU varieties (Byrd, Brawl CL Plus, and Snowmass) with proven high-yielding varieties (Hatcher and Settler CL) and with a commercial variety (TAM 112) under unbiased, field-scale testing conditions. The COFT program is in its 14<sup>th</sup> year and much of Colorado's 2012 wheat acreage was planted to winter wheat varieties that have been tested in the COFT program. In the fall of 2011, thirty-five eastern Colorado wheat producers planted on-farm tests in Baca, Bent, Prowers, Kiowa, Cheyenne, Kit Carson, Washington, Yuma, Phillips, Sedgwick, Lincoln, Logan, Adams, and Weld counties. Each collaborator planted the six varieties in side-by-side strips (approximately 1.25 acres per variety) at the same seeding rate as they seeded their own wheat. Thirty-one viable harvest results were obtained from the thirty-five tests. The COFT results need to be interpreted based on all tests within a year and not on the basis of a single variety comparison on a single farm in one year. In addition to the overall 2012 COFT variety performance results, we have added a summary table of this year's COFT results grouped by geographic region to assist with variety comparisons.

### **Colorado extension wheat educators who conducted the COFT program in 2012:**

Jerry Johnson – Extension Specialist-Crop Production, Fort Collins

Bruce Bosley – Extension Agronomist, Logan County

Wilma Trujillo – Extension Agronomist, Prowers County

Alan Helm – Extension Agronomist, Phillips County (no longer in CSU Extension)

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2012 Varieties<sup>a</sup>

County/Nearest Town	Byrd Test			Brawl CL Plus Test			Hatcher Test			Settler CL Test			TAM 112 Test			Snowmass Test			COFT Average Test		
	Yield <sup>b</sup> bu/ac	Weight lb/bu	Protein percent	Yield <sup>b</sup> bu/ac	Weight lb/bu	Protein percent	Yield <sup>b</sup> bu/ac	Weight lb/bu	Protein percent	Yield <sup>b</sup> bu/ac	Weight lb/bu	Protein percent	Yield <sup>b</sup> bu/ac	Weight lb/bu	Protein percent	Yield <sup>b</sup> bu/ac	Weight lb/bu	Protein percent	Yield <sup>b</sup> bu/ac	Weight lb/bu	Protein percent
Adams/Bennett	52.7	58.2	10.1	45.3	59.2	10.5	50.2	60.8	9.4	43.1	60.2	10.3	45.9	62.5	11.2	43.0	60.8	11.0	46.7	60.3	10.4
Adams/Last Chance	15.0	58.0	13.4	16.0	60.5	13.2	11.4	60.0	12.4	13.0	58.5	12.8	15.2	61.0	11.9	11.5	59.5	11.9	13.7	59.6	12.6
Baca/Two Buttes	9.3	57.7	17.1	13.5	57.6	17.5	7.0	60.0	16.1	10.2	56.6	17.5	11.0	58.8	17.3	6.5	58.7	17.7	9.6	58.2	17.2
Baca/Vilas	34.3	59.4	12.9	39.6	61.0	13.5	31.9	58.6	14.9	37.1	59.1	13.2	36.3	60.6	13.2	30.2	58.0	14.1	34.9	59.5	13.6
Bent/Lamar W	34.5	59.5	13.5	32.3	60.4	14.6	30.5	59.9	14.1	30.7	58.9	14.4	32.0	60.4	14.3	29.5	59.2	14.3	31.6	59.7	14.2
Cheyenne/Arapahoe	42.1	61.2	10.1	41.7	60.1	11.0	34.2	59.6	9.4	50.4	59.2	10.3	34.5	61.4	10.9	37.4	60.5	10.5	40.1	60.3	10.4
Cheyenne/Cheyenne Wells	32.3	59.6	14.5	28.2	60.4	15.1	31.6	62.0	13.9	29.8	59.0	14.6	29.6	60.8	15.0	29.6	58.7	15.3	30.2	60.1	14.7
Kiowa/Haswell	16.3	61.2	10.7	15.6	62.7	12.3	15.2	62.7	10.7	13.0	61.0	12.4	14.2	61.9	11.4	10.8	60.5	13.2	14.2	61.7	11.8
Kiowa/Towner	22.3	59.2	9.3	22.3	60.9	10.6	21.9	59.1	9.6	22.7	59.4	9.5	20.6	59.6	10.2	20.7	60.9	9.2	21.8	59.9	9.7
Kit Carson/Bethune	57.5	61.4	12.3	54.2	61.8	13.6	54.7	64.6	12.1	46.4	55.8	13.5	49.4	61.1	12.7	51.3	62.2	12.8	52.3	61.2	12.8
Kit Carson/Stratton	50.0	56.1	14.4	48.0	58.7	14.9	49.9	59.5	13.5	48.0	58.7	14.8	50.7	57.8	14.0	41.8	56.5	14.7	48.1	57.9	14.4
Lincoln/Arriba	64.9	62.0	11.8	60.2	65.5	12.1	62.1	63.0	11.0	58.0	63.0	12.2	59.0	62.5	12.4	56.7	62.5	11.5	60.2	63.1	11.8
Lincoln/Thurman	66.9	60.4	11.8	65.4	62.3	11.9	64.6	61.6	10.8	64.4	60.7	11.7	59.4	62.9	12.0	54.1	60.2	12.7	62.5	61.4	11.8
Logan/Leroy	56.7	60.5	10.6	53.4	61.5	10.6	50.5	60.5	10.1	50.7	61.0	10.3	53.1	59.0	10.1	49.0	60.0	10.0	52.2	60.4	10.3
Logan/Peetz	37.9	62.0	9.4	32.6	64.5	11.2	38.1	62.0	9.6	39.2	62.5	10.1	31.8	64.0	10.4	35.8	63.0	9.6	35.9	63.0	10.1
Logan/Sterling W	49.8	60.5	12.1	46.9	61.0	12.9	41.3	60.5	11.5	41.0	58.0	12.0	34.5	61.5	11.0	38.9	59.0	11.5	42.1	60.1	11.8
Phillips/Haxtun	40.7	54.8	12.5	43.5	58.0	10.9	44.1	57.5	11.9	43.2	55.5	11.7	40.1	56.2	11.7	33.2	53.4	13.8	40.8	55.9	12.1
Prowers/Bristol	49.2	59.0	12.0	40.0	57.9	14.2	41.0	58.9	12.5	39.2	55.4	14.2	48.5	60.9	13.0	42.4	56.9	12.8	43.4	58.2	13.1
Prowers/Lamar S	53.1	62.2	12.3	48.6	62.0	13.8	47.5	61.5	12.4	45.8	59.8	13.7	45.0	60.3	13.2	46.2	60.1	12.8	47.7	61.0	13.0
Prowers/Two Buttes N	17.2	56.0	15.4	16.5	58.0	15.4	13.8	55.0	14.5	16.5	54.0	16.2	17.0	57.0	15.6	13.8	55.0	16.8	15.8	55.8	15.7
Washington/Akron S	25.6	59.0	12.2	29.0	61.0	12.2	26.1	60.0	12.5	26.7	60.5	12.0	27.5	61.0	12.5	24.1	59.0	11.8	26.5	60.1	12.2
Washington/Akron W	33.5	59.1	15.6	33.4	60.2	15.4	35.5	60.0	14.3	32.6	60.4	14.9	32.3	58.5	14.8	28.7	58.0	14.8	32.7	59.4	15.0
Washington/Anton	10.4	58.0	10.2	9.6	59.0	9.9	9.6	59.0	10.6	10.7	57.5	11.4	9.2	58.0	11.4	9.4	59.0	12.0	9.8	58.4	10.9
Washington/Otis	58.3	61.5	12.0	57.6	61.5	12.3	52.0	61.0	12.6	49.0	61.5	12.2	49.0	63.0	12.0	45.6	61.0	12.5	51.9	61.6	12.3
Washington/Platner	52.9	60.0	11.9	53.9	62.5	11.8	52.5	61.5	11.2	47.5	61.0	12.3	47.3	60.5	13.0	46.9	60.0	13.1	50.2	60.9	12.2
Washington/Woodlin	39.6	58.5	10.4	38.5	60.0	11.7	39.9	59.5	10.0	36.6	59.0	10.7	36.7	60.5	10.8	32.5	58.5	10.4	37.3	59.3	10.7
Washington/Woodrow	53.2	62.0	9.5	49.4	62.5	12.6	49.9	63.5	11.1	49.4	62.5	10.8	47.6	62.0	10.3	43.7	63.5	11.0	48.9	62.7	10.9
Weld/Keenesburg	68.9	59.0	15.3	68.5	60.5	16.4	68.1	61.0	14.2	72.2	61.0	14.2	67.1	61.5	14.0	64.7	60.5	14.5	68.2	60.6	14.8
Weld/New Raymer	48.6	62.0	9.8	45.3	65.5	11.0	43.5	63.0	10.2	42.1	63.0	10.7	41.3	62.5	11.6	39.9	62.5	10.7	43.4	63.1	10.7
Weld/Prospect Valley	64.9	62.0	9.2	58.5	63.5	10.0	58.9	63.0	9.1	59.4	61.0	10.3	52.8	63.0	9.3	57.4	63.0	9.7	58.7	62.6	9.6
Yuma/Yuma	52.6	60.6	11.7	48.1	61.3	12.7	50.3	60.8	12.4	49.3	60.4	12.2	49.7	60.4	13.3	46.5	59.7	11.9	49.4	60.5	12.4
<b>Average</b>	<b>42.3</b>	<b>59.7</b>	<b>12.1</b>	<b>40.5</b>	<b>61.0</b>	<b>12.8</b>	<b>39.6</b>	<b>60.6</b>	<b>11.9</b>	<b>39.3</b>	<b>59.5</b>	<b>12.5</b>	<b>38.3</b>	<b>60.7</b>	<b>12.4</b>	<b>36.2</b>	<b>59.7</b>	<b>12.5</b>	<b>39.4</b>	<b>60.2</b>	<b>12.4</b>

Significance<sup>c</sup> yield A B C C D E

LSD<sub>(0.30)</sub> for yield = 0.7 bu/ac

LSD<sub>(0.30)</sub> for test weight = 0.3 lb/bu

LSD<sub>(0.30)</sub> for protein = 0.2 percent

<sup>a</sup>Varieties are ranked left to right by highest average yield.

<sup>b</sup>Yield corrected to 12% moisture.

<sup>c</sup>Significance: Varieties with different letters are significantly different from one another.

## 2012 COFT Variety Performance Summary and Comparison by Region

2012 Overall (31) <sup>a</sup>				Trial Regions							
				South (10) <sup>a,b</sup>				North (21) <sup>a,b</sup>			
Variety <sup>c</sup>	Test			Variety <sup>c</sup>	Test			Variety <sup>c</sup>	Test		
	Yield <sup>d</sup>	Weight	Protein		Yield <sup>d</sup>	Weight	Protein		Yield <sup>d</sup>	Weight	Protein
	bu/ac	lb/bu	percent		bu/ac	lb/bu	percent		bu/ac	lb/bu	percent
Byrd	42.4	59.7	12.1	Byrd	31.1	59.5	12.8	Byrd	47.8	59.8	11.7
Brawl CL Plus	40.6	61.0	12.8	Brawl CL Plus	29.8	60.1	13.8	Brawl CL Plus	45.8	61.5	12.3
Hatcher	39.7	60.6	11.9	Settler CL	29.5	58.2	13.6	Hatcher	45.6	61.1	11.5
Settler CL	39.4	59.5	12.5	TAM 112	28.9	60.2	13.4	Settler CL	44.1	60.1	12.0
TAM 112	38.5	60.7	12.4	Hatcher	27.5	59.7	12.8	TAM 112	43.0	60.9	11.9
Snowmass	36.3	59.7	12.5	Snowmass	26.7	58.9	13.7	Snowmass	40.9	60.1	12.0
<b>Average</b>	<b>39.5</b>	<b>60.2</b>	<b>12.4</b>		<b>28.9</b>	<b>59.4</b>	<b>13.3</b>		<b>44.5</b>	<b>60.6</b>	<b>11.9</b>
LSD <sub>(0.30)</sub>	0.7	0.3	0.2		1.3	0.4	0.3		0.8	0.3	0.2

<sup>a</sup>Number of locations included.

<sup>b</sup>Southern region includes trials located south of interstate-70, and northern region includes trials north of interstate-70.

<sup>c</sup>Varieties are ranked by the highest average yield.

<sup>d</sup>Yield corrected to 12% moisture.