



# Result Demonstration Report

## Multi-Year Evaluation of Soft Winter Wheat Varieties

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**Summary:** Since 2009, small grain producers have experienced drought, late freeze, scattered germination dates, lack of tillering, Hessian Fly Fungal disease pressure, armyworm infestations, and excessive rainfall.

**Objective:** This demonstration was written to conducted to evaluate soft winter wheat yield over multiple years and varieties.

**Materials and Methods:** Varieties planted in the McLennan County Small Grain Variety Trials are planted side-by-side for comparison. Strip trials test are planted in side-by-side comparison strip trials. Test plots are planted with farmers' tractor and grain drill. All varieties are planted at the same drill setting. Fertilizer applications consist of 100 pounds of 18-46-0 and followed with Anhydrous. Yields are obtained by producers combine. Bushel yield per acre are recorded at harvest.

**Results and Discussion:** The varieties considered in this result demonstration vary from one to seven growing seasons. Yields differ from year to year, however yields are similar across varieties on a yearly basis. Results can be viewed in Table I. Evaluation of Soft Winter Wheat Varieties over multiple years.

**Conclusions:** The varieties producing the highest grain yield naturally generate the highest grow income and net income. Production practices and cost of production were equal for all varieties. Rainfall amounts have more effect on yield than any other single factor. Producers are encouraged to consult results from previous years result demonstration handbooks to determine how varieties perform under various growing conditions over multiple years before deciding on specific varieties to plant.

**Table I. Evaluation of Soft Winter Wheat Varieties over multiple years 2009-2015, McLennan County**

<b>Years of Data</b>		<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>Avg</b>
<b>7</b>	<b>Coker 9553</b>	83.01	78.22	25.32	26.62	6.14	23	50	41.75
<b>6</b>	<b>Crawford</b>	67.79	68.83	14.16	26.96	39.19	24.54		40.24
	<b>LA 841</b>	76.38	79.20	21.85		23.55	26.07	31	43
<b>3</b>	<b>TAM Soft 700</b>		79.00	16.85	5.36				33.74
	<b>TV 8861</b>					54.38	44	49	49.12
	<b>USG 3201</b>					47.87	29.8	32	36.55
	<b>Coker 9700</b>	70.65	81.84	24.77					59.08
<b>2</b>	<b>USG 3555</b>			14.92		18.61			16.76
	<b>USG 3251</b>					10.74	29		19.87
	<b>Pioneer 25R39</b>						39	41	40
	<b>Pioneer 25R40</b>						39.9	30	34.95
<b>1</b>	<b>Pioneer 25R50</b>							24	24
	<b>LA 754</b>							18	18
	<b>Average</b>	<b>74.45</b>	<b>77.41</b>	<b>19.64</b>	<b>19.64</b>	<b>28.64</b>	<b>31.91</b>	<b>34.37</b>	<b>40.87</b>

Disease resistance, especially leaf rust, is extremely important in selecting varieties because of substantial yield reductions from high leaf rust infections. Because disease infestations are so unpredictable from year to year, producers should plant more than one variety to prevent a build-up of specific strains of leaf rust. Characteristics to consider, other than disease resistance when choosing a variety include: winter hardiness, straw strength, maturity plant height and residue carry-over, tillering, Hessian Fly resistance and yielding ability. Producers should use multiple tools when selecting varieties of wheat to plant. Evaluating research data over multiple years allows producers to select the best variety for this area.

**Acknowledgements:** Appreciation is expressed to Jerry and Jason Niemeier and Kevin Huffman for allowing me to plant grain plots on their property over the years. Special thanks to Dr. Clark Neely, State Extension Small Grain Specialist and Daniel Hathcoate, Extension Program Specialist for providing seed and technical support.