

# Centerfield herbicide-tolerant hard red winter wheat

- Oklahoma-bred Clearfield® wheat variety with adaptability to central Oklahoma
- Good genetic background with heavy 2174 influence
- Medium maturity similar to 2174
- Test weight comparable to non-Clearfield® varieties like 2174 and Ok102
- Resistant to wheat soilborne mosaic virus and wheat spindle streak mosaic virus
- Improved foliar disease package with resistance to powdery mildew and moderate resistance to leaf rust and stripe rust

Development of Centerfield was made possible by a cooperative effort among the following:



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## CENTERFIELD

Herbicide-tolerant  
Hard Red Winter  
Wheat



# Centerfield herbicide-tolerant wheat

Wheat farmers in the southern Great Plains wishing to use the Clearfield® wheat production system have had limited variety choices. Centerfield improves this list of choices by providing an agronomic package that fits the needs of central Oklahoma wheat farmers.

The Clearfield® trait was initially introduced into hard red winter wheat through the variety TAM 110. So, most Clearfield® varieties released so far have had similar areas of adaptation as TAM 110.

Centerfield breaks this mold with parentage that is 75% 2174 and 25% TAM 110. The strong 2174 influence in Centerfield means better adaptation to central Oklahoma and improved agronomics.

## YIELD POTENTIAL

Centerfield's yield performance was slightly better than other Clearfield® varieties tested by OSU in 2006 (Table 1). The good performance in the dual-purpose test in El Reno showcases Centerfield's better fit in locations with low soil pH.

Test weight of Centerfield has consistently been better than other Clearfield® varieties tested. This makes Centerfield one of the first Clearfield® varieties with test weight that is comparable to its non-Clearfield® counterparts like 2174.

Centerfield is also a step forward in milling and baking characteristics of herbicide-tolerant wheat varieties. Grain protein content of Centerfield is

similar to that of 2174 or Ok102. When combined with good mixing tolerance and dough strength, this makes for a good end-use quality wheat.

## DISEASE PACKAGE

Centerfield is resistant to wheat soilborne mosaic virus and wheat spindle streak mosaic virus. Resistance to these two soilborne diseases is unique among current Clearfield® varieties.

Centerfield is moderately resistant to current races of leaf rust and stripe rust. While this level of resistance still leaves room for improvement, it does mark a significant improvement among Clearfield® lines.

Centerfield shows resistance to powdery mildew but is susceptible to tan spot. So careful attention must be paid to disease management in no-till continuous wheat.

## MANAGEMENT

Centerfield's unique resistance to soilborne diseases and improved test weight make it a good fit for central Oklahoma. Centerfield's forage production is comparable to other Clearfield® varieties on the market (Table 2).

**Table 2.** Fall forage production and day of year (DOY) of first hollow stem at Stillwater in 2006-2007.

| Variety            | Fall forage | First hollow stem |
|--------------------|-------------|-------------------|
|                    | lb/A        | DOY               |
| <i>Centerfield</i> | <b>2380</b> | <b>74</b>         |
| Okfield            | 2480        | 71                |
| Protection CL      | 2310        | 54                |

The strong 2174 influence in Centerfield resulted in heat-sensitive seed dormancy. So, Centerfield is a variety that is better sown after soil temperatures cool in late September.

Centerfield closely resembles 2174 in plant maturity. First hollow stem and heading date data from 2007 place Centerfield as a true medium maturity variety.



**Table 1.** Yield and test weight data for grazed and non-grazed variety trials in Oklahoma in 2006

| Variety            | Non-grazed |            |           | Grazed    | Average Test Weight |
|--------------------|------------|------------|-----------|-----------|---------------------|
|                    | Haskell    | Kingfisher | Lamont    | El Reno   |                     |
|                    | bu/A       |            |           |           | lb/bu               |
| <i>Centerfield</i> | <b>44</b>  | <b>27</b>  | <b>40</b> | <b>42</b> | <b>61</b>           |
| Okfield            | 42         | 29         | 39        | 40        | 60                  |
| AP502CL            | 38         | 22         | 43        | 37        | 59                  |

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