

# Duster hard red winter wheat

- Oklahoma-bred wheat variety with wide area of adaptation
- Resistant to the Great Plains biotype of Hessian fly
- Medium maturity with good yield potential and test weight
- Resistant to leaf rust and powdery mildew
- Good dual-purpose adaptation with above-average tillering and rebound from grazing
- Resistant to wheat soilborne mosaic virus and wheat spindle streak mosaic virus
- Good milling and baking quality with intermediate grain protein and excellent dough strength

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



## OSU Wheat Improvement Team

Jeff Edwards, Brett Carver, Bob Hunger, Tom Royer, Kris Giles, David Porter, Patricia Rayas-Duarte, Art Klatt, Liuling Yan, and Bjorn Martin.

[www.wheat.okstate.edu](http://www.wheat.okstate.edu)

## FOR MORE INFORMATION ON DUSTER CONTACT



Oklahoma Foundation  
Seed Stocks

2902 West 6th Ave.  
Stillwater, OK 74074  
(405) 744-7741

<http://www.ofssinc.com>



DUSTER  
Hard Red  
Winter wheat

*Graze-n-Grain  
Breeding System*



# Duster hard red winter wheat

A 19-year effort of selection and reselection lead to the release of Duster by Oklahoma State University in May of 2006.

The initial cross for Duster was made by breeders in the Pioneer hard red wheat breeding program. Duster became part of the OSU wheat breeding program when it was selected by Dr. Ed Smith from approximately 30,000 head rows donated by Pioneer in 1991.

In 1995 Dr. Bob Hunger identified single-plants that displayed leaf rust and soilborne mosaic virus resistance. Several other selections over the next ten years led to the advanced line OK93P656H3299-2C04 which would eventually be released as Duster.

## YIELD POTENTIAL

Duster has been a consistent top-performer in the southern region wheat breeder performance nurseries.

Two years of Oklahoma state non-grazed and grazed wheat variety trial data indicated that Duster has a fit in both grain-only and dual-purpose systems (Table 1). Test weight of Duster has proven to be above-average in OSU variety trials.

## UNIQUE TRAITS

Hessian fly is becoming more and more of an issue for wheat producers in the southern Great Plains. Duster has shown resistance to the Great Plains biotype of Hessian Fly. This will be of benefit to producers wishing to sow early to maximize forage yield.

## DISEASE PACKAGE

Duster is resistant to current strains of leaf rust, powdery mildew, wheat soilborne mosaic virus, and wheat spindle streak mosaic virus. Duster shows intermediate resistance to stripe rust and barley yellow dwarf virus.

Moderate susceptibility to tan spot and septoria means that Duster may not fit well in no-till continuous wheat production systems.

## MANAGEMENT

Duster has above-average tillering ability and recovers from grazing well. It emerges well in hot, dry soil conditions and closes canopy rapidly.

These traits along with good forage production and medium/late first hollow stem (Table 2) make Duster a nice fit for dual-purpose production systems. Duster also has a fit in grain-only production, but management is the key.

Duster's abundant tillering combined with intermediate straw strength can result in lodging some years. Therefore, lower seeding rates and later planting dates are recommended for Duster in grain-only systems.

**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
<b>Duster</b>	<b>2950</b>	<b>64</b>
Jagger	2440	57
Jagalene	2540	57
2174	2680	74

Acid soil tolerance, a good soilborne and foliar disease resistance package, and a good track record in breeder nurseries and state variety trials indicate that Duster has wide adaptation to all areas of Oklahoma and similar areas of the southern Great Plains.



**Table 1.** Two-year yield and test weight data for grazed and non-grazed variety trials in Oklahoma in 2005 and 2006

Variety	Non-grazed		Grazed		Average Test Weight
	Marshall	Alva	El Reno	Marshall	
	bu/A				lb/bu
<b>Duster</b>	<b>37</b>	<b>37</b>	<b>45</b>	<b>24</b>	<b>61</b>
Jagger	33	40	42	17	60
Jagalene	31	37	41	20	60
Ok101	27	34	40	19	60

Oklahoma State University, in compliance with Title VI and VII of the Civil Rights Act of 1964, Executive Order 11246 as amended, Title IX of the Education Amendments of 1972, Americans with Disabilities Act of 1990, and other federal laws and regulations, does not discriminate on the basis of race, color, national origin, gender, age, religion, disability, or status as a veteran in any of its policies, practices or procedures. This includes but is not limited to admissions, employment, financial aid, and educational services.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Robert E. Whitson, Director of Oklahoma Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Vice President, Dean, and Director of the Division of Agricultural Sciences and Natural Resources.