

**THE KANSAS AGRICULTURAL EXPERIMENT STATION
KANSAS STATE UNIVERSITY
MANHATTAN, KANSAS 66506**

NOTICE OF VARIETY RELEASE KS970093-8-9-#1 AS EVEREST

The Kansas Agricultural Experiment Station, Manhattan, announces the release of KS970093-8-9-#1. KS970093-8-9-#1 is a hard red winter wheat selected from the cross HBK1064-3/Betty 'S'/VBF0589-1/IL89-6483 (Pioneer 9021L/Roland/IL77-2656). The pedigree of HBK1064-3 is Karl/HBY385D//2163. This line was a high yielding experimental line from the Pioneer germplasm that was increased but not released by K-State. Betty is a hard white wheat released from the Kansas Agricultural Experiment Station. VBF0589-1 is a line selected from the Pioneer germplasm gift. IL89-6483 is a soft red winter wheat line that was tested in the Uniform Eastern Soft Winter Wheat trials in 1998 and 1999.

KS970093-8-9-#1 has performed very well in central and eastern Kansas represents an significant increase in yield potential over currently grown cultivars in those areas of the state. In four years of testing, this line has averaged about 18% higher yield than Overley and about 4% higher than Santa Fe. In two years of testing, it has yielded the same as Art in our trials. In general, KS970093-8-9-#1 has not performed well in environments with terminal drought stress and is therefore not recommended for dryland production in western Kansas. Its yield potential under irrigation has not been adequately tested at this time.

KS970093-8-9-#1 has an excellent test weight pattern and is superior to Overley and Santa Fe.

KS970093-8-9-#1 has been moderately resistant to leaf rust throughout its testing. Field observations indicate that KS970093-8-9-#1 is moderately resistant to resistant to stripe rust. KS970093-8-9-#1 is also resistant to soil-borne mosaic virus and spindle streak mosaic virus. It is also moderately resistant to stem rust race QFCS, but susceptible to Ug99. It is also intermediate for speckled leaf blotch and moderately susceptible to susceptible to tan spot. In limited testing, KS970093-8-9-#1 appears to have good tolerance to acid soils. It is moderately susceptible to wheat streak mosaic and is also resistant to prevalent biotypes of Hessian fly.

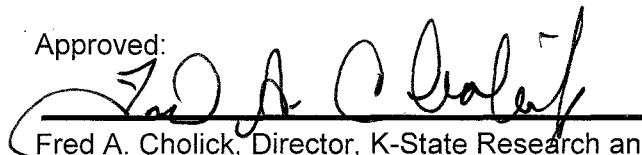
The most novel traits carried by KS970093-8-9-#1 are its moderately resistant reaction to Fusarium Head Blight and tolerance to barley yellow dwarf. Over three years of testing, KS970093-8-9-#1 was better than Fuller for FHB resistance. KS970093-8-9-#1 also appears to have good levels of tolerance to barley yellow dwarf virus as evidenced by low incidence of infection at Manhattan in 2006, 2007 and 2009 and Columbia, MO in 2008. These observations coincide with general observations of KS970093-8-9-#1 taken over its period of development. KS970093-8-9-#1 does not contain any of the Thinopyrum intermedium segments that have been reported as having resistance to BYDV.

KS970093-8-9-#1 is about a day later and slightly shorter than Jagger, with good straw strength. KS970093-8-9-#1 is tolerant to shattering.

Compared to the Hard Winter Wheat Quality Targets, KS970093-8-9-#1 has acceptable milling and baking quality. It's biggest weakness is a relative lack of mixing tolerance (2.4 compared to a target of 3). It also has a slightly shorter mixograph mix time than the target (2.9 minutes compared to the 3 to 5 minute target), though the average bake mix time is exactly 3 minutes. KS970093-8-9-#1 is about 1% lower in protein than Overley. Kernel diameter, as measure by SCKS, is slightly short of the target value, but is still higher than average for hard red winter wheat.

The name 'Everest' has been cleared for use by the USDA.

Approved:



Fred A. Cholick, Director, K-State Research and Extension

8/24/2009

Date