

ID86-14502B
Soft White Winter Wheat
Proposed name: 'Brundage'

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Description

ID86-14502B is a common soft white winter wheat. It is a white chaffed, awnletted, semi-dwarf wheat. The wheat is blue-green in color with an erect to semi-erect flag leaf. The kernels are large, white and soft.

Pedigree and History

ID86-14502B was selected from a cross of Stephens/Geneva. Stephens is an awned soft white winter wheat developed in Oregon and Geneva is an awnletted soft white winter wheat developed in New York. The cross was made in 1986 at the University of Idaho Plant Science Farm, Moscow, Idaho. The population was bulked for the first three generations, then headrows were planted the fourth generation. ID86-14502B was selected as an F₄ headrow in 1990. It was then evaluated for one year under irrigation by E. Souza at the Aberdeen Research and Extension Center, Aberdeen, Idaho. ID86-14502B has been evaluated in yield trials since 1993, Western Regional trials since 1994 and in extension trials since 1995. One thousand head rows were sown of ID86-14502B in 1995. Uniform rows were harvested, bulked, and planted in 1996 to produce breeder seed. The proposed name for ID86-14502B is 'Brundage'.

Area of Adaptation

ID86-14502B is adapted to the irrigated areas of southern Idaho. It may be grown in the dryland areas of northern Idaho, eastern Washington and Oregon but its level of stripe rust resistance may be inadequate in these areas in some years. ID86-14502B is susceptible to dwarf bunt and should be grown with a seed treatment effective for this disease.

Agronomic Traits

ID86-14502B is 5-7 cm (2-3 in.) shorter than Stephens and heads two to three days earlier than Stephens (Table 1). It has excellent straw strength and its winter-hardiness is similar to Stephens.

Yield and Test weight

ID86-14502B is superior to Stephens, Madsen, and Lambert for yield and test weight under irrigated conditions in southern Idaho (Table 1). In irrigated trials in Idaho,

ID86-14502B averaged 147 bu/ac compared to 137.5 bu/ac for Stephens (25 site/years). Under irrigated conditions ID 86-14502B was also superior for test weight. Averaged over 25 site/years the test weight for ID86-14502B was 60.9 lbs/bu compared to 59.1 lbs/bu for Stephens. Under dryland conditions in Idaho, ID86-14502B yielded slightly less than Stephens, Madsen and Lambert over 28 site/years (Table 2). ID86-14502B was equal or superior in test weight to these three lines under dryland conditions. In Washington extension trials in 1995-96, ID86-14502B was superior to Stephens for yield and test weight under dryland conditions (Table 2).

Quality

ID86-14502B has excellent soft white winter wheat quality when grown under irrigation in southern Idaho. Over 11 site/years, ID86-14502B was lower in protein, lower in NIR hardness, equal in flour yield and greater in cookie diameter than Stephens (Table 3). Under dryland conditions in Idaho, ID86-14502B was again lower in percent protein, lower in NIR hardness and greater in cookie diameter than Stephens but had a lower flour yield than Stephens (Table 4).

Disease Reactions

ID86-14502B has good resistance to stripe rust (*Puccinia striiformis*) in southern Idaho. It possesses an intermediate adult resistance to stripe rust that may be inadequate in areas where stripe rust occurs early in the season or the climate can stay cool and moist for extended periods in the late spring/early summer. ID86-14502B is susceptible to leaf rust (*Puccinia recondita*), stem rust (*Puccinia graminis*), Pseudocercospora footrot (*Pseudocercospora herpotrichoides*), common bunt (*Tilletia tritici*), and dwarf bunt (*Tilletia controversa*). It has only a low level of tolerance to Cephalosporium stripe (*Cephalosporium gramineum*).