

"BR 8631" is a hard red spring wheat developed by Farmers Marketing Corporation by Male Sterile Facilitated Recurrent Selection (MSFRS) population breeding. Seed from a single F₆ plant was harvested at Mt. Vernon, Washington in the fall of 1989 and increased at Maricopa, Arizona in 1990 to form the basis of the present designated breeder seed. It was increased in 1992 at Maricopa and Yuma, Arizona. Headrows were also grown to form the breeder seed basis for foundation seed production in 1993.

BR 8631 is relatively uniform and stable. The breeder seed increase was characterized by .01% plants which were slightly earlier and slightly taller. It is expected that this will continue in the 1993 production. Some occurrence of genetic male sterility, .001%, is expected from outcross seed set on unidentified male sterile plants. The headrow increase for foundation seed in 1993 is expected to eliminate or reduce male sterile and variant occurrence.

The base population from which BR8631 was derived was developed and released by the University of Arizona Experiment Station as AZ MSFRS-86 Quality Enhanced Semidwarf Hard Red Spring Wheat Germplasm. After topcrossing with the best available quality hard red spring wheats, BR8631 was selected in the F₂ and carried forward by "best plant selection" at two generations per year prior to quality screening and yield evaluation.

SECTION VIII - A

BR 8631 has been tested and is adapted to the irrigated production area of Arizona and California where Yecora Rojo is grown. Average yield has exceeded Yecora Rojo by 4%. Overall flour quality is similar with slightly stronger gluten strength. Bread baking quality is evidenced by a larger loaf volume and fine texture.

For certain areas and years in California, leaf rust can be a problem. It is similar to Yecora Rojo and BR 5702 in susceptabiity. Actual leaf rust ratings in 1992 were less for BR 8631. BR 8631 was relatively free of Septoria. No stripe rust was observed. Some susceptibility to powdery mildew was noted. Black point rating was less for BR 8631 than for Yecora Rojo or BR 5702.

In a yield trial evaluation at Aberdeen, Idaho in 1992 under sprinkler irrigation, BR 8631 yielded 9,738 lbs. per acre vs. The University of Idaho check variety, Copper, yield of 8,118 lbs. per acre. This indicates that adaption may be expanded.

Tables 1 - 10 attached.