

# Minnesota Agricultural Experiment Station

# VARIETY TRIALS

## Wild Rice



Locations of wild rice trials.

Successful production of wild rice depends to a considerable extent on selecting the best varieties for a particular farm. For that reason, varieties are compared in trial plots on Minnesota Agricultural Experiment Station paddies at Grand Rapids, and on privately owned paddies at Aitkin, Clearbrook and Waskish, Minnesota. Wild rice varieties are grown in replicated plots at each location. These plots are handled so that the factors affecting yield and other characteristics are as nearly the same for all varieties at each location as is possible.

### Variety Classifications

Wild rice varieties are not classed into groups such as "early" or "late" maturity, or "publicly" or "privately" developed. With only a limited number of varieties being tested, varieties descriptions are arranged alphabetically in the text and tables of this report.

### Interpreting the Tables

The LSD (Least Significant Difference) figures listed for wild rice yield and shattering are statistical measures of variability within the trials. This statistic is used to determine whether the differences between two quality tests are due primarily to genetic difference in the varieties.

If the quality difference between two varieties equals or exceeds the LSD value listed at the bottom of each test column, you can conclude that the higher quality variety was superior in quality. If the difference is less, greater attention should be given to other traits which are also important in making your variety choices.

### Authors/Researchers

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# **WILD RICE** **VARIETY TRIALS**

Minnesota Agricultural Experiment Station — University of Minnesota  
December 1996

Results of Wild Rice Variety Tests Conducted by the Minnesota Agricultural Experiment Station. This report was prepared by Raymie A Porter, research associate, North Central Experiment Station, Grand Rapids, Minnesota, a branch of the Minnesota Agricultural Experiment Station. [phone: 218/327-4490; e-mail: <raporter@maroon.tc.umn.edu>].

## **Crop Background**

Wild rice performance data for the 1995 growing season could not be obtained because all of the experiment station's variety test plots were severely damaged by numerous wind and rain storms which struck at critical times during the growing season. Aggregate performance data for the years 1991 through 1994 is presented in the table.

Cultivated wild rice is grown on approximately 20,000 acres in Minnesota. Most wild rice is produced from varieties with nonshattering tendency, but some fields are still planted to shattering types. No recommendations regarding specific varieties are made.

With the likelihood of preharvest losses due to high winds, storms, blackbird damage, and killing frost before varietal maturity, growers should favor early to medium maturing varieties. All varieties shatter to some extent and are lodging and disease susceptible.

## **Varieties**

**Franklin**—Medium height, medium to early maturity. More shattering resistant than K2 or other currently grown varieties, especially retaining more seed when harvest is delayed. Released 1992 by the Minnesota Agricultural Experiment Station.

**K2**—Medium height, early to medium maturity, and medium to high yield. Developed by Kosbau Brothers in 1972.

**Petrowske bottlebrush**—Medium height, medium to late maturity, and high yield. Up to 50 percent of plants can have bottlebrush panicle type, depending on continued selection for the trait. Developed by K & D Wild Rice.

**Voyager**—Short to medium height, early maturity, and medium to high yield. Should equal or exceed K2 in yield and mature a few days earlier. Developed by Minnesota Agricultural Experiment Station and released in 1983.

Table 1A. Yield and seed shattering losses of wild rice varieties at four locations (1991-94). [1]

Note Key:

[1] Means of trials at Grand Rapids in 1991 and 1992; Clearbrook, 1992 and 1993; Waskish, 1992 and 1994; and Aitkin, 1993.

[2] Yield expressed in pounds per acre, adjusted to 40% moisture.

[3] Shattering expressed as a percentage of harvested plus shattered grain.

Variety	Grand Rapids		Waskish		Clearbrook		Aitkin	
	Yield [2]	Shatter [3]	Yield [2]	Shatter [3]	Yield [2]	Shatter [3]	Yield [2]	Shatter [3]
Franklin	1450	12	1284	14	1319	16	1819	13
K2	1449	21	1143	23	1391	21	1488	22
Petrowske bottlebrush	1571	25	1254	31	1249	27	1862	14
Voyager	1210	18	865	29	1110	32	1854	11
LSD 0.05	139	3	118	3	116	3	363	6

Table 1B. Yield and seed shattering losses of wild rice varieties; average for the four Minnesota locations: Grand Rapids, Waskish, Clearbrook and Aitkin (1991-94). [1]

Note Key:

[1] Mean of trials at Grand Rapids in 1991 and 1992; Clearbrook, 1992 and 1993; Waskish, 1992 and 1994; and Aitkin, 1993.

[2] Yield expressed in pounds per acre, adjusted to 40% moisture.

[3] Shattering expressed as a percentage of harvested plus shattered grain.

Variety	Yield [2]	Shatter [3]
Franklin	1417	13
K2	1350	19
Petrowske bottlebrush	1430	24
Voyager	1175	23
LSD 0.05	128	3

## Wild Rice Planting Rate and Date

Rate is based on normal seedbeds and on normal size, good quality seed. Rate used can vary greatly depending on seed cost, desired stand, expected mortality, emerging ability, seed weight, seed germination, seedbed condition, depth of planting and planting equipment. Weight given is the most widely accepted in the U.S.

Condition	Bushel Weight (pounds)	Seeds/pound (number)	Rate/acre (pounds)	Rate (seeds)	Planting Date
Wet	25	7,900	33	6/square foot	Late fall