



Wildrice R.A. Porter

Varietal Trials Results, January 2006



Cultivated wildrice is grown on about 20,000 acres in Minnesota. Though some wildrice paddies are grown with shattering types, most growers use varieties with non-shattering tendencies.

For flexibility in harvesting, plant varieties resistant to shattering, disease and lodging. Where early killing frost is common, growers should favor varieties of early to medium maturity.

Varieties

Franklin—Medium height, medium to early maturity. More resistant to shattering than older varieties, such as K2, especially retaining more seed when harvest is delayed. Long seeds, resulting in higher percentage of long-grain seeds in A-grade width. Released 1992 by Minn. AES.

GIB-C9—High yielding, tall, medium-late maturing variety. Average shattering resistance. Seed is short, similar in length to Itasca and Petrowske Bottlebrush. Panicle type is mixed, including a noticeable percentage of bottlebrush panicles, depending on continuing selection intensity for the trait. Proprietary variety owned by Gunvalson Brothers and Pine Lake Wild Rice.

Itasca—High yielding, tall, medium-late maturing variety with superior resistance to seed shattering and fungal brown spot (FBS) disease. Very lodging resistant. Yield is about 50% higher than Petrowske Purple and Franklin. Shattering loss is about 1/3 less than Franklin or Petrowske Purple. Significantly

more FBS resistant than Franklin. Taller than Franklin by 3 inches and Petrowske Purple by 4 inches. Slightly later maturing than Petrowske Purple. Flowers 2-3 days after Petrowske Purple or Franklin. Average seed length is somewhat short—similar to Petrowske Purple and GIB-C9 but shorter than Franklin by 1/64 inch. Panicle type is mixed, including a noticeable percentage of bottlebrush panicles, but declining from 50% frequency without continued selection for the trait. Released 2002 exclusively to Minnesota growers by the Minnesota Cultivated Wild Rice Council.

Petrowske Purple—Moderately high fungal brown spot disease resistance and yield. High shattering resistance and lodging resistance. Consists of heterogeneous panicle types, most of which have some degree of purple at full flowering. Medium plant height. Medium-late maturity, flowering several days to a week after K2 and Franklin. Seeds shorter in length than most older varieties, but similar in length to Itasca and GIB-C9. Released 2000 by Minn. AES under a licensing agreement.

Yield, shattering, lodging and fungal brown spot (FBS) ratings for wildrice varieties.

Variety	Kelliher/Waskish				Clearbrook/Gully		
	Yield, Lb/Acre ¹	Shattering, % ²	Lodging Score ³	FBS Score ⁴	Yield, Lb/Acre ¹	Lodging Score ³	FBS Score ⁴
Franklin	1,255	23	2.7	4.8	1,439	2.4	4.0
GIB-C9	1,703	25	2.1	4.1	2,064	2.8	4.6
Itasca	1,793	17	1.3	3.2	2,429	2.0	3.5
Petrowske Purple	1,378	22	1.7	3.7	1,458	1.9	4.0
LSD (0.05)	197	4	0.4	0.6	374	0.6	0.8
Years	98-99-00-01-02	98-99-01	98-99-01-02	98-99-00-01-02	00-03	98-03	98-00-03

¹ Adjusted to 40% moisture.

² Expressed as a percentage of shattered seed plus grain yield per unit area.

³ Using a 1-5 scale where 1 = stems completely erect, 3 = stems averaging 45° angle, 5 = stems prostrate.

⁴ Fungal Brown Spot rating using a 1-9 scale where 1 = no significant disease lesions and 9 = completely susceptible (dead).

Yield, shattering, lodging and fungal brown spot (FBS) ratings for wildrice varieties (continued).

Variety	Aitkin				1998-2005 Average			
	Yield, Lb/Acre ¹	Shattering, % ²	Lodging Score ³	FBS Score ⁴	Yield, Lb/Acre ¹	Shattering, % ²	Lodging Score ³	FBS Score ⁴
Franklin	1,298	27	2.1	4.5	1,244	22	2.4	4.6
GIB-C9	1,407	45	1.8	4.2	1,629	28	2.2	4.3
Itasca	1,946	16	1.1	3.8	1,915	16	1.3	3.6
Petrowske Purple	—	—	—	—	—	—	—	—
LSD (0.05)	230	4	0.3	0.6	139	3	0.2	0.4

¹ Adjusted to 40% moisture.

² Expressed as a percentage of shattered seed plus grain yield per unit area.

³ Using a 1-5 scale where 1 = stems completely erect, 3 = stems averaging 45° angle, 5 = stems prostrate.

⁴ Fungal Brown Spot rating using a 1-9 scale where 1 = no significant disease lesions and 9 = completely susceptible (dead).

Seed length and width, and percent long in A-grade.

Variety	Kelliher/Waskish			Clearbrook/Gully			Aitkin		
	Seed Length 64 th in. ¹	Seed Width, 64 th in. ¹	Long-In A-Grade, % ²	Seed Length 64 th in. ¹	Seed Width, 64 th in. ¹	Long-In A-Grade, % ²	Seed Length 64 th in. ¹	Seed Width, 64 th in. ¹	Long-In A-Grade, % ²
Franklin	22.9	4.09	95	23.4	4.32	94	23.7	4.25	95
GIB-C9	21.9	4.19	84	23.0	4.45	89	22.9	4.22	90
Itasca	21.7	4.13	82	22.8	4.40	91	22.4	4.26	88
Petrowske Purple	21.9	4.00	86	23.1	4.19	92	—	—	—
LSD (0.05)	0.4	0.08	5	0.6	0.11	5	0.6	0.09	3
Years	00-01-02	00-01-02	00-01-02	00-03	00-03	00-03	00-01-02-05	00-01-02-05	00-01-02-05

¹ Dried, hulled, intact seeds.

² Percentage of A-grade seeds (width >3.75/64 in.) that are in the long-grain length category (>20/64 in.), calculated on a volume basis.

Seed length and width, and percent long in A-grade (continued).

Variety	2000-2005 Average		
	Seed Length 64 th in. ¹	Seed Width, 64 th in. ¹	Long-In A-Grade, % ²
Franklin	23.4	4.21	95
GIB-C9	22.6	4.26	88
Itasca	22.3	4.25	87
Petrowske Purple	—	—	—
LSD (0.05)	0.3	0.05	2

¹ Dried, hulled, intact seeds.

² Percentage of A-grade seeds (width >3.75/64 in.) that are in the long-grain length category (>20/64 in.), calculated on a volume basis.

Wildrice Planting Rate and Date

Bushel Weight, Pounds	25
Seeds/Pound	7,900
Planting Rate, Pounds/Acre	50
Planting Rate, Seeds Sq.Ft.	9
Planting Date	Late Fall