

**Data summary for George
(tested as WIX9772-1 line)
Lucia Gutierrez, March 10st, 2021**

Wisconsin oat George (tested as line WIX9772-1) has a pedigree of WIX8650-1/WIX8177-1. The final cross was made in the spring greenhouse at Madison in 2004. It has been tested in the Wisconsin State Trials since 2016 where two locations are used to evaluate forage advanced lines with released varieties. George (WIX9772-1) has performed well in all the trials.

George (WIX9772-1) is a high forage yielding oat line with high forage quality. Forage yield and quality was consistently in the top 10% of our trial (Tables 1-5). George (WIX9772-1) yielded 3272 lb per acre on three-year averages in Arlington, WI, and 1964 lb per acre in Madison, WI. On the same period George (WIX9772-1) had a relative forage quality (RFQ) values of 123 in Arlington and 140 in Madison. Test weight is average, with mean of 32 pounds per bushel. Additionally, the grain yield of the variety is high with an average of 114 bushels per acre in Arlington and Madison.

George (WIX9772-1) has an intermediate to late flowering date with heading dates 4 days earlier than ForagePlus and 2 days later than Goliath. George (WIX92-1) is a tall variety, similar in height to Vista, being 4 inches taller than ForagePlus and 5 inches shorter than Goliath with an average plant height of 46 inches. George (WIX9772-1) is a variety with high levels of disease resistance to crown rust showing low crown rust infection levels in most trials. The kernel color is yellow.

George (WIX9772-1) is most similar to the previously existing cultivar ForagePlus with similar, forage yield, relative forage quality, protein content, and milk yield per ton of forage. However, George (WIX9772-1) is earlier in booting and heading date and has a higher grain yield which makes it more convenient for seed production.

**George (WIX9772-1)
Oat from UW-Madison**

Table 1. Number of days required to reach the booting stage (expressed in days since May 31st) of forage oat varieties George (WIX9772-1) and ForagePlus evaluated in two locations in three years in Wisconsin.

	Arlington		2018	Madison		Overall
	2019	3-Year		2019	3-Year	
ForagePlus	35.5 A	32.1 A	27.0 A	20.0 A	21.9 A	27.1 A
WIX9772-1	32.0 B	28.4 B	24.3 B	16.5 B	18.3 B	23.1 B
Trial mean	32.4	28.9	174.3	15.5	18.4	23.8
Trial Standard error	0.1	0.1	0.1	0.1	0.2	0.2
LSD	0.5	0.9	1.3	0.9	1.6	1.4

Different letters indicate significant differences between the varieties

Table 2. Number of days required to reach heading (expressed in days since May 31st) of forage oat varieties George (WIX9772-1) and ForagePlus evaluated in two locations in three years in Wisconsin.

	Arlington		2018	Madison		Overall
	2019	3-Year		2019	3-Year	
ForagePlus	41.3 A	41.4 A	30 A	35.7 A	33.3 A	36.1 A
WIX9772-1	37.3 B	37.1 B	26 B	31.1 B	31 B	32.1 B
Trial mean	37.2	38.5	23.9	183.4	28.7	32.7
Trial standard error	0.1	0.0	0.0	0.1	0.1	0.1
LSD	0.9	0.6	0.3	0.9	0.9	1.2

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Table 3. Biomass dry weight (g per sqm) performance of forage oat varieties George (WIX9772-1) and ForagePlus evaluated in two locations in three years in Wisconsin.

	Arlington				Madison				Overall
	2017	2018	2019	3-Year	2017	2018	2019	3-Year	
ForagePlus	403.9 A	396.9 A	353.8 A	389.1 A	317.3 A	156.5 A	223.9 A	230.7 A	307.7 A
WIX9772-1	295.3 B	418 A	395.9 A	366.8 A	259.0 B	165.4 A	249.4 A	220.2 A	296.6 A
Trial mean	382.9	413.9	336.2	362.4	284.6	175.5	209.9	235.1	285.9
Trial standard error	2.6	2.8	2.3	1.7	3.4	2.7	2.9	3.6	4.5
LSD	23.4	24.9	29.5	30.2	30.2	24.8	25.9	32.7	40.2

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Table 4. Relative Forage Quality (RFQ) of forage oat varieties George (WIX9772-1) and ForagePlus evaluated in two locations in three years in Wisconsin.

	Arlington				Madison				Overall
	2017	2018	2019	3-Year	2017	2018	2019	3-Year	
ForagePlus	128.1 B	119.6 A	103.2 A	116.8 A	123.6 A	143.7 A	162.5 A	143.3 A	130.2 A
WIX9772-1	140.5 A	118.1 A	112.2 A	123.5 A	112.4 A	148.0 A	162.4 A	139.8 A	131.7 A
Trial mean	129.5	113.3	112.9	118.6	128.8	130.6	161.8	136.8	130.2
Trial standard error	0.6	0.7	0.5	0.4	2.1	0.5	0.6	1.6	1.4
LSD	5.3	6.2	6.0	7.6	18.6	4.8	5.1	14.6	12.7

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Table 5. Protein content (in % of dry matter) performance of forage oat varieties George (WIX9772-1) and ForagePlus evaluated in two locations in three years in Wisconsin.

	Arlington				Madison				Overall
	2017	2018	2019	3-Year	2017	2018	2019	3-Year	
ForagePlus	11.1 A	12.0 A	9.6 A	10.8 A	10.8 A	11.7 A	9.1 A	10.3 A	10.5 A
WIX9772-1	11.2 A	12.1 A	10.1 A	11.1 A	10.4 A	10.7 B	8.4 A	-	10.6 A
Trial mean	11.0	12.1	10.7	11.4	10.9	11.1	9.6	10.4	11.5
Trial standard error	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1
LSD	0.6	0.4	0.5	1.0	0.9	0.8	0.4	1.0	1.0

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Table 6. Milk yield (as ton of milk per ton of forage) performance of forage oat varieties George (WIX9772-1) and ForagePlus evaluated in two locations in three years in Wisconsin.

	Arlington				Madison				Overall
	2017	2018	2019	3-Year	2017	2018	2019	3-Year	
ForagePlus	2909 B	2789 A	2535.3 A	2744.4 A	2788.9A	3166.3 A	3308.9 A	3074.4 A	2957.3 A
WIX9772-1	3147 A	2729.3A	2705.1 A	2843.9 A	2596.9 A	3214.3 A	3363.3 A	3049.4 A	2911.8 A
Trial mean	2880.8	2661.4	2695.6	2755.7	2758.2	2920.3	3360.1	2986.2	2720.9
Trial standard error	9.2	12.1	8.7	7.2	30.3	7.8	8.4	23.9	29.2
LSD	83.2	108.8	111.3	130.3	273.1	70.1	75.5	215.5	263.4

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