

Small Grain Quick Facts: Durum Wheat

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General Variety Descriptions: Descriptions are based on performance in multi-year/location yield trials that were grown using recommended conventional wheat farming practices. Actual variety performance may vary, depending on local growing conditions and farming methods. All varieties listed are PVP protected.

MT BLACKBEARD (MAES release 2022): A top yielding cultivar in dryland and irrigated environments. Hollow stemmed, taller plant height, black awned, high protein, good test weight, and later maturing. Excellent end-use qualities with a large individual seed weight, high gluten index, high yellow color semolina, and low cadmium uptake. MT Blackbeard is adapted to the dryland durum growing environments in Montana and parts of North Dakota.

MT Raska (MAES release 2022): High yielding, hollow stemmed, semi-dwarf plant height, excellent straw strength, low sawfly cutting, high protein, excellent test weight, and early maturing. Good end use qualities with average gluten strength and yellow semolina color, and high milling yield. MT Raska is adapted to the dryland durum growing environments in North Central and Northeast, MT.

MTD19011 (name pending, MAES release 2026): One of the top yielding cultivars in dryland environments. Hollow stemmed, tall plant height, good protein, good test weight, with average maturity date. Good end use qualities with a large individual seed weight, average gluten strength, good yellow color semolina, high milling yield, and low cadmium uptake. MT19011 is adapted to dryland durum growing environments in North Central and Northeast, MT.

MTD19241 (name pending, MAES release 2026): One of the top yielding cultivars in dryland environments. Solid stemmed with low sawfly cutting, tall plant height, high grain protein, good test weight, and average maturity date. Good end use quality with a smaller individual seed weight, good gluten index, excellent yellow semolina color, and low cadmium uptake. MT19241 is adapted to dryland durum growing environments in North Central and Northeast, MT.

Table 1. Agronomic Performance from Advanced State Durum Trials for Selected Varieties in Dryland and Irrigated Conditions (2022-2025, 31 location-years)

ID	Yield (bu/ac)	Test weight (lbs/bu)	Protein (%)	Plant Height (inch)	Heading date (Julian)	Heading Calendar Date
MTD19011	68.7	60.7	14.6	33.7	180.6	Jun 29 th
MTD19241	68.6	61.1	14.8	32.6	181.0	Jun 30 th
MT Blackbeard	68.4	61.3	14.6	36.5	182.5	Jul 1 st
ND Riveland	65.5	60.9	14.8	35.5	181.5	Jun 30 th
Lustre	65.0	60.2	14.7	33.9	181.6	Jun 30 th
MT Raska	64.3	61.9	14.7	26.2	178.0	Jun 27 th
Divide	64.3	61.0	14.7	34.4	181.2	Jun 30 th
Joppa	64.0	61.1	14.4	33.9	180.8	Jun 29 th
Alzada	63.1	60.2	14.4	28.0	178.0	Jun 27 th
Mean	65.5	60.9	14.6	32.8	180.6	
LSD (0.05)	2.3	0.2	0.2	0.6	0.4	

Table 2. Agronomic Performance from Advanced State Durum Trials for Selected Varieties in Dryland Conditions 2(022-2025, 22 location-years)

ID	Yield (bu/ac)	Test weight (lbs/bu)	Protein (%)	Plant Height (inch)	Heading date (Julian)	Heading Calendar Date
MTD19011	<u>54.1</u>	60.1	15.1	32.1	179.8	Jun 28 th
MTD19241	53.4	60.3	15.3	31.3	180.5	Jun 29 th
MT Blackbeard	53.1	60.6	15.2	<u>34.5</u>	<u>181.7</u>	Jun 30 th
Alzada	51.7	59.7	14.8	27.2	177.2	Jun 26 th
MT Raska	51.0	<u>61.4</u>	15.1	25.3	177.3	Jun 26 th
Divide	49.9	60.3	15.2	32.7	180.3	Jun 29 th
ND Riveland	49.7	60.0	<u>15.4</u>	33.6	180.9	Jun 29 th
Lustre	49.4	59.3	15.3	32.2	180.9	Jun 29 th
Joppa	47.5	60.3	15.0	32.2	180.2	Jun 29 th
Mean	51.0	60.2	15.1	31.2	173.6	
LSD (0.05)	2.0	0.3	0.2	0.7	0.5	

Table 3. Agronomic Performance from Advanced State Durum Trials for Selected Varieties in Dryland Trials from North Central and Northeastern, MT (2022-2025, 16 location-years)

ID	Yield (bu/ac)	Test weight (lbs/bu)	Protein (%)	Plant Height (inch)	Heading date (Julian)	Heading Calendar Date
MTD19011	<u>51.6</u>	60.3	15.1	31.4	173.6	Jun 22 nd
MTD19241	51.5	60.5	15.3	30.6	174.2	Jun 23 rd
MT Blackbeard	49.7	60.6	15.3	<u>33.5</u>	<u>175.2</u>	Jun 25 th
MT Raska	48.9	<u>61.7</u>	15.2	25.4	170.8	Jun 19 th
Alzada	48.9	60.0	14.8	27.2	170.6	Jun 19 th
Divide	47.7	60.5	15.2	32.0	174.1	Jun 23 rd
Lustre	47.5	59.5	15.3	31.4	174.6	Jun 23 rd
ND Riveland	45.8	60.1	<u>15.4</u>	32.7	174.9	Jun 23 rd
Joppa	44.7	60.5	15.0	31.3	174.1	Jun 23 rd
Mean	48.3	60.4	15.2	30.6	173.6	
LSD (0.05)	2.0	0.3	0.2	0.7	0.6	

Table 4. Seed Quality Traits of Selected Varieties Evaluated by USDA-ARS Hard Spring and Durum Wheat Quality Lab (2022-2024)

ID	Test weight (lbs/bu)	Large seeds (%)	Individual seed weight (mg)	Individual seed diameter (mm)	Grain protein (%)	Falling number (sec)
MTD19011	60.2	54.3	40.3	2.85	14.5	477.2
MTD19241	60.5	39.0	35.3	2.73	14.7	468
MT Blackbeard	60.7	66.4	41.2	2.93	14.5	482.7
MT Raska	61.6	52.2	36.4	2.82	14.9	454.8
WB8148	60.2	41.8	36.7	2.79	14.7	484.3
Alzada	59.7	66.7	41.5	2.99	14.4	516.1
ND Riveland	60.2	51.6	40.1	2.83	14.7	480.5
Divide	60.5	47.3	38.6	2.8	14.6	437.5
Joppa	60.6	41.1	38.8	2.76	14.4	438.4
Mountrail	59.9	34.7	38	2.76	14.7	441.5
Average	60.4	49.5	38.7	2.83	14.6	468.1
LSD (0.05)	0.7	6.4	1.7	0.06	0.5	26.6

Table 5. Semolina Quality Traits of Selected Varieties Evaluated by USDA-ARS Hard Spring and Durum Wheat Quality Lab (2022-2024)

ID	Semolina Yield (%)	Semolina Protein (%)	Semolina Ash (%)	Brightness	Yellowness	Gluten Index (0-100)
MTD19011	63.9	13.1	0.64	84.3	30.7	68.5
MTD19241	61.1	13.3	0.63	84.1	31.8	62.3
MT Blackbeard	63.6	13	0.68	84.4	30.6	93.2
MT Raska	64.3	13.4	0.64	84.3	28.8	75.9
WB8148	62.6	13.6	0.68	83.8	31.6	91.1
Alzada	63.9	13.2	0.71	83.9	31.3	93.7
ND Riveland	60.4	13.3	0.65	84.4	30.5	86
Divide	63.4	13.2	0.64	84.6	27.9	73.9
Joppa	63.1	13	0.65	84.6	30.8	82.8
Mountrail	63.4	13.6	0.67	84.7	26.4	17.5
Average	63.0	13.3	0.66	84.3	30.0	74.5
LSD (0.05)	0.6	0.5	0.03	0.2	0.5	8.6