

Forage Crops

Key to 2024 Yield and Quality Tables

Yields derived over 2 or more growing seasons are the best indicator of variety performance. Use single site year data with caution.

CV % = Coefficient of Variation. A measure of random variation in a trial. A low CV is desirable.

LSD = Least Significant Difference. Varieties must differ by the LSD to be considered significantly different from one another.

Sig Diff = Significant Difference. Indicates if a real difference exists between varieties at an individual site.

☞ Indicates a variety that is protected by Plant Breeder's Rights legislation that complies with UPOV 1978.

☞ Indicates a variety that is protected by, or has been applied for and is pending, Plant Breeder's Rights legislation that complies with UPOV 1991.

VUA Variety Use Agreement in effect.

Forage Variety Registration Changes

Amendments to the Seeds Act, Seeds Regulations are now in effect that streamline the variety registration process for forage varieties.

Forage crops are moved to Part III of Schedule III of the Seeds Regulations. Recommending Committees are no longer required for the registration of forage crop varieties, since the testing and merit requirements are removed. Registration still requires a standard application package to enable the CFIA to continue to protect health and safety, prevent fraud, and facilitate seed certification.

Manitoba Agriculture Variety Guide

FORAGE ADAPTATION & COMPARISON GUIDE

LEGUMES

Forage	Primary Use	Longevity	Winter Hardiness	Tolerance to:			Preferred Climate and Growing Conditions
				Drought	Flooding	Salinity	
Alfalfa	Hay & Pasture	Long	Good	Good	Low	Low to Moderate	Widely adapted to most Manitoba soils but will not tolerate areas that have periodic flooding.
Alsike Clover	Hay & Pasture	Short	Fair	Poor	Moderate	Low	Low-lying moist areas.
Birdsfoot Trefoil	Pasture	Long	Good	Moderate	High	Low to Moderate	Moist areas.
Cicer Milkvetch	Pasture	Long	Good	Moderate to High	Low	Moderate	Widely adapted but exhibits its habit best on more coarse textured soils.
Kura Clover	Pasture	Long	Good	Moderate	Moderate	Unknown	Tolerates low fertility and soil acidity, wet soils and some flooding.
Red Clover	Hay & Pasture	Short	Poor	Low	High	Low	Best suited to humid areas with moderate temperatures.
Sainfoin	Pasture	Long	Fair	High	Low	Low	Best on brown and dark brown soil areas. In very dry areas it yields poorly. Does well on thin gravelly soils.
Sweet Clover	Hay & Pasture	Short to Long	Good	Poor	Low to Moderate	Low	Prefers well drained silt loams to clay soils that have a consistent supply of moisture.
White Clover	Hay & Pasture	2-years	Fair	Moderate to High	Low	Moderate	Especially productive on fertile soils.

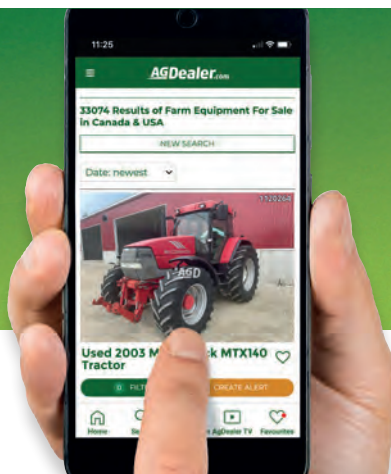
TAME GRASSES

Altai Wild Ryegrass	Pasture	Long	Excellent	High	Low	Very High	Loam & clay soils best, but grows on a wide range of soils. Doesn't appear adapted to Manitoba conditions.
Annual (Italian) Ryegrass	Hay & Pasture	Short annual 1 year	Poor	Low	High	Low	Produces best on soils of medium to high fertility and grows best with adequate moisture.
Creeping Foxtail	Pasture	Long	Good	Low	High	Moderate	Adapted to areas where reed canarygrass grows well and soil moisture is continually available.
Creeping Red Fescue	Pasture Lawn	Long	Excellent	Moderate	Moderate	Low	Does best in high rainfall areas. Will grow in wide range of soil types.
Crested Wheatgrass	Hay & Pasture	Long	Excellent	Moderate to High	Low	Low to Moderate	Adapted to dry areas with good soils but will also establish on lighter soils.
Dahurian Wild Ryegrass	Pasture	Short	Good	Moderate	Low	High	Adapted to all soil zones.
Intermediate Wheatgrass	Hay & Pasture	Short to Medium	Good	Moderate to High	Low	Low	Well drained soils with ample moisture.

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Forage	Use	Longevity	Winter Hardiness	Tolerance to:			Preferred Climate and Growing Conditions
				Drought	Flooding	Salinity	
Kentucky Blue Grass	Pasture Lawn	Long	Excellent	Moderate	Moderate	Low	Prefers cool and humid. Grows on most soils.
Meadow Bromegrass	Hay & Pasture	Long	Good	High	Low	Low	Grows well on most soils where Smooth Brome does well.
Meadow Fescue	Pasture	Short - Medium	Good	Moderate	High	Low to Moderate	Prefers soil with good moisture and good drainage.
Meadow Foxtail	Pasture	Long	Good	Low	High	Low	Prefers cool moist conditions. High water table.
Orchard grass	Hay & Pasture	Short	Fair	Moderate	Low to Moderate	Low	Prefers moist conditions. Sandy soils are too dry for good growth unless in high rainfall area.
Perennial Ryegrass	Hay & Pasture	Short	Poor	Low	Low	Low	Needs high precipitation and fertility for high yields. Adapted to a wide range of soils.
Pubescent Wheatgrass	Hay & Pasture	Medium	Good	Moderate to High	Low	Low to Moderate	Widely adaptable with respect to precipitation, temperature, elevation, and low fertility soil.
Russian Wild Ryegrass	Pasture	Long	Excellent	Very High	Low	Very High	Can be grown on a wide range of soils. Most productive on fertile loams.
Smooth Bromegrass	Hay & Pasture	Long	Excellent	Moderate	Moderate	Low to Moderate	Well adapted to all soils in Manitoba.
Tall Fescue	Pasture	Medium	Good	Moderate	Moderate to High	High	Variety of soils. Does well on wet, poorly drained soils.
Tall Wheatgrass	Hay & Pasture	Medium	Excellent	Low	High	High	Adapted to saline and imperfectly drained alkali soils.
Timothy	Hay & Pasture	Medium	Good	Low	High	Low	Cool moist areas with good drainage.

NATIVE GRASSES

Awned Wheatgrass	Hay & Pasture	Medium	Good	Moderate	Moderate	Low to Moderate	Prefers moderately sandy to loam soils with good moisture and drainage. Found in moist flats, meadows and low growing bushes.
Big Bluestem	Pasture	Long	Good	Low to Moderate	Moderate	Low to Moderate	Grows under a wide range of conditions.
Green Needlegrass	Pasture	Long	Good	High	Moderate	Low to Moderate	Performs best on medium to heavy textured soils. Prefers moist sites with good drainage.
Little Bluestem	Pasture	Long	Good	High	Low	Moderate	Sandy, gravelly soils with shallow water table or where snow accumulates. Common on prairie upland.
Northern Wheatgrass	Pasture	Long	Good	Very High	Moderate	Moderate	Prefers medium to coarse textured soil.
Prairie Cord Grass	Hay & Riperian	Long	Good	Low to Moderate	High	Low to Moderate	Wide range of soils (sand to clay) - does best on seasonally dry areas, marsh edges, wet meadows, drainageways.
Reed Canarygrass	Hay & Pasture	Long	Good	Moderate	Very High	Low	Moist cool climate. Poorly drained areas subject to temporary flooding.
Side Oats Grama	Hay & Pasture	Long	Good	Moderate to High	Low	Low to Moderate	Adapted to a range of soils. Performs best on fine textured soils. Found on rocky ridges, open grasslands and hillsides.
Slender Wheatgrass	Hay & Pasture	Medium	Good	Moderate	Moderate	High	Widely adapted - prefers sandy loams.
Switch grass	Pasture	Medium	Fair	Low	Moderate	Moderate	It has potential for good summer pasture when enough moisture. Grows best on loam and sandy loams.
Western Wheatgrass	Hay & Pasture	Long	Excellent	High	Moderate to High	High	Widely adapted - prefers heavy moderately alkaline soil. Tolerates periodic flooding.

Source: Manitoba Agriculture — Forage Adaptation & Comparison Guide

ANNUAL FORAGE

The MCVET Annual Forage trials evaluated different crop types and varieties for forage yield and quality for livestock feed.

Annual crops are more moisture efficient than perennial forages such as alfalfa or timothy.

Both warm (sorghum, millet) and cool season crops were included in the trials. Warm season crops are more drought and heat tolerant than cool season crops.

Varieties were selected for their higher grain yield, taller growth, lodging resistance, smooth awns and better disease resistance.

Quality is highly dependent on plant maturity at harvest. For optimum quality: harvest barley at early-mid dough stage; oats & triticale at milk-early dough stage; peas at full pod formation; millet and sorghum at early heading.

Variety Descriptions

Variety descriptions for wheat, barley and oat crop types can be found in the Cereal Crops section of SEED Manitoba 2024 page 20.

Field pea variety information can be found on page 80.

TRITICALE

Variety	Days to Maturity (+/- Banjo)	Resistance Level:				
		Lodging	Stem Rust	Leaf Rust	Bunt	Fusarium
AC Alta	-1	G	R	R	R	—
AC Certa	-3	G	R	R	R	I
Banjo	100 days	G	R	R	R	—
Pronghorn	-4	G	R	R	R	I
SANDRO	-3	G	R	R	R	—
T301	-4	VG	R	R	R	I

	Seed Color	Seed Size (seeds/lb)	Days to Head	Days to Maturity
FOXTAIL MILLET				
Yellow (Golden German)	Yellow	160-170,000	75-90	85-95
Red (Siberian)	Red	169-170,000	55-70	70-90
PROSO MILLET				
Green (Crown)	Gray/Green	70-90,000	50-60	85-90
Red (Cerise)	Red	70-90,000	50-60	85
Yellow (AC Prairie Gold)	Yellow	70-90,000	50-60	75
SORGHUM				
Forage Sorghum	—	—	—	85-90
Sorghum Sudangrass	—	—	—	80-85

Seed source for millet & sorghum Imperial Seed

Seed source for triticale Field Crop Development Centre

2024 Feed Quality Comparisons

Crop	Variety	RFV (%) ²			
		Arborg	Carberry	Melita	Average
Oats	CDC Arborg ¹	97	124	109	
Oats	CDC Endure ¹	115	95	112	
Oats	CDC Westgate ¹	88	113	85	
Oats	ORe BOOST ¹	87	99	88	
Oats	ORe Ruminator ¹	95	114	87	
	Oat Average	99	109	98	102
Barley	AB Advantage ¹	127	133	121	
Barley	AB Tofield ¹	109	121	136	
Barley	CDC Renegade ¹	138	109	139	
	Barley Average	125	121	132	126
Peas/Barley	CDC Lewochko ¹ - AB Advantage ¹	128	111	141	
Peas/Oats	DL Delicious ¹ - CDC Arborg ¹	121	103	117	
	Pea/Cereal Average	125	107	129	120
Spring Triticale	T301	113	116	102	110
Proso Millet	Crown ⁵	90	101	93	
Foxtail Millet	Siberian ⁵	98	93	74	
	Millet Average	94	97	84	92
Sorghum sudangrass	common ⁵	87	93	99	
Forage Sorghum	common ⁵	87	96	99	
	Sorghum Average	87	95	99	94

1 Quality tests were done by wet chemistry and were a composite of the three plots/site.

2 Relative feed value (RFV)

3 Crude protein (CP)

4 Total Digestive Nutrients (TDN)

5 Due to lack of availability, common seed was used.

Yield Comparisons

The 2024 annual forage trial combined all crops and varieties in one trial with three replicates per site.

Quality is highly dependent on plant maturity at harvest. Barley was harvested in mid dough stage; oats & triticale at milk- early dough stage; peas at early pod wrinkle; millet and sorghum at heading.

Crop	Variety	2024 Dry Matter Yield (tonnes/acre) ¹			Manitoba Average
		Arborg	Carberry	Melita	
Oats	CDC Arborg ²	4.2	5.6	5.9	5.26
Oats	CDC Endure ²	3.3	6.4	6.3	5.32
Oats	CDC Westgate ²	4.0	6.4	6.3	5.46
Oats	ORe BOOST ²	4.0	5.5	6.4	5.30
Oats	ORe Ruminator ²	4.4	5.5	6.5	5.46
Oat Average					5.41
Barley	AB Advantage ²	4.1	6.9	5.5	5.48
Barley	AB Tofield ²	4.2	8.2	5.9	6.11
Barley	CDC Renegade ²	4.1	9.5	5.5	6.37
Barley Average					5.99
Peas/Barley	CDC Lewochko ² - AB Advantage ²	4.4	6.6	5.6	5.53
Peas/Oats	DL Delicious ² - CDC Arborg ²	4.7	6.2	6.5	5.80
Pea/cereal Average					5.67
Spring Triticale	T301	4.3	4.3	5.8	4.80
Proso Millet	Crown ²	2.3	6.4	4.7	4.47
Foxtail Millet	Siberian ²	2.4	1.3	5.2	2.97
Millet Average					3.72
Sorghum sudangrass	common ²	7.6	4.8	12.1	8.17
Forage Sorghum	common ²	7.6	—	13.3	10.45
Sorghum Average					9.31
Grand Mean (tonnes/acre)		4.4	6.0	6.8	
CV %		10.1	14.7	10.4	
LSD (0.05)		0.7	1.5	1.2	
Sig Diff		Yes	Yes	Yes	
Seeding Date		May 13 & Jun 8	May 23	May 22	
Harvest Date		Aug 1 & 27*	Aug. 8	Aug. 6, 19 & Sep. 4*	

1 Dry matter yields measured under a one-cut system.

2 Due to lack of availability, common seed was used.

* Sorghum and millet were harvested later due to their later maturity

Forage Quality ¹							
CP (%) ³				TDN (%) ⁴			
Arborg	Carberry	Melita	Average	Arborg	Carberry	Melita	Average
6.3	5.9	9.8		58.0	66.8	62.7	
7.8	6.1	8.8		63.0	56.7	63.8	
7.0	6.5	9.0		56.9	63.8	55.4	
6.5	6.0	8.8		54.7	61.0	56.6	
7.9	5.9	9.1		58.7	64.0	56.5	
7.1	6.1	9.1	7.4	58.3	62.5	59.0	59.9
7.5	7.4	8.8		66.5	69.2	67.2	
6.3	6.5	9.8		61.9	65.5	71.4	
6.3	5.4	7.9		67.8	62.7	69.3	
6.7	6.4	8.8	7.3	65.4	65.8	69.3	66.8
12.0	8.6	13.2		64.2	62.1	67.2	
9.9	6.9	13.0		61.6	61.8	63.4	
11.0	7.8	13.1	10.6	62.9	62.0	65.3	63.4
9.3	7.1	11.0	9.1	62.4	62.9	60.9	62.1
10.6	7.6	8.6		61.3	63.0	59.0	
14.0	9.1	8.3		62.0	60.2	52.8	
12.3	8.4	8.5	9.7	61.7	61.6	55.9	59.7
7.4	7.7	6.3		57.3	61.7	60.9	
8.7	10.9	5.4		56.3	62.3	60.9	
8.1	9.3	5.9	7.7	56.8	62.0	60.9	59.9

Distributor Contacts for Listed Varieties in Seed Manitoba 2025

Look up variety within the correct CROP KIND to find the company, then look for company phone number in the box at bottom of section.

FORAGE

See cereal and pulse distributor contacts and growers list for forage varieties of oat, barley, and pea.
See forage growers list for perennial forage types.

Alfalfa

Dakota	DSV Northstar LTD.
Escalade BR	DSV Northstar LTD.
Instinct	DLF CANADA INC.
Performer	DSV Northstar LTD.
Rugged ST	DSV Northstar LTD.
Sidewinder	DSV Northstar LTD.
Vision	DLF CANADA INC.

Birdsfoot Trefoil

Bull	DLF CANADA INC.
Lotanova	DLF CANADA INC.

Bromegrass

AAC Maximus	DSV Northstar LTD.
AC Knowles	DSV Northstar LTD.

Fescue

Pradel	DSV Northstar LTD.
Preval	DSV Northstar LTD.
Yukon	DSV Northstar LTD.

Sainfoin

AAC Mountainview	DSV Northstar LTD.
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Timothy

Arlaka	DLF CANADA INC.
Aturo	DSV Northstar LTD.
Comer	DLF CANADA INC.

FORAGE

Comtal	DLF CANADA INC.
Express	DSV Northstar LTD.
Ovation	DSV Northstar LTD.
Radde	DSV Northstar LTD.
Richmond	DLF CANADA INC.
Sahara DT	DLF CANADA INC.
Summergraze	DLF CANADA INC.
Treasure	DSV Northstar LTD.
Valor	DLF CANADA INC.
Wheatgrass	
AAC Renegade	DSV Northstar LTD.

DISTRIBUTOR CONTACTS – FORAGE SEED	PHONE NUMBER
Alliance Seed	1-877-270-2890
Brett Young.....	1-800-665-5015
DL Seeds.....	204-331-3611
DLF Canada (Pickseed).....	1-800-263-7425
Dyck Seeds	1-888-204-1000
FP Genetics.....	1-877-791-1045
Imperial Seed	1-204-786-8457
Interlake Forage Seeds	1-800-990-1390
DSV Northstar Ltd.	1-800-430-5955
Nutrien/Proven Seed.....	1-800-661-3334
SeCan.....	1-800-665-7333

Growers List



ALFALFA

S=Select; F=Foundation; R=Registered; C=Certified; ☼ Indicates Plant Breeders Rights (PBR) protection under UPOV 1978 and Ⓢ protected or pending under UPOV 1991.

MULTI5301		
Fisher Branch; Interlake Forage Seeds Ltd	204-372-6920	C
POWER 4.2		
Broad Valley; Woloshyn Forage Seed Farms.....	204-372-6029	C

BIRDSFOOT TREFOIL

BRUCE		
Broad Valley; Grzenda, Laura Annelle Woloshyn	204-880-9747	F
Fisher Branch; Interlake Forage Seeds Ltd	204-372-6920	C

BIRDSFOOT TREFOIL

S=Select; F=Foundation; R=Registered; C=Certified; ☼ Indicates Plant Breeders Rights (PBR) protection under UPOV 1978 and Ⓢ protected or pending under UPOV 1991.

LEO		
Beausejour; Murash, Darrin.....	204-265-3303	C
Broad Valley; Woloshyn, Stuart John.....	204-372-6369	C
Fisher Branch; Shepell, Christopher & Murray	204-372-6844	C
Winnipeg; DLF Canada Inc.	204-633-0088	C

MEADOW FESCUE

PREVAL		
Neepawa; Tibbett Enterprises Ltd.	204-841-3060	F