

Forage Barleys for Manitoba

What are Forage Barleys?

Forage barleys are cultivars specifically developed as forage for cattle. While any type of barley can be used as forage in feeding cattle, forage barleys deliver a higher dry matter yield than conventional feed barleys. They also provide more energy per tonne of whole plant dry matter, making them a higher quality and more cost-effective source of fodder than conventional cultivars.



History

Barley is an ancient crop that has been under cultivation for over 15,000 years. It originated in Eurasia and since it proved to be the most widely adapted cereal crop in the temperate regions of the world, it was grown from far eastern Siberia to Scotland. It was first used to make a type of flat bread or roasted and eaten like peanuts. Its ease of production made it a choice feed for the earliest forms of domestic cattle.

Barley was introduced from Europe to Canada in the 1700s for the express purpose of making beer. Though brewing still remains a major

reason for growing barley in Canada, about 75 per cent of the nation's six million acres (2.4 million hectares) of barley production is used to feed livestock. About one-third of that production, or two million acres (800,000 hectares), is dedicated to forage barley production. Forage barley acreage continues to increase as more cattle producers come to realize that barley is one of the most nutritional and cost-effective feed stocks for cattle.

The forage barley cultivars described below have been chosen for their demonstrated adaptability to Manitoba conditions. Although not all originated in Manitoba, they have been repeatedly evaluated in Prairie-wide co-operative registration trials and the Manitoba Crop Variety Evaluation Team (MCMVET) crop adaptation trials.

Forage Barley Cultivars

AC Rosser: Developed at Agriculture and Agri-Food Canada's (AAFC) Brandon Research Centre, this cultivar was originally released as a feed-type barley. However, producer experience has shown it to be perfectly acceptable for use as forage barley. AC Rosser is very well adapted to Manitoba and a consistent performer with a proven track record.



AC Ranger: Developed at AAFC's Brandon Research Centre, this forage cultivar combines high forage and grain yield with high forage quality making it ideal for

the mixed cattle producer, rancher or feedlot owner. AC Ranger is adapted to all areas of Manitoba and is widely accepted owing to its versatility.

CDC Cowboy: Developed by the University of Saskatchewan's Crop Development Centre in Saskatoon, this is the first two-row forage barley for Canada. CDC Cowboy is best suited to drier conditions and extensive management. Grain yield and quality are outstanding, as is forage yield. On the down side, Cowboy may lodge severely under intensive management or high fertility regimes.

Dillon: Dillon is a hooded barley cultivar developed by Western Plant Breeders, Bozeman, Montana, U.S.A. It is primarily intended for greenfeed production, but can also be ensiled. Lack of awns is a plus when used as forage, but grain yield and quality are inferior to all other forage barleys. It is best suited to areas where disease pressure is not likely to be severe, as it is highly susceptible to foliar disease.

Cultivar	Row Type	Uses: (G)rain (S)ilage Green(F)eed	Growing Zone (see map)	Tolerances (drought, flooding, salinity, alkalinity, acidity)	Forage Quality	General Foliar Disease Resistance
AC Rosser	6	G,S	Zone 1, 2, 3; most soils and moisture conditions.	Good tolerance to drought; Moderate tolerance to soil acidity/alkalosis; Poor tolerance to flooding.	Good	Good
AC Ranger	6	G,S,F	Zone 1, 2, 3; most soils and moisture conditions	Good tolerance to drought; Moderate tolerance to soil acidity/alkalosis; Poor tolerance to flooding.	Excellent	Excellent
CDC Cowboy	2 rough awns	G,S	Drier parts of zone 1	Especially good in drought. Very poor in flooding.	Good	Good
Dillon	6 hooded	S,F	Northern half of zone 1	Good in drought; poor in salinity or flooding.	Good	Very Poor
Vivar	6	G,S,F	Zone 1, 2, 3; most soils and moisture conditions	Good tolerance to most adverse field conditions.	Good	Good
Robust	6	G,S	Zone 1, 2, 3; most soils and moisture conditions	Moderate tolerance to adverse field conditions.	Good	Good
Excel	6	G,S	Zone 1, 2, 3; most soils and moisture conditions	Moderate tolerance to adverse field conditions.	Good	Good
Virden	6	S,F	Zone 1, 2, 3; most soils and moisture conditions	Good tolerance to most adverse field conditions.	Fair	Good

* Barley grown in zone 4 has a high incidence of leaf diseases

Vivar: A short-statured cultivar, Vivar was developed by Alberta Agriculture, Food and Rural Development in Lacombe, Alberta. Vivar has very strong straw that can tolerate intensive management and high fertility soils. It has a very high grain and forage yield potential, but does not perform well under drought conditions.

Robust: A malting barley developed at the University of Minnesota, Robust can be used for forage as well. Robust makes good silage but is not as well suited for greenfeed because of rough awns. It is well adapted to Manitoba conditions.

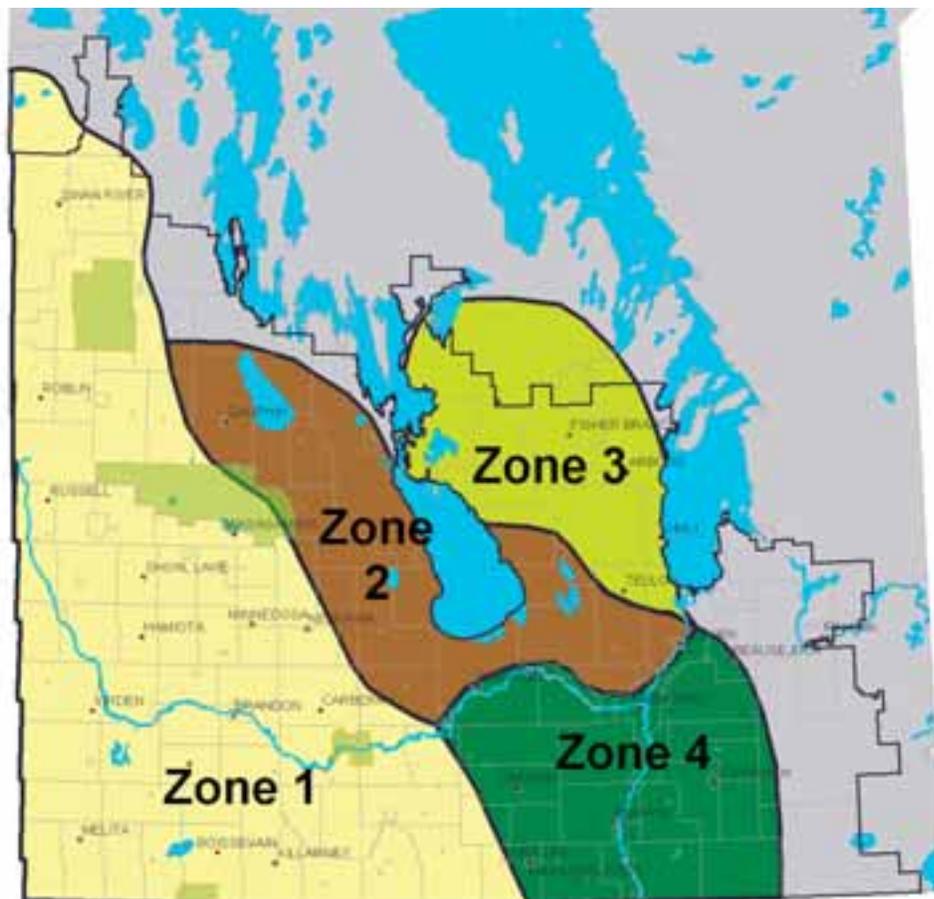
Excel: Similar to Robust and also developed at the University of Minnesota, Excel can also be used for feed grain and silage. It has somewhat stronger straw than Robust and generally higher grain yield. It is also well adapted to Manitoba conditions.

Viriden: Developed at AAFC's Brandon Research Station, this is the oldest forage cultivar in commercial production. Although not a good choice for grain production, Viriden consistently delivers some of the highest forage yields for barley in Manitoba. It is well suited for silage and green-feed production under extensive, lower-fertility practices. Since forage quality is relatively low, an appropriate use for Viriden is as maintenance rations for cattle.



ar	Lodging Resistance	Seeding Date	Seeding Rate	Fertility Requirements	Forage Maturity	Forage Yield (% AC Rosser)	Grain Yield (% AC Rosser)
	Good	May	2 to 2.5 bu/ac	80-100 lbs/ac N and 50-60 lbs/ac P	Medium	100	100
	Very Good	May	1.5 to 2 bu/ac	80-100 lbs/ac N and 50-60 lbs/ac P	Medium/Late	115	110
	Fair	May	2 to 2.5 bu/ac	70-90 lbs/ac N and 50-60 lbs/ac P	Medium	110	105
	Good	May	2 to 2.5 bu/ac	70-90 lbs/ac N and 50-60 lbs/ac P	Very Late	110	70
	Excellent	May	Up to 3 bu/ac	100-110 lbs/ac N and 50-60 lbs/ac P	Late	110	120
	Fair	May	2 to 2.5 bu/ac	70-90 lbs/ac N and 50-60 lbs/ac P	Early	100	90
	Good	May	2 to 2.5 bu/ac	70-90 lbs/ac N and 50-60 lbs/ac P	Early	105	100
	Fair	May	2 to 2.5 bu/ac	70-90 lbs/ac N and 50-60 lbs/ac P	Late	120	80

Manitoba Barley Growing Zones



For more information on forage barley production contact your local Manitoba Agriculture, Food and Rural Initiatives office or visit us online at manitoba.ca/agriculture/production.

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For more information please visit <http://www.agr.gc.ca/env/greencover-verdir> or phone 1 866 844-5620.