

A1133 (Revised)

Dry Bean Production Guide

NDSU EXTENSION
SERVICE

Fargo, North Dakota

June 2013

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Published in cooperation
with and support from the
Northharvest Bean Growers Association

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7M-12-03; 4.5M-6-13

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Introduction

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Known as a “nutritional powerhouse,” dry bean (*Phaseolus vulgaris* L.) is a human food high in protein, phosphorus, zinc, iron, vitamin B1 and fiber, among many other nutritional traits. Dry bean is an imported staple in many areas of the world, especially Central and South America, and Africa. It is the most important legume worldwide for human consumption. Different cultures have developed a multitude of end products made with dry bean.

Dry bean is a major cash crop in the Northharvest Bean Growers Association growing region of North Dakota and Minnesota and has been grown on a large scale since the 1970s. Today, the region is the largest producer of dry bean in the U.S. Most of the production is in the eastern half of North Dakota, with the major production area in the northeastern quadrant.

Pinto, navy and black bean, respectively, are the most important market classes in North Dakota, accounting for approximately 90 percent of the total area and production. However, kidney, navy, pink and pinto bean are the most important classes in Minnesota. In addition, great northern and small red bean are grown on limited acres.

Tables 1 through 4 provide information about selected bean cultivars. We recommend growing dry bean under contract with a processing firm. These firms are located throughout central and eastern North Dakota, northwestern and south-central Minnesota, and in Montana.

Dry bean is a food crop that requires the producers to provide special cultural management and attention. Proper management is essential from cultivar selection, field selection and planting through harvest, plus marketing for maximum profitability.

Table 1. Selected pinto bean cultivar descriptions.

Cultivar	Origin	RM ¹	Plant Type ²	Bean Growth Type ³
AC Island	Ag. Can.	ME	V	III
Baja	Provita	E	V	III
Buster	Seminis	ME	UV	III
Croissant	CSU	L	V	IIb
Durango	Provita	E	V	II
Galeena	Provita	L	V	IIb
GTS-900	GenTec	L	UV	III
GTS-903	GenTec	L	UV	IIb
GTS-904	GenTec	L	UV	IIb
GTS-907	GenTec	M	UV	IIb
Island	Ag. Can.	E	V	III
Kimberly	U. Idaho	M	V	III
La Paz	Provita	L	USV	II
Lariat	NDSU	L	USV	II
Long's Peak	CSU	L	USV	IIb
Mariah	Seminis	ME	UV	IIb
Maverick	NDSU	ME	V	III
Max	Idaho Seed Bean	E	V	III
Medicine Hat	Seminis	ME	UV	II
Montrose	CSU	E	V	III
ND-307	NDSU	M	UV	IIb
Odyssey	Idaho Seed Bean	ME	V	IIb
Othello	USDA-Prosser	E	V	III
Quincy	WSU/USDA	M	V	III
Santa Fe	Mich. AES	M	USV	II
Sequoia	Idaho Seed Bean	ML	USV	II
Shoshone	U. Idaho	ML	V	III
Sinaloa	Provita	ML	USV	II
Sonora	Provita	E	V	II
Stampede	NDSU	M	USV	II
Windbreaker	Seminis	M	UV	IIb

¹ RM = Relative Maturity; E = Early; ME = Medium Early; M = Medium; ML = Medium Late; L = Late.

² V = Vine; UV = Upright Vine; USV = Upright Short Vine; B = Bush.

³ I = Bush – Determinate; II = Upright – Indeterminate; IIb = Upright-Indeterminate, but prostrated/decumbent in some environments; III = Prostrated/decumbent – Indeterminate.

Table 2. Selected navy bean cultivar descriptions.

Cultivar	Origin	RM¹	Plant Type²	Bean Growth Type³
Avalanche	NDSU	ME	USV	IIb
Ensign	ADM/Seedwest	M	USV	III
GTS-544	GenTec	M	USV	IIb
GTS-564	GenTec	M	USV	IIb
HMS Medalist	Provita	M	UV	II
HY 4181	Hyland	E	USV	IIb
Indi	ADM/Seedwest	M	USV	II
Lightning	U. of Guelph	M	UV	II
Mayflower	Mich. AES	ML	USV	IIb
Merlin	Provita	M	USV	II
Navigator	ADM/Seedwest	M	USV	II
Norstar	NDSU	ME	USV	III
Rexeter	U. of Guelph	–	USV	II
ROG 331	ADM/Seedwest	M	UV	III
Seabiskit	ADM	ME	USV	–
Seahawk	Mich. AES	ML	USV	III
T9903	Hyland	ME	USV	II
T9905	Hyland	ME	USV	II
Viscount	GenTec	L	USV	–
Vista	Ag. Can.	ML	USV	II

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Table 3. Selected small red, black and pink bean cultivar descriptions.

Cultivar	Origin	RM ¹	Plant Type ²	Bean Growth Type ³
Small red				
Cajun	ADM/Seedwest	E	UV	–
Carman	Idaho Seed Bean	E	V	–
Merlot	Mich. AES/USDA	ME	USV	II
Rio Rojo	NDSU	ME	USV	IIb
Ryder	ADM/Seedwest	M	USV	III
UI-259	U. Idaho	M	V	III
Black				
Black Jack	GenTec	ML	USV	–
Black Magic	GenTec	L	USV	–
Black Velvet	Seminis	–	USV	–
Blackhawk	Mich. AES	L	USV	–
Carman Black	AAFC	E	USV	II
CDC Jet	U. Sask.	ME	USV	II
CDC Super Jet	U. Sask.	ME	USV	II
Condor	Mich. AES	ML	USV	II
Domino	Mich. AES	L	USV	II
Eclipse	NDSU	M	USV	II
GTS-1103	GenTec	M	USV	II
Jaguar	Mich. AES	M	USV	II
Loreto	Provita	M	USV	II
Shania	ADM/Seedwest	–	UV	IIb
T-39	U. Calif.	M	USV	III
Zorro	Mich. AES	L	USV	II

Cultivar	Origin	RM¹	Plant Type²	Bean Growth Type³
Pink				
Alberta Pink	U. Alberta	E	V	III
Flamingo	Idaho Seed Bean	E	V	III
Floyd	ADM/Seedwest	ML	V	III
ROG 922	ADM/Seedwest	M	V	III
Rosalee	U. Sask.	E	V	III
Sedona	Mich. AES	M	USV	II
UI-537	U. Idaho	E	V	III
Viva	USDA-Prosser	M	V	III

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Table 4. Selected light red, dark red and white kidney, great northern, cranberry and otebo bean cultivar descriptions.

Cultivar	Origin	RM¹	Plant Type²	Bean Growth Type³
Light red kidney				
Blush	WSU/USDA	ML	B	I
California Early (CELRK)	U. Calif.	E	B	I
Chinook 2000	Mich. AES	M	B	I
Clouseau	Seminis	M	B	I
Foxfire	ADM/Seedwest	ME	B	I
OAC Inferno	U. of Guelph	–	–	I
OAC Lyrik	U. of Guelph	ME	B	I
Pink Panther	Seminis	M	B	I
Sacramento	Agri-Sales	E	B	I
Dark red kidney				
Cabernet	ADM/Seedwest	ML	B	I
Drake	Seminis	M	B	I
GTS-104	GenTec	M	B	I
GTS-106	GenTec	M	B	I
Majesty	Ag. Can.	ML	USV	II
Montcalm	Mich. AES	ML	B	I
Redhawk	Mich. AES	M	B	I
Red Rover	Seminis	ME	B	I
White kidney				
Beluga	Mich. AES	M	B	I
Lassen	Agri-Sales	E	B	I
Silvercloud	WSU/USDA	E	B	I

Cultivar	Origin	RM ¹	Plant Type ²	Bean Growth Type ³
Great northern				
Beryl	ADM/Seedwest	M	V	III
Coyne	U. Nebraska	ML	V	IIb
Gemini	Provita	E	–	III
Hungerford	U. Idaho	M	V	III
Matterhorn	Mich. AES	ME	USV	II
Orion	Provita	E	V	III
Sawtooth	U. Idaho	L	V	III
UI-465	U. Idaho	M	V	III
Cranberry				
Bellagio	Mich. AES	ML	V	III
Otebo				
Fuji	Mich. AES	E	B	I
Hime	SK Foods	ME	B	I

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