

MEMORANDUM

TO: Prairie Recommending Committee for Pulse and Special Crops
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DATE: February 15, 2026
SUBJECT: Request for Support for Registration of Great Northern Bean 6390CBB-3-2

Breeding line 6390CBB-3-2 was tested in the SSNR Trials in 2024 and 2025. It is derived from a cross between CDC Great Northern and Pinto breeding lines selected repeatedly for seed colour, size and agronomic characters. The last cross was made in winter 2018.

It has similar yield to the check AAC Whitehorse and the same days to maturity. The plants are upright, indeterminate and have slightly higher pod clearance than the check. Seeds are larger than the check. It is segregating for anthracnose resistance which will be cleaned up during breeder seed development. It had similar white mould scores to the check. The cooking scores and canning results were similar to the check with the exception of higher % hard seed after a room temperature soak (21C, 16 h) but, like the check, those were not apparent after a hot soak.

Strengths

- Better lodging score than the check, AAC Whitehorse
- Slightly better pod clearance than the check

Neutral Traits

- Similar yield to the check over two years
- Larger seed than the check
- Similar maturity to the check
- Most cooking and canning traits equal to the check

Weaknesses

- Initial hard seed score was high but this changed with a 93C soak.



Performance data

Table 1: Two year agronomic performance data for the 2024-2025 Short Season Narrow Row Dry Bean Co-operative Trial "A" in western Canada

Line	Market Class	[2]		[4]	% of MC-C	[2]			[5]	[2]			[4]	[2]			[3]
		Yield(kg/ha)				Days to flower	Days to mature			Pod Clearance (%)							
		2024	2025	Mean			2024	2025	Mean	2024	2025	Mean	2024	2025	Mean		
AAC Whitehorse	Great Northern	2352	3232	2939	100	52	56	55	93	102	99	76	78	77			
6390CBB-2-2	Great Northern	2520	3421	3121	106	54	58	57	103	104	104	74	78	77			
6390CBB-3-2	Great Northern	2031	3299	2876	98	52	56	55	96	101	99	77	80	79			

Bold indicates Market class check variety

MC-C = market class check

[] Indicates number of sites

Line	Market Class	[2]			[3]	[2]			[3]	[2]			[3]
		Plant Height (cm)			Seed Weight (g/1000)	Lodging (1-3)							
		2024	2025	Mean		2024	2025	Mean	2024	2025	Mean		
AAC Whitehorse	Great Northern	60	49	53	363	322	338	1.8	1.6	1.7			
6390CBB-2-2	Great Northern	59	51	54	383	332	352	1.9	1.8	1.8			
6390CBB-3-2	Great Northern	53	48	50	389	405	399	1.6	1.3	1.4			

Bold indicates Market class check variety

[] Indicates number of sites

Table 2: Mean Anthracnose Severity of Saskatchewan Short Season Narrow Row Co-operative Trial "A" in western Canada

Entry	Cultivar	Class	Race 73								Race105			
			2024				2025				2024		2025	
			Test #1		Test #2		Test #1		Test #2		Test #1		Test #1	
			Est.	Rank	Est.	Rank	Est.	Rank	Est.	Rank	Est.	Rank	Est.	Rank
2	AAC Whitehorse	GN	8.7	bd	9.0	bcd	8.4	acd	9.0	acd	8.6	c	8.7	
7	6390CBB-3-2	GN	5.3	bd	4.5	bad	0.3	bc	0.0	bc	3.6	a	2.8	
	Envoy	Navy	0.8	ac	0.0	a	0.0	bc	0.0	bc	7.2	c	8.9	
	AC Pintoba	Pinto	8.2	bd	9.0	bcd	8.8	acd	9.0	acd	8.3	c	8.5	
	Othello	Pinto	5.1	bd	3.8	a	3.4	abd	4.4	abd	2.3	abd	6.3	
	Dresden	Navy	0.0	ac	0.0	a	0.0	bc	0.0	bc	7.5	c	8.8	
	Num DF		15		15		13		13		15		13	
	Den DF		32		32		26		28		32		28	
	F Value		14.46		16.28		52.26		87.42		8.11		16.9	
	Pr>F		<.0001		<.0001		<.0001		<.0001		<.0001		<.0001	
	LSD(0.05)		2.6		2.7		1.6		1.3		2.9		2.0	

Table 3. White Mold data for entries in the 2025 Short Season Narrow Row Dry Bean Co-operative Trial "A" in western Canada

*White Mold Data						
Name	Type	Years in Trial	2024 SSNRA Trial		2025 SSNRA Trial	
			Incidence (%)	Index (1-4)	Incidence (%)	Index (1-4)
AAC Whitehorse	Great Northern	MC-C	100	3.0	99	3.3
6390CBB-2-2	Great Northern	2	94	2.7	89	2.6
6390CBB-3-2	Great Northern	2	96	2.7	97	3.0
I9365-31		Disease check	84	1.9	81	2.1
Othello	Pinto	Disease check	92	2.1	100	3.1
Pintium	Pinto	Disease check	88	2.1	99	3.4
CV			3.2	9.1	12.5	12.3
LSD(0.05)			4.5	0.4	17.0	0.5

Severity index (1-4): 1 = healthy, 4 = dead

Table 4. Cooking and Canning Quality Evaluation of Select Dry Bean Lines in the 2025 Short Season Narrow Row Dry Bean Cooperative Trial in western Canada

Genotype	Canning quality													Cooking quality				
	Hydration Co-efficient			Drained Wt. (%)	Matting (1 to 5)	Appearance (1 to 5)	Seed Integrity (1 to 5)	Dry color			Canned color			Texture (kg force)	16 h at 21°C		20 min at 93°C	
	HCS (16 h, 21°C)	HCBS (3 min, 93°C)						L*	a*	b*	L*	a*	b*		Hard seed (%)	Partially hydrated seed (%)	Hard seed (%)	Partially hydrated seed (%)
Great Northern																		
AAC Whitehorse	2.0	2.2	64.0	3	4	5	66.6	2.1	9.8	52.5	7.6	17.4	26.6	9.8	8.5	0.0	0.5	
6390CBB-3-2	1.8	2.0	65.3	4	4	4	65.0	2.2	9.0	51.9	7.7	17.4	27.3	27.0	7.8	0.0	1.0	
LSD (0.05)	0.3	0.2	23.1	2	1	1	2.7	0.4	0.7	4.4	1.9	2.0	14.2	33.9	13.3	0.2	15.6	
CV	6.6	4.6	15.8	37.5	23.5	13.2	2.1	8.8	2.0	4.3	8.6	4.9	15.5	57.7	47.6	447.2	196.3	