

Technical Bulletin

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CDC Spectrum Yellow Field Pea



Progress Through Research
Le progrès grâce à la recherche

Description:

CDC Spectrum is a high yielding yellow cotyledon, semi-leafless field pea with improved yield potential, good lodging tolerance and powdery mildew resistance.

Parentage: CDC Meadow/Polstead//CDC Bronco

Strengths:

- 11% higher yield compared to the mean of the yellow checks CDC Golden and Agassiz
- Better lodging resistance than the checks
- Powdery mildew resistant

Neutral Traits:

- Medium maturity (2 days later than Agassiz, 4 days later than CDC Golden)
- Medium vine length (similar to the checks)

- Medium seed size (larger than the checks)
- Round seed shape (similar to the checks)
- Low seed coat breakage percent
- Moderate protein concentration (similar to Agassiz, less than CDC Golden, higher than CDC Amarillo)
- Fair Mycosphaerella Blight resistance; similar to the checks
- Fair Fusarium wilt resistance; similar to the checks CDC Golden and Agassiz

Breeder:

Funded by:



UNIVERSITY OF SASKATCHEWAN

Crop Development Centre
COLLEGE OF AGRICULTURE AND BIORESOURCES
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Table 1: Performance of CDC Spectrum compared to the checks (Pea Co-op Test B, 2012-2013)

Variety	Yield (kg/ha)	Yield (% mean of checks)	Days to maturity	Vine length (cm)	Lodging (pre-harvest)	Seed wt (mg)	Shape	Seed coat breakage (%)	Crude protein (%)
CDC Golden (check)	4743	95	96	85	5.0	206	2.5	1	24.7
Agassiz (check)	5196	105	98	87	4.4	219	2.5	5	23.8
CDC Spectrum	5501	111	100	90	3.2	232	2.5	2	23.9
CV	8.3								
LSD 05	266		1.1	3.7	0.4	6.3	0.1	4.2	0.6
# of locations	21		19	16	21	21	21	7	11

Lodging score: 1=upright; 9=completely lodged

Shape: 1=round; 5=cubic

Table 2: Disease resistance data of CDC Spectrum compared to the checks (Pea Co-op Test B, 2012-2013)

Variety	Myco (MB)	Myco (SK)	AUDPC-SK	Fusarium wilt (%)	Powdery mildew
CDC Golden (check)	6.5	5.0	15.7	33	0
Agassiz (check)	5.8	4.5	13.8	26	0
CDC Spectrum	5.8	4.2	13.2	25	0
LSD 05	0.5	2.5	1.1	15.2	0
# locations	2	2	2	2	2

Myco (MB)= Mycosphaerella blight assessed at Morden, MB (1=no disease, 9=completely blighted)

Myco (SK)= Mycosphaerella blight assessed at Saskatoon, SK.

AUDPC= Mycosphaerella blight area under the disease progress curve

Powdery mildew (0=no disease, 9=completely mildew)

For more information, call 1-800-665-7333 or visit www.secan.com

2024 Seed Manitoba

Variety	Yield % of Check	Site Years Tested	Relative Maturity	Relative Vine Length	Seed Size (TKW)	Resistance to:						
						Lodging	Powdery Mildew	MB ¹	Fusarium Wilt ²	Green Seed Coat ³	Seed Coat Breakage	Seed Coat Dimpling ⁴
CDC Amarillo (C)	98	50	Long	M	230	VG	VG	F	G	G	F	F
CDC Hickie	100	14	Mid	M	230	VG	VG	F	G	G	G	G
CDC Lewochko	100	42	Long	L	230	VG	VG	F	F	G	G	G
CDC Spectrum	93	42	Long	L	240	VG	VG	F	F	G	G	G

1. Mycosphaerella Blight
2. Varieties which show good disease tolerance to one strain of Fusarium wilt may be susceptible to other strains
3. Green seed coats: G= 0-10%, F= 11-25%
4. Seed coat dimpling rating: VG= 0-5%, G= 6-20%, F= 21-50%

2024 Saskatchewan Seed Guide

Variety	Years Tested	Yield (% of CDC Amarillo)			Protein	Relative Maturity	Lodging ¹	Vine Length (cm)	Resistance to:					Seed Weight (g/1000)	
		1, 2 & South 3	North 3 & 4	Irrigation					MB ²	Powdery Mildew	Fusarium Wilt	Seed Coat Breakage	Seed Coat Dimpling ³		Greenness ⁴
CDC Amarillo (C)	14	100	100	100	23.0	M	3.5	85	4.5	R	MR	F	F	G	230
CDC Boundless	4	109	100	---	+0.8	M	3.0	90	4.5	R	MR	G	G	G	230
CDC Canary	10	99	100	---	+0.1	E	3.5	85	4.5	R	I	G	F	F	230
CDC Hickie	7	107	106	---	+0.5	M	3.5	85	4.5	R	MR	G	G	G	230
CDC Lewochko	10	104	104	---	+0.9	M	3.5	90	4.5	R	I	G	G	G	230
CDC Spectrum	12	105	103	94	+0.7	M	3.5	85	4.5	R	I	G	G	F	240

1. Lodging: 1= completely upright, 9= completely lodged
2. Mycosphaerella Blight score (1-9) 1= no disease, 9= completely blighted
3. Seed coat dimpling: VG= 0-5%, G= 6-20%, F= 21-50%
4. Green seed coats: G= 0-15%, F= 16-40%

2024 Alberta Seed Guide

Variety	Overall Yield	Overall Station Years of Testing	Brown - Irrigated		Brown		Black-short		Black-mid		Grey Wooded		Agronomic Characteristics:					Disease Tolerance ⁵		Tolerance to:		
			Yield (%)	Site Years	Yield (%)	Site Years	Yield (%)	Site Years	Yield (%)	Site Years	Yield (%)	Site Years	Protein (%)	Maturity Rating ¹	Vine Length (cm)	Seed Size (TKW)	Standability ²	MB ³	Fusarium Wilt	Seed Coat Breakage	Seed Coat Dimpling ⁴	Green Seed Coat ⁶
CDC Amarillo (C)	100	58	100	3	100	7	100	14	100	23	100	11	23.0	M	85	230	2.4	4.5	MR	F	F	G
CDC Canary	103	58	XX	3	95	7	104	14	105	23	103	11	+0.1	E	58	230	2.6	4.5	I	G	F	F
CDC Hickie	104	16	XX	1	XX	1	XX	4	107	7	XX	3	+0.5	M	85	230	2.6	4.5	MR	G	G	G
CDC Lewochko	103	58	XX	3	98	7	104	14	104	23	103	11	+0.9	M	90	230	1.6	4.5	I	G	G	G
CDC Spectrum	103	58	XX	3	94	7	105	14	104	23	103	11	+0.7	M	85	240	2.1	4.5	I	G	G	F

1. Maturity: E= Early, M= Medium, L= Late
2. Standability: 1= completely upright 9= completely lodging
3. Mycosphaerella Blight, 1= no disease, 9= completely blighted
4. Seed Coat Dimpling: VG= 0-5%, G= 6-20%, F= 21-50%
5. Disease Tolerance: I = intermediate, MR = moderately resistance, R = resistant
6. Green Seed Coat: G = 0-10%, F = 11-25%

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