

Technical Bulletin

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Canada's Seed Partner

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

- 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

Neutral Traits:

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

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

2022 Seed Manitoba

Variety	Yield (% of CDC Amarillo)	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)	100	44	Long	M	230	VG	VG	F	G	G	F	F
CDC Athabasca	96	28	Long	L	300	VG	VG	F	G	G	F	F
CDC Canary	99	28	Early	L	230	VG	VG	F	F	F	G	F
CDC Lewochko	103	28	Mid	L	230	VG	VG	F	F	G	G	G
CDC Spectrum	96	28	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%

2022 Saskatchewan Seed Guide

Variety	Yield (% of CDC Amarillo)				Vine Length (cm)	Resistance to:									
	1, 2 & North 3		Irrigation	Protein		Relative Maturity	Lodging ¹	MB ²	Powdery Mildew	Fusarium Wilt	Seed Coat Breakage	Seed Coat Dimpling ³	Greenness ⁴	Seed Weight (g/1000)	
	South 3	South 3 & 4													
CDC Amarillo (C)	13	100	100	100	23.0	M	3.5	85	4.5	R	MR	F	F	G	230
CDC Athabasca	7	93	97	---	+0.5	M	3.0	85	4.5	R	I	F	F	G	300
CDC Canary	9	99	101	---	+0.1	E	3.5	85	4.5	R	I	G	F	F	230
CDC Lewochko	8	102	103	---	+0.9	M	3.5	90	4.5	R	I	G	G	G	230
CDC Spectrum	10	104	102	---	+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%

2022 Alberta Seed Guide

Variety	Overall Station Yield Testing	Area 1			Area 2			Area 3			Area 4			Area 5			Resistance to:						
		Yield (%)	Site Years	Yield (%)	Site Years	Yield (%)	Site Years	Yield (%)	Site Years	Yield (%)	Site Years	Yield (%)	Site Years	Yield (%)	Site Years	Vine Length (cm)	Seed Size (TKW)	Lodging ¹	MB ²	Fusarium Wilt	Seed Coat Breakage	Seed Coat Dimpling ³	Green Seed Coat ⁴
		Overall Yield	Overall Yield	Overall Yield	Overall Yield	Overall Yield	Overall Yield	Overall Yield	Overall Yield	Overall Yield	Overall Yield	Overall Yield	Overall Yield	Overall Yield	Overall Yield	Maturity Rating							
CDC Amarillo (C)	100	134	100	21	100	40	100	21	100	21	100	30	100	22	M	81	227	2.4	I	MR	F	F	G
CDC Athabasca	95	42	93	8	94	13	99	6	96	7	92	8	80	M	80	284	2	I	I	F	F	G	
CDC Canary	103	66	102	11	105	20	100	11	102	11	105	13	E	E	80	241	2.6	I	I	G	F	G	
CDC Lewochko	102	52	104	8	100	16	103	9	103	8	105	11	M	M	89	233	1.6	I	I	G	G	G	
CDC Spectrum	104	66	102	11	102	20	105	11	101	11	107	13	M	M	78	242	2.1	I	I	G	G	G	F

1. Lodging: 1= completely upright 9= completely lodged
2. Mycosphaerella Blight
3. Seed Coat Dimpling: VG= 0-5%, G= 6-20%, F= 21-50%
4. Green Seed Coat: G= 0-10%, F= 11-25%

Resistance: P= Poor, F= Fair, G= good, VG= Very Good R= Resistant

Maturity: E= Early, M= Medium, L= Late

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