

Technical Bulletin

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Canada's Seed Partner

CDC Spectrum Yellow Field Pea

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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

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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	Myc (MB)	Myc (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

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

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

AUDPC= Mycosphaerella blight area under the disease progress curve

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

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

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2020 Seed Manitoba

Variety	Yield (% of CDC Meadow)	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 Meadow (C)	100	79	E	M	220	G	VG	F	F	G	G	G
CDC Athabasca	99	13	M	L	300	VG	VG	F	G	G	F	F
CDC Canary	100	13	E	L	230	VG	VG	F	F	F	G	F
CDC Lewochko	106	13	M	L	230	VG	VG	F	F	G	G	G
CDC Spectrum	100	13	M	L	240	VG	G	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%

2020 SaskSeed 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)	11	100	100	100	23.0	M	3.5	85	4.5	R	MR	F	F	G	230
CDC Canary	7	98	98	---	-0.1	E	3.5	85	4.5	R	I	G	F	F	230
CDC Lewochko	6	103	103	---	+0.7	M	3.5	90	4.5	R	I	G	G	G	230
CDC Athabasca	7	93	97	---	+0.5	M	3.0	85	4.5	R	I	F	F	G	300
CDC Spectrum	8	103	101	---	+0.5	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%

2020 Alberta Seed Guide

Variety	Overall Yield	Overall Station Years of Testing	Area 1		Area 2		Area 3		Area 4		Area 5		Maturity Rating	Vine Length (cm)	Seed Size (TKW)	Lodging ¹	Resistance to:					
			Yield (%)	Site Years	Yield (%)	Site Years	Yield (%)	Site Years	Yield (%)	Site Years	Yield (%)	Site Years					MB ²	Fusarium Wilt	Powdery Mildew	Seed Coat Breakage	Seed Coat Dimpling ³	Green Seed Coat ⁴
CDC Amarillo (C)	100	106	100	18	100	30	100	17	100	25	100	16	M	81	227	2.4	F	G	R	F	F	G
CDC Canary	104	29	106	5	104	8	98	5	101	6	101	5	E	80	241	2.6	F	F	R	G	F	G
CDC Lewochko	106	15	102	2	98	4	104	3	100	3	105	3	M	89	233	1.6	F	F	R	G	G	G
CDC Athabasca	95-	29	92	5	94	8	99	5	95	6	91-	5	M	82	284	2	F	F	R	F	F	G
CDC Spectrum	106+	29	103	5	99	8	106+	5	100	6	109+	5	M	78	242	2.1	F	F	R	G	G	F

1. Lodging: 1= completely upright 9= completely lodging

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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