

Technical Bulletin

Genes that fit *your* farm.



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)
- Moderate cooking time (slightly slower than the checks)
- 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 (%)	Cooking time (min)
CDC Golden (check)	4743	95	96	85	5.0	206	2.5	1	24.7	10.8
Agassiz (check)	5196	105	98	87	4.4	219	2.5	5	23.8	10.1
CDC Spectrum	5501	111	100	90	3.2	232	2.5	2	23.9	14.3
CV	8.3									
LSD 05	266		1.1	3.7	0.4	6.3	0.1	4.2	0.6	2.9
# locations	21		19	16	21	21	21	7	11	2

Lodging score: 1=upright; 9=completely lodged

Shape: 1=round; 5=cubic

Cooking=Mattson cooking time (min);

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

Variety	Mycosphaerella blight (MB)	Mycosphaerella blight (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

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

Table 3: Agronomic performance for CDC Spectrum from 2016 Co-op and Regional trials in Saskatchewan – adapted from Varieties of Grain Crops 2017

Variety	Year of release	Years Tested	Yield % Amarillo			Maturity	Lodging (1-9)	Vine Length (cm)	Resistance to:					Seed Weight (g/1000)	
			1, 2 & South 3*	North 3 & 4*	Irrigation				Mycosphaerella Blight	Powdery Mildew	Fusarium Wilt	Seed Coat Breakage	Seed Coat Dimpling		Greenness
CDC Amarillo (check)	2012	8	100	100	100	Medium	3.5	85	4.5	R	MR	Fair	Fair	Good	230
CDC Meadow	2006	8	90	87	90	Early	4	85	5	R	I	Good	Good	Good	220
CDC Prosper	2008	8	84	79	73	Early	4.5	80	5	R	MR	Good	Fair	Good	150
CDC Treasure	2009	8	88	87	93	Early	4	80	5	R	I	Fair	Fair	Good	210
CDC Hornet	2010	8	91	84	91	Medium	4	85	4.5	R	I	Fair	Good	Good	220
CDC Saffron	2011	8	97	91	91	Early	4	80	4.5	R	I	Good	Fair	Good	250
CDC Inca	2015	5	106	100	ID	Medium	4	85	4.5	R	I	Good	Good	Fair	230
CDC Spectrum	2016	5	104	103	ID	Medium	3.5	85	4.5	R	I	ID	Good	Fair	240
CDC Athabasca	2016	5	94	102	ID	Medium	3	85	4.5	R	I	ID	Fair	Good	300
CDC Canary	2017	4	98	98	ID	Early	4	90	4.5	R	I	ID	Good	ID	240

*Area 1: Brown soil zone; Area 2: Dark brown; Area 3: Black; Area 4: Dark gray
 Lodging score: 1=upright; 9=completely lodged
 Mycosphaerella blight score (1-9) where 1=no disease, 9=completely blighted
 Seed coat dimpling: VG = 0-5%; G = 6-20%; F = 21-50%
 Greenness: Good = 0-15%; Fair = 16-40%

ID: Insufficient Data

Figure 1: Scans of seed samples from the 2013 Pea Co-op Test B at Saskatoon of CDC Spectrum and check varieties Agassiz and CDC Golden:



CDC Spectrum

Agassiz

CDC Golden

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