

Technical Bulletin

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SeCan

Canada's Seed Partner

CDC Spruce Green Field Pea



Progress Through Research
Le progrès grâce à la recherche

Description:

CDC Spruce is a high yielding green cotyledon, semi-leafless field pea with good lodging tolerance and powdery mildew resistance.

Parentage: Hugo/Mendel

Strengths:

- Improved yield (109%) compared to the mean of the green check varieties (CDC Striker and Cooper)
- Medium vine length; longer than the checks
- Powdery mildew resistance

Neutral:

- Good lodging resistance; similar to checks
- Medium maturity (same as Cooper, 2 days later than CDC Striker)
- Medium seed size (similar to CDC Striker, smaller than Cooper)

- Round seed shape (similar to CDC Striker, rounder than Cooper)
- Low seed coat breakage percent (less than Cooper, more than CDC Striker)
- Moderate protein concentration (same as Cooper, less than CDC Striker)
- Fair Mycosphaerella blight resistance; similar to the checks
- Fair Fusarium wilt resistance; similar to the checks

Breeder:

Funded by:



UNIVERSITY OF SASKATCHEWAN

Crop Development Centre
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Table 1: Performance of CDC Spruce compared to the checks (Pea Co-op Test A, 2012-2013)

Variety	Yield (kg/ha)	Yield (% mean of checks)	Days to maturity	Vine length (cm)	Lodging (pre-harvest)	Seed weight (mg)	Shape	Seed coat breakage (%)	Crude protein (%)
CDC Striker (check)	4627	99	97	78	3.6	241	2.5	1	25.1
Cooper (check)	4715	101	99	81	3.5	263	2.9	6	23.7
CDC Spruce	5111	109	99	90	3.7	244	2.6	4	23.7
CV	8.5								
LSD 05	259		0.74	3.2	0.45	6.4	0.11	1.9	0.6
# locations	21		19	17	21	21	21	7	11

Lodging score: 1=upright; 9=completely lodged; Shape: 1=round; 5=cubic;

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 Striker (check)	4.4	5.8	13.4	29	7
Cooper (check)	3.5	6.5	10.7	43	0
CDC Spruce	4.4	5.7	13.7	31	0
LSD 05	1.6	1.6	3.1	18.9	.4
# 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 mildewed)

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

January 2021

2021 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	Bleaching
CDC Amarillo (C)	100	35	Long	M	230	VG	VG	F	G	G	F	F	N/A
CDC Forest	101	19	Long	L	230	G	VG	F	F	N/A	G	G	G
CDC Greenwater	97	34	Mid	M	220	G	VG	F	G	N/a	VG	G	G
CDC Spruce	98	19	Long	L	240	G	VG	F	F	N/A	F	F	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%

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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	Bleaching	Seed Coat Dimpling ³	Greenness ⁴	
CDC Amarillo (C)	12	100	100	100	23.0	M	3.5	85	4.5	R	MR	F	N/A	F	G	230
CDC Forest	8	100	101	---	0.0	M	4.0	85	4.5	\$	I	G	G	G	N/A	230
CDC Greenwater	11	99	93	89	-0.9	M	3.5	90	4.0	R	MR	F	G	F	N/A	230
CDC Spruce	10	95	98	---	+0.3	M	4.0	85	4.5	R	I	F	G	F	N/A	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%

2021 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	MB ²	Fusarium Wilt	Bleaching	Seed Coat Breakage ³	Seed Coat Dimpling ⁴
			Yield (%)	Site Years	Yield (%)	Site Years	Yield (%)	Site Years	Yield (%)	Site Years	Yield (%)	Site Years									
CDC Limerick (C)	100	131	100	22	100	41	100	19	100	35	100	14	M	78	211	3.0	F	F	G	VG	G
CDC Forest	107	55	113	10	109	15	102	7	105	12	105	11	M	81	236	2.2	F	F	G	G	G
CDC Spruce	106	55	101	10	108	15	109	7	103	12	107	11	M	81	254	2.3	F	F	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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