

Technical Bulletin

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Canada's Seed Partner

CDC Athabasca Yellow Field Pea



Progress Through Research
Le progrès grâce à la recherche

Description:

CDC Athabasca is a high yielding yellow cotyledon, semi-leafless field pea with large seed size, medium vine length, good lodging tolerance and powdery mildew resistance.

Parentage: Ceb4152/1658-7

Strengths:

- 7% higher yield compared to the mean of the yellow checks CDC Golden and Agassiz
- Jumbo seed size, larger than the checks
- Better lodging resistance than the checks
- Medium vine length, longer than the checks
- Powdery mildew resistant

Neutral Traits:

- Medium maturity, 1 day later than Agassiz, 3 days later than CDC Golden

- Round seed shape, slightly blockier than the checks
- Low seed coat breakage percent, same as Agassiz, slightly greater than CDC Golden
- Moderate protein concentration, similar to the checks
- 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
COLLEGE OF AGRICULTURE AND BIORESOURCES
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Table 1: Performance of CDC Athabasca 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 wt (mg)	Shape	Seed coat breakage (%)	Crude protein (%)
CDC Golden (check)	4604	96	96	83	4.4	206	2.5	1	25.0
Agassiz (check)	5023	104	98	86	4.0	223	2.6	6	23.9
CDC Athabasca	5104	107	99	93	3.0	291	2.8	6	24.4
CV	8.5								
LSD 05	259		0.74	3.2	0.45	6.4	0.11	1.6	0.6
# locations	21		19	17	21	21	21	7	11

Lodging score: 1=upright; 9=completely lodged

Shape: 1=round; 5=cubic

Cooking=Mattson cooking time (min);

Table 2: Disease resistance data of CDC Athabasca 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)	4.9	6.4	15.3	49	0
Agassiz (check)	4.7	6.0	14.5	32	0
CDC Athabasca	5.4	5.8	15.7	43	0
LSD 05	1.6	1.6	3.1	18.9	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 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 Spectrum	100	13	M	L	240	VG	G	F	F	G	G	G
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 Athabasca	99	13	M	L	300	VG	VG	F	G	G	F	F

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 Spectrum	8	103	101	---	+0.5	M	3.5	85	4.5	R	I	G	G	F	240
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

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 Spectrum	106+	29	103	5	99	8	106+	5	100	6	109+	5	M	78	242	2.1	F	F	R	G	G	F
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

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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