Technical Bulletin

Genes that fit your farm.



CDC Canary Yellow Field Pea



Description:

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

Parentage: Ceb4152/1658-7

Strengths:

- 10% higher yield compared to the mean of the yellow pea checks CDC Golden and Agassiz
- Good lodging resistance, similar to Agassiz and better than CDC Golden
- Medium vine length, longer than the checks
- Powdery mildew resistant

Neutral Traits:

- Medium maturity, same as CDC Golden and 1 day earlier than Agassiz
- Medium seed size, slightly larger than CDC Golden and Agassiz

- Round seed shape, slightly blockier than the checks
- Low seed coat breakage percent, similar to the checks
- Moderate protein concentration, same as Agassiz and less than CDC Golden
- 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



Table 1: Performance of CDC Canary compared to the checks (Pea Co-op Test B, 2013-2014)

Variety	Yield (kg/ha)	Yield (% mean of checks)	Days to Vine length (cm)		Lodging (pre- harvest)	Seed wt (mg)	Shape	Seed coat breakage (%)	Crude protein (%)
CDC Golden (check)	4472	97	97	87	4.7	210	2.5	1.5	23.7
Agassiz (check)	4797	104	98	90	4.2	223	2.6	4.6	22.7
CDC Canary	5103	110	97	95	3.9	232	3.0	2.3	22.7
CV	8.3								
LSD 05	293		.8	3.8	.5	7.7	.2	2.6	.7
# locations	22		20	16	23	19	20	4	9

Lodging score: 1=upright; 9=completely lodged

Shape: 1=round; 5=cubic

Cooking=Mattson cooking time (min);

Table 2: Disease resistance data of CDC Canary compared to the checks (Pea Co-op Test B, 2013-2014)

Variety	Myco (MB)	Myco (SK)	AUDPC- SK	Fusarium wilt (%)	Powdery mildew
CDC Golden (check)	4.8	4.2	17.3	25	0
Agassiz (check)	5.0	4.4	16.2	21	0
CDC Canary	4.9	4.4	17.5	27	0
LSD 05	1.2	1.1	1.7	18.4	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

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	Yield					Resistance to:									
Variativ	(% of CDC Amarillo)	Site Years Tested	Relative Maturity	Relative	Seed Size (TKW)	Ladaina	Powdery	MB ¹	Fusarium Wilt ²	Green Seed	Seed Coat	Seed Coat			
Variety	Amariio)	resteu	Maturity	Vine Length	(INVV)	Lodging	Mildew	INID.	VVIIT-	Coat ³	Breakage	Dimpling⁴			
CDC Amarillo (C)	100	57	Long	M	230	VG	VG	F	G	G	F	F			
CDC Athabasca	97	41	Long	L	300	VG	VG	F	G	G	F	F			
CDC Hickie	103	6	Mid	M	230	VG	VG	F	G	F	G	G			
CDC Lewochko	103	41	Mid	L	230	VG	VG	F	F	G	G	G			
CDC Spectrum	97	41	Long	L	240	VG	VG	F	F	G	G	G			
CDC Canary	98	41	Early	L	230	VG	VG	F	F	F	G	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%

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		Yield (%	of CDC	Amarillo)					Resistance to:							
Variety	Years Tested	1, 2 & South 3	North 3 & 4	Irrigation	Protein	Relative Maturity	Lodging ¹	Vine Length (cm)	MB ²	Powdery Mildew	Fusarium Wilt	Seed Coat Breakage	Seed Coat Dimpling ³	Greeness ⁴	Seed Weight (g/1000)	
										_		_	_			
CDC Amarillo (C)	14	100	100	100	23.0	M	3.5	85	4.5	R	MR	F	F	G	230	
CDC Boundless	4	109	100		+0.8	M	3.0	90	4.5	R	MR	G	O	G	230	
CDC Hickie	7	107	106		+0.5	M	3.5	85	4.5	R	MR	G	G	G	230	
CDC Lewochko	10	104	104		+0.9	M	3.5	90	4.5	R	I	G	G	G	230	
CDC Spectrum	12	105	103	94	+0.7	M	3.5	85	4.5	R	I	G	G	F	240	
CDC Canary	10	99	100		+0.1	E	3.5	85	4.5	R	ĺ	G	F	F	230	

- 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%

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			Brown - Irrigated		Brown		Black-short		Black-mid		Grey Wooded		Agronomic Characteristics:				Disease T	olerance ⁵	Tolerance to:			
		Overall Station Years of		Site	Yield	Site	Yield	Site	Yield	Site	Yield			Maturity	Vine Length		Stand-				Seed Coat	Green Seed
Variety	Yield	Testing	(%)	Years	(%)	Years	(%)	Years	(%)	Years	(%)	Years	(%)	Rating ¹	(cm)	(TKW)	ability ²	MB ³	Wilt	Breakage	Dimpling ⁴	Coat ⁶
CDC Amarillo (C)	100	58	100	3	100	7	100	14	100	23	100	11	23.0	М	85		2.4	4.5	MR	F	F	G
CDC Hickie	104	16	XX	1	XX	1	XX	4	107	7	XX	3	+0.5	М	85	230	2.6	4.5	MR	G	G	G
CDC Lewochko	103	58	XX	3	98	7	104	14	104	23	103	11	+0.9	М	90	230	1.6	4.5	I	G	G	G
CDC Spectrum	103	58	XX	3	94	7	105	14	104	23	103	11	+0.7	М	85	240	2.1	4.5	I	G	G	F
CDC Canary	103	58	XX	3	95	7	104	14	105	23	103	11	+0.1	E	58	230	2.6	4.5	I	G	F	F

- 1. Maturity: E= Early, M= Medium, L= Late
- 2. Standability: 1= completely upright 9= completely lodging
- 3. Mycosphaerella Blight, 1= no disease, 9= completely blighted
- 4. Seed Coat Dimpling: VG= 0-5%, G= 6-20%, F= 21-50%
- 5. Disease Tolerance: I = intermediate, MR = moderately resistance, R = resistant
- 6. Green Seed Coat: G= 0-10%, F= 11-25%