

CDC INCA Yellow Pea

CDC Inca is a yellow cotyledon, semi-leafless field pea variety. It was registered and released to Select Seed Growers in Saskatchewan, Alberta and Manitoba in 2015.

CDC Inca was tested for two years in the Field Pea Co-op Registration Test “B” in 2011 - 2012. In these trials, the yield was 114% of the yellow pea check varieties CDC Golden and Agassiz (Table 1). In 5 years of testing in the Coop and Regional trials in Saskatchewan (Table 3), CDC Inca yielded 6% higher than CDC Amarillo (new check variety) in the southern regions and 100% in the north. In the 2016 Manitoba Field Pea Variety Trials, CDC Inca was the highest yielding yellow pea. In the 2016 Alberta Performance Trials, CDC Inca yielded 104% of CDC Amarillo. CDC Inca has PBR protection.

Strengths:

- Improved yield compared to the yellow check varieties
- Good lodging resistance; better than the checks CDC Golden and Agassiz
- Medium vine length
- Powdery mildew resistance

Neutral:

- Medium maturity (same as Agassiz, 2 days later than CDC Golden)
- Medium seed weight (similar to Agassiz and CDC Amarillo, slightly greater than CDC Golden)
- Round seed shape (similar to the checks)
- Low seed coat breakage percent (similar to CDC Golden, slightly less than Agassiz)
- Moderate protein concentration (slightly lower than the checks CDC Golden and Agassiz)
- Moderate cooking time; (slightly slower than the checks CDC Golden and Agassiz)

- Fair mycosphaerella blight resistance; similar to the checks; lower AUDPC than CDC Golden
- Fair Fusarium wilt resistance; similar to the checks CDC Golden and Agassiz



Breeder seed sales to Select Seed Growers:

Year sold	# Growers SK	# Growers MB	# Growers AB
2015	49	0	9
2016	5	1	0
2017	3	2	0

Table 1: Performance of CDC Inca compared to the checks (Pea Co-op Test B, 2011-2012)

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)	4024	94	97	80	4.6	199	2.4	1	24.5	11.1
Agassiz (check)	4528	106	99	85	4.4	212	2.6	4	23.8	10.6
CDC Inca	4895	114	99	90	3.6	213	2.5	2	22.8	19.7
CV	8.1									
LSD 05	239		0.9	2.9	0.5	5.4	0.1	1.3	0.6	12.0
# locations	19		17	18	18	18	18	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 Inca compared to the checks (Pea Co-op Test B, 2011-2012)

Variety	Myco (MB)	Myco (SK)	AUDPC-SK	Fusarium wilt (%)	Powdery mildew
CDC Golden (check)	5.0	5.4	13.9	15.0	0
Agassiz (check)	4.0	5.5	12.0	10.4	0
CDC Inca	3.9	5.2	10.7	12.0	0
LSD 05	1.6	1.6	1.7	12.5	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)

Table 3: Agronomic performance for CDC Inca 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