

YELLOW PEA: CDC ATHABASCA

Breeder: Dr. Tom Warkentin

Crop Development Centre
University of Saskatchewan
Saskatoon, SK.

Year released to Select Seed Growers: 2016

Sub-licensed outside of SK: SeCan

International Distribution Rights: Canterra Seeds Ltd./Meridian Seeds

Plant Breeders Rights: PBR'91

CDC Athabasca is a large seeded yellow pea variety. In two years of testing in the field pea co-op registration trials in 2012–2013, CDC Athabasca yielded 107% of the check varieties CDC Golden and Agassiz (Table 2). The agronomic performance over seven years of testing in the co-op and regional trials in Saskatchewan is shown in Table 1. CDC Athabasca has PBR'91 protection.

Strengths:

- Jumbo seed size
- Very good lodging resistance
- Medium vine length
- Powdery mildew resistance

Neutral:

- Moderate yield relative to CDC Amarillo
- Medium maturity
- Round seed shape
- Moderate protein concentration (better than CDC Amarillo)
- Moderate cooking time
- Fair resistance to *Mycosphaerella* blight and *Fusarium* wilt

Weaknesses:

- Rated 'fair' for seed coat breakage



Table 1: Agronomic Performance for CDC Athabasca from Co-op and Regional Trials in Saskatchewan – Adapted from Varieties of Grain Crops 2019

Variety	Year Registered	Years Tested	Yield % Amarillo		Maturity	Lodging (1-9)	Vine Length (cm)	Resistance to:					Seed Weight (g/1000)	Protein vs. CDC Amarillo	
			1, 2 & South 3*	North 3 & 4*				Mycosphaerella Blight	Powdery Mildew	Fusarium Wilt	Seed Coat Breakage	Seed Coat Dimpling			Greenness
CDC Amarillo (check)	2012	10	100	100	Medium	3.5	85	4.5	R	MR	Fair	Fair	Good	230	23.0
Abarth	2012	7	93	90	Early	3.5	75	5.0	R	I	Fair	Good	Good	280	-0.1
AAC Ardill	2013	7	103	99	Medium	3.5	85	4.5	R	MR	Good	Good	Good	230	-1.9
AAC Asher	2017	3	103	100	Medium	4.5	75	4.5	R	I		Fair	Good	260	-0.6
CDC Athabasca	2016	7	93	97	Medium	3.0	85	4.5	R	I	Fair	Fair	Good	300	+0.5
CDC Canary	2017	6	97	98	Early	3.5	85	4.5	R	I	Good	Fair	Fair	230	-0.1
AAC Carver	2014	5	103	100	Early	4.0	85	5.0	R	I	Good	Fair	Good	240	-1.3
AAC Chrome	2017	4	105	102	Medium	4.5	75	4.5	R	I	Good	Good	Good	240	-1.2
CDC Inca	2015	7	104	99	Medium	4.0	85	4.5	R	I	Good	Good	Fair	230	-0.8
AAC Lacombe	2013	6	96	99	Medium	3.5	85	5.0	R	I	Fair	Fair	Fair	250	-0.9
CDC Lewochko	2018	5	104	103	Medium	3.5	90	4.5	R	I	Good	Good	Good	230	0.7
CDC Meadow	2006	10	92	89	Early	4.0	85	5.0	R	I	Good	Good	Good	220	-0.6
AAC Profit	2018	3	101	110	Medium	4.5	90		R	I	Good	Good	Good	230	0.6
CDC Saffron	2011	10	98	92	Early	4.0	80	4.5	R	I	Good	Fair	Good	250	-0.4
CDC Spectrum	2016	7	104	102	Medium	3.5	85	4.5	R	I	Good	Good	Fair	240	0.5

Source: Varieties of Grain Crops 2019 (SaskSeed Guide)

*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) 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%

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 Weight (mg)	Shape	Seed Coat Breakage (%)	Crude Protein (%)	Cooking Time (min)
CDC Golden (check)	4604	96	96	83	4.4	206	2.5	1	25.0	16.8
Agassiz (check)	5023	104	98	86	4.0	223	2.6	6	23.9	12.3
CDC Athabasca	5140	107	99	93	3.0	291	2.8	6	24.4	14.1
CV	8.5									
LSD 05	259		0.74	3.2	0.45	6.4	0.11	1.9	0.6	6.5
# locations	21		19	17	21	21	21	7	11	2

Source: CDC Pulse breeding group, U of S

*Lodging score: 1=Upright; 9=Completely lodged

**Seed shape: 1=Round; 5=Cubic

Cooking time = Mattson cooking time (min)

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



CDC Athabasca

Agassiz

CDC Golden