

GREEN PEA: CDC FOREST

Breeder: Dr. Tom Warkentin

Crop Development Centre
University of Saskatchewan
Saskatoon, SK.

Year released to Select Seed Growers: 2017

Sub-licensed outside of SK: SeCan

International Distribution Rights: Not assigned

Plant Breeders Rights: PBR'91

CDC Forest is a green cotyledon, semi-leafless field pea variety. In two years of testing in the field pea co-op registration trial in 2013–2014 CDC Forest yielded 117% of the green pea check varieties CDC Striker and Cooper (Table 2). In six years of testing in the co-op and regional trials in Saskatchewan (Table 1), CDC Forest was the top yielding green pea in both geographies. CDC Forest has PBR'91 protection.

Strengths:

- High yield (greater than or equal to CDC Amarillo)
- Yield stability over different soil zones
- Powdery mildew resistance

Neutral:

- Good lodging resistance
- Medium vine length
- Medium maturity
- Medium seed size (equal to CDC Amarillo)
- Round seed shape (blockier than CDC Striker, rounder than Cooper)
- Low seed coat breakage per cent
- Good bleaching resistance
- Moderate protein concentration
- Moderate cooking time
- Fair resistance to Fusarium and Mycosphaerella



Table 1: Agronomic Performance for CDC Forest 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	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			Bleaching
CDC Amarillo (check)	2012	10	100	100	Medium	3.5	85	4.5	R	MR	F	F	n/a	230	23.0
Blueman	2018	3	91	88	Medium	4.5	85	4.5	R	I	n/a	G	F	220	+0.3
AAC Comfort	2016	4	90	99	Medium	4.5	85	4.5	R	I	G	G	G	250	-0.4
Cooper	2004	8	89	80	Medium	4.0	80	5.0	R	I	F	G	F	270	+0.9
CDC Forest	2017	6	100	101	Medium	4.0	85	4.5	R	I	G	G	G	230	-0.2
CDC Greenwater	2014	9	99	92	Medium	3.5	90	4.0	R	MR	F	F	G	230	-1.1
CDC Limerick	2012	10	95	90	Medium	3.5	85	4.0	R	I	G	G	G	210	+2.8
CDC Patrick	2008	10	87	86	Medium	4.5	80	4.5	R	MR	G	G	G	190	-1.0
CDC Pluto	2010	8	92	84	Medium	5.5	80	4.5	R	I	G	G	G	160	-0.2
AAC Radius	2014	6	77	77	Medium	5.0	85	4.5	R	I	VG	G	G	230	+0.5
CDC Raezer	2011	10	81	80	Early	3.5	85	5.0	R	MR	G	G	G	220	-0.3
AAC Royce	2014	5	92	84	Medium	5.0	70	5.0	R	I	F	F	G	260	+0.4
CDC Sage	2005	5	73	71	Medium	4.0	80	5.0	R	MR	G	F	G	220	n/a
CDC Spruce	2016	7	94	99	Medium	4.0	85	4.5	R	I	F	F	G	240	+0.1
CDC Striker	2002	10	81	80	Medium	3.5	80	4.5	S	MR	VG	G	G	240	+2.0

Source: Varieties of Grain Crops 2019 (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 2: Agronomic Performance of CDC Forest Compared to the Checks (Pea Co-op Test A, 2013-2014)

Variety	Yield (kg/ha)	Yield (% mean of checks)	Days to Maturity	Vine Length (cm)	Lodging	Seed Weight (g/1000)	Seed Shape	Seed Coat Breakage	Bleaching	Green Colour Intensity	Crude Protein (%)	Cooking Time (min)
CDC Striker (check)	4181	98	97	80	3.9	242	2.5	0.3	3.0	3.5	25.1	20.6
Cooper (check)	4310	102	99	82	3.8	257	3.1	5.5	3.2	3.9	23.7	11.7
CDC Forest	4948	117	100	86	3.8	230	2.9	2.1	3.2	3.7	23.7	12.9
CV	10											
LSD 05	332		0.9	6.9	0.5	9.3	0.2	1.9	0.2	0.2	0.9	9.8
# locations	22	22	20	17	23	19	20	4	19	20	9	2

Source: CDC Pulse breeding group, U of S

Lodging score: 1=Upright; 9=Completely lodged

Seed shape: 1=Round; 5=Cubic

Bleaching score: 1=No bleaching, 5=Completely bleached

Green color intensity (1=Very intense, 5=Pale)

Cooking time = Mattson cooking time (min)

