

# CDC SPRUCE

Green Pea



**YEAR RELEASE TO  
SELECT SEED GROWERS**  
2016

**SUB-LICENSED OUTSIDE OF SK**  
SeCan

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**BREEDER**  
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## Description

CDC Spruce is a green cotyledon, semi-leafless field pea variety. In two years of testing in the field pea co-op registration test "A" in 2012 – 2013, CDC Spruce yielded 109% of the green pea check varieties CDC Striker and Cooper (Table 2). In seven years of testing in the co-op and regional trials in Saskatchewan, CDC Spruce yielded 13% higher than CDC Striker southern regions and 19% higher in the north (Table 1). Relative to the yellow pea check variety CDC Amarillo, CDC Spruce yielded 94% in the south and 99% in the north. CDC Spruce has PBR protection.

## Strengths

- Medium vine length
- Powdery mildew resistance

## Neutral

- Good lodging resistance
- Medium maturity
- Medium seed size
- Round seed shape
- Good resistance to bleaching
- Moderate protein (similar to CDC Amarillo)
- Moderate cooking time
- Fair resistance to Mycosphaerella blight and Fusarium wilt

## Weaknesses

- Rated fair for seed coat breakage and dimpling

**Table 1: Agronomic Performance for CDC Spruce 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***	POWDERLY 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	FAIR	FAIR	n/a	230	23.0
BLUEMAN	2018	3	91	88	MEDIUM	4.5	85	4.5	R	I	n/a	GOOD	FAIR	220	+0.3
AAC COMFORT	2016	4	90	99	MEDIUM	4.5	85	4.5	R	I	GOOD	GOOD	GOOD	250	-0.4
COOPER	2004	8	89	80	MEDIUM	4.0	80	5.0	R	I	FAIR	GOOD	FAIR	270	+0.9
CDC FOREST	2017	6	100	101	MEDIUM	4.0	85	4.5	R	I	GOOD	GOOD	GOOD	230	-0.2
CDC GREENWATER	2014	9	99	92	MEDIUM	3.5	90	4.0	R	MR	FAIR	FAIR	GOOD	230	-1.1
CDC LIMERICK	2012	10	95	90	MEDIUM	3.5	85	4.0	R	I	GOOD	GOOD	GOOD	210	+2.8
CDC PATRICK	2008	10	87	86	MEDIUM	4.5	80	4.5	R	MR	GOOD	GOOD	GOOD	190	-1.0
CDC PLUTO	2010	8	92	84	MEDIUM	5.5	80	4.5	R	I	GOOD	GOOD	GOOD	160	-0.2
AAC RADIUS	2014	6	77	77	MEDIUM	5.0	85	4.5	R	I	VERY GOOD	GOOD	GOOD	230	+0.5
CDC RAEZER	2011	10	81	80	EARLY	3.5	85	5.0	R	MR	GOOD	GOOD	GOOD	220	-0.3
AAC ROYCE	2014	5	92	84	MEDIUM	5.0	70	5.0	R	I	FAIR	FAIR	GOOD	260	+0.4
CDC SAGE	2005	5	73	71	MEDIUM	4.0	80	5.0	R	MR	GOOD	FAIR	GOOD	220	n/a
<b>CDC SPRUCE</b>	<b>2016</b>	<b>7</b>	<b>94</b>	<b>99</b>	<b>MEDIUM</b>	<b>4.0</b>	<b>85</b>	<b>4.5</b>	<b>R</b>	<b>I</b>	<b>FAIR</b>	<b>FAIR</b>	<b>GOOD</b>	<b>240</b>	<b>+0.1</b>
CDC STRIKER	2002	10	81	80	MEDIUM	3.5	80	4.5	S	MR	VERY GOOD	GOOD	GOOD	240	+2.0

Source: Varieties of Grain Crops 2019 (SaskSeed Guide)

\*Area 1: Brown soil zone; Area 2: Dark brown; Area 3: Black; Area 4: Dark grey

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

\*\*\*Mycosphaerella blight score: 1 = No disease, 9 = Completely blighted

\*\*\*\*Seed coat dimpling: Very Good = 0-5%; Good = 6-20%; Fair = 21-50%

**Table 2: Performance of CDC Spruce 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*	SEED WEIGHT (MG)	SEED SHAPE**	CRUDE PROTEIN (%)	COOKING TIME (MIN)***
CDC STRIKER (CHECK)	4627	99	97	78	3.6	241	2.5	25.1	20.6
COOPER (CHECK)	4715	101	99	81	3.5	263	2.9	23.7	11.7
<b>CDC SPRUCE</b>	<b>5111</b>	<b>109</b>	<b>99</b>	<b>90</b>	<b>3.7</b>	<b>244</b>	<b>2.6</b>	<b>23.7</b>	<b>12.9</b>
CV	8.5								
LSD 05	259		0.74	3.2	0.45	6.4	0.11	0.6	6.5
# Locations	21		19	17	21	21	21	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)

**Table 3: Disease Resistance Data of CDC Spruce Compared to the Checks (Pea Co-op Test A, 2012-2013)**

VARIETY	MYCO (MB)*	MYCO (SK)**	AUDPC - MB***	FUSARIUM WILT (%)	POWDERY MILDEW****
CDC STRIKER (CHECK)	4.4	5.8	13.4	29	7
COOPER (CHECK)	3.5	6.5	10.7	43	0
<b>CDC SPRUCE</b>	<b>4.4</b>	<b>5.7</b>	<b>13.4</b>	<b>31</b>	<b>0</b>
LSD 05	1.6	1.6	3.1	18.9	0.4
# Locations	2	2	2	2	2

Source: CDC Pulse Breeding Group, U of S

\*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 assessed at Morden

\*\*\*\*Powdery mildew: 0 = No disease, 9 = Completely mildewed