

MEMORANDUM

TO: Prairie Recommending Committee for Pulse and Special Crops
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DATE: January 11, 2023
SUBJECT: **Request for support for registration of yellow cotyledon field pea variety CDC 6083-4**

Strengths

- Improved yield (105%) compared to the mean of the yellow checks (CDC Spectrum and AAC Lacombe)
- Improved protein-yield (105%) compared to CDC Spectrum (100%) and AAC Lacombe (94%)
- Medium-long vine length, longer than the checks
- Round seed shape, rounder than the checks

Neutral traits

- Good lodging resistance, similar to the checks
- Medium maturity, one day later than the checks
- Medium seed weight, smaller than the checks
- Moderate seed protein concentration, similar to CDC Spectrum, greater than AAC Lacombe
- Moderate seed coat breakage score, similar to AAC Lacombe, more than CDC Spectrum
- Powdery mildew resistance, same as the checks
- Fair mycosphaerella blight resistance, similar to the checks
- Moderate Fusarium root rot resistance, similar to the checks

Description

Yellow cotyledon, semileafless field pea variety CDC 6083-4 was tested in the Field Pea Co-operative Registration Test-A in 2021 and 2022. Performance data for CDC 6083-4 are summarized in accompanying Table 1. Seed photos for CDC 6083-4 and check varieties are in Fig 1.

Table 1. Performance of yellow pea variety CDC 6083-4 compared to the checks (Pea Co-op Test-A, 2021-2022)

Variety	Yield		DTM	VLTH	PHL (1-9)	Weight (g/1000)	Shape (1-5)	Protein (%)	Myco (0-9)	SCB (per 50)	FRR (1-7)	PM
	kg/ha	% of yellow										
CDC Spectrum	3281	101	90	62	3.1	214	2.5	24.4	1.5	3.4	4.9	R
AAC Lacombe	3219	99	90	66	2.9	234	2.7	23.5	2.1	8.9	4.6	R
CDC 6083-4	3423	105	91	69	3.0	195	2.2	24.7	1.9	7.1	4.8	R
CV	8.7		1.8	6.7	21.0	5.3	7.8	4.3	31.1	76.5	6.2	na
LSD	146		0.9	2.4	0.4	7.4	0.1	0.6	0.7	2.0	0.4	na

Yield: % of yellow = percent yield of the average yield of yellow checks;

DTM = Days to maturity; VLTH = Vine length (cm); PHL = Pre-harvest lodging score (1=upright, 9=flat);

Shape: 1=round, 5=blocky;

SCB=seed coat breakage, number of broken seed coats out of 50 seeds tested

Myco: mycosphaerella blight, where 0=no disease, 9=completely blighted

FRR: Fusarium root rot, where 1=healthy, 7=completely decayed, PM: powdery mildew where R=resistant, S=susceptible

[X] number of locations

Fig. 1. Scans of seed samples from the 2022 Pea Co-op Test-A at Saskatoon (Sutherland) of CDC 6083-4 and check varieties CDC Spectrum and AAC Lacombe.

