

SMALL RED LENTIL: CDC IMPULSE CL[®]

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Year released to Select Seed Growers: 2014
Sub-licensed outside of SK: SeCan
International Distribution Rights: Pulse USA

Plant Breeders Rights: UPOV'91

CL (Clearfield[®]) is a Trademark of BASF Inc.

CDC Impulse (IBC-479) is a high yielding Clearfield[®] small red lentil that is well-adapted to the Brown and Dark Brown soil zones. In nine years of testing in the co-op and regional trials in Saskatchewan, CDC Impulse yielded 108% of CDC Maxim in the Brown and Dark Brown soil zones, and 95% in the Black and Dark Grey soil zones (Table 1). Maturity is slightly later than CDC Maxim, positive for the southern regions of the lentil production zone. Seed type is larger in diameter and seed weight, acceptable for specific segments of the dehulled red lentil market (Table 2). CDC Impulse has PBR'91 protection.

Strengths:

- Seed type suitable for segments of the small red cotyledon lentil market
- High yield compared to CDC Maxim
- Imidazolinone tolerance
- Seed weight and diameter is greater than CDC Maxim.
- Later maturing than CDC Maxim
- Taller than CDC Maxim

Neutral:

- Similar in disease ratings and lodging resistance compared to CDC Maxim



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

Variety	Herbicide tolerance	Year of release	Years Tested*	Yield % of CDC Maxim		Disease Resistance		Days to flower	Height (cm)	Maturity rating	Seed Weight (g/1000)
				Area 1-2	Area 3-4	Ascochyta	Anthraco nose (race 1)				
CDC Maxim	CL	2007	12	100	100	G	G	51	34	Early-mid	40
CDC Impulse	CL	2014	9	108	95	G	G	52	37	Early-mid	44
CDC Proclaim	CL	2014	8	105	102	G	G	51	34	Early-mid	40
CDC Nimble	CL	2019	5	108	108	G	G	52	35	Early-mid	38
CDC Redmoon	No	2015	8	114	106	G	G	52	33	Early-mid	41
CDC Coral	No	2016	5	110	106	G	G	55	33	Early-mid	37
CDC Carmine	No	2016	8	111	106	G	G	54	34	Early-mid	40

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

Table 2: Seed Thickness Distribution of CDC Impulse CL in the 2010-2012 Lentil Registration Recommendation Trials in Western Canada (data from 6 sites)

Variety	Seed Thickness Distribution: % Seed over							
	Round hole (mm)							Slotted screen (mm)
	6.0 mm >15/64	5.6 mm >14/64	5.2 mm >13/64	4.8 mm >12/64	4.4 mm >11/64	4.0 mm >10/64	3.6 mm >9/64	2.6 mm >6.5/64
CDC Maxim	0	1	19	44	27	7	2	24
CDC Impulse	3	18	33	31	11	3	1	27

Source: CDC Pulse breeding group, U of S

Table 3: Three Year Disease Summary for CDC Impulse vs. CDC Maxim

Variety	Ascochyta Blight (%)		Anthracnose*				
	2010 Indoor Test	2011 Indoor Test	2010 (0 – 5) Indoor Test	2011 (0 – 5) Indoor Test	2012 Indoor Testing (0 – 10)		2012 Field (0 – 5)
					Test 1	Test 2	
CDC Maxim	12.9	9.4	2.8	3.4	4.9	4.7	3.3
CDC Impulse	19.1	11.9	2.3	3.4	4.9	4.8	3.0

Source: CDC Pulse breeding group, U of S

* Anthracnose rating: where 0 = no disease