

EXTRA-SMALL RED LENTIL: CDC IMP (CL[®])

Breeder: Dr. Albert Vandenberg
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Year released to Select Seed Growers: 2018
Sub-licensed outside of SK: SeCan
International Distribution Rights: Not assigned

Plant Breeders Rights: Applied

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

CDC Imp is an extra-small red lentil of Clearfield[®] variety. In five years of testing in the in the co-op and regional trials in Saskatchewan, CDC Imp was the top yielding Clearfield[®] extra-small red lentil variety. It yielded 95% of the small red lentil check variety CDC Maxim in the south, and 98% in the north (Table 1). The seed diameter of CDC Imp is similar to CDC Impala however, it has greater seed thickness making CDC Imp more suitable for dehulling (Table 2). Application for PBR'91 protection for CDC Imp has been submitted to CFIA.

Strengths:

- Seed thickness slightly greater than that of CDC Impala
- Imidazolinone tolerance
- High yield compared to other Clearfield[®] extra-small reds
- Taller than other extra small red varieties

Neutral:

- Early-mid maturity
- Similar disease resistance as CDC Maxim and other extra-small red varieties

Weaknesses:

- Lower yielding than non-Clearfield[®] extra-small red varieties



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

Variety	Market Class	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	Anthracnose (race 1)				
CDC Maxim	Small red	CL	2007	12	100	100	G	G	51	34	Early-mid	40
CDC Impulse	Small red	CL	2014	9	108	95	G	G	52	37	Early-mid	44
CDC Proclaim	Small red	CL	2014	8	105	102	G	G	51	34	Early-mid	40
CDC Nimble	Small red	CL	2019	5	108	108	G	G	52	35	Early-mid	38
CDC Redmoon	Small red	No	2015	8	114	106	G	G	52	33	Early-mid	41
CDC Coral	Small red	No	2016	5	110	106	G	G	55	33	Early-mid	37
CDC Carmine	Small red	No	2016	8	111	106	G	G	54	34	Early-mid	40
CDC Imp	Extra-small red	CL	2018	5	95	98	G	G	52	35	Early-mid	30
CDC Impala	Extra-small red	CL	2007	11	80	90	G	G	51	30	Early	31
CDC Imperial	Extra-small red	CL	2006	8	84	79	G	G	49	30	Early	30
CDC Redbow	Extra-small red	No	2009	7	102	99	G	G	49	30	Early	32
CDC Rosebud	Extra-small red	No	2009	7	100	99	G	G	50	30	Early	31
CDC Rosie	Extra-small red	No	2012	8	92	90	G	G	52	33	Early-mid	30
CDC Roxy	Extra-small red	No	2014	8	102	98	G	G	53	34	Early-mid	32

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 IBC-978 in the 2014-2017 Lentil RRT in Western Canada (6 sites)

Market Class	Line	Seed Thickness Distribution (% Seed over):							Slotted screen (mm) 2.6 mm >6.5/64
		Round hole (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	
Small red	CDC Maxim	0	3	19	48	23	6	2	43
Extra small	CDC Impala	0	0	2	18	45	27	8	3
Extra small	IBC-978	0	0	2	18	45	29	7	9

Source: CDC Pulse breeding group, U of S

Table 3: Three Year Indoor Testing Disease Summary for CDC Imp vs. Small Red Check Variety CDC Maxim and Extra-Small Red Variety CDC Impala in the 2014–2016 Lentil Registration Recommendation Trial in Western Canada

Variety	Ascochyta Blight (%)				Anthracnose (0 – 5 rating scale)*				
	2014	2015		2016	2014	2015		2016	
		Test 1	Test 2			Test 1	Test 2	Race 1	Race 2
CDC Maxim	12.5	7.5	6.3	7.5	5.0	4.8	5.0	4.5	4.7
CDC Impala	19.4	13.1	10.6	18.1	2.1	1.2	1.5	0.9	4.4
CDC Imp	16.7	16.3	14.8	9.8	2.4	1.1	2.5	1.3	4.8

Source: CDC Pulse breeding group, U of S

* Anthracnose rating: where 0 = no disease