

EXTRA-SMALL RED LENTIL: CDC ROXY

Breeder: Dr. Albert Vandenberg
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Saskatoon, SK.

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

Plant Breeders Rights: Applied

CDC Roxy is an extra-small red lentil variety. CDC Roxy was tested in the Lentil Registration Recommendation Trial “C” in 2011 and 2012 where it yielded 104% of CDC Maxim. In eight years of testing in the co-op and regional trials in Saskatchewan, CDC Roxy yielded 102% of CDC Maxim in the Brown and Dark Brown soil zones, and 98% in the Black and Dark Gray soil zones (Table 1). CDC Roxy has good resistance to Anthracnose (Table 2). Seed type is acceptable for the extra-small dehulled red lentil market. Thickness of the seed is greater than that of CDC Rosetown, the extra-small red check at the time of testing. Application for PBR’91 protection for CDC Roxy has been submitted.

Strengths:

- Higher yield than CDC Maxim (similar to CDC Redbow)
- Improved resistance to Anthracnose vs. CDC Maxim

Neutral:

- Similar maturity, flowering, lodging resistance, and resistance to Ascochyta Blight as CDC Maxim

Weaknesses:

- Not tolerant to imidazolinone herbicides

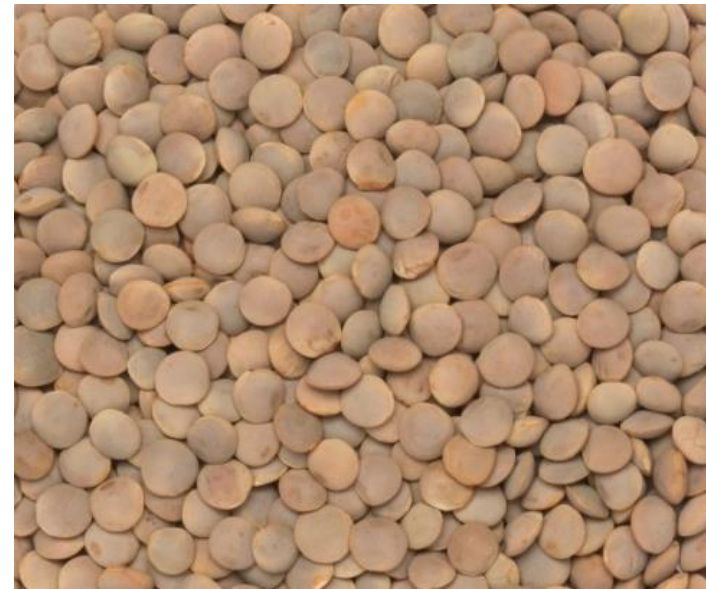


Table 1: Agronomic Performance for Small Red Lentils from Co-op and Regional Trials in Saskatchewan – Adapted from Varieties of Grain Crops, Sask Seed Guide 2019

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	Anthracnose (race 1)				
CDC Maxim	CL	2007	12	100	100	G	G	51	34	Early-mid	40
CDC Imperial	CL	2006	8	84	79	G	G	49	30	Early	30
CDC Impala	CL	2007	11	80	90	G	G	51	30	Early	31
CDC Imp	CL	2018	5	95	98	G	G	52	35	Early-mid	30
CDC Redbow	No	2009	7	102	99	G	G	49	30	Early	32
CDC Rosebud	No	2009	7	100	99	G	G	50	30	Early	31
CDC Rosie	No	2012	8	92	90	G	G	52	33	Early-mid	30
CDC Roxy	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: Two Year Disease Summary for CDC Roxy vs. CDC Maxim

Variety	Ascochyta Blight (%)		Anthracnose*			
	2011 Indoor Test	2012 Indoor Test	2011 Indoor Test (0 - 5 rating)	2012 Indoor Testing (0 – 10 rating)		2012 Field (0 – 5 rating)
				Test 1	Test 2	
CDC Maxim	6.4	40.0	4.7	3.9	4.1	3.0
CDC Roxy	9.8	40.0	1.4	1.1	1.9	2.3

Source: CDC Pulse breeding group, U of S

* Anthracnose rating: where 0 = no disease