

## **LARGE GREEN LENTIL: CDC LIMA (CL<sup>®</sup>)**

**Breeder:** Dr. Albert Vandenberg  
Crop Development Centre  
University of Saskatchewan  
Saskatoon, SK.

**Year released to Select Seed Growers:** 2018  
**Sub-licensed outside of SK:** SeCan  
**International Distribution Rights:** not assigned

**Plant Breeders Rights:** Applied

CL (Clearfield<sup>®</sup>) is a Trademark of BASF Inc.

CDC Lima (IBC-937) is a high-yielding, large green Clearfield<sup>®</sup> lentil variety. In six years of testing in the co-op and regional trials, it yielded 113% of the Clearfield<sup>®</sup> large green lentil variety CDC Impower in the Brown and Dark Brown soil zones, and 137% in the Black and Dark Gray zones (Table 1). CDC Lima has similar disease resistance characteristics (Table 2) as CDC Impower. It has a larger seed compared to CDC Impower, which is also thicker making CDC Lima more suitable for lentil dehulling (Table 3). Application for PBR'91 protection for CDC Lima has been submitted.

### **Strengths:**

- Seed thickness greater than that of CDC Impower
- High yield compared to CDC Impower
- Improved lodging resistance over CDC Impower
- Imidazolinone tolerance

### **Neutral:**

- Similar agronomic and maturity characteristics compared to CDC Improve and CDC Impower
- Similar disease resistance as CDC Improve and CDC Impower

### **Weaknesses:**

- Slightly shorter than CDC Impower and CDC Improve, more similar to CDC Maxim



**Table 1: Large Green Lentil Performance Data from Co-op and Regional Trials in Saskatchewan Compared to CDC Maxim**

Variety	Market Class	CL	Year s Tested	Yield (% Maxim)		Yield (% Impower)		Days to Flower	Height (cm)	Maturity Rating	Resistance to:		Seed Weight (g/1000)
				*Area 1 & 2	*Area 3 & 4	*Area 1 & 2	*Area 3 & 4				Ascochyta Blight	Anthracnose Race 1	
CDC Maxim	Small red	Yes	12	100	100			51	34	E/M	G	G	40
CDC Greenland	Large green	No	19	89	70			52	38	M/L	G	VP	64
CDC Greenstar	Large green	No	10	97	81			52	40	M/L	G	F	73
CDC Impower	Large green	Yes	12	79	63			52	41	M/L	G	VP	64
<b>CDC Lima</b>	<b>Large green</b>	<b>Yes</b>	<b>6</b>	<b>89</b>	<b>86</b>	<b>113</b>	<b>137</b>	<b>51</b>	<b>35</b>	<b>M/L</b>	<b>G</b>	<b>VP</b>	<b>74</b>
CDC Sovereign	Large green	No	12	83	77			52	40	L	G	P	66

Source: Varieties of Grain Crops 2019 (SaskSeed Guide) \*Area 1&2: Brown & Dark Brown soil zones; Area 3&4: Black and Dark Gray soil zones

**Table 2: Two Year Indoor Disease Summary for CDC Lima in the 2014-2015 Lentil Registration Recommendation Trial (RRT) in Western Canada**

Variety	Market Class	2014		2015			
		Ascochyta (%)	Anthracnose Race 1*	Ascochyta (%)		Anthracnose Race 1*	
				Test 1	Test 2	Test 1	Test 2
CDC Maxim	Small red	13	5.0	7.5	6.3	4.8	5.0
CDC Impower	Large green	34	4.9	27.5	22.5	4.8	4.8
<b>CDC Lima</b>	<b>Large green</b>	<b>35</b>	<b>5.0</b>	<b>27.7</b>	<b>16.3</b>	<b>4.7</b>	<b>5.0</b>

Source: CDC Pulse breeding group, U of S \* Anthracnose rating: 0 – 5 where 0 = no disease

**Table 3: Seed Thickness Distribution of CDC Lima in the 2014-2015 Lentil RRT in Western Canada (4 sites)**

Mkt class	Line	Seed thickness distribution (% Seed over):										
		Round Hole (mm)										Slotted
		6.8 >15/64	6.4 >14/64	6.0 >13/64	5.6 >12/64	5.2 >11/64	4.8 >10/64	4.4 >10/64	4.0 >9/64	3.6 >9/64	2.6 mm >6.5/64	
SR	CDC Maxim	0	0	0	3.5	23	50.5	17.5	4	1	51	
LG	CDC Impower	16	43	24	11	4	1	1	1	1	74	
LG	<b>CDC Lima</b>	14	40	29	11	3	1	1	1	0	88	