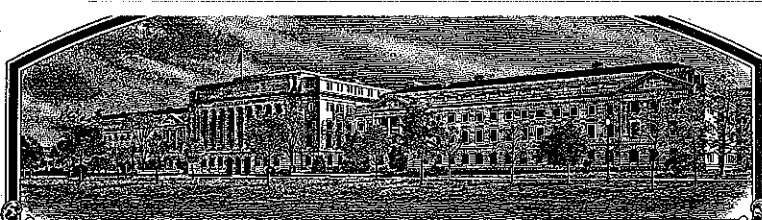


No.



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:  
 Crop Development Centre University of Saskatchewan

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE REQUIREMENTS OF THE GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

LENTIL

'CDC Roujeau'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this fifth day of March, in the year two thousand and seven.

Attest:

Commissioner  
 Plant Variety Protection Office  
 Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. Include form number and date on all reproductions

U.S. DEPARTMENT OF AGRICULTURE  
 AGRICULTURAL MARKETING SERVICE  
 SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE  
 (Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER <b>Crop Development Centre University of Saskatchewan</b>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME <b>1145-3-6</b>	3. VARIETY NAME <b>CDC Rouleau</b>
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) <b>51 Campus Drive Saskatoon, SK S7N 5A8</b>		5. TELEPHONE (Include area code) <b>(306) 966-8195</b>	FOR OFFICIAL USE ONLY PVPO NUMBER <b>200500304</b>
		6. FAX (Include area code) <b>(306) 966-5015</b>	
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) <b>University</b>	8. IF INCORPORATED, GIVE STATE OF INCORPORATION	9. DATE OF INCORPORATION	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) <b>Ronald B. Weik Quality Assured Seeds 418B McDonald St. Regina, SK S4N 6E1</b>		FILING AND EXAMINATION FEES: \$ <b>3657.00</b> DATE <b>7/28/2005</b> CERTIFICATION FEE: \$ <b>768.00</b> DATE <b>2/5/07</b>	

11. TELEPHONE (Include area code) <b>(306) 791-0500</b>	12. FAX (Include area code) <b>(306) 791-0555</b>	13. E-MAIL <b>rweik@qas-online.com</b>	
14. CROP KIND (Common Name) <b>Lentils</b>	16. FAMILY NAME (Botanical) <b>Leguminosae</b>	18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.	
15. GENUS AND SPECIES NAME OF CROP <b>Lens culinaris Medic</b>	17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input checked="" type="checkbox"/> YES (If "yes", answer items 21 and 22 below) <input type="checkbox"/> NO (If "no", go to item 23)	
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)		21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$3,652), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)	
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER <i>F. A. Holm</i>		SIGNATURE OF OWNER	
NAME (Please print or type) <b>Frederick A. Holm</b>		NAME (Please print or type)	
CAPACITY OR TITLE <b>Director, Crop Development Centre Univ. of Saskatchewan</b>	DATE <b>14 July/05</b>	CAPACITY OR TITLE	DATE

(See reverse for instructions and information collection burden statement)

## INSTRUCTIONS

**GENERAL:** To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,652 (\$432 filing fee and \$3,220 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-6518

FAX: (301) 604-6291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvindex.htm>

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and provide evidence that name has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, 10301 Baltimore Avenue, Suite 401 NAL Building, Beltsville, MD 20705. Telephone: (301) 504-5682 <http://www.ams.usda.gov/lsg/seed.htm>.

## ITEM

- 19a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) evidence of uniformity and stability; and (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
  - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
  - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
20. If "Yes" is specified (seed of this variety be sold by variety name only, as a class of certified seed), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
24. See Section 65 of the Act for instructions on claiming the benefit of an earlier filing date.

**22. CONTINUED FROM FRONT** (Please provide a statement as to the limitation and sequence of generations that may be certified.)

The progeny of Foundation seed can be sold as Registered seed; the progeny of Registered seed can be sold as Certified seed; the progeny of Certified seed

*can NOT be sold as pedigreed seed.*

**23. CONTINUED FROM FRONT** (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

Breeder seed was sold and planted in western Canada in 2004; Breeder and Select seed was sold and planted in western Canada in 2005.

**24. CONTINUED FROM FRONT** (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

**NOTES:** It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0155. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parents' status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 328-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

200500304

## Exhibit A

### Origin and Breeding History of CDC Rouleau

Pedigree:

B-15 x [CDC Milestone x (CDC Milestone x 545-8)]

Where: **B-15 is a CDC Breeding line** = Bulgaria 15; a line derived from a single plant selection from a CDC segregating bulk population known as Bulgaria.

**545-8 is a CDC Breeding line** = Indianhead x Plant Row 86-360; CDC selection made in 1986.

The final cross was made in 1996.

Breeding technique used was: F2-derived family method.

Selection criteria: yield, maturity and seed quality in all generations.

Generation breeder seed was first bulked: F8

Lines bulked to form this variety: 57

This variety was observed to be uniform and stable over 6 generations.

A 'variant' in the form of yellow cotyledon seeds was observed with the following frequency:

Breeder seed	-1:20,000
Foundation seed	- 1:2,000
Registered seed	- 1:1,000

This variety does not contain any traits that are novel to its species.

Name and address of institution maintaining breeder seed:

Crop Development Centre  
University of Saskatchewan  
51 Campus Drive  
Saskatoon, SK S7N 5A8

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**Clarification to Appendix A for CDC Rouleau**

**Plant Row 86-360:** is a breeding line developed at the Crop Development Centre, University of Saskatchewan. It was an F2-derived F3 row population developed by Dr. Alfred E. Slinkard, retired lentil breeder at this institution.

**Exhibit B: Statement of Distinctness, CDC Rouleau**

The following is the Statement of Distinctiveness for CDC Rouleau.

CDC Rouleau is most similar to the variety CDC Robin.

Basis a robust statistical analysis, the significant distinguishing characteristics of CDC Rouleau compared with CDC Robin (basis paired trials conducted in Western Canada in 2005 and 2006) is:

**Kernel Weight**

In 2005, the weight of 1000 kernels of CDC Rouleau was 7.8 grams greater than the weight of 1000 kernels of CDC Robin. In 2006 the difference was 8.9 grams. Summary of the statistical analysis for kernel weight for each of the two years is as follows:

ENTRY	NAME	2005	2005	2005	2005	2005	2005
		Kyle	Saskatoon	Rosthern	Swift Current	Goodale	Mean
		seed weight g/1000 seeds					
13	CDC Robin	30.0	27.7	28.3	27.7	29.0	28.5
17	CDC Rouleau	38.7	34.0	36.0	36.3	36.7	36.3
	CV	2.6	2.6	2.7	3.2	2.6	2.7
	LSD	1.5	1.3	1.5	1.6	1.4	1.5
	MSE	1.0	0.8	1.0	1.2	0.9	1.0
	SED	0.8	0.7	0.8	0.9	0.8	0.8
	ALPHA	0.1	0.1	0.1	0.1	0.1	0.1
	REP-MS	1.2	10.9	1.1	0.5	1.4	3.0
	REPS	3	3	3	3	3	3.0
	Seeding date	29-Apr	1-May	18-May	1-May	14-May	

ENTRY	NAME	2006	2006	2006	2006	2006	2006
		Kyle	Saskatoon	Rosthern	Swift Current	Goodale	Mean
		seed weight g/1000 seeds					
13	CDC Robin	28.7	28.3	31.0	27.0	26.7	28.3
17	CDC Rouleau	39.7	35.7	39.3	39.0	32.3	37.2
	CV	3.6	2.5	1.7	2.7	2.6	2.6
	LSD	2.0	1.3	1.0	1.5	1.3	1.4
	MSE	1.8	0.8	0.5	1.0	0.8	1.0
	SED	1.1	0.7	0.6	0.8	0.7	0.8
	ALPHA	0.1	0.1	0.1	0.1	0.1	0.1
	REP-MS	0.1	0.2	4.4	0.5	15.1	4.0
	REPS	3	3	3	3	3	3.0
	Seeding date	25-Apr	27-Apr	05-May	30-Apr	29-Apr	

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**Trial details**

- 1 Each trial had 3 replications
- 2 Plot size 4' x 12' = 48 square feet
- 3 Seed weight determination determined by counting 200 seeds using Agriculex seed counter, then converted to g/1000 seeds
- 4 All sites in Saskatchewan Canada
- 5 Sample seed weights determined from air-dried plot samples.

6

**A. ABOUT THE OBJECTIVE DESCRIPTION FORM**

200500304

This objective description form is designed as an aid for the identification of lentil varieties to provide sufficient information for pedigreed seed crop inspection and variety verification purposes. Companion documents include the "Variety Registration Application Form" and the "Procedures for the Registration of Crop Varieties in Canada," both of which are available from the Variety Registration Office.

The objective description form lists characteristics to be used as the basis for developing the description of lentil varieties. It is recommended that the form be completed in as much detail as possible to ensure that an accurate description of the variety be on record. Uniformity and stability must be sufficient to ensure that the genetic purity of the variety has not been compromised during the development of the variety or during the seed multiplication process. However, accurate information on variability within the variety is essential for distinguishing between variants and off-types during the seed multiplication process.

Information on this document may be accessible or protected as required under the provisions of the *Access to Information Act*. Information that could cause you or your organization injury if released is protected from disclosure as defined in Section 20 of the *Access to Information Act*.

**B. CHARACTERISTICS**

1. The candidate variety must be described for all characteristics designated on the form with the pound symbol (#).
2. A rating system of 1-9 provides a scale for describing most characteristics in this form. To rate characteristics, select a value that best corresponds to the state indicated. Characteristics may be rated with intermediate values where the characteristic grades gradually from one extreme to another. For example, where the states for a characteristic are described as: small (3), medium (5), large (7); other values of 1, 2, 4, 6, 8 or 9 may be selected.
3. Each characteristic on this form has been arranged in a tabular format allowing the candidate variety (CV) and up to four reference varieties (R1 to R4) to be described. Information on reference varieties is useful but not required for variety registration. The reference varieties must be registered for sale in Canada.

**C. LEGEND**

(#) Characteristics that must always be included when completing the objective description form, except when the state of expression of a preceding characteristic renders this impossible.

CV Candidate variety 1145-3-6 CDC Rouleau

R1 - R4 Reference varieties

R1 Erimson R3 \_\_\_\_\_

R2 Blaze R4 \_\_\_\_\_



LENTIL OBJECTIVE DESCRIPTION

VARIETY NAME:

## D. LENTIL OBJECTIVE DESCRIPTION

Applicant (name and address):

ALBERT VANDENBERG  
 Crop Development Centre University of Saskatchewan  
~~2200~~ ~~St~~ ~~St~~ 51 Campus Drive  
 Saskatoon SK CANADA S7N 5A8

Telephone: 306-966-8786 Facsimile: 306-966-5015

## 1.0 CLASSIFICATION:

1.1 Botanical name: *Lens culinaris* Medikus

1.2 Proposed variety denomination (name):

CDC Rouleau (1145-3-6)

1.3 Utilization:



feed/food



green manure



either

## 2.0 PLANT CHARACTERISTICS

2.1 Plant: growth habit

		CV	R1	R2	R3	R4
prostrate	3					
intermediate	5					
erect	7					

2.2 Plant: height (cm) (measured during late pod filling stage, from the ground to the tip of the extended foliage)

(#)

FROM COOP DATA

mean	29	25	28		
range	26-32	22-28	28-31		

## 3.0 STEM CHARACTERISTICS

3.1 Stem: seedling stem pigmentation

(#)

absent	1	9	9	9		
present	9					

3.2 Stem: number of nodes to first flower

(#)

average number of nodes	12	11	11		
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**LENTIL OBJECTIVE DESCRIPTION**

**VARIETY NAME:**

200500304

**4.0 LEAF CHARACTERISTICS**

**4.1 Leaf: leaflet width (mm)(measure middle leaflet at the node of the first open flower)**

		CV	R1	R2	R3	R4
small	3					
medium	5					
large	7					

**4.2 Leaf: leaflet length (mm)(measure middle leaflet at the node of the first open flower)**

		CV	R1	R2	R3	R4
small	3					
medium	5					
large	7					

**4.3 Leaf: number of pairs of leaflets (no. of pairs of leaflets at the node of the first open flower)**

average number of nodes	CV	R1	R2	R3	R4

**4.4 Leaf: pubescence (observe before maturity)**

		CV	R1	R2	R3	R4
absent	1					
slight	3					
strong	7					

**4.5 Leaf: tendrils (record from flowering nodes)**

		CV	R1	R2	R3	R4
rudimentary	1					
prominent	9					

**5.0 FLOWERING CHARACTERISTICS**

**5.1 Time to flowering (time in days from sowing to when 50% of the plants have started to flower) (#)**

		CV	R1	R2	R3	R4
early	3	5-6	4	4		
medium	5	56d	54d	53d		
late	7					

**5.2 Time to maturity (time in days from sowing to when 90% of the pods are golden brown) (#)**

		CV	R1	R2	R3	R4
early	3	5-6	3	4		
medium	5	89d	89d	90d		
late	7					

**5.3 Flower colour (#)**

		CV	R1	R2	R3	R4
white	1	2	2	2		
white with blue veins	2					
blue	3					
violet	4					
pink	5					

**LENTIL OBJECTIVE DESCRIPTION**

**VARIETY NAME:**

**5.4 Flower: number of flowers per peduncle**

200500304

CV

R1

R2

R3

R4

average number of flowers					
---------------------------	--	--	--	--	--

**6.0 POD CHARACTERISTICS**

**6.1 Pod: number per peduncle**

average number of pods					
------------------------	--	--	--	--	--

**6.2 Pod: colour of ripe pods**

(#)

non-pigmented	1	/	/	/	
pigmented	9				

**6.3 Pod: shattering**

susceptible	3				
moderate	5				
resistant	7				

**7.0 SEED CHARACTERISTICS**

**7.1 Seed: weight (100 random seeds after air-drying)**

(#)

average 100 seed weight	4.2	4.0	4.0		
-------------------------	-----	-----	-----	--	--

**7.2 Seed: diameter**

(#)

small	3	4	4	4	
medium	5				
large	7				

**7.3 Seed: shape**

(#)

globose	1	4	4	5	
flattened	9				

**7.4 Seed: ground colour of testa**

(#)

white	1	3	4	3	
green	2				
grey	3				
brown	4				
black	5				
pink	6				
other	7				

**LENTIL OBJECTIVE DESCRIPTION**

**VARIETY NAME:**

200500304

**7.5 Seed: pattern of testa (#)**

		CV	R1	R2	R3	R4
absent	1	/	/	/		
dotted (speckled)	2					
spotted	3					
mottled (marbled)	4					
complex (combo of 2,3,4)	5					

**7.6 Seed: colour of pattern on testa**

olive-green	1					
grey	2					
violet	3					
brown	4					
black	5					

**7.7 Seed: colour of hilum (#)**

white	1	/	/	/		
dull brown	9					

**7.8 Cotyledon colour (#)**

yellow	3	5	5	5		
orange-red	5					
green	7					

**8.0 AGRONOMIC CHARACTERISTICS**

**8.1 Lodging susceptibility**

low	3					
medium	5					
high	7					

**8.2 Low temperature tolerance**

not tested	1					
poor	3					
fair	5					
good	7					

**9.0 QUALITY CHARACTERISTICS**

**9.1 Protein content**

percentage						
------------	--	--	--	--	--	--

**9.2 Cooking quality (time of cooking)**

slow	3					
medium	5					
fast	7					

**LENTIL OBJECTIVE DESCRIPTION**

**VARIETY NAME:**

200500304

**10.0 REACTION TO DISEASES**

- 0 - not tested
- 1 - resistant
- 3 - moderately resistant
- 5 - moderately susceptible
- 7 - susceptible
- 9 - very susceptible

	CV	R1	R2	R3	R4
Ascochyta blight - <i>Ascochyta</i> spp.	R1	9	1		
Anthracnose - <i>Colletotrichum</i> spp.	3	9	9		
Fusarium root rot - <i>Fusarium</i> spp.					
Other (please specify)					

**11.0 REACTION TO INSECTS**

- 0 - not tested
- 3 - low susceptibility
- 5 - intermediate susceptibility
- 7 - high susceptibility

List insects


**12.0** Describe traits of the candidate variety that aid in its identification, e.g. Electrophoresis, RFLP's, etc. Please attach data and corresponding protocol.

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**13.0** Describe any deviant plants, including both off-types and variants observed during seed increase of the candidate variety. The maximum allowable frequency of each variant for each class of pedigree seed must be given.

(#) very low frequency of yellow cotyledon seeds observed  
 Breeder 1: 20000  
 Select 1: 2000  
 Foundation 1: 1000

**14.0** Indicate which characteristics are more useful in distinguishing the described candidate variety. Use objective description key numbers.

S.1 2.2 10.0  
 S.2

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12



200500304

CDC Rouleau

## VARIETY REGISTRATION APPLICATION FORM

*Refer to the "Procedures for the Registration of Crop Varieties in Canada" document, to ensure that the application contains sufficient information for registration or contact the Variety Registration Office, Plant Health and Production Division for further information.*

*In order to avoid unnecessary delays in the registration process, please ensure that all pertinent information along with a properly tagged and sealed reference sample (or in the case of potato varieties, photographic slides) and the appropriate registration fee are submitted with the application.*

*As original signatures are required to complete the application for registration, applications submitted by facsimile must be followed by original applications sent by mail or courier.*

(Publié aussi en français)

**Previous versions of the application form should be destroyed**

**Crop**Common name: LentilScientific name: Lens culinaris L.**Experimental Designation(s)**1145-3-6**Proposed Variety Name**CDC RouleauPlease write name **exactly** as it should appear on legal documents with careful attention to the use of hyphens, spaces and capital letters.

I declare that I have not applied for or received a Canadian trademark for the name, of this variety.

March 24, 2004

Signature

Date

Has this variety been applied for or granted Plant Breeders' Rights ?  Yes  No  
If yes, the name proposed for registration **must** be the same as the one for Plant Breeders' Rights.In which countries (if any) is this variety presently being marketed?  
NoneIs this variety being marketed by **any other name** in other countries?  Yes  No  
If yes, please specify the name(s) and country(s) where sold \_\_\_\_\_**Registration Type**Full registration:   
Restricted registration:  Interim registration  
 Regional registration  
 Contract registration  
Reinstatement: 

Restrictions to registration are subject to the recommendations of the recommending committee and the provisions of the Seeds Regulations Part III.

**Origin and Breeding**

The amount of information required varies from crop to crop. Please provide as much detail as possible.

Name and complete address of breeding institution:

Crop Development Centre, University of Saskatchewan, 51 Campus DriveSaskatoon, Saskatchewan, Canada S7N 5A8Telephone #: 306-966-5855Facsimile #: 306-966-5015E-mail address: vandenberg@sask.usask.ca



**Pedigree:** For hybrid and composite crops, please give the uncoded pedigree and derivation of the inbred lines. For other crops, please provide as much information as possible on the genetic background of the variety.

B-15 x (CDC Milestone x (CDC Milestone x 545-8))

B-15 and 545-8 are CDC breeding lines

In what year was the final cross made? (only applicable to non hybrid and non-composite varieties)

1996

What breeding techniques were used in developing this variety? (i.e. pedigree selection, clonal selection, single seed descent)

F2-derived family method

What selection criteria were used in developing this variety? In what generation(s) was selection conducted?

Yield, maturity and seed quality in all generations

In what generation was breeder seed first bulked?

F8

How many lines were bulked to form this variety?

57

### Varietal Characteristics

Enclose a description of the variety, using the objective description form (ODF) as a guide, where available (ODFs are not yet available for all crops). Please ensure that all varietal and major identifying characteristics (identified by "#" in the ODF) are included.

Does this variety contain traits that are novel to its species?:

No

Yes, please describe \_\_\_\_\_

### Additional Information

Please refer to the *Procedures for the Registration of Crop Varieties in Canada* for guidelines specific to some crops. The Variety Registration Office may, in addition to information provided in this application form, require that the applicant supply further information that will allow the Registrar to determine the merit and identity of the variety (i.e. more detailed morphological characteristics, history of development information, data to support disease reaction claims, etc.).

**Seed  
Stocks**

Name and address of institution maintaining breeder seed. (If person maintaining breeder seed is a Canadian agent who is not the owner of the variety, a letter of authorization from the owner is required. The Canadian maintainer must be a plant breeder recognized by the Canadian Seed Growers' Association for crops other than potatoes.):

Crop Development Centre, University of Saskatchewan, 51 Campus Drive

Saskatoon, Saskatchewan Canada S7N 5A8

Do you wish this variety to be added to the "OECD List of Cultivars"? Unless there are exceptional circumstances, CFIA will only add varieties to the OECD List of Cultivars, for which breeder seed is being maintained in Canada. (Composite canola varieties are not added to the OECD list). Failure to complete the appropriate box will result in the variety not being added to the OECD list. If you are requesting addition of a hybrid, please supply descriptions of the inbred lines as well as the hybrid.

Yes

No

As part of your obligation for the OECD listing of a variety, upon request, you must supply a description and standard sample of the variety to official OECD certifying agencies.

**Canadian  
Representative**

Name and address of Canadian representative (If the applicant is not the breeder or owner of the variety, a signed statement is required from the breeder or owner authorizing representation):

Telephone #: \_\_\_\_\_ Facsimile #: \_\_\_\_\_

E-mail address: \_\_\_\_\_

**Canadian  
Distributor**

Name and address of Canadian distributor(s) if different from Canadian representative:

Saskatchewan Pulse Growers

310-111 Research Drive, Saskatoon, SK S7N 3R2

Telephone 306-668-5556

Fax 306-668-5557

**Name of  
Recommending  
Committee(s)**

Prairie Registration Recommending Committee for Grain - Special Crops Sub-committee

Year support was granted: 2004

It is the responsibility of the applicant to include a copy of the letter or motion of support, as well as the experimental data used by the recommending committee to support the variety.

**Reference  
Sample**

For details on procedures for submitting reference samples, please see Section II 5.9 and Appendix II of the *Procedures for the Registration of Crop Varieties in Canada*.

**Contract  
Registration**

The submission of the proposed quality control system manual for the variety is required under paragraph 68(2)(c) of the *Seeds Regulations*. (See Appendix VI of the *Procedures for the Registration of Crop Varieties in Canada* for more information).

As registrant, I agree that once the variety is registered, upon request, I will provide the Registrar with information relating to the distribution, use and disposition of any seed of the variety or any progeny thereof, and acknowledge that I am responsible for any seed or progeny that is not properly disposed of or accounted for.

Type or print name	Title
Signature	Date

**Sign above ONLY if you are applying for contract registration**

**ALL  
APPLICATIONS  
MUST BE  
SIGNED HERE**

I certify that the information given in this application form is correct, including that the reference sample is properly drawn and is representative of the variety and meets the purity and germination requirements.

Application completed by: Albert Vandenberg  
Type or print name

	March 24, 2004
Signature of applicant	Date

Crop Development Centre, Univ. of Sask.

**NOTE:**

- (i) **The applicant must be a permanent resident in Canada.**
- (ii) **The applicant need not be the breeder or owner of the variety. Unless otherwise specified, once a variety is registered, the applicant is considered to be the registrant. Thus, the applicant/registrant must be in a position to accept full responsibility for compliance with all terms and conditions of a restricted registration.**
- (iii) **For foreign bred varieties, all correspondence with respect to the registration of this variety will be addressed to the Canadian representative.**
- (v) **The submission of false or misleading information will result in refusal of registration or in subsequent cancellation.**

**APPLICATION CHECKLIST**

A complete application package for registration of a variety must be submitted by the applicant, and will include the following:

Please refer to the relevant sections of the *Procedures for the Registration of Crop Varieties in Canada* before submitting application.

1. **Completed Variety Registration Application Form with original signatures on page 1 and page 4.**
2. **Properly sealed and tagged legal reference sample (see Appendix II and Section II.5.9), for potato varieties include slides (see Section II.5.10)**
3. **Description of Variety (see Section II.5.4)**
4. **Appropriate Registration Fees (see Appendix IX)**
5. **Authorization letter from breeder (if applicable) (see Sections II.5 h) and j))**
6. **Recommending Committee support and experimental data (see Section II.5 e) and f))**
7. **Data to substantiate claims (if applicable) (see Section II.5.4 f))**
8. **Kernel description for wheat and triticale (see Section II.5 d))**
9. **Notarized affidavits for PNT's (see Section II.5.6)**
10. **Quality Control System -for contract registration (see Appendix VI)**

**Fee Submission for Variety Registration**

**A separate Fee Submission Form must be used and included in each application package**

**To be completed by Applicant: (Payment must be made in Canadian funds. No Goods and Services Tax applies.)**

**Variety:** (1145-3-6) CDC Rouleau  
**Crop Kind:** Lentil

	Cost	Project code
Application for permanent registration (national, regional, contract)	\$875	3792
Application for interim registration	\$200	3794
Annual renewal of interim registration	\$100	3800
Reinstatement of suspended or canceled registration	\$200	3796
Amending a variety name	\$200	3798

**By Cheque or Money Order**

Cheque                       Money Order

Cheques and money orders must be made payable to the Receiver General for Canada. Please ensure that all cheques can be drawn from a Canadian bank.

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**By Credit Card**

Visa                      Card Holder's Name: \_\_\_\_\_  
Please print

Master Card              Company Name: \_\_\_\_\_ Telephone #: (306 ) \_\_\_\_\_

American Express        Card Number: \_\_\_\_\_ / \_\_\_\_\_  
Expiry date

Signature of Card Holder: \_\_\_\_\_

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**By Direct Wire Transfer (AAFC Research Centres only)**

\_\_\_\_\_ Name and location of Research Centre

\_\_\_\_\_ Telephone #: (    ) \_\_\_\_\_

\_\_\_\_\_ Print name of finance contact              IS Org. Code: \_\_\_\_\_

\_\_\_\_\_ Signature of finance contact              IS Ref. Code: \_\_\_\_\_

**NOTE: Once review of an application has been initiated, no refund will be issued.**

**Areas in grey are for office use only**

Applicant: _____	Reference #: _____
Date fee received: _____	VARIETY REGISTRATION OFFICE

200500304

**Exhibit C**

**Objective Description of CDC Rouleau**

An Objective Description of CDC Rouleau is attached.

CDC Rouleau

U.S. DEPARTMENT OF AGRICULTURE  
EXHIBIT C  
AGRICULTURAL MARKETING SERVICE  
SCIENCE & TECHNOLOGY DIVISION  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MARYLAND 20705

(Lentil)

OBJECTIVE DESCRIPTION OF VARIETY  
LENTIL (*Lens culinaris* Medik.)

NAME OF APPLICANT(S) CROP Development Centre University of Saskatchewan	FOR OFFICIAL USE ONLY
	PVPO NUMBER 200500304
	VARIETY NAME
ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) 51 Campus Drive Saskatoon, SK. S7N 5A8	TEMPORARY OR EXPERIMENTAL DESIGNATION

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g.    or   ) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 25 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: Royal Horticultural Society  
Please answer all questions for your variety; lack of response may delay progress of your application.

1. MATURITY:

Relative Maturity: 1=Early 2=Medium 3=Late

Days from Planting to Harvest.

Days from Planting to Harvest of the Check Variety. Name of the Check Variety = CDC Blaze

2. PLANT HABIT:

Type: 1=Determinate 2=Intermediate 3=Indeterminate

Plant Height in centimeters.

Plant Height of the Check Variety. Name of the Check Variety = CDC Blaze

Pod Position: 1=Low (lower pods touching the soil surface)  
2=High (lower pods not touching the soil surface)  
3=Scattered (not concentrated high or low)

Adaptability to machine harvest: 1=Adapted 2=Not Adapted

Lodging Resistance: 1=Good 2=Fair 3=Poor

3. LEAFLET MORPHOLOGY:

Leaflet Texture: 1=Smooth 2=Wrinkled

Leaflet Surface: 1=Dull 2=Glossy 3=Semiglossy 4=Variable

Relative Size: 1=Small 2=Medium 3=Large

Leaflet Shape: 1=Ovate 2=Lanceolate 3=Deltoid 4=Cordate 5=Rhomboid

Apex of Leaflet: 1=Acute 2=Acuminate 3=Cuspidate 4=Obtuse

Base of Leaflet: 1=Obtuse 2=Oblique 3=Cordate 4=Cuneate 5=Attenuate

200500304

4. FLOWER:

- 6 Color of Standard: 1=White 2=Cream 3=Pink 4=Blue 5=Purple 6=White/Blue 7=Other = \_\_\_\_\_
- 6 Color of Wings: 1=White 2=Cream 3=Pink 4=Blue 5=Purple 6=White/Blue 7=Other = \_\_\_\_\_
- 6 Color of Keel: 1=White 2=Cream 3=Pink 4=Blue 5=Purple 6=White/Blue 7=Other = \_\_\_\_\_
- 56 Number of Days to 50 Percent Bloom.

5. POD MORPHOLOGY:

- |                          |                                     |                                     |   |  |
|--------------------------|-------------------------------------|-------------------------------------|---|--|
| Green                    | Mature                              |                                     |   |  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Color Pattern:                      | 1=Solid 2=Striped 3=Blotched 4=Mottled 5=Other = _____        |  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Primary Color:                      | 1=Purple 2=Red 3=Green 4=Yellow 5=Tan 6=Brown 7=Other = _____ |  |
| <input type="checkbox"/> | <input type="checkbox"/>            | Color Modifier:                     | 1=Light 2=Light Medium 3=Medium 4=Medium Dark 5=Dark          |  |
| <input type="checkbox"/> | <input type="checkbox"/>            | Secondary Color:                    | 1=Purple 2=Red 3=Green 4=Yellow 5=Tan 6=Brown 7=Other = _____ |  |
| <input type="checkbox"/> | <input type="checkbox"/>            | Cross Section Shape:                | 1=Flat 2=Pear 3=Round 4=Figure-8                              |  |
| <input type="checkbox"/> | <input type="checkbox"/>            | Pod Curvature:                      | 1=Straight 2=Slightly Curved 3=Curved 4=Recurved              |  |
| <input type="checkbox"/> | <input type="checkbox"/>            | Pod Beak Orientation:               | 1=Straight 2=Curved Upward 3=Curved Downward 4=Variable       |  |
| <input type="checkbox"/> | <input type="checkbox"/>            | Pod Constrictions:                  | 1=None 2=Slight 3=Deep  |  |
| <input type="checkbox"/> | <input type="checkbox"/>            | Average Beak Length in millimeters. |   |  |
| <input type="checkbox"/> | <input type="checkbox"/>            | Average Number of Seeds per Pod.    |   |  |

6. SEED COLOR:

- 2 Seed Luster: 1=Shiny 2=Dull 3=Semishiny 4=Variable
- 1 1=Monochrome 2=Polychrome
- 1 2 Primary Color: 1=White 2=Yellow 3=Beige 4=Tan 5=Brown 6=Pink 7=red 8=Purple 9=Blue 10=Black 11=Green 12=Other = Gray
- Secondary Color: 1=White 2=Yellow 3=Buff 4=Tan 5=Brown 6=Pink 7=red 8=Purple 9=Blue 10=Black 11=Green 12=Other = \_\_\_\_\_
- Seed Fleck Color: 1=White 2=Yellow 3=Buff 4=Tan 5=Brown 6=Pink 7=red 8=Purple 9=Blue 10=Black 11=Green 12=Other = \_\_\_\_\_
- Seedcoat Color Pattern: 1=Solid 2=Splashed 3=Mottled 4=Striped 5=Flecked 6=Dotted
- Hilum Color: 1=White 2=Yellow 3=Buff 4=Tan 5=Brown 6=Pink 7=red 8=Purple 9=Blue 10=Black 11=Green 12=Other = \_\_\_\_\_
- Cotyledon Color: 1=Yellow 2=Orange 3=Red 4=Yellow/Orange 5=red/Orange

7. SEED SHAPE AND WEIGHT:

- 1 Shape: 1=Round 2=Oval 3=Cuboid 4=Kidney 5=Truncate/Fastigiate
- 4.2 Dry Seed Weight in Grams per 100 Seeds (adjusted to 12% moisture)



200500304

8. ANTHOCYANIN PIGMENTATION: 1=Absent 2=Present

- 2 Flowers
- Stems
- Pods
- Seeds
- Leaves
- Petioles
- Peduncles
- Nodes

9. DISEASE or PEST REACTION: 1=Susceptible 2=Resistant 3=Tolerant 4=Avoidance 0=Not Tested

(Give the common name (CN), scientific name (SN), and race/biotype/pathotype (R), where applicable)

- 2 Anthracnose (*Colletotrichum* spp.) Race Ct 1
- 2 Ascochyta (*Ascochyta* *pisi*)
- 0 Fusarium (*Fusarium* *solanii*)
- 0 Pythium (*Pythium* *ultimum*)
- 0 Pea Enation Mosaic Virus
- 0 White Mold (*Sclerotinia* *sclerotiorum*)
- CN \_\_\_\_\_ SN \_\_\_\_\_ R \_\_\_\_\_
- CN \_\_\_\_\_ SN \_\_\_\_\_ R \_\_\_\_\_
- CN \_\_\_\_\_ SN \_\_\_\_\_ R \_\_\_\_\_
- CN \_\_\_\_\_ SN \_\_\_\_\_ R \_\_\_\_\_
- CN \_\_\_\_\_ SN \_\_\_\_\_ R \_\_\_\_\_
- CN \_\_\_\_\_ SN \_\_\_\_\_ R \_\_\_\_\_
- CN \_\_\_\_\_ SN \_\_\_\_\_ R \_\_\_\_\_
- CN \_\_\_\_\_ SN \_\_\_\_\_ R \_\_\_\_\_
- CN \_\_\_\_\_ SN \_\_\_\_\_ R \_\_\_\_\_
- CN \_\_\_\_\_ SN \_\_\_\_\_ R \_\_\_\_\_
- CN \_\_\_\_\_ SN \_\_\_\_\_ R \_\_\_\_\_
- CN \_\_\_\_\_ SN \_\_\_\_\_ R \_\_\_\_\_
- Weevils
- CN \_\_\_\_\_ SN \_\_\_\_\_ R \_\_\_\_\_
- CN \_\_\_\_\_ SN \_\_\_\_\_ R \_\_\_\_\_

10. PHYSIOLOGICAL STRESS REACTION: 1=Susceptible 2=Resistant 3=Tolerant 4=Avoidance 0=Not Tested

- 0 Heat
- 0 Cold
- 0 Drought
- 0 Air Pollution

11. COMMENTS:

A very low frequency of yellow cotyledon seeds were observed during seed increase:

Breeder Seed = 1:20,000

Select (Foundation in USA) = 1:2000

Foundation (Registered in USA) = 1:1000

**Exhibit D****Additional Description of the Variety**

Attached are:

- i. Statistical tables from the PRRCG's 2002 Lentil Co-operative Trial in Western Canada.
- ii. Statistical tables from the PRRCG's 2003 Lentil Co-operative Trial in Western Canada.
- iii. Letter of 'Names Cleared'

Table 1. Agronomic performance summary for entries in the 2002 Lentil Co-operative Trial "A" in western Canada

Market class (MC)	Line	Entry	Years in trial	Cot. colour	Seed coat	Yield		Days to flower	% of maturity	Height (cm)	Lodging (1-9)	Seed weight g/1000	% seed over >1284	Seed Coat Colour (1-6)	Field disease ratings	
						kg/ha	% of MC check								Ascochyta (0-11)	Anthraxnose (0-11)
Medium green	CDC Vantage	6	6	Y	G	920	100	58	103	35	2.4	61	95	3.8	2.1	2.4
Medium green	1038-L-18	8	3	Y	G	1146	125	57	103	37	1.8	60	97	4.0	2.7	2.9
Medium green	1207d-13	28	1	Y	G	1184	129	57	103	37	1.2	52	95	3.4	2.0	2.7
Medium green	1208d-35	29	1	Y	G	1160	126	57	101	37	1.5	52	96	4.2	2.3	2.9
Medium green	1211-41	30	1	Y	G	1131	123	58	109	38	1.7	55	96	4.0	1.3	3.1
Medium green	1211m-16	31	1	Y	G	1187	127	57	106	37	1.3	55	95	4.2	2.0	2.6
Medium green	1162-27	32	1	Y	G	1099	119	58	108	37	1.5	52	95	3.8	1.8	2.5
Medium green	1159-5-11	35	2	Y	G	1209	131	55	101	36	1.7	55	96	4.6	1.0	2.4
Medium green	1170s-15	36	1	Y	G	1177	128	58	105	34	1.6	56	93	4.2	2.3	2.8
Small green	CDC Illustone	2	8	Y	G	986	100	55	102	33	1.9	43	76	4.6	1.6	3.5
Small green	1066-E-4	5	3	Y	G	1086	111	56	98	35	2.6	38	54	3.8	1.7	2.3
Small green	1153-11	27	1	Y	G	1142	116	58	100	34	2.0	41	80	4.4	2.0	2.4
Small green	1134-4-17	33	2	Y	G	971	98	57	106	32	1.8	39	55	4.2	2.2	2.6
Small green	1134-4-27	34	2	Y	G	1021	104	56	97	33	2.0	44	85	4.2	2.3	3.0
Small red	Crimson	1	5	R	B	644	100	55	94	29	3.2	41	70	2.8	2.8	3.6
Small red	CDC Robin	4	5	R	B	879	137	55	100	34	1.2	33	13	2.0	2.0	2.5
Small red	CDC Blaze	7	4	R	B	803	125	55	95	32	1.8	40	68	2.6	2.6	3.5
Small red	1193-2-21	9	1	R	B	1138	177	56	97	32	1.3	36	27	2.4	2.4	3.8
Small red	1193-6-10	10	1	R	B	982	152	55	100	34	2.3	35	27	1.7	1.7	3.3
Small red	1194-3	11	1	R	B	1163	181	58	104	37	0.7	35	40	2.0	2.0	2.2
Small red	1218d-3	12	1	R	B	1085	168	55	97	36	2.3	38	46	2.3	2.3	2.4
Small red	1190s-10	13	1	R	B	1105	172	56	97	34	1.6	37	60	2.9	2.9	3.2
Small red	1218d-13	14	1	R	B	1202	187	57	103	37	2.2	37	39	1.6	1.6	2.1
Small red	1110-13RY-5	15	2	R	B	1094	170	59	103	32	2.7	39	68	1.4	1.4	2.6
Small red	1218d-18	16	1	R	B	1144	178	57	101	34	1.6	41	68	1.9	1.9	3.1
Small red	1245s-7	17	1	R	B	965	150	56	105	33	2.2	42	83	2.3	2.3	2.9
Small red	1254s-16	18	1	R	B	1183	184	57	104	36	1.4	49	90	2.1	2.1	2.5
Small red	1266s-24	19	1	R	G	1116	173	56	103	35	2.3	46	92	1.7	1.7	3.3
Small red	1254s-1	20	2	R	B	1154	179	57	102	35	2.2	47	89	1.6	1.6	2.7
Small red	1145-3-6	21	2	R	B	1178	180	57	105	36	1.8	42	73	2.8	2.8	3.1
Small red	1125-1-5	22	2	R	B	1162	183	57	101	38	1.7	38	32	2.0	2.0	2.6
Small red	1119-2-3	23	2	R	B	970	151	55	104	35	2.3	41	66	3.1	3.1	2.5
Small red	1119-2-7	24	2	R	B	827	128	57	106	35	2.7	40	64	2.3	2.3	2.8
Spanish brown	Pardina	3	2	Y	P	604	100	53	99	29	3.6	45	68	2.4	2.4	4.0
Small green	901-1-26RS	26	1	Y	BM	1206	200	57	106	36	1.4	35	44	1.7	1.7	3.0
Spanish brown	1076-13	25	2	Y	P	970	161	53	102	36	2.0	43	65	33.7	33.7	17.6
CV (%)																
LSD (0.05)																

Lines in bold type are checks for market class. Numbers in [ ] indicate number of sites.  
 Codes for seed characters. Cot/ledon colour: Y-yellow; R - red. Seed coat: G - green; M - dark marbled pattern; B - brown; P - Pardina type.  
 Disease ratings: 0-11 Horsfall-Barratt Scale  
 Lodging scores: 1 - upright; 9 - flat.  
**Seed Coat Colour: 1 - all seed coats green; 5 - all seed coats bleached**

Table 2. Yield performance of entries in the 2002 Lentil Co-operative Trial "A" in western Canada

Market class (MC)	Line	Years in trial	Cot. colour	Seed coat	Yield in kg/ha							Yield % of		
					Geodale	Rosethorn	Scott	Swift	Assinib	Girvin	SPG	Mean	MC check	CDC Milestone
Medium green	CDC Vantage	6	Y	G	1117	602	491	1516	1263	667	764	920	100	93
Medium green	1038-L-18	3	Y	G	1076	1014	580	2103	1587	810	849	1146	125	116
Medium green	1207d-13	1	Y	G	1218	1072	536	2159	1993	539	771	1184	129	120
Medium green	1208d-35	1	Y	G	911	900	549	2208	2097	554	901	1160	126	118
Medium green	1211-41	1	Y	G	1182	959	562	2081	1815	723	796	1131	123	115
Medium green	1211m-16	1	Y	G	1075	875	496	2520	1720	667	818	1167	127	118
Medium green	1162-27	1	Y	G	1233	935	443	2115	1702	485	779	1099	119	111
Medium green	1159-5-11	2	Y	G	1152	853	548	2257	2228	618	809	1209	131	123
Medium green	1170s-15	1	Y	G	1200	987	468	2073	1861	758	895	1177	128	119
Small green	CDC Milestone	8	Y	G	1120	811	448	2204	900	595	823	986	100	100
Small green	1066-E-4	3	Y	G	925	749	491	2211	1610	829	854	1096	111	111
Small green	1153-11	1	Y	G	1308	748	506	2124	1803	620	888	1142	116	116
Small green	1134-4-17	2	Y	G	1226	681	514	1636	1166	424	1148	971	98	98
Small green	1134-4-27	2	Y	G	1204	801	539	1957	1325	455	869	1021	104	104
Small red	Crimson	5	R	B	597	639	440	1257	667	418	489	644	100	65
Small red	CDC Robin	5	R	B	1038	603	491	1558	1174	532	758	879	137	89
Small red	CDC Blaze	4	R	B	819	603	480	1418	1073	538	687	803	125	81
Small red	1193-2-21	1	R	B	1142	842	535	2089	1796	661	897	1138	177	115
Small red	1193-6-10	1	R	B	1052	729	456	1870	1413	544	811	982	152	100
Small red	1194-3	1	R	B	1174	880	498	1905	2086	614	1006	1163	181	118
Small red	1218d-3	1	R	B	983	795	598	2073	1592	745	809	1085	168	110
Small red	1190s-10	1	R	B	994	950	522	2072	1831	554	810	1105	172	112
Small red	1218d-13	1	R	B	992	938	628	2361	1874	570	1051	1202	187	122
Small red	1110-13RY-5	2	R	B	935	569	442	1905	2277	460	1068	1094	170	111
Small red	1218d-18	1	R	B	1102	946	608	2204	1567	620	961	1144	178	116
Small red	1245s-7	1	R	B	980	743	453	1690	1615	592	684	965	150	98
Small red	1254s-16	1	R	B	1182	856	547	2213	1807	639	1036	1183	184	120
Small red	1266s-24	1	R	G	1217	837	586	2370	1168	708	928	1116	173	113
Small red	1254s-1	2	R	B	1367	891	542	1671	1911	797	899	1154	179	117
Small red	1145-3-6	2	R	B	1271	879	561	2382	1506	679	970	1178	183	119
Small red	1125-1-5	2	R	B	1161	1011	506	2059	1692	695	1010	1162	180	118
Small red	1119-2-3	2	R	B	1100	688	570	2009	849	694	876	970	151	98
Small red	1119-2-7	2	R	B	765	657	462	1721	865	680	641	827	128	84
Spanish brown	Pardina	2	Y	P	619	607	480	1166	232	568	555	604	100	61
Small green	901-1-28RS	1	Y	BM	1201	819	590	2327	2038	522	947	1206	200	122
Spanish brown	1076-13	2	Y	P	789	691	545	1841	1680	624	624	970	161	98
Mean					1067	810	520	1981	1543	617	473			
LSD					163	104	47	184	167	92	64			
CV (%)					18.9	15.9	12.1	15.2	12.0	16.9	18.9			

CDC Redberry

Lines in bold type are checks for market class. Numbers in [ ] indicate number of sites.  
 Codes for seed characters. Cotyledon colour: Y-yellow; R-red. Seed coat: G-green; M-dark marbled pattern; B-brown; P-Pardina type.  
 Lodging scores: 1-upright; 9-flat.

Table 3. Yield performance summary of second year entries in the 2001-2002 Lentil Co-operative Trial "A" in western Canada

Year	Location	Yield in kg/ha															
		Small green		Medium green			Crimson		Biese 110-13RY-1294a-1		Small red		Spanish Brown				
		A	A	A	A	B.A	B.A	B.A	A	A	A	A	A	A	A	A	A
2001	CDC Milestones	1845	1088E-4	1134-4-17	1134-4-27	CDC Vantage	1038-L-18	1160-6-11	CDC Roblin	1294a-1	1145-3-6	1125-1-5	1119-2-3	1119-2-7	Pardina	1076-13	
	Goodale	1891	1821	1982	1742	1781	1627	1812	1986	1922	1880	1856	1923	1923	1514	1950	
	Eldora	677	752	661	821	961	799	504	582	957	869	759	710	725	645	795	
	Scott	1373	1405	1198	1860	2101	1798	1189	1049	1174	1131	1185	1302	1160	1241	1324	
	Swift Current	1806	1873	1284	1606	1673	1529	1097	1049	1655	1483	1378	1709	1634	1144	1477	
	Assinboia	2150	1947	2300	1760	1534	1874	1492	1517	1808	1820	2251	2014	1887	1220	2138	
	Bow Island (-0)	878	1102	809	1483	1293	1160	671	893	1041	1276	1093	871	950	571	1197	
	Goodale	1120	925	1226	1204	1076	1152	597	819	935	1271	1161	1100	785	819	789	
	Rosthem	811	749	681	802	1014	853	689	603	569	879	1011	988	657	607	691	
	Scott	448	491	514	491	580	548	440	480	442	542	506	570	462	480	545	
2002	Swift Current	2204	2211	1636	1957	2103	2257	1559	1418	1905	2382	2059	2009	1721	1168	1841	
	Assinboia	900	1810	1166	1263	1587	2226	1174	1073	1811	1503	1692	849	865	292	1880	
	Girvin	585	829	424	455	610	618	418	532	460	678	685	684	680	568	624	
	SPG	823	854	1146	859	848	809	469	687	1088	899	1010	878	841	555	624	
	Mean of 13 sites	1187	1263	1151	1199	1336	1327	870	928	1224	1182	1289	1181	1083	812	1206	
	% CDC Milestones	100	106	97	101	102	112	73	78	103	100	106	99	91	68	102	
	% Crimson							100	114	106	141	148	136	124			
	% Vantage																
	% Pardina																
	Note: Medium green lines were in Coop Trial "B" in 2001																

Table 4. Two year agronomic performance summary for second year entries in the 2000-2001 Lentil Co-operative Trial "A" in western Canada

Market class (MC)	2001 Trial	2002 Trial	Line	Cot. colour	Seed coat	kg/ha	Yield % of MC check	Milestone % of	Days to flower	Days to maturity	Height (cm)	Lodging (1-9)	Seed weight g/1000	% seed over >12/64	Field disease ratings		[1]
															Anthracnose (0-11)	Ascochyta (0-11)	
Small green	A	A	CDC Milestone	Y	G	1187	100	100	56	91	28	2.5	44	75.3	2.0	3.5	
Small green	A	A	1066E-4	Y	G	1263	106	106	58	92	31	2.1	39	46.9	2.0	2.3	
Small green	A	A	1134-4-17	Y	G	1151	97	97	55	90	28	1.8	41	54.7	1.7	2.6	
Small green	A	A	1134-4-27	Y	G	1199	101	101	55	92	29	2.4	48	83.3	3.0	3.0	
Medium green	B	A	CDC Vantage	Y	G	1207	102	102	57	92	33	2.5	63	96.2	1.7	2.4	
Medium green	B	A	1038-L-18	Y	G	1338	111	113	58	86	34	2.1	62	95.7	2.0	2.9	
Medium green	B	A	1159-5-11	Y	G	1327	110	112	58	91	31	1.7	58	98.1	2.7	2.4	
Small red	A	A	Crimson	R	B	870	100	73	55	89	25	3.8	43	68.1	2.0	3.6	
Small red	A	A	CDC Robin	R	B	994	114	84	55	90	29	1.4	35	8.7	2.0	2.5	
Small red	A	A	CDC Blaze	R	B	926	106	78	55	90	28	2.2	42	66.9	2.3	3.5	
Small red	A	A	1110-13RY-5	R	B	1224	141	103	58	92	29	2.8	41	65.1	2.3	2.6	
Small red	A	A	1294s-1	R	B	1182	136	100	57	93	31	2.2	49	88.6	2.3	2.7	
Small red	A	A	1145-3-6	R	B	1280	147	108	58	85	32	1.8	44	76.4	2.3	3.1	
Small red	A	A	1125-1-5	R	B	1269	148	109	57	92	31	1.9	38	29.3	3.0	2.6	
Small red	A	A	1119-2-3	R	B	1181	136	99	55	81	30	2.2	43	65.0	2.0	2.5	
Small red	A	A	1119-2-7	R	B	1083	124	91	56	92	30	3.1	44	69.2	2.7	2.8	
Spanish brown	A	A	Pardina	Y	P	812	100	68	53	88	25	4.0	45	61.8	2.0	4.0	
Spanish brown	A	A	1076-13	Y	P	1206	148	102	53	90	30	2.1	48	79.4	2.0	2.6	

**Table 1. Agronomic performance summary for entries in the 2003 Lentil Registration Recommendation Trial "A" in western Canada**

Market class (MC)	Line	Milestone	Years		Cot. Colour	Seed coat	kg/ha	MC Check	% of	Yield	Milestone	% of	Days to Flower	Maturity	Lodging (1-9)	Seed Weight g/1000	% seed >12/64	plump seed	Field disease ratings	
			In	Trial															Ascocyta (4-6)	Anthracoosa (1-5)
small green	1615	1615	9	9	yellow	green	1615	100	100	100	100	52	94	2.0	38	62	17	1.7	2.9	
small green	1787	1787	4	4	yellow	green	1787	111	111	111	111	53	94	2.0	32	32	12	1.5	2.9	
medium green	1769	1769	4	4	yellow	green	1769	110	110	110	110	53	94	2.0	31	98	14	1.7	3.0	
small green	1720	1720	2	2	yellow	green	1720	106	106	106	106	56	81	2.0	34	55	12	0.9	2.2	
small green	1777	1777	1	1	yellow	green	1777	110	110	110	110	52	98	1.3	37	66	28	1.2	2.7	
red	1895	1895	6	6	red	brown/gray	1895	109	99	89	89	53	80	2.0	35	43	28	1.8	2.4	
red	1285	1285	8	8	red	brown/gray	1285	81	80	80	80	52	95	2.3	28	6	50	1.5	2.6	
red	1469	1469	5	5	red	gray	1469	91	90	90	90	51	93	1.7	37	46	39	1.4	2.7	
red	1577	1577	2	2	red	brown/gray	1577	89	88	88	88	51	93	2.3	31	20	28	1.4	2.7	
red	1816	1816	2	2	red	brown/gray	1816	114	114	114	114	55	92	2.0	29	12	21	1.8	1.6	
red	1521	1521	2	2	red	brown/gray	1521	95	94	94	94	53	94	2.0	34	37	24	1.1	2.4	
red	1767	1767	2	2	red	brown/gray	1767	111	109	109	109	55	94	3.7	32	26	32	1.3	2.4	
red	1899	1899	2	2	red	gray	1899	119	118	118	118	56	93	2.3	36	52	20	1.3	2.8	
red	1909	1909	2	2	red	gray	1909	120	118	118	118	51	94	2.0	47	81	29	1.9	2.8	
red	1771	1771	2	2	red	green-dotted	1771	111	110	110	110	53	94	2.7	41	89	10	1.2	2.4	
red	1781	1781	3	3	red	gray	1781	110	108	108	108	53	93	1.7	42	84	18	1.2	2.0	
red	1837	1837	3	3	red	gray	1837	115	114	114	114	56	95	1.7	36	60	12	1.4	2.8	
red	1803	1803	3	3	red	brown/gray	1803	100	99	99	99	56	94	2.3	32	14	43	1.6	2.7	
red	1869	1869	1	1	red	brown/gray	1869	117	116	116	116	53	92	2.0	29	6	28	1.8	2.8	
red	1715	1715	1	1	red	green-dotted	1715	108	106	106	106	53	95	2.3	39	78	11	1.2	2.6	
red	1840	1840	1	1	red	gray	1840	115	114	114	114	55	94	2.3	33	28	24	1.4	2.4	
red	1692	1692	1	1	red	gray	1692	100	99	99	99	53	93	2.0	39	50	41	1.4	2.8	
red	1881	1881	1	1	red	gray	1881	117	115	115	115	55	95	1.7	45	81	17	1.2	2.8	
red	1892	1892	1	1	red	gray	1892	108	105	105	105	48	94	1.3	47	82	27	1.5	2.0	
red	1802	1802	1	1	red	gray	1802	113	112	112	112	51	96	1.7	42	84	18	1.7	3.0	
red	1612	1612	1	1	red	gray	1612	101	100	100	100	55	95	2.0	33	14	51	1.1	2.7	
red	1708	1708	1	1	red	gray	1708	107	106	106	106	52	93	2.3	39	81	17	1.2	3.1	
red	1371	1371	1	1	red	brown/gray	1371	88	86	86	86	52	93	2.3	30	9	39	1.6	2.8	
red	1632	1632	1	1	red	brown/gray	1632	102	101	101	101	54	94	2.3	32	15	39	1.3	2.4	
red	1647	1647	1	1	red	gray	1647	97	96	96	96	52	93	2.0	35	27	56	1.9	2.7	
red	1544	1544	1	1	red	tan	1544	97	96	96	96	56	98	2.0	34	85	13	1.3	2.5	
red	1396	1396	1	1	red	gray	1396	88	86	86	86	55	98	2.7	34	57	11	1.2	2.3	
red	1548	1548	1	1	red	gray	1548	87	86	86	86	53	94	1.7	32	12	61	1.5	2.1	
Spanish brown	1232	1232	3	3	yellow	gray-dotted	1232	100	78	78	78	50	95	4.0	40	61	40	1.8	2.9	
Spanish brown	1623	1623	3	3	red	gray-marbled	1623	132	101	101	101	49	93	1.7	41	68	38	1.3	2.4	
Spanish brown	1841	1841	2	2	yellow	gray-marbled	1841	133	102	102	102	52	93	2.0	30	14	18	1.1	2.3	

Lines in bold type are checks for market class. Numbers in [ ] indicate number of sites.

Disease ratings: 1 - no symptoms to 5 - highly infected. Anthracnose ratings based on irrigated disease nursery with mixture of Races C10 and C11

Lodging scores: 1 - upright; 9 - flat

Plump seed % based on separation on an orbital sorter adjusted to 50% separation for Robin.

**Table 2. Yield performance of entries in the 2003 Lentil Registration Recommendation Trial "A" in western Canada**

Market	Class (MC)	Line	Years		Seed coat	Colour	GoT	Floral	Rosthem	Rouleau	Kyle	Davidson	Mean	Yield % of	
			In	Trial										MC Check	Milestones
small green	Milestones	9	yellow	green	2188	1887	1428	654	2241	1615	100	100	100	100	
small green	Viceroy	4	yellow	green	2233	1790	1544	749	2728	1797	111	111	111	111	
medium green	1038L-18	4	yellow	green	2149	1481	1733	836	2634	1769	110	110	110	110	
small green	1153-11	2	yellow	green	1630	1405	1681	733	2639	1720	106	106	106	106	
small green	1302M-16	1	yellow	green	2485	1469	1858	923	2145	1777	110	110	110	110	
red	Crimson	6	red	brown/gray	1993	1349	1450	768	2413	1595	100	99	80	80	
red	Robin	6	red	brown/gray	1867	1269	961	421	1878	1285	81	81	80	80	
red	Blaze	5	red	gray	1898	1267	1313	465	2252	1459	91	91	90	90	
red	1193-2-21	2	red	brown/gray	2061	1864	1338	734	2088	1577	89	89	98	98	
red	1194-3	2	red	brown/gray	2241	1730	1697	798	2674	1816	114	114	112	112	
red	1190s-10	2	red	brown/gray	1998	1355	1402	568	2281	1521	95	95	94	94	
red	1218d-13	2	red	brown/gray	2028	1744	1726	744	2591	1787	111	111	109	109	
red	1218d-16	2	red	gray	2166	2023	1619	792	2696	1899	119	119	118	118	
red	1254s-16	2	red	gray	2423	1787	1508	725	3100	1909	120	120	116	116	
red	1266s-24	2	red	green-dotted	2373	1837	1743	762	2311	1771	111	111	110	110	
red	Redberry	3	red	gray	2599	1545	1514	531	2565	1761	110	108	108	108	
red	1145-3-6	3	red	gray	2386	1801	1404	608	2893	1837	115	115	114	114	
red	1125-1-5	3	red	brown/gray	2097	1411	1393	635	2478	1603	100	100	99	99	
red	1194-67	1	red	brown/gray	2241	1821	1574	637	3073	1869	117	117	116	116	
red	1266s-25	1	red	green-dotted	2312	1455	1754	758	2296	1715	108	108	106	106	
red	1283D-10	1	red	gray	2421	1463	1516	662	2818	1840	115	115	114	114	
red	1282D-10	1	red	gray	1897	1510	1634	575	2844	1692	100	100	98	98	
red	1308M-7	1	red	gray	2565	1388	1625	670	2557	1861	117	117	115	115	
red	1308M-8	1	red	gray	1908	1630	1458	707	2759	1692	106	106	105	105	
red	1266S-20	1	red	gray	2351	1607	1615	633	2605	1602	113	113	112	112	
red	1308M-39	1	red	gray	2037	1500	1435	768	2316	1612	101	101	100	100	
red	1243M-1	1	red	gray	2097	1412	1438	796	2798	1708	107	107	106	106	
red	1267M-34	1	red	brown/gray	2176	1336	740	568	2035	1371	86	86	85	85	
red	1267M-86	1	red	brown/gray	2063	1549	1358	667	2621	1632	102	102	101	101	
red	1269D-25	1	red	gray	2055	1457	1127	607	2489	1547	97	97	96	96	
red	1286D-8	1	red	tan	2084	1338	1268	584	2468	1544	97	97	96	96	
red	1286D-3	1	red	gray	2161	1098	1393	588	1771	1396	88	88	86	86	
red	1308M-29	1	red	gray	1835	1368	1221	645	2650	1548	97	97	96	96	
Spanish brown	Fardina	3	yellow	gray-dotted	1785	1459	1478	607	633	1232	100	100	78	78	
Spanish brown	1076-13	3	red	gray-marbled	2237	1505	1317	762	2297	1623	132	132	101	101	
Spanish brown	901-1-26RS	2	yellow	gray-marbled	2381	1191	1314	650	2891	1641	133	133	102	102	
Mean					2150	1523	1471	662	2457	1659			123		
LSD 0.05					155	202	82	71	206						
CV(%)					6.6	16.5	6.6	12.5	10.3						

Lines in bold type are checks for market class.



Table 3. Yield summary for 2 and 3-yr entries in the 2001-03 Lentil Registration Recommendation Trial "A" in western Canada

Year	Location	Yield in kg/ha																		
		Small Green					Small red					Spanish Brown								
		Milestone n(check)	Viceroy	1153-11	Crimson (check)	Robin	Blaze	1193-2-21	1194-3	1190-10	1218-13	1218-18	1254-16	1266-24	Redberry	1145-6	1128-1-6	Pardina (check)	201-1-28-23	1076-13
2001	Goodale	1845	1861		1340	1812	1485								1822	1980	1958	1514		1950
	Elrose	677	762		603	504	450								857	689	759	945		785
	Scott	1373	1405		1268	1189	1049								1074	1131	1185	1241		1324
	Swift Current	1608	1673		1132	1097	948								1129	1483	1378	1144		1477
	Assinibola	2150	1947		1537	1492	1517								1488	1820	2251	1220		2138
	Bow Island	878	1102		922	671	893								1025	1276	1093	571		1197
2002	Floral	823	854	868	488	758	687	897	1006	810	1051	981	1038	928	868	970	1010	555	947	624
	Goodale	1120	925	1308	597	1038	819	1142	1174	984	982	1102	1182	1217	1367	1271	1181	619	1201	789
	Rosthern	811	749	749	638	603	603	842	880	950	938	948	858	837	881	878	1011	507	819	691
	Scott	448	491	506	440	491	480	535	488	522	628	608	547	586	542	581	506	480	590	545
	Swift Current	2204	2211	2124	1257	1558	1418	2088	1905	2072	2361	2204	2213	2370	1871	2382	2059	1166	2327	1841
	Assinibola	900	1610	1803	667	1174	1073	1796	2088	1831	1874	1587	1807	1168	1811	1506	1692	232	2038	1860
	Glavin	585	829	820	418	532	538	661	614	554	570	620	639	706	797	679	695	568	522	624
2003	Floral	2167	2233	1930	1993	1867	1898	2081	2241	1988	2029	2196	2423	2373	2589	2398	2097	1765	2381	2237
	Rosthern	1686	1730	1406	1349	1289	1267	1684	1730	1355	1744	2023	1787	1637	1545	1901	1411	1459	1181	1505
	Rouleau	1428	1544	1691	1450	961	1313	1338	1897	1402	1728	1618	1508	1743	1514	1405	1383	1478	1914	1317
	Kyle	654	749	733	768	421	465	734	738	588	744	792	725	792	531	608	635	607	650	762
	Davidson	2241	2728	2839	2414	1878	2262	2088	2874	2281	2591	2866	3100	2311	2586	2863	2478	834	2681	2287
	2001-2003																			
[18]	Mean	1308	1411		1071	1075	1074								1340	1434	1376	929		1322
	% Milestone	100	108		82	82	82								103	110	105	71		101
	% Crimson				100	100	100								125	134	128	87		123
	% Pardina																	100		142
	2002-2003																			
[12]	Mean	1248	1388	1363	1040	1048	1076	1321	1435	1276	1437	1459	1465	1388	1403	1453	1348	866	1388	1243
	% Milestone	100	111	111	83	84	86	106	115	102	115	117	118	111	112	118	108	69	111	100
	% Crimson				100	101	103	127	138	123	136	140	143	134	135	140	128	83	133	119
	% Pardina																	100	180	143

Numbers in [ ] indicate number of sites.

Table 4. Three year summary of agronomic performance for entries in the 2001-2003 Lentil Registration Recommendation Trial "A" in western Canada

Market class (MC)	Line	Cot. Colour	Seed Coat	kg/ha	Yield % of MC check	Milestone % of	Days to flower	Days to maturity	Plant height cm	Lodging (1-9)	Seed weight g/1000	Plump seed %	% seed over >12/84	2002 Anthracnose		2003 Anthracnose		2002 Ascochyta (0-11)	2003 Ascochyta (1-6)
														(0-11)	(1-5)	(0-11)	(1-5)		
small green	Milestone	yellow	green	1306	100	100	53	91	27	2.1	42	17	71	3.5	2.9	1.6	1.7		
small green	Viceroy	yellow	green	1411	108	108	55	98	30	2.4	35	12	43	2.3	2.9	1.7	1.5		
red	Crimson	red	brown/gray	1071	100	82	54	89	25	3.4	40	25	60	3.6	2.4	2.8	1.8		
red	Robin	red	brown/gray	1075	100	82	53	91	29	1.7	33	60	8	2.5	2.6	2	1.5		
red	Blaze	red	gray	1074	100	82	53	90	28	2.1	40	36	60	3.5	2.7	2.6	1.4		
red	Redberry	red	gray	1340	125	103	55	93	31	2.1	47	18	87	2.7	2.0	1.6	1.2		
red	1145-3-6	red	gray	1434	134	110	56	95	29	1.7	42	12	71	3.1	2.8	2.8	1.4		
red	1125-1-5	red	gray	1376	128	105	56	93	31	2.0	37	43	24	2.6	2.7	2	1.6		
Spanish brown	Pardina	yellow	gray-dotted	929	100	71	51	89	26	4.0	44	40	62	4	2.6	2.4	1.8		
Spanish brown	1076-13	red	gray-marbled	1322	142	101	51	91	30	2.0	46	38	76	2.6	2.4	1.7	1.3		

Lines in bold type are checks for market class. Numbers in [] indicate number of sites.

Disease ratings: 2003: 1 - no symptoms to 5 - highly infected. Anthracnose ratings based on irrigated disease nursery with mixture of Races C10 and C11

Lodging scores: 1 - upright; 9 - flat.

Plump seed % based on separation on an orbital sifter adjusted to 50% separation for Robin.

Table 5. Agronomic performance of 2-yr entries in the 2002-03 Lentil Registration Recommendation Trial "A" in western Canada

Market class (MC)	Line	Cot. Colour	Seed Coat	Yield % of MC		Days to flower	Plant height cm	Lodging (1-9)	Seed weight g/1000 seed	% plump seed >12/84	Anthracnose (0-11)		Ascochyta (0-11)	
				check	kg/ha						[1]	[2]	[3]	[4]
small green	Milestone	yellow	green	100	1248	53	33	2.0	39	17	3.5	2.9	1.6	1.7
small green	Viceroy	yellow	green	111	1388	54	35	2.5	34	14	2.3	2.9	1.7	1.5
small green	1153-11	yellow	green	111	1393	57	34	2.0	37	12	2.4	2.2	2.0	0.9
red	Crimson	red	brown/gray	83	1040	54	28	3.3	38	25	3.6	2.4	2.6	1.8
red	Robin	red	brown/gray	101	1048	53	34	1.4	31	50	2.5	2.6	2.0	1.5
red	Blaze	red	gray	86	1076	52	32	1.9	38	36	3.5	2.7	2.6	1.4
red	1193-2-21	red	brown/gray	127	1321	53	32	1.4	33	28	2.8	2.7	2.4	1.4
red	1194-3	red	brown/gray	138	1435	56	37	1.0	32	21	2.2	1.8	2.0	1.6
red	1190s-10	red	brown/gray	123	1278	54	34	1.6	36	24	3.2	2.4	2.9	1.1
red	1218d-13	red	brown/gray	138	1437	56	37	2.4	34	32	2.1	2.4	1.6	1.3
red	1218d-18	red	gray	140	1459	58	34	1.7	38	20	3.1	2.8	1.9	1.3
red	1254s-16	red	gray	143	1485	53	36	1.5	48	29	2.5	2.6	2.1	1.9
red	1286s-24	red	green-dotted	134	1368	54	36	2.3	43	10	3.3	2.4	1.7	1.2
red	Redberry	red	gray	135	1403	56	35	2.2	44	18	2.7	2.0	1.6	1.2
red	1145-3-6	red	gray	140	1453	57	36	1.8	37	12	3.1	2.8	2.8	1.4
red	1125-1-5	red	gray	129	1346	56	35	1.8	35	43	2.6	2.7	2.0	1.6
Spanish brown	Pardina	yellow	gray-dotted	68	866	52	29	3.7	42	40	4.0	2.6	2.4	1.8
Spanish brown	901-1-28RS	yellow	gray-marbled	111	1366	55	36	1.5	32	38	3.0	2.3	2.3	1.1
Spanish brown	1076-13	red	gray-marbled	143	1243	52	36	2.0	42	18	2.6	2.4	1.7	1.3

Lines in bold type are checks for market class. Numbers in [ ] indicate number of sites.

Disease ratings: 2003: 1 - no symptoms to 5 - highly infected. Anthracnose ratings based on irrigated disease nursery with mixture of Races C10 and C11

2002 ratings based on Horsfall-Barratt scale of 0-11

Lodging scores: 1 - upright; 9 - flat.

Plump seed % based on separation on an orbital sorter adjusted to 50% separation for Robin.

**Table 6. Agronomic performance summary for entries in the 2003 Lentil Registration Recommendation Trial "B" in western Canada**

Market class (MC)	Line	Years in Trial	Yield		Flower	Days to Maturity	Lodging (1-9)	Seed weight g/1000	Seed Diameter Distribution % over 64th screens					Field disease ratings (1-5)	
			MC Check	% of					Milestone	% of	% of	% of	% of	% of	Ascochyta (1-5)
large green	Glamis	8	1129	100	92	55	87	67	0	11	49	88	100	1.5	2.3
large green	Grandora	7	1085	94	86	57	86	74	10	48	83	100		2.0	2.4
large green	Sedley	6	1174	104	85	54	88	76	6	37	79	99	100	1.5	2.3
large green	Plato	5	1185	103	94	55	87	64	0	10	41	76	95	1.7	2.0
large green	1169-67	2	1074	95	87	52	98	70	5	30	66	93	100	1.4	2.1
large green	1186d-5	2	1426	126	116	54	85	67	1	23	65	92	100	1.1	2.3
large green	1202-19	2	1120	99	91	53	87	67	1	17	60	91	100	1.5	2.6
large green	1205m-5	2	1284	114	104	51	83	65	0	14	55	88	100	1.4	2.6
large green	1227e-23	2	1029	91	83	55	87	72	7	40	80	99	100	2.2	2.2
large green	1227e-28	2	1076	95	87	55	88	73	9	42	77	94	100	1.4	2.0
large green	1230d-10	2	1273	113	103	55	87	70	5	37	80	99	100	2.0	1.9
large green	1230d-7	2	1076	95	87	54	88	65	1	22	61	90	100	1.1	2.4
large green	1231e-3	2	1179	104	96	56	87	73	5	32	74	98	100	1.6	2.4
large green	1231e-5	2	1136	101	92	54	87	67	3	28	73	95	100	1.3	2.4
large green	1237e-24	2	1110	98	80	55	87	64	1	15	45	82	98	1.5	2.3
large green	1230d-3	1	1312	116	108	55	86	72	6	36	78	98	100	1.7	2.4
large green	1277D-26	1	1083	96	88	55	95	67	0	1	16	81	92	1.4	2.2
large green	1293M-5	1	974	86	79	54	86	73	8	38	76	99	100	1.8	2.1
large green	1294M-50	1	1023	91	83	55	87	66	0	9	43	83	100	1.2	2.1
large green	1385S-4	1	1294	115	105	53	86	64	0	7	42	83	100	1.8	2.0
medium green	Vantage	9	1251	100	101	51	92	55	0	0	7	46	86	1.7	2.0
medium green	1038L-18	4	1494	119	121	53	92	53	0	0	2	17	67	2.1	2.3
medium green	1140-2-5	3	1207	96	88	56	86	56	0	0	9	48	86	1.7	2.3
medium green	1159-5-11	3	1263	101	102	50	91	53	0	0	12	52	86	1.4	1.9
medium green	1236-8	3	1308	104	106	53	86	60	0	4	28	85	92	1.2	2.8
medium green	1162-27	2	1429	114	116	54	94	58	0	0	9	42	80	1.2	2.0
medium green	1207d-13	2	1484	119	120	53	86	46	0	0	3	32	77	1.3	2.6
medium green	1208d-35	2	1555	124	126	53	83	47	0	0	3	27	73	1.3	2.2
medium green	1211-48	2	1236	99	100	54	86	61	0	0	16	60	89	1.3	2.0
medium green	1211m-18	2	1568	125	127	52	93	48	0	0	6	37	81	1.3	2.0
medium green	1237e-1	2	1273	102	103	53	86	56	0	0	6	40	81	0.9	2.1
medium green	1294M-23	1	1168	93	85	52	86	53	0	0	1	21	69	1.6	2.6
medium green	1175s-12	1	1430	114	116	53	84	58	0	0	5	30	72	1.4	2.1
medium green	1280D-13	1	1272	102	103	54	84	54	0	0	11	37	73	1.4	2.0
small green	Milestone	9	1233	100	100	52	90	38	0	0	0	0	17	1.6	2.5
small green	1265D-1	1	1223	99	99	55	94	40	0	0	0	1	16	1.7	2.0

Lines in bold type are checks for market class. Numbers in [ ] indicate number of sites.  
 Disease ratings: 1 - no symptoms to 5 - highly infected. Anthracnose ratings based on irrigated disease nursery with mixture of Races C10 and C11  
 Lodging scores: 1 - upright; 9 - flat.  
 Plump seed % based on separation on an orbital sorter adjusted to 50% separation for Robin.

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Table 7. Yield performance of entries in the 2003 Lentil Registration Recommendation Trial "B" in western Canada										
Market		Years	Yield in kg/ha					Yield % of		
class (MC)	Line	in Trial	Floral	Elrose	Kyle	Davidson	Rouleau	Mean	MC Check	Milestone
large green	<b>Glamis</b>	8	1555	594	595	1739	1161	1129	100	92
large green	<b>Grandora</b>	7	1517	626	562	1283	1336	1065	94	86
large green	<b>Sedley</b>	6	1485	523	615	1995	1251	1174	104	95
large green	<b>Plato</b>	5	1260	639	833	1654	1438	1165	103	94
large green	<b>1159-67</b>	2	1198	501	518	1835	1318	1074	95	87
large green	<b>1196d-5</b>	2	1477	733	831	2734	1355	1426	126	116
large green	<b>1202-19</b>	2	1255	556	703	1714	1372	1120	99	91
large green	<b>1205m-5</b>	2	1460	645	706	2217	1393	1284	114	104
large green	<b>1227s-23</b>	2	1526	543	543	1263	1272	1029	91	83
large green	<b>1227s-28</b>	2	1418	645	580	1446	1289	1076	95	87
large green	<b>1230d-10</b>	2	1649	557	746	2063	1351	1273	113	103
large green	<b>1230d-7</b>	2	1413	598	629	1495	1246	1076	95	87
large green	<b>1231s-3</b>	2	1460	595	557	1959	1326	1179	104	96
large green	<b>1231s-5</b>	2	1528	627	602	1718	1203	1136	101	92
large green	<b>1237s-24</b>	2	1635	694	629	1264	1328	1110	98	90
large green	<b>1230d-3</b>	1	1689	747	790	1933	1399	1312	116	106
large green	<b>1277D-26</b>	1	1706	496	455	1898	860	1083	96	88
large green	<b>1293M-5</b>	1	1292	459	497	1466	1157	974	86	79
large green	<b>1294M-50</b>	1	1236	548	606	1534	1193	1023	91	83
large green	<b>1385S-4</b>	1	1716	567	730	2088	1367	1294	115	105
medium green	<b>Vantage</b>	9	1630	459	816	1877	1472	1251	100	101
medium green	<b>1038L-18</b>	4	1717	627	831	2806	1489	1494	119	121
medium green	<b>1140-2-5</b>	3	1384	618	763	1892	1376	1207	96	98
medium green	<b>1159-5-11</b>	3	1487	475	636	2724	992	1263	101	102
medium green	<b>1236-8</b>	3	1552	703	750	2225	1301	1306	104	106
medium green	<b>1162-27</b>	2	1815	717	801	2186	1625	1429	114	116
medium green	<b>1207d-13</b>	2	1630	590	950	2686	1564	1484	119	120
medium green	<b>1208d-35</b>	2	1869	699	825	2768	1614	1555	124	126
medium green	<b>1211-45</b>	2	1337	706	837	1915	1386	1236	99	100
medium green	<b>1211m-16</b>	2	1924	735	924	2686	1569	1568	125	127
medium green	<b>1237s-1</b>	2	1513	641	772	1999	1439	1273	102	103
medium green	<b>1294M-23</b>	1	1474	524	694	1934	1212	1168	93	95
medium green	<b>1175s-12</b>	1	1709	629	774	2415	1623	1430	114	116
medium green	<b>1280D-13</b>	1	1509	614	738	2232	1267	1272	102	103
small green	<b>Milestone</b>	9	1698	407	697	2181	1184	1233	100	100
small green	<b>1285D-1</b>	1	1468	623	856	1788	1380	1223	99	99
	<b>Mean</b>		1533	602	705	1989	1336	1233		
	<b>LSD 0.05</b>		145	56	82	254	62			
	<b>CV(%)</b>		11.6	11.6	14.5	16.0	5.6			
Lines in bold type are checks for market class.										

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Table 8. Yield performance summary of 3-yr and 2-yr green lentil entries in the 2001-2003 Lentil Registration Recommendation Trial "B" in western Canada

Year	Location	Grandora		Sedley		Yield in kg/ha										Small green														
		Giamis (check)	Ratio	Giamis (check)	Ratio	11984-6	1202-19	1285m-5	1227-23	1227-28	12304-10	12304-7	1231-3	1231-5	1237-24		Vantage (check)	1038L-18	1140-26	1159-5-11	1236-8	1162-27	12074-13	1284-35	1211-45	1211m-16	1237-1	Milestone		
2001	Elrose	723	874	581	820											821	981	796	789	820										722
[9]	Goodale	1375	1513	984	1727											1742	1781	1844	1827	1528										1750
	Scott	1817	1811	1408	1845											1850	2101	1851	1798	1804										2014
	Swift Current	743	884	989	1012											1808	1679	1809	1529	1743										1729
	Assinibola	984	1207	1812	1526											1760	1534	1438	1874	1731										1989
	Bow Island	1308	1483	1086	1529											1463	1283	1030	1180	1253										1039
2002	Floral	1854	1800	1480	1946	1923	1948	1702	1800	1784	1797	2292	1666	1884	1624	1781	784	849	1940	809	1464	779	771	901	1477	818	1610	1610	892	
[5]	Rosethorn	882	857	758	885	948	1179	1124	1081	1232	1046	1128	1138	797	1054	1010	602	1014	1075	853	1023	835	1073	900	1038	875	1010	1020	1020	
	Scott	602	431	434	673	447	508	569	588	522	527	631	573	535	524	489	491	580	508	548	586	443	536	578	523	496	811	622	622	
	Swift Current	1850	1862	1964	2132	2157	2691	2183	2275	2240	2235	2071	2251	2080	2081	1785	1518	2103	2350	2257	2331	2115	2159	2208	2047	2520	2527	1864	1864	
	Assinibola	635	680	1349	1216	1408	1138	1436	1181	1100	1265	1469	1226	1193	907	925	1263	1587	1578	2226	1905	1702	1993	2097	1423	1720	1709	679	679	
2003	Floral	1555	1517	1485	1260	1198	1477	1255	1480	1526	1418	1649	1413	1480	1528	1635	1630	1717	1364	1487	1552	1815	1630	1869	1337	1924	1513	1698	1698	
[5]	Elrose	594	628	523	639	501	733	556	645	543	645	557	596	595	627	684	459	627	618	475	703	717	590	699	706	735	841	407	407	
	Rouleau	1181	1336	1251	1438	1218	1355	1372	1383	1272	1289	1351	1246	1326	1203	1328	1472	1489	1376	982	1301	1625	1564	1614	1388	1569	1439	1163	1163	
	Kyle	595	562	615	833	518	831	703	708	543	580	746	629	557	602	629	816	831	763	638	750	801	950	825	837	924	772	697	697	
	Davidson	1739	1338	1251	1438	1835	2734	1714	2217	1263	1446	2083	1495	1859	1718	1264	1877	2808	1882	2724	2225	2186	2686	2788	1915	2086	1898	2181	2181	
2001-2003 Mean		1139	1130	1108	1308											1280	1438	1378	1382	1420									1278	
[16]	% Giamis	100	89	97	115											110	125	120	119	124									111	
	% Vantage	90	80	88	104											100	114	109	108	113									101	
	% Milestone	89	88	87	102											89	112	108	107	111									100	
2002-2003 Mean		1127	1061	1109	1246	1225	1458	1261	1333	1201	1221	1396	1224	1237	1188	1154	1091	1360	1348	1301	1384	1312	1365	1446	1269	1427	1383	1122	1122	
[10]	% Giamis	100	94	98	111	109	129	112	116	107	108	124	109	110	105	102	87	121	120	115	123	116	124	128	113	127	123	100	100	
	% Vantage	103	87	102	114	112	134	116	122	110	112	128	112	113	109	106	100	125	124	119	127	120	128	133	116	131	127	103	103	
	% Milestone	100	85	99	111	109	130	112	119	107	109	124	109	110	106	103	87	121	120	116	123	117	124	128	113	127	123	100	100	

Numbers in [ ] indicate number of sites.

Table 8. Three year summary of agronomic performance for entries in the 2001-2003 Lentil Registration Recommendation Trial "B" in western Canada

Market class	Yield		Days to flower	Plant height cm	Lodging (1-5)	Seed weight g/1000	Seed Diameter Distribution				Seed coat colour (1-5)	Ascochyta		Anthracnose		
	kg/ha	% of Glamis					% of Milestone	% of Maturity	>18	>17		>16	>15	2002	2003	2002
large green	1139	100	56	37	1.8	70	0	10	56	69	100	2.5	2.0	1.5	2.1	2.3
large green	1130	99	59	38	2.0	76	4	37	82	96	100	2.5	2.0	2.0	2.0	2.4
large green	1108	97	56	36	2.0	80	3	32	79	94	100	3.8	1.5	1.5	3.3	2.3
large green	1308	115	58	38	2.3	71	0	13	58	85	100	3.8	1.3	1.7	1.9	2.0
medium green	1260	111	55	37	1.5	80	0	2	20	39	86	3.8	2.1	1.7	2.4	2.0
medium green	1436	126	56	33	2.1	59	0	0	1	12	90	4.0	2.7	2.1	2.9	2.3
medium green	1378	121	57	36	2.1	60	0	0	4	27	100	3.0	1.8	1.7	2.7	2.3
medium green	1362	120	53	31	1.5	56	0	0	0	9	88	4.6	1.0	1.4	2.4	1.9
medium green	1420	125	57	37	1.8	63	0	3	27	68	100	3.8	1.7	1.2	2.3	2.6
small green	1278	112	55	32	2.0	42	0	0	0	0	17	64	4.8	2.2	1.6	2.5

Lines in bold type are checks for market class. Numbers in [] indicate number of sites.

Disease ratings: 2003: 1 - no symptoms to 5 - highly infected. Anthracnose ratings based on irrigated disease nursery with mixture of Races C10 and C11

2002 ratings based on Horsfall-Barratt scale of 0-11

Lodging scores: 1 - upright; 9 - flat.

Colour scores for 2002 were visual ratings of seed coat colour where 1 = none and 5 = 100% discoloured (bleached and/or darkened)

Table 10. Two year summary of agronomic performance for entries in the 2002-2003 Lentil Registration Recommendation Trial "B" in western Canada

Market class	Line	kg/ha	Yield % of Glamis	% of Milestone	Days to flower	Height (cm)	Lodging (1-9)	Seed weight g/1000	Seed diameter distribution			Seed coat colour (1-5)	Ascochyta		Anthracnose				
									>18	>17	>16		2002 (0-11)	2003 (1-8)	2002 (0-11)	2003 (1-5)			
large green	Glamis	1127	100	99	57	35	1.8	89	0	7	57	91	100	2.5	2.0	1.5	2.1	2.3	
large green	Grandora	1081	94	93	60	38	2.0	73	6	30	83	98	100	2.5	2.0	2.0	2.0	2.4	
large green	Sadley	1109	98	103	58	101	2.0	76	4	23	78	86	100	3.8	1.5	1.5	3.3	2.3	
large green	Plato	1246	111	110	58	102	2.0	88	0	6	54	85	97	3.8	1.3	1.7	1.9	2.0	
large green	1159-67	1200	106	105	58	103	1.5	86	3	18	65	92	100	2.8	1.7	1.4	2.7	2.1	
large green	1196d-5	1453	129	127	58	100	2.0	88	0	14	69	82	99	2.5	1.8	1.1	2.3	2.3	
large green	1202-19	1238	110	108	58	102	2.1	88	1	11	63	91	100	3.0	1.8	1.5	2.7	2.6	
large green	1205m-5	1325	118	116	57	98	1.5	86	0	9	59	89	99	3.8	2.7	1.4	3.3	2.8	
large green	1227a-23	1172	104	103	59	102	1.6	74	4	25	81	98	100	3.8	1.3	2.2	2.3	2.2	
large green	1227b-28	1197	108	105	59	103	2.0	73	5	26	79	94	99	3.3	2.0	1.4	2.3	2.0	
large green	1230d-10	1375	122	120	59	102	1.7	72	3	23	82	98	100	3.5	1.3	2.0	2.7	1.9	
large green	1230d-7	1199	106	105	59	102	1.9	67	1	13	65	90	100	2.8	2.2	1.1	2.0	2.4	
large green	1231s-3	1227	109	107	60	102	1.5	73	3	20	74	96	100	2.8	2.2	1.6	3.0	2.4	
large green	1231s-5	1178	105	103	59	102	1.8	71	2	17	75	95	99	3.3	2.5	1.3	3.1	2.4	
large green	1237s-24	1147	102	100	59	102	2.0	85	0	9	47	82	98	2.3	1.3	1.5	2.3	2.3	
medium green	Vantage	1118	89	88	58	103	2.3	57	na	na	na	na	na	90	3.8	2.1	1.7	2.4	2.0
medium green	1038-L-18	1383	123	121	57	99	1.6	89	na	na	na	na	na	83	4.0	2.7	2.1	2.9	2.3
medium green	1140-2-5	1325	118	118	80	102	1.9	58	0	18	55	89	98	3.0	1.8	1.7	2.7	2.3	
medium green	1159-5-11	1240	110	109	55	98	1.6	54	na	na	na	na	na	98	4.8	1.0	1.4	2.4	1.9
medium green	1238-8	1371	122	120	58	99	1.4	68	0	30	66	94	99	3.8	1.7	1.2	2.3	2.6	
medium green	1162-27	1331	118	117	58	103	1.8	60	na	na	na	na	na	98	3.8	1.8	1.2	2.5	2.0
medium green	1207d-13	1410	125	123	57	101	1.3	80	na	na	na	na	na	84	3.4	2.0	1.3	2.7	2.6
medium green	1208d-35	1464	130	128	57	98	1.7	48	na	na	na	na	na	82	4.2	2.3	1.3	2.9	2.2
medium green	1211-45	1284	112	111	58	99	1.8	82	0	26	68	92	99	3.3	2.5	1.3	1.8	2.0	
medium green	1211m-16	1450	129	127	57	102	1.2	61	na	na	na	na	na	86	4.2	2.0	1.3	2.8	2.0
medium green	1237s-1	1365	121	119	58	100	1.8	88	0	10	46	66	98	4.3	1.5	0.9	2.3	2.1	
small green	Milestone	1122	100	100	63	95	1.6	39	0	0	0	0	0	18	4.2	2.2	1.6	2.6	2.5

Lines in bold type are checks for market class. Numbers in [ ] indicate number of sites.

Disease ratings: 2003: 1 - no symptoms to 5 - highly infected. Anthracnose ratings based on irrigated disease nursery with mixture of Races C10 and C11

2002 ratings based on Horsfall-Barratt scale of 0-11

Lodging scores: 1 - upright; 9 - flat.

Colour scores for 2002 were visual ratings of seed coat colour where 1 = none and 5 = 100% discoloured (bleached and/or darkened)



U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

**EXHIBIT E**  
**STATEMENT OF THE BASIS OF OWNERSHIP**

1. NAME OF APPLICANT(S) Cereal Research Centre University of Saskatchewan	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER 1145-3-6	3. VARIETY NAME CDC Rouleau
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) 51 Campus Drive Saskatoon, SK S7N 5A8	5. TELEPHONE (include area code) (306) 966-8195	6. FAX (include area code) (306) 966-5015
7. PVPO NUMBER		200500304

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain.  YES  NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country.  YES  NO  
Canada

10. Is the applicant the original owner?  YES  NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?  
 YES  NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?  
 YES  NO If no, give name of country  
Canada

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

**PLEASE NOTE:**

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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