

# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS, SHALL COME:

## Dairyland Seed Co., Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE  
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED 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 *eighteen* 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, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS AS DETERMINED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)


ALFALFA

'Magnum'

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 this 14th day of January in the year of our Lord one thousand nine hundred and eighty-two.

Attest:

  
Commissioner  
Plant Variety Protection Office  
Grain Division  
Agricultural Marketing Service

  
Secretary of Agriculture



UNITED STATES DEPARTMENT OF AGRICULTURE  
 AGRICULTURAL MARKETING SERVICE  
 LIVESTOCK, POULTRY, GRAIN & SEED DIVISION

OMB NO. 40-R3022

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

INSTRUCTIONS: See Reverse.

FOR OFFICIAL USE ONLY

1a. TEMPORARY DESIGNATION OF VARIETY DS-7406	1b. VARIETY NAME MAGNUM	PV NUMBER 7900023	
2. KIND NAME Alfalfa	3. GENUS AND SPECIES NAME Medicago Sativa	FILING DATE 12/6/78	TIME 10:10 <u>A.M.</u> P.M.
4. FAMILY NAME (BOTANICAL) Leguminosae	5. DATE OF DETERMINATION 11-02-77	FEE RECEIVED \$ 500.00 \$ 250.00	DATE 12/6/78 11/16/81
6. NAME OF APPLICANT(S) Dairyland Seed Co., Inc.	7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) P. O. Box 958 West Bend, Wisconsin 53095	8. TELEPHONE AREA CODE AND NUMBER 414-338-0163	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation	10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION Wisconsin	11. DATE OF INCORPORATION Dec. 1963	
12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS: Mr. Stan Rollin, 6802 Orem Drive Laurel, Maryland 20810 <del>XXXXXX Box 621xx Beltsville, Maryland 20705</del>			

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)

13B. Exhibit B, Novelty Statement.

13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)

13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a). (If "Yes," answer 14B and 14C below.)  YES  NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?  YES  NO

14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED?  FOUNDATION  REGISTERED  CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES?  YES  NO (If "Yes," give name of countries and dates.)

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES?  YES  NO (If "Yes," give name of countries and dates.)

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL?  YES  NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

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

11-14-78  
 (DATE)  
 Re-submitted  
 12-21-79  
 (DATE)

Thomas G. Strachota  
 (SIGNATURE OF APPLICANT)

Thomas G. Strachota  
 (SIGNATURE OF APPLICANT)

I. Development of Magnum

- A. Origin - 76 Clone Synthetic
- B. Genetic Source - Vernal, Ladak, Cayuga, Saranac, Iroquois, Cherokee, MSA-W4, P.I. 206452 and Teweles Multi-Strain Brand Alfalfa.

- C. Breeding Procedures - Parental clones selected from progeny tests for forage yields, seed yield, forage productivity, persistence, winter-hardiness, disease and insect resistance.

Step 1. All clones were tested at Clinton, WI for three years for winter survival.

Step 2. Clones were inoculated with Bacterial Wilt, Anthracnose, and Phytophthora. Surviving clones were sent to California and put in Top Cross field and evaluated for seed productivity of individual clone.

Step 3. Forage productivity evaluation was done by the method of progeny testing.

Step 4. 76 superior clones with adequate forage, seed productivity, winter-hardiness and resistance to Bacterial Wilt Anthracnose, and Phytophthora were sent to California and isolated in a cage to produce breeder seed.

Step 5. Seed from breeder seed increase was put into an isolated foundation field where it is open-pollinated.

Step 6. Seed from foundation field is used for Certified Seed Increase.

13A - EXHIBIT A

Origina & Breeding History

Magnum is a 76 clone synthetic variety. Sources of these clones trace to Vernal (7), Ladak (3), Cayuga (2), Saranac (2), Iroquois (3), Cherokee (1), MSA-W4 (35), P.I. 206452 (19) and Teweles Multi-Strain brand alfalfa (4) (an unknown winter hardy source). Parental clones were selected based on progeny tests for one or more of the following traits: forage yield; seed yield; stand persistence; winter hardiness; bacterial wilt resistance; and anthracnose resistance.

APPLICATION NO. 7900023 - 'MAGNUM' ALFALFA - AMENDED 12-1-80

EXHIBIT A (AMENDED)

There are no variants recognizable during three generations of reproduction for certification. 'Magnum' has been accepted by the National Alfalfa Certification Review Board for certification and hence meets presently acceptable levels of uniformity and stability for commercial alfalfa varieties.

EXHIBIT B

Magnum is most similar to the varieties Saranac and Saranac AR.

Magnum is a novel alfalfa variety because it has resistance to pea aphid (30%) and spotted alfalfa aphids (41%); whereas, both Saranac and Saranac AR are susceptible to these insects.

Magnum has moderate resistance to Races 1 (29%) and Race 2 (14%) of anthracnose; whereas, Saranac is susceptible and Saranac AR is resistant to both races ( Race 1 = 66% and Race 2 = 53%).

EXHIBIT B (CONT)

ANTHRACNOSE - RACE 1

	<u>% Resistant Plants</u>	<u>A.S.I.</u> (1-5; 5=dead plant)
Magnum	29 c	3.61 c
Saranac	0 d	5.00 a
Saranac AR	66 b	2.06 d

Tested in 1979 by Dr. Jim Elgin at BARC

Columns having different letters are significantly different at the .05 level of probability.

ANTHRACNOSE - RACE 2

	<u>% Resistant Plants</u>
Magnum	14
Saranac	0
Saranac AR	53

LSD at .05 = 13%

OBJECTIVE DESCRIPTION OF VARIETY  
Alfalfa (Medicago sativa L. complex)

NAME OF APPLICANT(S) <b>Dairyland Seed Company, Inc.</b>	VARIETY NAME OR TEMPORARY DESIGNATION <b>MAGNUM</b>
ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code) <b>P.O. Box 958 West Bend, WI 53095</b>	FOR OFFICIAL USE ONLY PVPO NUMBER

Place the appropriate number that describes the varietal character of this variety in the boxes below.  
Place a zero in first box (e.g.  or  ) when number is either 99 or less or 9 or less.

NOTE: For single plant data a minimum of 100 plants is suggested

<p>1. PRIMARY AREA OF ADAPTATION</p> <p><input type="text" value="2"/> 1 = NORTHWEST      2 = NORTHCENTRAL      3 = NORTHEAST 4 = SOUTHEAST      5 = SOUTHWEST      6 = SOUTHERN PLAINS 7 = INTERMOUNTAIN</p>	<p>INDICATE AREA WHERE TEST WAS CONDUCTED. FURTHER EXPLANATION CAN GO IN COMMENTS AT THE END OF THE FORM.</p> <p><input type="text" value="2"/> AREA TESTED</p>
<p>2. WINTER HARDINESS</p> <p><input type="text" value="5"/> 1 = NON-HARDY (Mesa Sirsa)      3 = INTERMEDIATE NON-HARDY 5 = MODERATELY HARDY (Saranac)      7 = HARDY (Vernal) 9 = EXTREMELY HARDY (Norseman)</p> <p><input type="text" value="2"/> SOURCE OF INFORMATION: 1 = ANTICIPATED      2 = MEASURED</p>	<p><input type="text" value="2"/> AREA TESTED</p>
<p>3. FALL GROWTH HABIT</p> <p><input type="text" value="5"/> 1 = ERECT (Mesa Sirsa)      3 = SEMIERECT (DuPuits) 5 = INTERMEDIATE (Saranac)      7 = SEMIDECUMENT (Vernal) 9 = DECUMBENT (Norsement)</p>	<p><input type="text" value="2"/> AREA TESTED</p>
<p>4. RECOVERY AFTER FIRST SPRING CUTTING</p> <p><input type="text" value="3"/> 1 = VERY FAST (Mesa Sirsa)      3 = FAST (Saranac)      5 = INTERMEDIATE 7 = SLOW (Vernal)      9 = VERY SLOW (Norseman)</p>	<p><input type="text" value="2"/> AREA TESTED</p>
<p>5. FLOWERING DATE (FIRST SPRING GROWTH)</p> <p><input type="text" value="0"/><input type="text" value="0"/> DAYS EARLIER THAN . . . . . <input type="text" value="3"/> 1 = MESA SIRSA      2 = LAHONTAN <input type="text" value="0"/><input type="text" value="0"/> DAYS LATER THAN . . . . . <input type="text" value="3"/> 3 = SARANAC      4 = VERNAL 5 = NORSEMAN</p>	<p><input type="text" value="2"/> AREA TESTED</p>
<p>6. CROWN TYPE</p> <p><input type="text" value="5"/> 1 = SPREADING ROOTS      3 = SPREADING RHIZOMES (Teton) 5 = BROAD (Vernal)      7 = INTERMEDIATE (Saranac) 9 = NARROW (Mesa Sirsa)</p>	<p><input type="text" value="2"/> AREA TESTED</p>
<p>7. PLANT COLOR</p> <p><input type="text" value="5"/> 3 = DARK GREEN (Weevlchek)      5 = GREEN (Vernal) 7 = LIGHT GREEN (Ranger)</p>	<p><input type="text" value="2"/> AREA TESTED</p>
<p>8. HAIRINESS</p> <p><input type="text" value=""/><input type="text" value=""/><input type="text" value=""/> % PLANTS WITH PUBESCENT STEMS</p> <p><input type="text" value=""/><input type="text" value=""/><input type="text" value=""/> % PLANTS WITH PUBESCENT PODS</p>	
<p>9. POD SHAPE</p> <p><input type="text" value="0"/><input type="text" value="9"/><input type="text" value="6"/> % PLANTS WITH TIGHT COILS      <input type="text" value="0"/><input type="text" value="0"/><input type="text" value="4"/> % PLANTS WITH LOOSE COILS      <input type="text" value="0"/><input type="text" value="0"/><input type="text" value="0"/> % PLANTS WITH SICKLE PODS (Less than 1 coil)</p>	

006% PLANTS WITH MULTIFOLIATE LEAVES



10. GIVE ITEM LENGTH FREQUENCY DISTRIBUTION FOR SUBMITTED AND 1 TO 5 STANDARD VARIETIES 1/

VARIETY NAME	STEM LENGTH FREQUENCY DISTRIBUTION 2/											AVERAGE STEM LENGTH
	0 - 5 mm. %	6 - 10 mm. %	11 - 15 mm. %	16 - 20 mm. %	21 - 30 mm. %	31 - 40 mm. %	41 - 50 mm. %	51 - 60 mm. %	61 - 70 mm. %	71 - 80 mm. %	81 + mm. %	

AMENDED 21 SEPTEMBER 1981 PER LETTER OF S. ROLLIN DATED 16 SEPT 1981 - DCB

11. FLOWER COLOR 3/ (DETERMINE COLOR ON FRESHLY OPENED FLOWERS) 1% CREAM AND YELLOW

0 8 0 % PURPLE    ~~0 1 8~~ 019 % VARIEGATED    ~~0 0 1~~ % (0.3) YELLOW    ~~0 0 1~~ (0.7) % CREAM    0 0 0 % WHITE

12. DISEASE, INSECT, AND NEMATODE RESISTANCE: (Enter resistance of submitted and check cultivars. Circle check cultivars used.)

DISEASE	CULTIVAR	% RESISTANT PLANTS	AVG. SEVERITY INDEX (ASI)	ASI LSD .05	TEST, YEAR & LOCATION 4/
BACTERIAL WILT	MAGNUM (SUBMITTED)	47.4	51		Laddie Elling University of Minnesota 1979
	VERNAL (RES. CK.) <del>VXXXX</del>	39.2	42		
	NARAGANSETT (SUS. CK.) <del>NXXXXANSETT</del>	0.0	00		
ANTHRACNOSE (Race 1)	MAGNUM (SUBMITTED)	29	← too high		Jim Elgin BARC 1979
	(RES. CK.) ARC	82			
	(SUS. CK.) SARANAC	0			
COMMON LEAF SPOT	MAGNUM (SUBMITTED)		} ASI's only		Dairyland Seed Research Station, 1976, Clinton, Wisconsin.
	VERNAL <del>VXXXXVXXXX</del>				
	SARANAC <del>SXXXXSXXXX</del>				
DOWNY MILDEW	(SUBMITTED)				NO DATA
	(RES. CK.) SARANAC				
	(SUS. CK.) KANZA				
PHYTOPHTHORA ROOT ROT	MAGNUM (SUBMITTED)	5.3	05		Laddie Elling University of Minnesota 1979
	(RES. CK.) AGATE	43.7	43		
	(SUS. CK.) SARANAC	2.0	02		
Anthracnose (Race 2)	MAGNUM (SUBMITTED)	14	12		Jim Elgin BARC 1980
	SARANAC AR (RES. CK.)	53	45		
	SARANAC (SUS. CK.)	0	00		

1/ Preferred standards: Saranac, Vernal, Norseman, Lahontan, Mesa S of incandescent filament light and twelve hours darkness at 5° C. 2000 lux of cool white florescent; 2,000 lux

2/ From cotyledonary node to tip of stem 20 days after planting.  
3/ For further clarification consult USDA Agricultural Handbook No. 424.

12. DISEASE, INSECT, AND NEMATODE RESISTANCE: (Enter resistance of submitted and check cultivars. Circle check cultivars used.)

DISEASE	CULTIVAR	% RESISTANT PLANTS	AVG. SEVERITY INDEX (ASI)	ASI LSD .05	TEST, YEAR & LOCATION <sup>4/</sup>
OTHER	(SUBMITTED)				
	(RES. CK.)				
	(SUS. CK.)				
OTHER	(SUBMITTED)				
	(RES. CK.)				
	(SUS. CK.)				
INSECT	CULTIVAR	% SEEDLING SURVIVAL	AVG. SEVERITY INDEX (ASI)	SEX LSD .05	TEST, YEAR & LOCATION <sup>4/</sup>
PEA APHID	MAGNUM (SUBMITTED)	30.2			ant Plants Dr. E.L. Sorenson Kansas State University 1979
	(RES. CK.) KANZA	71.4	← too high		
	(SUS. CK.) RANGER	3.3			
SPOTTED ALFALFA APHID	MAGNUM (SUBMITTED)	41.2			ant Plants Dr. E.L. Sorenson Kansas State University 1979
	(RES. CK.) KANZA	69.6	↖ too high		
	(SUS. CK.) RANGER	7.4			
INSECT	CULTIVAR	% DEFOLIATION			TEST, YEAR & LOCATION <sup>4/</sup>
ALFALFA WEEVIL	(SUBMITTED)				NO DATA
	(RES. CK.) ARK				
	(SUS. CK.) VERNAL				
INSECT	CULTIVAR	% RESISTANT PLANTS	EMERGED ADULTS PER PLANT	EMERGED LSD .05	TEST, YEAR & LOCATION <sup>4/</sup>
ALFALFA SEED CHALCID	(SUBMITTED)				NO DATA
	(RES. CK.) LAHONTAN				
	(SUS. CK.) SONORA				
INSECT	CULTIVAR	% RESISTANT PLANTS			TEST, YEAR & LOCATION <sup>4/</sup>
POTATO LEAF-HOPPER	MAGNUM (SUBMITTED)				Dr. Irving Carlson Iowa State University Ames, Iowa 1979
	VERNAL				
	<del>XXXXXX</del> SARANAC				
	<del>XXXXXX</del>				
OTHER	(SUBMITTED)				
	(RES. CK.)				
	(SUS. CK.)				

<sup>4/</sup> Give: The institution in charge of test, (2) year, and (3) location. ARS NC-19, September 1974.

Refer from procedure suggested in

→ only ASI's  
NOT STD ✓'s

12. DISEASE, INSECT, AND NEMATODE RESISTANCE: (Enter resistance of submitted and check cultivars. Circle check cultivars used.)

INSECT	CULTIVAR	% RESISTANT PLANTS	AVG. SEVERITY INDEX (ASI)	ASI LSD .05	TEST, YEAR & LOCATION <sup>4/</sup>
OTHER	(SUBMITTED)				
	(RES. CK.)				
	(SUS. CK.)				
NEMATODE	CULTIVAR	% RESISTANT PLANTS	ASI		TEST, YEAR & LOCATION <sup>4/</sup>
STEM NEMATODE	Magnum (SUBMITTED)	18.02	14 40 12		Boyd Hartman - 1979, U. of Nev.-R
	(RES. CK.) LAHONTAN	50.80			
	(SUS. CK.) RANGER	12.40			
NORTHERN ROOT KNOT NEMATODE	(SUBMITTED)				NO DATA
	(RES. CK.) NEV. SYN. XX				
	(SUS. CK.) LAHONTAN				
SOUTHERN ROOT KNOT NEMATODE	(SUBMITTED)				NO DATA
	(RES. CK.) MOAPA 69				
	(SUS. CK.) LAHONTAN				
OTHER	(SUBMITTED)				
	(RES. CK.)				
	(SUS. CK.)				

13. INDICATE A VARIETY THAT MOST CLOSELY RESEMBLES THE VARIETY SUBMITTED FOR THE FOLLOWING CHARACTERS:

CHARACTER	VARIETY	CHARACTER	VARIETY
AREA OF ADAPTATION	SARANAC	PLANT HEIGHT	SARANAC
RECOVERY AFTER CUTTING	SARANAC	WINTER HARDINESS	SARANAC

REFERENCES

Barnes, D.K., and C.H. Hanson, An Illustrated Summary of Genetic Traits in Tetraploid and Diploid Alfalfa, ARS Technical Bul. 1370.  
 Barnes, D.K., et al, Standard Tests to Characterize Pest Resistance in Alfalfa Varieties. ARS-NC-19, September 1974.  
 Nittler, L.W., G.W. McKee, and J.L. Newcomer, Principles and Methods of Testing Alfalfa Seed for Varietal Purity. New York Agricultural Experiment Station Bul. 807.  
 USDA Agricultural Handbook No. 424.

COMMENTS

## 13D - EXHIBIT D

## Additional Description

Magnum is moderately winter hardy having high resistance to bacterial wilt, moderate resistance to spotted alfalfa aphids, anthracnose, and pea aphids. Magnum is susceptible to phytophthora. Magnum has not been adequately tested for stem nematode. Magnum also has considerable tolerance to leaf-spotting disease.

EXHIBIT D (CONT.)

FALL DORMANCY AND PERSISTENCE DATA

Fall and winter dormancy based on fall regrowth.

Test Location	Date of Last Cut	Date Measured	This Variety	Score or Average Height*			L.S.D.	C.V. %
				2. Vernal	3. Saranac	4. African		
U. of Minn.	9-8-79	10-9-79	6.08	7.23	6.01	4.12	.56	6.9

\*Scoring system used 0-9: 0 = 18" or higher; 9 = 0-2"

Persistence (winter and drought tolerance, summer survival relative to Check varieties.) Enter dates of both Initial and Final stand estimates.

Test Location	Date Seeded	Yrs. Hvst'd	No. Hvsts	Date of Readings		This Variety	% Stand*				
				Init.	Final		2. Vernal		3. Saranac		4.
				Init.	Final	Init.	Final	Init.	Final	Init.	Final
Clinton, WI	4-75	4	15	5-75	5-79	80	37	78	53	80	43
Clinton, WI	5-76	4	16	4-77	11-79	85	55	87	67	85	58

\*Scoring system used Visual Score; 3 reps of 5' x 25' plot

COLLATERAL ASSIGNMENT

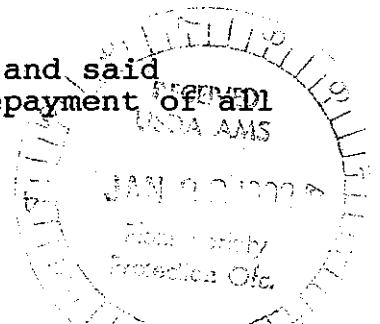
WHEREAS, Dairyland Seed Co., Inc., of West Bend, Wisconsin, hereinafter called "Assignor" is the owner of all rights to certain inventions in the following plant varieties for which said Assignor has obtained the following United States Plant Variety Protection Act Certificates:

<u>Certificate No.</u>	<u>Variety</u>	<u>Dated Issued</u>
7900023	Magnum Alfalfa	1-14-82
8900229	Magnum III Alfalfa	6-29-90
8100020	DSR-141 Soybean	2-26-81
8100021	DSR-171 Soybean	2-26-81
8100022	DSR-207 Soybean	2-26-81
8100023	DSR-232 Soybean	6-11-81
8100096	DSR-120 Soybean	8-27-81
8200123	DSR-320 Soybean	9-29-83
8200124	DSR-227 Soybean	6-30-83
8200125	DSR-352 Soybean	9-29-83
8500209	DSR-287 Soybean	1-30-87
8500210	DSR-297 Soybean	1-30-87
8500211	DSR-317 Soybean	1-30-87
8800065	DSR-128 Soybean	9-30-88
8800067	DSR-155 Soybean	9-30-88

WHEREAS, M&I Marshall & Ilsley Bank, hereinafter called "Assignee," a corporation of Wisconsin having its principal office in Milwaukee, Wisconsin, is desirous of acquiring a security interest in said inventions and certificates:

NOW, THEREFORE, in consideration of, and in security for, certain loans by Assignee to Assignor, the receipt of which by said Assignor is hereby acknowledged, said Assignor, by this document, does hereby conditionally assign, and transfer unto the Assignee the full and exclusive right for the territory of the United States of America, its territories and possessions, in and to said inventions as described in the certificates and in and to said certificates. Until repayment of all loans from Assignee to Assignor, both present and future, Assignee may hold and enjoy the certificates for its own use and behoof, and for its successors and assigns, to the full end term for which said certificates has been granted, as fully and entirely as the same would have been held by said Assignor had this assignment not been made.

Assignee agrees to re-assign said inventions and said certificates to Assignor conditionally upon the repayment of all loans from Assignor to Assignee.



Executed this 20<sup>TH</sup> day of January, 1992.

DAIRYLAND SEED CO., INC.

By: Thomas G. Strachota  
Thomas G. Strachota  
Executive Vice President

Attest: Marie A. Strachota  
Marie A. Strachota  
Secretary

Date: 1-20-92

Subscribed and sworn to before me  
this 20<sup>th</sup> day of January, 1992.

Kim M. Helling  
Notary Public, State of Wisconsin  
My Commission: Expires 5/92

43647017  
011392

