No. 9600228

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

ProSeeds Marketing, Inc.

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 PURPOSE , OR USING IT IN ODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY TECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BLUEGRASS, KENTUCKY

'Princeton P-105'

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 thirtieth day of January, in the year two thousand three.

PLANT VARIETY PROTECTION OFFICE · U.S. DEPARTMENT OF AGRICULTURE

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions.* FORM APPROVED - OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION - 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).

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 APPLICANT(S) *(as it is to appear on the Certificate)*
~~Lofts Seed, Inc.~~ ProSeeds Marketing, Inc.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER
A84-567PT and P-105

3. VARIETY NAME
Princeton P-105

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
Fax 10/9/2002
~~347 Elizabeth Avenue, Suite 101~~
~~Somerset, NJ 08873~~
13963 Westside Lane S.
Jefferson, OR 97352

5. TELEPHONE *(include area code)*
~~(908) 356-8700~~
(541) 928-9999

6. FAX *(include area code)*
~~(908) 560-0884~~
(541) 924-5695

FOR OFFICIAL USE ONLY

PVPO NUMBER: 9600226

FILING DATE: 04-22-96

FEES RECEIVED — FILING AND EXAMINATION FEE: $ 2450.00 DATE: 4-22-96

CERTIFICATION FEE: $ 320⁻ DATE: 10/22/2002

7. GENUS AND SPECIES NAME
Poa pratensis

8. CROP KIND NAME *(Common name)*
Kentucky Blueg

10. IF THE APPLICANT NAMED IS NOT
Corporation

ciation, etc.) (Common name)

11. IF INCORPORATED, GIVE STATE O
New Jersey

DATE OF INCORPORATION
ov. 1948

13. NAME AND ADDRESS OF APPLICA
Fax 10/9/2002
~~Dr. Richard Hu~~
~~Lofts Seed, In~~
~~347 Elizabeth~~
~~Somerset, NJ~~

CEIVE ALL PAPERS
ase
River Dr
97355

14. TELEPHONE *(include area code)*
541/451-3478 FAX 1342 2/1/01

15. FAX *(include area code)*
541/451-3478

Copy Double sided

16. CHECK APPROPRIATE BOX FOR E
- a. ☒ Exhibit A. Origin and Bre
- b. ☒ Exhibit B. Statement of O
- c. ☒ Exhibit C. Objective Desc
- d. ☒ Exhibit D. Additional Des
- e. ☒ Exhibit E. Statement of t
- f. ☒ Voucher Sample (2,500
- g. ☒ Filing and Examination Fe

culture will be deposited and maintained in a public repository)

17. DOES THE APPLICANT SPECIFY
☐ YES *(If "yes," answer ite*

ASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act)?
em 20)

18. DOES THE APPLICANT SPECIFY GENERATIONS?
☒ YES ☐ NO

"YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☒ FOUNDATION ☒ REGISTERED ☒ CERTIFIED

20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
☒ YES *(If "yes," give names of countries and dates)* ☐ NO

USA 9|95

21. The applicant(s) declare that a viable sample of basic seed of the variety will be 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 applicant(s) is(are) the owner(s) 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 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

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

SIGNATURE OF APPLICANT *(Owner(s))*		SIGNATURE OF APPLICANT *(Owner(s))*	
NAME *(Please print or type)* Richard H. Hurley, Ph.D.		NAME *(Please print or type)*	
CAPACITY OR TITLE Vice President, Research Professional Sales	DATE 4/15/96	CAPACITY OR TITLE	DATE 1

SD-470 (04-96) *(Previous editions are to be destroyed)* *(See reverse for instructions and information collection burden statement)*

EXHIBIT A

ORIGIN AND BREEDING HISTORY OF PRINCETON P-105 KENTUCKY BLUEGRASS

Princeton P-105 was developed from germplasm obtained from the New Jersey Agricultural Experiment Station. The experimental designations of Princeton P-105 were A84-567 PT and P-105.

Princeton P-105 Kentucky bluegrass originated as a single, highly apomictic plant selected from the open-pollinated progeny of Warren's A-25 Kentucky bluegrass. Warren's A-25 is a vigorous, aggressive selection with medium-green color, medium leaf texture, high density, and good turf performance. It was selected from an old golf course near Chicago, IL. Warren's A-25 is highly sexual and is reported to have 37+/- 1 somatic chromosomes (1).

Warren's A-25 was pollinated by plants, selected from old turfs, during the late winter of 1975 in a greenhouse located on the Cook College campus of Rutgers University (2, 3, 4). Seedlings from these crosses were established in a spaced-plant nursery at Adelphia, NJ, during August and September 1975. An attractive F_1 hybrid was selected from the progeny of Warren's A-25 on June 27, 1976. Seed from this plant was used to establish turf trials at Adelphia, NJ in September 1977. Princeton P-105 has been included in various turf tests at either North Brunswick, NJ or Adelphia since that date and was included in the National Kentucky bluegrass test (medium-high maintenance) in 1995. It has exhibited a high level of apomictic reproduction as observed in spaced-plant nurseries in New Jersey and seed production fields in Oregon. The first certified seed was harvested in 1995.

Princeton P-105 Kentucky bluegrass is a uniform and stable variety. It has produced turf of good quality and acceptable uniformity.

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Exhibit A Origin and Breeding History

Please modify our exhibit A by adding the following statements:

P-105, a highly apomictic bluegrass, was rogued one generation. No more than 5% was rogued. The type of variant in P-105 is a small, light green, type of plant that would not be apparent in turf.

2%

Jan 10/10/02

9600228
2

THE STATE UNIVERSITY OF NEW JERSEY
RUTGERS

Department of Plant Science • Cook College
Rutgers, The State University of New Jersey
59 Dudley Road • New Brunswick • New Jersey 08901-8520
732/932-9711 • FAX: 732/932-9441

February 27, 2001

Dr. Virginia Lehman
315 Edgewater Drive
Lebanon, OR 97355

Dear Virginia:

The plants used to pollinate Warren's A-25 were selected from old turfs prior to 1974. These selections were all large patches normally from one to many meters in diameter. This suggests that they had originated as single seedlings that had persisted and spread over a period of many decades. The origin of the seed producing these patches is not know. It obviously did not come from early turf-type Kentucky bluegrasses such as 'Merion', 'Flyking', 'Pennstar', or 'Midnight'. It most likely came from naturalized plants of Kentucky bluegrass that colonized old pastures and other turfs and spread by birds and other animals, or striped from old pastures and hayfields prior to the 1940's.

The frequency of small, light green variants is normally less than two percent. They are found in essentially all facultatively apomictic bluegrasses, especially where grown in isolation. These weak plants are generally crowded out by the vigorous plants of Princeton P-105 Kentucky bluegrass and have no negative effect on turf appearance and performance.

Best wishes,

C. Reed Funk (BA)

C. Reed Funk
Research Professor
in Plant Breeding

bas
Enclosure
cc: W. A. Meyer

4

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References and Notes

1. Dale, M.R., M.K. Ahmed, G. Jelenkovic, and C.R. Funk. 1975. Characteristics and performance of interspecific hybrids between Kentucky bluegrass and Canada bluegrass. Crop Sci. 15:797-799.

2. Bashaw, E.C., and C.R. Funk. 1987. Apomictic grasses. p. 40-82. *In* W.R. Fehr (ed.) Principles of cultivar development. Vol. 2. Crop species. Macmillan, New York.

3. Hintzen, J.J., and A.J.P. van Wijk. 1985. Ecotype breeding and hybridization in Kentucky bluegrass (*Poa pratensis* L.). p. 213-219. *In* F. Lemaire (ed.) Proc. Int. Turfgrass Res. Conf., 5th, Avignon, France. INRA Publ., Versailles.

4. Pepin, G.W., and C.R. Funk. 1971. Intraspecific hybridization as a method of breeding Kentucky bluegrass for turf. Crop Sci. 11:445-448.

EXHIBIT B

STATEMENT OF DISTINCTNESS FOR PRINCETON P-105 KENTUCKY BLUEGRASS

Princeton P-105 can be distinguished from all other cultivars by a combination of spaced plants and turf characteristics (Tables 1 - 9). Princeton P-105 most closely resembles P-104. They can be distinguished by the following characteristics:

1. Princeton P-105 has more purple pigmentation during winter on mature dense turf than P-104 (Tables 1, 4, 6, & 8).

Table 1. Performance of Kentucky bluegrass cultivars and selections in turf trials seeded September, 1977 at Adelphi, New Jersey.

Cultivar	Turf Performance Score 9 = Best 1978 Avg.	1979 Avg.	1980 Avg.	Purple winter color 9 = most Jan. 1980	Percent leaf spot 1980 Avg.
—Princeton P-105 (A77-1384=A84-5677)	7.3	7.4	8.4	4.5	3.0
Eclipse	7.1	6.8	7.6	2.6	3.0
—Princeton P-104	6.6	6.8	7.6	2.2	1.8
Midnight	7.5	7.4	7.3	3.2	2.4
Rugby	6.2	6.8	6.8	1.0	2.2
Victa	5.8	6.5	6.7	2.4	7.4
Merion	5.7	6.5	6.6	6.2	4.0
Glade	6.3	6.2	6.2	4.0	12.4
Baron	6.1	6.4	6.2	2.4	4.1
Kenblue	3.9	2.8	2.4	3.2	68.3
Park	4.0	3.0	2.0	3.2	79.2

Table 4. Performance of Kentucky bluegrass cultivars and selection in a turf trial seeded September 1991 at Adelphia, NJ.

Cultivar or Selection	Fall[1] Color 1991	Leaf[2] Tip Burn Jan. 1992	Purple[3] Winter Color Dec. 1992
America	6.4	8.4	2.1
Midnight	6.7	2.7	3.0
SR-2000	6.0	4.0	1.3
Ikone	7.3	5.3	1.3
Shamrock	5.7	2.2	2.3
NuBlue	5.3	4.0	0.3
Nassau	5.5	3.0	0.7
—Princeton P-104	5.2	7.5	2.0
Opal	7.5	3.5	3.3
Fylking	6.2	2.2	1.0
—Princeton P-105 (A84-872 PT)	6.0	7.8	7.5
Unique	5.0	8.2	2.1
Limousine	7.0	7.3	2.0
Eclipse	6.7	6.7	1.7
Georgetown	4.3	7.2	1.0
Banff	4.2	7.8	0.3
NuStar	6.2	5.5	3.3
Preakness	8.3	8.7	2.7
Alpine	6.8	2.5	3.0
Sydsport	5.8	4.8	1.0
Livingston	5.0	5.3	1.7
Adelphi	6.5	5.7	2.0
Broadway	7.5	4.7	2.7
Blacksburg	7.5	4.7	1.7
Trenton	4.2	7.0	1.0
Washington	5.3	5.6	2.4
Cheri	6.2	4.8	1.3
Suffolk	4.3	7.8	0.3
Amazon	6.3	3.8	2.3
Merit	5.0	2.0	2.0
SR-2100	5.5	2.8	3.0
Ram I	6.8	2.7	3.3

(continued)

Table 4. (continued)

Cultivar or Selection	Fall[1] Color 1991	Leaf[2] Tip Burn Jan. 1992	Purple[3] Winter Color Dec. 1992
4 Aces	5.2	4.8	2.0
Mystic	2.4	3.7	1.1
Eagleton	4.0	7.8	3.0
Voyager	5.2	6.8	5.7
Alene	3.7	2.2	1.8
Park	3.7	7.5	1.7
Garfield	3.0	7.2	2.7
Huntsville	4.7	5.8	2.7
S-21	3.3	7.3	2.3
Kenblue	2.8	6.2	5.7
MN-2405	3.0	7.2	6.7
LSD at 5% =	0.9	1.0	1.5

[1]9 = darkest fall color
[2]9 = least leaf tip burn caused by Acscochyta
[3]9 = most purple winter color

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Table 6. Performance of Kentucky bluegrass cultivars and selections in a turf trial seeded September 1994 at Adelphia, NJ. (High Maintenance Test)

Cultivar or Selection	9 = best Turf Quality Avg. 1995	Seedling Vigor Oct. 1994	9 = dark Color Nov. 1994	9 = most Purple Color Dec. 1995
Wildwood	7.1	4.7	8.7	4.0
America	7.0	4.3	7.0	2.3
Midnight	7.0	5.3	7.7	4.3
Unique	6.8	4.3	6.5	2.3
Blacksburg	6.7	4.7	7.0	2.7
—Princeton P-105	6.5	4.9	6.4	6.5
Limousine	6.3	3.7	4.7	3.3
Apex	6.1	3.7	7.3	3.7
Ram I	6.0	4.0	7.7	5.3
Eclipse	5.7	4.7	6.0	2.7
Aspen	5.6	5.0	6.7	4.0
Tennant Cem	5.6	3.7	7.0	3.7
Julia	5.5	5.0	6.0	3.3
Freedom	5.5	6.7	5.0	1.0
Adelphi	5.5	6.0	6.3	3.0
Shamrock	5.5	4.7	6.0	4.0
Cheri	5.4	3.3	5.0	2.7
—Princeton P-104	5.4	5.3	5.3	2.7
Glade	5.4	5.3	6.3	4.7
Classic	5.4	5.7	5.3	1.0
Rugby	5.3	6.7	4.7	0.7
Sydsport	5.2	3.7	4.0	2.3
NuBlue	5.2	6.0	5.0	2.0
Trenton	5.1	6.0	4.3	1.3
1757	5.1	5.3	4.7	1.0
NuStar	5.1	4.7	4.7	6.3
Georgetown	5.1	3.3	5.7	1.0
Liberty	5.1	6.0	4.3	1.3
Suffolk	5.0	5.0	5.3	0.7
Belmont	5.0	3.7	5.7	2.3
Belturf	5.0	6.9	6.7	3.7
Washington	5.0	7.3	5.7	4.0
Kelly	4.9	5.0	4.3	4.7
Amazon	4.8	3.7	5.3	3.7

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Table 6. (continued)

(continued)

Cultivar or Selection	9 = best Turf Quality Avg. 1995	Seedling Vigor Oct. 1994	9 = dark Color Nov. 1994	9 = most Purple Color Dec. 1995
Merit	4.7	5.0	4.3	4.0
Fylking	4.7	4.7	5.3	4.0
Baron	4.6	4.7	4.7	3.3
Livingston	4.6	5.7	5.0	3.3
Penn Pro	4.6	4.3	4.0	4.0
A34	4.5	5.7	3.0	3.7
Plush	3.9	6.3	3.0	3.3
Huntsville	3.5	6.0	6.3	5.0
S-21	2.5	8.0	3.3	3.7
LSD at 5% =	0.7	1.4	1.2	1.4

Table 8. Performance of Kentucky bluegrass cultivars and selections in a turf trial seeded October 1993 at Adelphia, NJ.

Cultivar or Selection	9 = best Turf Quality 1995	9 = most Purple Color Dec. 1995
Midnight	6.9	4.3
Wildwood	6.7	5.3
Glade	6.5	6.0
Ram I	6.3	4.3
Princeton P-105	6.0	6.6
NuStar	6.0	6.7
Princeton P-104	6.0	1.0
Julia	6.0	3.7
Limousine	5.9	4.7
Eclipse	5.8	3.3
Washington	5.7	5.0
Plush	5.6	3.3
Classic	5.4	1.0
Adelphi	5.2	2.3
Merion	5.2	5.0
NuBlue	5.1	1.3
Belmont	5.1	2.7
Amazon	5.0	4.0
Penn Pro	5.0	2.7
Belturf	5.0	5.0
Freedom	4.9	1.0
Shamrock	4.9	4.2
Trenton	4.9	1.7
Baron	4.8	4.7
Fylking	4.8	1.0
Apex	4.7	1.7
Rugby	4.7	1.0
S-21	4.6	4.3
1757	4.6	1.3
Cheri	4.6	1.7
Suffolk	4.4	1.0
Nassau	4.4	2.0
Huntsville	4.3	4.3
Georgetown	4.3	1.0
Sydsport	4.2	2.3
Pomeroy	4.1	4.0
Wabash	4.1	5.0
LSD at 5% =	1.0	1.9

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF VARIETY
BLUEGRASS
(Poa spp.)

NAME OF APPLICANT(S)	VARIETY NAME OR TEMPORARY DESIGNATION
Lofts Seed, Inc.	Princeton P-105
ADDRESS (Street and No., or R.F.D. No., City State, and ZIP Code)	FOR OFFICIAL USE ONLY
347 Elizabeth Avenue, Suite 101 Somerset, NJ 08873	PVPO NUMBER 9600228

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. 0/8/9/ or 0/9/) when number is either 99 or less or 9 or less. Descriptions of characters should represent those that are typical for the variety. Ranges may be given also. Measured data must be for SPACED PLANTS. Give additional description for all characteristics that cannot be adequately described in the form below. Append all pertinent comparative trial and evaluation data. The symbol "Δ" indicates decimal.

Cultural Conditions

All measurements must be on spaced plants with a minimum of (30 cm) between plants. A minimum of 30 plants and 60 data points must be used for all measurements. Plants must be established no later than the previous fall for spring and summer measurements. Trials should be irrigated if necessary. Cultural conditions must be stated in comment section and plant number / data points shown in all tables. Specify growing conditions and experimental design. Any application of fungicide should be stated.

1. SPECIES

2/ 1 = *Poa compressa*
2 = *Poa pratensis*
3 = *Poa trivialis*
4 = OTHER (Specify) _____

2. ADAPTATION (0 = NOT TESTED 1 = NOT ADAPTED 2= ADAPTED)

2/ NORTHEAST
1/ SOUTHEAST
2/ NORTHCENTRAL
2/ PACIFIC N.W.
2/ TRANSITIONAL ZONE
2/ INTERMOUNTAIN
1/ SOUTH WEST (CA, AZ)
__/ OTHER (Specify) _____

STANDARD CULTIVARS - Choose cultivars from same species.

Poa compressa	*Poa pratensis*		*Poa trivialis*
11 = REUBEN	21 = BARON	2A = RAM I	31 = SABRE
12 = CANON	22 = TOUCHDOWN	2B = ADELPHI	32 = COLT
	23 = KENBLUE	2C = JULIA	33 = LASER
	24 = WABASH	2D = NUGGET	34 = PO-LIS
	25 = MIDNIGHT		
	26 = AMERICA		
	27 = GEORGETOWN		
	28 = CHALLENGER		
	29 = GLADE		

41 = _____ (Specify Species)

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3. **MATURITY**

TEST AREA Hubbard, Oregon **LATITUDE** 45 degrees

Jad 10/10/2002

6 / **MATURITY CLASS** (1-9) 1 = Very Early 2 = Early 3 = 4 = Medium Early 5 = Medium 6 = Medium Late 7 = Late 8 = 9 = Very Late

HEADING DATE (When 50% of plants in the variety have at least 3 panicles emerged from boot.)

1/2/7/ CALENDAR DAY. 1996

0/6/ DAYS EARLIER THAN . . . America . . . 2/6/

__/__/ SAME AS . . . . . __/__/ Comparison Variety.

0/7/ DAYS LATER THAN . . . Eagleton . . . . __/__/

ANTHESIS DATE (When 50% of plants in the variety have started anthesis. A plant is at anthesis when at least 3 panicles have emerged anthers.)

1/5/6/ CALENDAR DAY.

__/__/ DAYS EARLIER THAN . . . . . __/__/

__/__/ SAME AS . . . . . America . . 2/6/ Comparison Variety.

__/__/ DAYS LATER THAN . . . . . __/__/

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4. **PLANT HEIGHT** (Post - Anthesis. Average of minimum 60 data points from soil surface to top of panicle.)

5/9/9/7 cm. HIGH . . . . . __/__/

1/0/9/ cm SHORTER THAN . . . . . America . . 2/6/

__/__/__/ SAME AS . . . . . __/__/ Comparison Variety.

__/__/__/ cm TALLER THAN . . . . . __/__/

FLAG LEAF HEIGHT (Ground to collar of flag leaf.)

__/__/__/ cm. HIGH . . . . . __/__/

__/__/__/ SHORTER THAN . . . . . __/__/

__/__/__/ SAME AS . . . . . __/__/ Comparison Variety.

__/__/__/ TALLER THAN . . . . . __/__/

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5. **GROWTH HABIT** (Mature - Fully headed reproductive tillers)

Jad 10/10/2002

5 / 1 = PROSTRATE 5 = SEMI-ERECT 9 = ERECT (Delta)

9600228

6. RHIZOMES

___/___/___/ cm. LENGTH (1 year spread. First year - farthest spread by each plant.)

___/___/___/ mm. WIDTH (of internode.)

___/___/___/ mm. INTERNODE LENGTH

___/
1 = ABSENT
3 = WEAKLY RHIZOMATOUS
5 = STRONGLY RHIZOMATOUS
7 = VERY STRONGLY RHIZOMATOUS
9 =

---

7. LEAF CHARACTERISTICS

SUBTENDING LEAF (First leaf subtending flag leaf - after anthesis.) - Preferred Leaf.

___/___/___/	cm. BLADE LENGTH (ligule to tip)	___/___/___/	mm. WIDTH (at widest point)
___/___/___/	cm. SHORTER THAN . . . ___/__	___/___/___/	mm. NARROWER THAN . . ___/__
___/___/___/	SAME AS . . . . . ___/__	___/___/___/	SAME AS . . . . . ___/__
___/___/___/	cm. LONGER THAN . . . . ___/__	___/___/___/	mm. WIDER THAN . . . . . ___/__

RAD 01/18/2001

FLAG LEAF

___/7.4/	cm. BLADE LENGTH (ligule to tip)	___/2.5/	mm. WIDTH (at widest point)
___/___/___/	cm. SHORTER THAN . . . ___/__	___/___/___/	mm. NARROWER THAN . . ___/__
___/___/___/	SAME AS . . . . . ___/__	___/___/___/	SAME AS . . . . . ___/__
___/___/___/	cm. LONGER THAN . . . . ___/__	___/___/___/	mm. WIDER THAN . . . . . ___/__

1/ Position of Flag Leaf (angle to stem) 1 = Appressed 2 = Open angle, yet stiff 3 = Nodding

GENETIC FOLIAGE COLOR (Summer)

7/ **GREEN LEAF COLOR** 1 - 9

Jad 10/10/2002

1 = LIGHT 2 = 3 = MEDIUM LIGHT 4 =
5 = MEDIUM 6 = MEDIUM DARK 9 = DARK GREEN

3/ **BLUEGREEN COLOR** (1 - 9)

1 = NOT BLUEGREEN 3 = MODERATELY BLUEGREEN (Merion, A34)
6 = BLUEGREEN (Adelphi) 9 = STRONGLY BLUEGREEN (Midnight)

LEAF BLADE

1/	Hairs upper side	1 = Absent	5 = Sparse	9 = Dense
1/	Hairs lower side	1 = Absent	5 = Sparse	9 = Dense
2/	Luster upper side	1 = Shiny	2 = Dull	
2/	Luster lower side	1 = Shiny	2 = Dull	
1/	Margin hairs (Fringe on Margin or Base)	1 = Absent (Delta)	5 = Sparse	9 = Dense

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5/ Width (Turf) 1 = Very broad 3 = Broad 5 = Medium (Fylking)
7 = Fine (Nugget) 9 = Very fine (Mystic)

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8. LEAF SHEATH

SUBTENDING LEAF		TILLER LEAF (Last fully expanded leaf on vegetative tiller of spaced plants.)	
6/7/8/	mm SHEATH LENGTH	___/___/___/	mm SHEATH LENGTH
___/___/___/	mm. SHORTER THAN . . . ___/___/	___/___/___/	mm. SHORTER THAN . . . ___/___/
___/___/___/	SAME AS . . . . . ___/___/	___/___/___/	SAME AS . . . . . ___/___/
___/___/___/	mm. LONGER THAN . . . . ___/___/	___/___/___/	mm. LONGER THAN . . . . ___/___/

6/	Seedling Color (base of sheath)	1 = Green 4 = Red (edge)	2 = Red (throughout) 5 = Purple (edge)	3 = Purple (throughout) 6 = White
		7 = Other _____		
1/	Hairs on Margin	1 = Absent (Fylking)	5 = Sparse	9 = Dense (Nugget)
1/	Margin Roughness (to touch)	1 = Smooth (Delta)	2 = Rough (Sabre)	
1/	Hairs on Surface	1 = Absent	5 = Sparse	9 = Dense
1/	Surface Roughness (to touch)	1 = Smooth (Fylking)	2 = Rough (Ram I)	
1/	Hairs on both sides just beneath leaf blade (under collar)	1 = Absent	5 = Sparse	9 = Dense
1/	Hairs on Ligule	1 = Absent	5 = Short	9 = Long
1/	Glaucosity	1 = Absent (Mystic, Enmundi))		2 = Present (Birka)
1/	Keel	1 = Absent (Ram I)	2 = Present (Adelphi)	

9. PANICLE (Post - Anthesis)

10A7/2/	cm. PANICLE LENGTH (Lowest branch Whorl to top)	___/___/___/	cm. PANICLE LENGTH (Flag Leaf to top)
12A6/	cm. SHORTER THAN . . 2/6/	___/___/___/	cm. SHORTER THAN . . ___/___/
___/___/___/	SAME AS . . . . . ___/___/	___/___/___/	SAME AS . . . . . ___/___/
___/___/___/	cm. LONGER THAN . . ___/___/	___/___/___/	cm. LONGER THAN . . ___/___/

RAD 01/18/2001

5/	Color (at 50% flowering)	1 = Red 4 = Purple	2 = Yellow Green 5 = Green /w Purple	3 = Green 6 = Green /w Red
		7 = Other _____		
2/	Shape of Rachis (opposite lower side branches)	1 = No bend (Nugget)	2 = Slight bend	3 = Bend (Merion)
1/	Collar	1 = Opened (Nugget)	2 = Closed (Merion)	
5/	Branches Attitude (Lowest Whorl)	1 = Drooping 9 = Ascending	4 = Horizontal w/ drooping tip	5 = Horizontal

3A/6/8 Total number of branches in lowest whorl

5/	Panicle Habit	1 = Nodding (Newport)	5 = Moderate nodding	9 = Upright (Nugget)
1/	Panicle Type	1 = Open	2 = Intermediate	3 = Compact

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0 / 1 / Anther Color (anthesis) 1 = Purple 2 = Yellow 3 = Brown
4 = Yellow/Purple 5 = Red 6 = Yellow/Red
7 = Yellowgreen 8 = White 9 = White/Purple

10. SEED - From PVP nursery (not commercial sample). All seed just be processed similarly. Specify how data collected. Floret - not dehulled.

7 / SIZE CLASS (g / 10,000 seed) 1 = < 1.5 g 2 = 1.5 - 2 g 3 = 2.0 - 2.5 g
4 = 2.5 - 3.0 g 5 = 3.0 - 3.5 g 6 = 3.5 - 4.0
7 = 4.0 - 4.5 g 8 = 4.5 - 5.0 g 9 = > 5.0 g

407.5/1000 seed

4 / 0 / 7 / 5 / mg. PER 10,000 SEED (Seed should be uniformly dried.)

__ / __ / __ / __ / mg. LESS THAN . . . . . __ /

__ / __ / __ / __ / mg. MORE THAN . . . . . __ /

2 / Apomixis Percentage 1 = more than 95 2 = 85 to 95 3 = less than 8

Jad 10/10/02 5 / Phenol Reaction 1 = none-lemma removed (Merion) 2 = Beige 3 = Brown (Mi
4 = Black (Mystic-2 hrs) 5 = Black (24 hrs)

LEMMA

3 / 0 / 7 mm. LEMMA LENGTH (average of 100) 0 / 7 / 34 mm. LEMMA WIDTH (average of 10

__ / __ / mm. LESS THAN . . . . . __ / __ / __ / mm. LESS THAN . . . . .

__ / __ / SAME AS . . . . . __ / __ / __ / SAME AS . . . . . .

__ / __ / mm. MORE THAN . . . . . __ / __ / __ / mm. MORE THAN . . . . . .

5 / Keel 1 = Glabrous 5 = Slightly pubescent 9 = Pubescent

5 / Marginal Nerves 1 = Glabrous 5 = Slightly pubescent 9 = Pubescent

2 / Intermediate Nerves 1 = Distinct 2 = Obscure

5 / Basal Webbing 1 Absent 5 = Scant 9 = Copious

---

11. DISEASE (0 = NOT TESTED 1 = HIGHLY SUSCEPTIBLE 4 = MODERATELY SUSCEPTIB
5 = MODERATELY RESISTANT 9 = HIGHLY RESISTANT)

Age of stand / year rated / trial type (turf, pasture, spaced plant).

∅ / LEAF RUST *Puccinia poae-nemoralis*

7 / BROWN PATCH *Rhizoctonia solani*

8 / MELTING-OUT *Drechslera poae*

8 / LEAF SPOT *D. poae* (Tables 1 & 5)

0 / SCLEROTINIA PATCH *S. borealis*

0 / PYTHIUM BLIGHT *Pythium spp.*

0 / ERGOT *Claviceps purpurea*

3 / STRIPE RUST *P. striiformis*

4 / SUMMER PATCH *Magnaporthe*

0 / Recovery from YELLOW RING

__ / OTHER

(Table 3)

5 / DOLLAR SPOT *Lanzia and Moellerdiscus s*

(Table 9)

5 / STEM RUST *P. graminis*

0 / RED THREAD *Laetisaris fusciformis*

0 / LEAF SPOT *Olpolaris sorokiniana*

0 / POWDERY MILDEW *Erysiphe graminis*

0 / SNOW MOLD (Gray) *Typhula idiana*

0 / SNOW MOLD (Pink) *Gartachia nivalis*

0 / ORANGE STRIPE RUST *P. pcarum*

(Table 2)

9 / STRIPE SMUT *Ustilago striiformis*

0 / FLAG SMUT *Urocystis agropyri*

12. **INSECT** (0 = NOT TESTED 1 = HIGHLY SUSCEPTIBLE 4 = MODERATELY SUSCEPTIBLE 6= MODERATELY RESISTANT 9 = HIGHLY RESISTANT) 600228

___/ CHINCH BUG *Blissus spp.*

___/ SOD WEBWORM *Crambus spp.*

___/ BILLBUGS *Sphenophorus spp.*

___/ WHITE GRUB _____

___/ GREENBUG APHID *Schizaphis graminum*

___/ OTHER _____

13. **STRESS TOLERANCES** (0 = NOT TESTED 1-9, 9 = BEST) (tables 1,4,6, & 8)

7 / HEAT	8 / COLD (Injury)	3 / WINTER COLOR
0 / SALINITY	7 / DROUGHT	0 / LOW FERTILITY
0 / SHADE	0 / ACID SOIL (pH < 4.5)	0 / ALKALINITY (pH > 7.5)
0 / SOIL COMPACTION	0 / POOR DRAINAGE	0 / AIR POLLUTION

___/ OTHER _____

14. GIVE RESEMBLANCE VALUE IN LEFT COLUMN AND VARIETY CODE NUMBER IN RIGHT COLUMN FOR VARIETY WITH WHICH COMPARISON IS MADE (1 = LESS THAN 2 = SAME AS 3 = MORE ERECT, MORE RESISTANT, DENSER, MORE PERSISTENT, DARKER OR GREATER HEIGHT) USE STANDARD CULTIVARS LIST ABOVE.

RESEMBLENCE	CHARACTER	SIMILAR VARIETY
___/	MATURITY - HEADING	___/
___/	HEIGHT	___/
___/	RHIZOME LENGTH (Aggressiveness)	___/
3 /	LEAF COLOR (Spring) darker than P-104	___/ (Tables 4 & 6)
3 /	LEAF COLOR (Summer) darker than P-104	___/ (Tables 4 & 6)
3 /	LEAF COLOR (Winter) more purple than P-104	___/ (Tables 1, 4, 6, & 8)
___/	SHADE TOLERANCE	___/
3 /	LEAF WIDTH Finer than	P-104
___/	DROUGHT	___/
___/	COLD INJURY	___/
___/	HEAT	___/
___/	SEED SIZE	___/
___/	SEED WEIGHT	___/
___/	STEMMINESS	___/
___/	WEAR TOLERANCE	___/
___/	SOD STRENGTH	___/
___/	LOWCUT TOLERANCE (1/2")	___/
___/	DISEASE	___/

SPECIFY _____

15. GIVE AREA TEST RESULTS PRESENTED FROM _____

16. ADDITIONAL DESCRIPTION : (Use additional sheets as required.)
Describe all characteristics that cannot be adequately described in the form in Exhibit D. Comparitive varieties shou be used as may be appropriate, such as for disease. Append all comparitive trial and evaluation data, including measured characteristics, environmental, and disease tests.

EXHIBIT D.

ADDITIONAL DESCRIPTION OF PRINCETON P-105 KENTUCKY BLUEGRASS

Princeton P-105 is a turf-type Kentucky bluegrass with an attractive medium-dark green color during the growing season. It produces a persistent, aggressive turf with medium wide leaf texture, a medium-low growth profile, medium-high density, good sod strength, and good overall turf performance. Princeton P-105 shows a purpling of the leaf tissue as it goes into winter dormancy. It has average seedling vigor. Princeton P-105 has shown good resistance to leaf spot and melting-out [caused by *Drechslera poae* (Baudys) Shoem.], and stripe smut [caused by *Ustilago striiformis* (Westend.) Niesel.] and moderate resistance to dollar spot caused by *Sclerotinia homoeocarpa* F. T. Bennet. It shows promise of higher seed yield than Princeton 104. Princeton P-105 produces extensive rhizomes, giving it good spreading and recuperative ability.

Princeton P-105 is recommended for lawns and sports turfs in regions where Kentucky bluegrass is well adapted. It is compatible in blends with most other Kentucky bluegrasses and in mixtures with turf-type perennial ryegrasses (Lolium perenne L.) and strong creeping red fescues (*Festuca rubra* L. subsp. *rubra*). However, its aggressiveness and density may cause it to dominate many blends and mixtures.

Mar-28-02 11:01P # 5414511847 P.02

1997 mean morphological measurements for a spaced-plant Kentucky bluegrass trial planted fall 1995 near Hubbarc

Entry	Plant Height cm	Tiller Leaf Length cm	Tiller Leaf Width mm	Branches at Lowest Whorl #	Panicle Length cm
P-105	62.1	8.9	3	4	9.3
Merit	46.5	7.9	2.8	4.7	8.4
Baron	43.5	7.3	2.7	4.7	8
LSD (0.05)	2.9	0.08	0.03	0.03	0.6

Mean initial heading dates for entries in a spaced-plant Kentucky bluegrass trial planted fall 1995 near Hubbard, (

Entry	1996	1997
P-105	5-May	30-Apr
Merit	7-May	5-May
Baron	30-Apr	4-May
LSD (0.05)	6 days	4 days

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1996 mean morphological measurements for entries in a Kentucky bluegrass spaced plant nursery planted fall of 1995 near Hubbard, OR.

Entry	Plant Height (cm)	Tiller Leaf Length (cm)	Tiller Leaf Width (mm)	Panicle Length (cm)	Branches/ Lowest Whorl (#)
Georgetown	84.700	15.2333	4.6333	13.2500	3.8833
Wabash	80.525	17.0250	4.5833	15.5667	4.6000
Julia	81.642	13.8667	5.0167	13.4083	4.1667
Kenblue	80.583	13.9500	4.2000	13.8083	4.7000
Eagleton	77.733	11.1833	3.4500	13.2500	4.2167
NJGD	74.000	10.8583	4.4500	11.8417	4.2667
Challenger	72.267	12.3417	4.1833	12.8250	4.6000
Les Clemons	72.250	13.0500	5.4500	11.9500	4.4333
ZPS-2183	68.683	10.8917	3.9833	10.0583	4.5333
B9-196	67.867	12.5583	4.3833	12.8000	4.2000
B3-180	67.200	10.2833	4.7500	10.4833	4.3167
Adelphi	66.217	11.8667	4.6667	12.3500	3.7333
Touchdown	65.650	12.6083	4.4667	10.7167	3.7833
A88-744	65.400	11.1833	3.9833	10.1083	3.4167
Ram I	62.117	9.1000	2.8167	8.6167	4.0833
America	61.058	12.1500	3.3000	11.9750	4.4500
Baron	60.883	10.0417	4.6333	10.7667	4.5333
P-105	59.850	11.5000	5.5833	10.7167	3.6833
Opti-Green	58.192	9.9750	3.6500	9.8500	4.7000
Midnight	57.267	13.2833	3.1833	11.5167	4.4500
Wildwood	57.233	9.2750	4.2500	10.3500	3.7000
BO-165	57.067	9.0667	4.2833	9.5167	4.5667
Sodnet	56.517	9.0083	3.4167	9.3750	3.4333
PST-P46	55.333	10.2667	3.4167	11.0667	3.7500
Merit	55.033	9.6667	3.8500	11.0000	5.0500
Glade	54.650	8.4000	3.0333	10.0500	4.0833
B2-42	52.467	9.7917	4.2833	10.0500	4.1833
PST-638	52.433	11.8333	2.7000	11.9833	4.1500
Blacksburg	51.850	10.7583	3.8167	9.3917	4.2333
Unique	50.850	9.0250	2.3167	10.8167	4.3500
A418	48.717	8.2833	5.3667	9.2750	3.8500
BO-141	48.150	8.4417	4.9667	9.6250	4.1333
Limousine	44.750	8.7000	4.7333	8.4333	4.7333
Nugget	42.833	7.9833	4.1333	7.4250	2.6000
MTT 683	36.317	6.0833	3.1333	7.8417	2.5167
A7-60	35.817	6.3083	4.4167	5.4167	3.3167
LSD (0.05)	3.25	0.9786	0.4549	0.6783	0.3125

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Table 2. Performance of Kentucky bluegrass cultivars and selections in a turf trial seeded September 1984 at Adelphia, NJ.

Cultivar or Selection	Turf Quality[1] 1985	1986	1987	1988	1989	1990	1985-1990 Avg.	Stripe[2] Smut May 1990
Princeton P-105	7.6	7.8	8.2	7.6	8.4	8.8	8.1	9.0
Eclipse	6.9	7.6	7.1	7.0	6.9	7.5	7.2	9.0
Midnight	8.0	7.5	6.7	6.0	6.5	7.3	7.0	9.0
Able I	5.7	7.2	7.4	6.5	7.4	7.2	6.9	8.8
Blacksburg	7.0	6.9	6.8	6.4	7.1	7.2	6.9	9.0
Glade	7.0	6.7	6.8	6.3	7.0	7.2	6.8	9.0
Asset	6.5	6.7	6.6	6.7	7.3	7.0	6.8	9.0
Adelphi	6.3	6.9	7.1	6.8	6.9	6.1	6.6	9.0
Challenger	6.9	7.0	7.2	6.7	6.2	5.2	6.5	7.5
Ram I	6.8	6.3	6.1	6.8	5.8	7.1	6.5	9.0
Touchdown	5.1	5.7	6.7	6.8	6.6	6.9	6.3	9.0
Liberty	6.4	6.4	7.2	5.7	6.3	5.3	6.2	8.3
SR-2000	6.2	5.9	6.0	6.7	6.1	6.4	6.2	8.8
Pretty	6.7	7.0	6.4	5.7	5.6	5.4	6.1	8.3
Julia	5.9	5.5	6.2	6.3	6.4	5.9	6.0	9.0
America	6.8	6.5	6.7	5.8	5.2	5.0	6.0	9.0
Coventry	6.3	4.6	6.3	5.6	5.3	5.7	5.6	8.5
Mystic	5.1	5.6	5.5	5.5	5.1	6.3	5.5	9.0
Bronco	5.1	5.8	5.5	5.5	5.7	5.5	5.5	9.0
Fylking	5.2	5.7	6.4	5.1	5.4	5.2	5.5	8.0
Parade	5.7	5.8	6.0	5.6	5.8	3.8	5.4	9.0
Classic	5.7	5.6	6.3	5.1	5.2	4.7	5.4	9.0
Cheri	5.9	5.2	5.7	5.5	5.3	4.9	5.4	8.3
Eagleton 1425	5.5	5.5	4.9	5.3	5.5	5.6	5.4	9.0
Minstral	5.2	6.3	6.2	5.5	4.8	4.3	5.4	8.5
Cocktail	5.4	4.9	6.0	5.3	5.2	5.5	5.4	9.0
Caroline	4.4	5.1	5.3	5.5	5.9	6.0	5.3	8.8
Georgetown	5.6	5.8	5.7	5.7	5.4	3.9	5.3	9.0
Merit	6.2	6.0	5.7	5.5	4.4	3.5	5.2	5.5
Columbia	5.6	5.4	5.5	5.6	5.0	3.9	5.1	7.0
Merion	5.3	6.0	5.7	5.1	4.8	3.8	5.1	8.5
Cynthia	5.2	5.4	6.0	4.9	4.9	4.3	5.1	6.8
Bensun (A-34)	4.8	4.7	5.3	5.0	4.9	4.9	4.9	9.0
Baron	6.6	5.9	6.6	5.4	2.7	1.7	4.8	1.5
Nassau	6.1	5.4	5.8	4.9	3.6	2.9	4.8	5.0
Banff	5.5	5.2	5.0	4.4	4.7	3.7	4.7	8.8
Wabash	4.5	4.0	3.8	4.3	3.0	2.8	3.7	9.0
Park	3.8	3.7	3.4	3.5	2.3	2.3	3.1	9.0
LSD at 5% =	0.7	0.7	0.8	0.7	0.9	1.2	0.5	1.9

[1] 9 = best turf quality

[2] 9 = most disease resistance

Table 3. Performance of Kentucky bluegrass cultivars and selections in a turf trial seeded September 1991 at Adelphia, NJ.

Cultivar or Selection	Turf Quality[1] 1994 Average	Dollar Spot[2] Aug. 1994
Midnight	7.1	6.7
America	6.8	8.9
SR-2000	6.5	6.0
—Princeton P-105	6.3	4.5
Eclipse	6.4	6.3
Blacksburg	6.2	3.7
—Princeton P-104	5.8	6.3
Wildwood	5.8	7.0
Unique	6.2	8.3
NuBlue	5.0	6.0
Opal	5.8	3.0
Ikone	5.0	2.7
Nassau	5.4	6.7
Banff	5.5	8.3
Shamrock	5.4	5.5
Fylking	5.1	5.0
Limousine	5.1	1.3
Suffolk	5.4	7.3
Georgetown	5.1	8.0
NuStar	5.6	5.0
Alpine	5.6	4.3
Broadway	5.1	2.0
Preakness	5.6	8.3
Washington	5.2	3.8
Livingston	5.1	6.3
Adelphi	5.3	6.3
Trenton	4.8	6.3
Baron	4.3	3.7
RAM I	4.4	3.7
Amazon	4.4	5.7
Sydsport	4.1	2.3
SR-2100	4.6	7.0
Cheri	3.7	1.3
4 Aces	4.1	3.5
Glade	4.9	4.3
Silvia	4.2	1.3
Merit	3.6	2.3
Voyager	5.0	7.7
Eagleton	4.4	8.0
Alene	3.9	7.4
Huntsville	4.3	7.0
Park	3.5	8.0
Garfield	3.1	7.7
S-21	3.0	7.0
Kenblue	2.6	7.3
LSD at 5% =	0.9	2.4

[1] 9 = best turf quality

[2] 9 = least dollar spot

Table 5. Performance of Kentucky bluegrass cultivars and selections in a turf trial established September 1991 at Adelphia, NJ.

Cultivar or Selection	Turf Quality[1] 1992-1993 Avg.	Turf Quality[1] 1992 Avg.	Turf Quality[1] 1993 Avg.	Percent Leaf Spot March 1993 Avg.
Midnight	7.5	7.4	7.6	5.5
America	6.9	7.5	6.4	3.2
SR-2000	6.8	7.2	6.5	1.7
NuBlue	6.7	6.9	6.5	3.7
—Princeton P-105 (A84--872 PT)	6.6	6.7	6.5	5.3
—Princeton P-104	6.5	6.8	6.2	2.3
Ikone	6.5	7.0	6.0	1.3
Blacksburg	6.4	6.0	6.8	2.7
Eclipse	6.3	6.5	6.1	3.7
Opal	6.3	6.8	5.8	3.3
Nassau	6.3	6.8	5.7	1.3
Unique	6.2	6.6	5.7	5.7
Banff	6.2	6.3	6.0	2.3
Shamrock	6.1	6.5	5.6	3.4
Fylking	6.1	6.7	5.5	29.3
Limousine	6.1	6.6	5.6	2.0
Georgetown	6.0	6.4	5.6	2.7
Canterbury	5.9	6.3	5.6	6.0
Suffolk	5.9	6.0	5.7	2.7
Broadway	5.8	6.0	5.6	7.0
Nustar	5.7	6.3	5.2	33.3
Alpine	5.7	6.1	5.3	4.3
Livingston	5.7	6.1	5.3	8.3
Washington	5.6	6.0	5.3	4.0
Adelphi	5.6	6.0	5.1	9.3
Trenton	5.6	6.0	5.1	2.3
Preakness	5.6	6.2	5.0	7.0
Baron	5.5	5.7	5.3	4.3
Ram I	5.4	5.4	5.5	22.3
Fortuna	5.4	5.7	5.1	6.7
Cheri	5.4	6.0	4.8	9.0
Sydsport	5.3	6.1	4.6	6.3

(continued)

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Table 5. (continued)

Cultivar or Selection	Turf Quality[1] 1992-1993 Avg.	Turf Quality[1] 1992 Avg.	Turf Quality[1] 1993 Avg.	Percent Leaf Spot March 1993 Avg.
Amazon	5.3	5.8	4.7	44.0
Merit	5.3	5.5	5.1	6.7
4 Aces	5.2	5.1	5.2	3.2
Silvia	5.0	5.7	4.2	2.0
SR-2100	5.0	5.4	4.5	8.7
Glade	4.7	3.9	5.5	30.0
Eagleton	4.4	4.4	4.3	91.7
Voyager	4.2	4.3	4.2	13.3
Alene	3.6	3.4	3.6	26.7
Huntsville	3.2	3.0	3.4	10.7
Park	3.1	3.4	2.9	39.7
Garfield	2.9	3.1	2.6	70.0
Pomeroy	2.8	3.1	2.5	65.0
S-21	2.8	2.6	3.0	61.7
Kenblue	2.3	2.4	2.2	96.3
LSD at 5% =	0.5	0.6	0.7	18.1

[1] 9 = best turf quality

Table 7. Performance of Kentucky bluegrass cultivars and selections in a turf trial seeded September 1994 at Adelphia, NJ. (Low Maintenance Test)

Cultivar or Selection	---------9 = best--------- Turf Quality Avg. 1995	Seedling Vigor Oct. 1994	9 = tallest Height Nov. 1994
SR A82-2005	6.7	5.7	2.3
Midnight	6.5	5.0	4.0
Blacksburg	6.3	5.0	3.0
Apex	6.2	5.3	3.3
Unique	6.0	5.0	2.0
Ram I	6.0	5.3	6.3
America	5.8	5.3	2.0
Wildwood	5.8	5.3	4.0
Rita	5.6	5.3	5.0
Cheri	5.3	5.3	4.0
Princeton P-105	5.3	5.4	5.4
RSP	5.2	5.7	5.7
Eclipse	5.2	5.0	4.7
Julia	5.2	5.0	6.0
Princeton P-104	5.1	5.0	6.0
Rugby	5.1	6.0	6.0
Classic	5.1	5.7	6.0
Nimbus	5.1	6.0	6.3
Washington	5.0	7.7	7.0
Shamrock	5.0	5.7	4.0
Fylking	5.0	5.3	5.0
Limousine	5.0	5.0	2.0
Adelphi	4.9	5.3	4.7
Freedom	4.9	6.0	6.7
NuStar	4.9	5.0	4.0
Belturf	4.9	6.0	4.0
1757	4.8	6.0	6.3
Aspen	4.8	5.3	5.0
Glade	4.7	5.7	3.3
Georgetown	4.7	2.7	4.0
Livingston	4.7	5.3	6.7

(continued)

Table 7. (continued)

Cultivar or Selection	---------9 = best--------- Turf Quality Avg. 1995	Seedling Vigor Oct. 1994	9 = tallest Height Nov. 1994
Sydsport	4.6	4.7	3.3
Suffolk	4.6	4.7	6.7
Bel 21	4.6	6.7	6.0
Plush	4.6	6.3	4.3
Liberty	4.5	5.0	5.3
Huntsville	4.5	5.7	6.7
Baron	4.5	5.7	4.0
Belmont	4.5	4.7	4.3
Trenton	4.4	7.0	6.3
Kelly	4.4	5.7	3.7
Merit	4.4	5.0	4.0
Amazon	4.3	5.7	3.7
NuBlue	4.2	5.7	4.3
Penn Pro	3.6	5.0	5.0
S-21	3.6	6.0	6.3
LSD at 5% =	0.7	0.9	1.3

Table 9. Performance of Kentucky bluegrass cultivars and selections in a turf trial seeded September 1984 at Adelphia, New Jersey.

Cultivar or Selection	Turf Quality[1] 1985	Stem Rust[2] 1985
Midnight	8.0	7.9
Princeton P-105	7.6	7.8
Blacksburg	7.0	5.8
Glade	7.0	7.3
Eclipse	6.9	5.9
Challenger	6.9	6.7
America	6.8	6.7
Ram I	6.8	7.2
Baron	6.6	6.7
Liberty	6.4	6.9
Adelphi	6.2	7.1
Merit	6.2	6.2
Nassau	6.1	6.9
Julia	5.9	6.8
Cheri	5.9	6.7
Classic	5.7	5.4
Parade	5.7	6.9
Highland I	5.7	6.9
Able I	5.7	3.5
Georgetown	5.6	7.3
Columbia	5.6	7.0
Banff	5.5	7.1
Merion	5.3	2.8
Cynthia	5.2	5.2
Fylking	5.2	6.3
Mystic	5.1	3.4
Eagleton 1424	5.1	5.9
Touchdown	5.1	3.1
Warren's A-34	4.8	5.9
Wabash	4.5	5.7
Park	3.8	4.9
LSD at 5%	0.7	1.0

[1]Turf quality, where 9 =4 best quality and 1 = worst quality.
[2]Stem rust, where 9 = least disease and 1 = most disease.

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Table 10.

Tiller leaf length and width as measured on spaced plants in 1996 at Hubbard, OR

Variety	Tiller Leaf Length	Tiller Leaf Width
P-105	11.53	5.58
Eagleton	11.18	3.45
America	12.15	3.33

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Exhibit E. Statement of the Basis of Ownership.

ASSIGNMENT OF PRINCETON 105 KENTUCKY BLUEGRASS

WHEREAS, Richard Hurley, 146 Bonney Court, Bridgewater, NJ 08807, Virginia Lehman, 315 Edgewater Drive, Lebanon, OR 97355; Cyril R. Funk Jr., 4 Delaware Drive, East Brunswick, NJ 08816; and Ronald F. Bara, 321 Cedar Grove Lane, Somerset, NJ 08873 have cooperated in the breeding and development of Princeton 105 Kentucky bluegrass.

NOW, THEREFORE, IN CONSIDERATION OF ONE DOLLAR ($1.00) and other valuable considerations made to the New Jersey Agricultural Experiment Station, including those made in the Agreement dated May 5, 1993 between Lofts Seed, Inc., P.O. Box 146, Bound Brook, NJ 08805, and the New Jersey Agricultural Experiment Station, and ONE DOLLAR ($1.00) and other valuable considerations made to each of us; we hereby assign unto Lofts Seed, Inc., P.O. Box 146, Bound Brook, NJ 08805 our entire interest in Princeton 105 Kentucky bluegrass for the United States and any foreign country. The Commissioner, Plant Variety Protection Office is requested to issue the plant variety protection certificate in accordance herewith.

Cyril R. Funk Jr.
Cyril R. Funk, Jr.

Sworn and subscribed to
before me this 14 day
of December, 1994.

Patricia A. Wald
Notary Public of New Jersey
Commission Expires 5-14-95

Ronald F Bara
Ronald F. Bara

Sworn and subscribed to
before me this 15 day
of December, 1994.

Patricia A. Wald
Notary Public of New Jersey
Commission Expires 5-14-95

Richard Hurley

Sworn and subscribed to
before me this 22nd day
of December, 1994.

Patricia E. Olivo
Notary Public of New Jersey
Commission Expires 8-2-97

Virginia Lehman

Sworn and subscribed to
before me this 13 day
of JANUARY, 1995.

Patricia M. Updegrave
Notary Public of Oregon

OFFICIAL SEAL
PATRICIA M. UPDEGRAVE
NOTARY PUBLIC - OREGON
COMMISSION NO.023883
MY COMMISSION EXPIRES APR. 13, 1997