No. 7800001

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Lofts Pedigreed Seed, 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 *Seventeen* 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 TY 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 OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS Y THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

PERENNIAL RYEGRASS

'Yorktown II'

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* 1st *day of* May *in the year of our Lord one thousand nine hundred and* eighty.

Attest:

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Secretary of Agriculture

FORM GR-470
(12-15-72)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

FORM APPROVED
OMB NO. 40-R3712

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: *See Reverse.*

1. VARIETY NAME OR TEMPORARY DESIGNATION	2. KIND NAME	FOR OFFICIAL USE ONLY
(Experimental Syn D-1) Yorktown II	Perennial ryegrass	PV NUMBER 7800001
3. GENUS AND SPECIES NAME	**4. FAMILY NAME** *(Botanical)*	FILING DATE 10-6-77 / TIME 9:30 A.M. P.M.
Lolium perenne L.	Gramineae	FEE RECEIVED $ 500.00 + $ 250.00 / BALANCE DUE $ 3-11-80 Rec'd.
	5. DATE OF DETERMINATION Sept. 20, 1973	

6. NAME OF APPLICANT(S)	7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*	8. TELEPHONE AREA CODE AND NUMBER
Lofts Pedigreed Seed, Inc.	P.O. Box 146 Bound Brook, N. J. 08805	(201) 356-8700

9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)*	10. STATE OF INCORPORATION	11. DATE OF INCORPORATION
Corporation	New Jersey	11/10/48

12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:

C. R. Funk
Soils & Crops Dept.
P.O. Box 231
N. J. Agricultural Experiment Station
New Brunswick, N. J. 08903

Phone: (201) 932-9480

13. **CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:**

- [X] 13A. Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*
- [X] 13B. Exhibit B, Botanical Description of the Variety
- [X] 13C. Exhibit C, Objective Description of the Variety
- [X] 13D. Exhibit D, Data Indicative of Novelty
- [X] 13E. Exhibit E, Statement of the Basis of Applicant's Ownership

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.)* [X] YES [ ] NO

14B. Does the applicant(s) specify that this variety be limited as to number of generations? [X] YES [ ] NO

14C. If "Yes," to 14B, how many generations of production beyond breeder seed? [X] FOUNDATION [ ] REGISTERED [X] CERTIFIED

The applicant declares that a viable sample of basic seed of this variety will be deposited upon request before issuance of a certificate and will be replenished periodically in accordance with such regulations as may be applicable.

The undersigned applicant(s) of this sexually-reproduced novel plant variety believes 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 Protection Act.

Applicant is informed that false representation herein can jeopardize protection and result in penalties.

(DATE)

Peter S. Loft
(SIGNATURE OF APPLICANT)

1

(DATE)

(SIGNATURE OF APPLICANT)

INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and $250.00 fee to U.S. Dept. of Agriculture, Agricultural Marketing Service, Grain Division, 6525 Belcrest Road, Hyattsville, Maryland 20782. (See Section 180.175 of the regulations and rules of practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

ITEM

5 Insert the date the applicant determined that he had a new variety based on the definition in Section 41 (a) of the Act and decision is made to increase the seed.

13a First, give the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method. Second, give the details of subsequent stages of selection and multiplication. Third, indicate the type and frequency of variants during reproduction and multiplication and state how these variants may be identified. Fourth, provide evidence on stability.

13b First, give any special characteristics of the seed and of the plant as it passes through the seedling stage, flowering stage and the fruiting stage. Second, describe the mature plant and compare it with a similar commercial variety grown under the same conditions, and indicate the differences.

13c A supplemental form will be furnished by the PVPO to describe in detail a variety for each kind of seed.

13d Provide complete data indicative of novelty. Seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty may be submitted. Seeds submitted may be sterile.

13e Indicate whether applicant is the actual breeder, the employer of the breeder, the owner through purchase or inheritance, etc.

EXHIBIT A

Origin and Breeding History of Yorktown II Perennial Ryegrass

1. Yorktown II is a six clone synthetic variety. Clones D-8, D-14, D-21 and D-23 were obtained by crossing plants selected from Pennfine perennial ryegrass with clone L4H and parental clones of Manhattan perennial ryegrass. Clones D-12 and D-16 were obtained by crossing NJE K-79 with plants selected from Pennfine. Most of the parental germplasm of both Manhattan and NJE K-79 originated from central Park in New York City. Clone L4H was selected from a school playground in Baltimore, Maryland in 1962. NJE K-79 is a germplasm source derived from 80 turf-type perennial ryegrass clones combined as a breeding synthetic in 1967. The six parental Clones of Yorktown II were selected from a nursery containing over 3,000 spaced plants. Clones were selected on the basis of attractive appearance, uniformity of anthesis date, and freedom from disease. All six clones demonstrated good resistance to the races of crown rust (Puccinia coronata Corda F. sp. lolii Erikss.) present in field nurseries at Adelphia, N.J. during 1973 (Table 1). All six clones performed well in polycross progeny trials conducted under turf maintenance with all progenies producing leafy, attractive turf showing good resistance to the brown blight disease incited by Helminthosporium siccans Drecheler, and the brown patch disease incited by Rhizoctonia solani Kuhn. (Table 2).

(Exhibit A Continued)

2. Clonal propagules were established in a randomized, replicated, isolated crossing block for the production of Syn I seed. Syn II breeder seed was produced from an isolated nursery of over 10,000 spaced plants. Certified production fields must be established from Breeder or Foundation seed.
3. No objectionable off-type plants or variants have been observed in the reproduction or multiplication of Yorktown II perennial ryegrass.

4. Syn II Breeder seed and Syn III Foundation seed have produced turf of comparable quality and acceptable uniformity (Tables 3 and 4).

EXHIBIT B

Botanical Description of the Variety

'Yorktown II' perennial ryegrass is a dark green, fine textured, turf type variety. In New Jersey trials, Yorktown II has produced an excellent turf throughout the entire growing season (tables 2, 5, 6 and 7). It has shown good resistance to a late fall and winter brown blight disease caused by Helminthosporium siccans Drechsler (Table 2). It produces a turf comparable in density and texture to the better turf type ryegrasses (Table 8). Yorktown II shows improved resistance to Rhizoctonia brown patch compared with Manhattan or Yorktown (tables 2 and 5). The variety is intermediate in maturity between Pennfine and Manhattan (tables 9 and 10). It produces no fluorescent seedlings. Yorktown II has maintained a more leafy turf during late May and early June than varieties such as Pennfine and Citation. Mowing qualities of Yorktown II appear to be comparable to Yorktown, Manhattan and Pennfine. Observations of spaced-plant nurseries at Adelphia, New Jersey indicate that Yorktown II has good winterhardiness, being similar to Manhattan and Yorktown in this respect and significantly more winter hardy than Pennfine.

FORM GR-470-36
(9-76)

FORM APPROVED: OMB NO. 40-R3712

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

OBJECTIVE DESCRIPTION OF CULTIVARS
RYEGRASS
(Lolium spp.)

NAME OF APPLICANT(S)

Lofts Pedigreed Seed Inc.

ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code)

P. O. Box 146
Bound Brook, New Jersey 08805

VARIETY NAME OR TEMPORARY DESIGNATION

Yorktown II

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. [0][8][9] or [0][9].)when number if 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 should be for SPACED PLANTS. Give additional description for all characteristics that cannot be adequately described in the form below. Append all petrinent comparative trial and evaluation data.

1. SPECIES:

[2] 1 = L. MULTIFLORUM (annual or Italian: includes Westerwoldicum) 2 = L. PERENNE (perennial) 3 = L. RIGIDUM (includes Wimmera)
4 = HYBRID (of species) _____ 5 = OTHER (Specify) _____

2. PLOIDY:

[1] 1 = DIPLOID 2 = TETRAPLOID 3 = OTHER (Specify) _____

3. DURATION:

[3] 1 = ANNUAL OR BIENNIAL 2 = SHORT LIVED PERENNIAL (3-4 years) 3 = PERENNIAL (more than 4 years)

STANDARD CULTIVARS

1 = GULF 2 = WIMMERA 62 3 = LINN 4 = PELO
5 = NORLEA 6 = ABERYSTWYTH S-23 7 = MANHATTAN 8 = PENNFINE

4. MATURITY (50% HEADED) Use standards from above for comparison: (See Tables 9, 10)

[5] 1 = VERY EARLY 3 = EARLY 5 = MEDIUM 7 = LATE 9 = VERY LATE

[6] DAYS EARLIER THAN ..... [7] STANDARD CULTIVAR
[10] DAYS LATER THAN ..... [8] STANDARD CULTIVAR

5. MATURE PLANT HEIGHT (Use standard cultivars from above) :

[59] CM. HIGH (See Table 11)
[4] CM. SHORTER THAN ..... [7] STANDARD CULTIVAR
[5] CM. TALLER THAN ..... [8] STANDARD CULTIVAR

6. PERCENT WINTER DAMAGE (estimated as percent of the area appearing dead). Use standard cultivars from above for comparison:

[0] PERCENT DAMAGE OF APPLICATION CULTIVAR
[100] PERCENT DAMAGE OF ..... [7] STANDARD CULTIVAR

No winter damage was observed on either Yorktown II or Manhattan in turf trials in New Jersey.

7. TURF DENSITY Use standard cultivars from above:

[342] TILLERS PER 100 SQ. CM. (See table 8)
[ ] LESS TILLERS PER 100 SQ. CM. THAN .... [ ] STANDARD CULTIVAR
[59] MORE TILLERS PER 100 SQ. CM. THAN ... [8] STANDARD CULTIVAR

8. FLAG LEAF (at full growth) Use standard cultivars from above:

[ ] CM. LENGTH (from ligule to tip) [ ] MM. WIDTH (at widest point)
[ ] CM. SHORTER THAN ..... [ ] STANDARD CULTIVAR
[ ] CM. LONGER THAN ..... [ ] STANDARD CULTIVAR
[ ] MM. NARROWER THAN ..... [ ] STANDARD CULTIVAR
[ ] MM. WIDER THAN ..... [ ] STANDARD CULTIVAR

[ ] FLAG LEAF AT BOOT STAGE: 1 = DEFLEXED 3 = RECURVED 5 = HORIZONTAL 7 = SEMI-ERECT 9 = ERECT

EXHIBIT D

Data Indicative of Novelty

'Yorktown II' perennial ryegrass most closely resembles 'Yorktown' except it is 4 to 5 days later in anthesis and has (1) the ability to produce a finer, denser turf, (2) improved resistance to the Rhizoctonia brown patch disease, (3) a better record of summer performance in New Jersey, and (4) improved resistance to crown rust (see Tables 1, 2, 5, 6, 7, 9, 10, 12 and 15).

Table 1. Reaction of perennial ryegrass clones to the crown rust disease incited by Puccinia coronata in spaced-plant nurseries at Adelphia, New Jersey.

Clone*	Rust rating - 9 = most rust† July 1973
D-8	0
D-12	0
D-14	0
D-16	0
D-21	1
D-23	1
C-1	4
C-2	5
C-3	4
C-4	4
C-5	5
A	5
B	3
C	3
16	5
24	4
LSD at 5%	1.4

*Clones D-8, D-12, D-14, D-16, D-21 and D-23 are the parents of Yorktown II. Clones C-1, C-2, C-3, C-4, and C-5 are the parents of Yorktown. Clones A, B and C are the parents of Citation. Clones 16 and 24 are two of the 16 parents of Manhattan.

Table 2. Performance of perennial ryegrass varieties and selections in a turfgrass test seeded September 1973 at Adelphia,New Jersey.

	Percent* brown blight Jan 1974	Percent** brown patch July 1974	Turf performance score 9 = best						
			1973 1974 Avg.	July 1975	June 1976	Nov 1976	Aug 1977	Sept 1977	1975 1976 1977 Avg.
Yorktown II	7	7	7.7	6.3	6.0	6.5	7.0	6.8	6.5
Diplomat	8	17	7.2	6.0	5.0	6.0	6.0	5.5	5.7
Omega	9	13	7.0	5.5	6.0	5.8	6.8	5.8	6.0
Yorktown	5	22	7.0	5.0	5.4	5.8	4.8	4.5	5.1
Citation	29	10	7.0	6.0	7.0	6.0	6.5	7.0	6.5
Lofts Syn F	11	18	6.9	5.3	5.5	5.5	5.0	4.8	5.2
Derby	24	11	6.7	5.5	6.3	6.5	6.5	5.5	6.1
Pennfine	29	10	6.6	6.0	5.9	5.5	6.2	5.8	5.9
Manhattan	7	32	6.4	4.5	4.8	5.5	5.8	5.4	5.2
Eton	23	61	4.8	2.8	3.0	2.8	2.3	2.8	2.7
NK200	16	68	4.8	3.0	3.0	2.5	3.0	2.5	2.8
Ensporta	32	93	4.1	2.0	2.8	2.3	2.3	2.3	2.3
Servo	32	81	4.1	2.5	2.8	3.0	2.0	1.8	2.4
S-23	11	88	3.7	2.0	3.0	2.8	2.3	2.0	2.4
Pelo	6	86	3.6	2.0	2.3	2.8	2.0	2.0	2.2
Sportiva	9	89	3.5	2.0	3.0	2.3	2.3	2.3	2.4
Parcour	5	91	3.5	2.0	2.0	2.0	3.0	4.0	2.8
Splendor	6	92	3.4	1.8	2.3	2.0	2.5	2.3	2.2
NK-100	18	83	3.4	2.3	2.8	3.0	2.3	2.0	2.5
Compas	7	93	3.4	2.0	2.5	2.3	3.3	2.5	2.5
Endura	6	91	3.2	2.0	2.3	1.8	1.8	1.8	1.9
Caprice	6	92	3.1	2.0	2.0	1.8	2.0	1.8	1.9
Combi	10	94	2.8	1.5	2.0	1.8	1.8	1.5	1.7
Linn	20	73	2.7	2.0	2.0	1.5	2.0	1.5	1.8
D-8***	5	6	7.5	6.0	8.0	8.0	7.5	6.5	7.2
D-12***	6	7	7.6	5.0	6.0	6.0	7.0	6.5	6.1
D-14***	6	7	7.5	7.0	6.0	6.0	7.5	6.5	6.6
D-16***	5	7	7.5	7.0	6.0	7.0	7.5	7.0	6.9
D-21***	8	4	7.2	5.5	6.5	7.0	7.5	6.5	6.6
D-23***	5	7	7.5	6.0	6.0	7.0	6.5	6.0	6.3
LSD @ 5%	9	11	0.7	0.9	0.8	0.9	0.7	1.0	0.9

* Brown blight disease caused by Helminthosporium siccans

** Brown patch disease caused by Rhizoctonia solani

*** Components of Yorktown II

Table 3. Turf quality ratings of different sources of Yorktown II perennial ryegrass evaluated at North Brunswick, New Jersey.

Seed Source	Turf quality ratings* 9 = best quality									
	Nov. 1976	Apr. 1977	May 1977	June 1977	July 1977	Aug. 1977	Sept. 1977	Oct. 1977	Nov. 1977	Dec. 1977
Breeders (Syn II)	6.2	6.8	7.2	7.0	7.2	6.8	6.4	6.8	7.0	7.0
Foundation (Syn III)	6.4	6.6	7.2	6.8	7.4	6.8	6.6	7.0	6.8	7.2
LSD at 5%	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns

*Turf quality based on uniformity, general appearance and freedom from disease.

Test seeded October 1976 with five replications.

Table 4. Comparison of Syn II and Syn III generations of Yorktown II perennial ryegrass in turf trials seeded May 6, 1977 at Bound Brook, NJ.

Seed source	Days germination	Stand density June 29 1977 9 = best	Turf quality 9 = best	
			July 27 1977	August 8 1977
Syn II	5.0	6.3	6.7	6.5
Syn III	5.0	6.7	7.0	6.7
LSD at 5%	ns	ns	ns	ns

Table 5. Performance of perennial ryegrass cultivars at Martinsville, New Jersey during 1977.

Cultivar	Reaction to drought* 6/2	Brown Patch** thinning % 8/17	Turf quality (9 = best) 3/21	4/22	5/18	6/20	7/29	8/26	11/18	Avg.	Rank
Yorktown II	0	2	5.7	8.0	8.0	8.0	7.7	8.0	6.0	7.3	1
Diplomat + Yorktown II	1.0	0	6.3	8.0	7.7	7.3	8.0	8.0	6.3	7.3	2
Diplomat	0.7	11	6.3	8.0	7.3	7.7	7.3	7.0	6.0	7.2	3
Derby	0.7	6	6.0	8.0	7.7	7.0	8.0	7.3	7.0	7.2	4
Manhattan	1.3	35	6.7	7.7	7.0	7.0	6.3	6.7	6.3	6.8	5
Yorktown + Manhattan	0.7	27	6.7	8.0	7.7	6.3	6.7	5.7	6.3	6.8	6
Citation	3.3	6	6.0	7.0	7.0	6.0	7.0	7.0	7.0	6.7	7
Yorktown	0.7	18	5.3	7.3	7.3	6.3	6.3	6.3	6.7	6.5	8
Pennfine	3.0	2	6.0	7.3	7.0	6.3	7.0	6.7	5.7	6.4	9
EER 88	1.3	65	7.0	6.7	6.0	6.0	7.0	4.3	5.7	6.1	10
Caravelle	0.7	55	4.0	5.3	6.7	6.0	4.7	5.0	6.0	5.2	11

Test seeded September 17, 1975 and maintained at a 1-1/4" cutting height.

* 0 = None 6 = Severe stress

** After two weeks of hot muggy weather

Table 6. Performance of perennial ryegrass varieties seeded August 1974 at North Brunswick, New Jersey.

	Turf performance score 9 = best												
	1974	1976 Ratings											
Variety	1975 Avg.	Feb 18	Mar 29	Apr 9	Apr 26	Jun 7	Jun 17	Jul 7	Aug 3	Aug 9	Nov 3	Dec 20	1976 Avg.
Yorktown II	6.5	8.0	8.0	8.0	7.0	7.0	7.0	7.0	8.0	8.0	7.0	7.0	7.4
Diplomat	6.2	6.5	6.4	6.5	6.4	6.4	5.9	6.5	6.4	6.0	6.8	6.8	6.4
Citation	6.0	5.7	5.9	6.1	6.5	6.9	7.0	5.9	6.5	6.5	5.7	6.3	6.3
Omega	6.0	6.5	6.3	6.0	6.3	5.8	5.8	6.0	6.0	6.0	6.3	6.8	6.2
Yorktown	6.0	6.5	6.0	6.5	6.5	7.0	6.5	5.5	5.5	5.5	6.5	6.5	6.2
Derby	5.6	6.0	5.9	5.8	5.6	6.5	5.6	5.6	5.6	5.8	6.4	6.1	5.9
Birdie	5.6	5.2	5.3	5.6	5.8	6.1	5.8	5.9	5.8	5.6	6.0	6.1	5.7
Pennfine	5.4	5.1	5.0	5.3	5.1	6.3	5.8	5.6	5.4	5.3	5.1	4.8	5.3
Manhattan	4.8	5.6	5.0	5.1	5.5	5.0	4.7	4.6	4.3	4.5	5.5	5.9	5.1
Eton	4.1	4.3	3.3	3.8	6.0	5.3	4.3	3.8	3.5	3.3	3.3	2.8	4.0
NK200	4.1	4.5	3.8	4.0	6.0	4.3	4.0	3.8	3.0	3.0	3.5	3.3	3.9
Servo	3.8	3.5	3.8	3.3	4.5	4.0	4.0	3.3	3.0	2.8	3.3	3.3	3.5
Sprinter	3.3	2.5	3.0	3.0	4.5	4.0	3.0	3.5	3.0	2.5	4.0	4.0	3.4
Pelo	3.0	3.8	3.0	3.8	3.8	3.3	2.8	2.8	2.5	2.3	3.5	3.3	3.2
S321	3.1	2.5	2.5	2.8	3.5	3.3	3.3	3.3	3.0	3.0	4.0	2.5	3.1
Ensporta	2.8	3.0	2.8	2.8	3.8	3.8	3.0	2.3	2.3	2.0	4.3	3.5	3.1
Sportiva	2.9	3.8	2.8	2.8	4.0	3.3	2.8	1.8	2.0	1.5	2.5	2.8	2.7
Caprice	2.8	3.8	2.8	2.8	3.0	2.5	2.8	2.5	2.0	2.0	2.8	3.0	2.7
NK100	2.7	2.5	2.3	2.3	3.3	2.5	2.8	2.5	2.0	2.0	2.8	3.0	2.6
Endura	2.6	3.5	2.5	2.3	3.0	2.5	2.8	1.8	2.0	1.8	2.5	2.8	2.5
Compas	2.7	3.0	2.3	2.8	3.3	2.8	2.8	1.8	2.0	1.8	2.5	2.5	2.5
Game	2.8	2.5	2.0	2.3	2.3	2.8	2.8	2.8	2.0	2.0	2.8	2.5	2.4
Splendor	2.8	3.3	2.5	2.5	2.8	2.3	2.0	1.8	1.8	2.0	2.5	2.8	2.4
Linn	2.6	2.5	2.5	2.0	2.3	1.8	2.5	2.3	2.0	1.5	2.3	2.3	2.2
Combi	2.3	2.5	2.3	2.3	2.3	1.8	2.3	1.8	1.5	1.5	2.0	2.3	2.1
Perma	2.1	2.5	2.0	2.0	2.0	2.5	2.0	1.5	1.5	1.5	2.0	2.5	1.9
LSD at 5%	0.9												0.7

Table 7. Performance of perennial ryegrass varieties at North Brunswick, New Jersey in test seeded August 1975.

Variety	Turf performance score 9 = best											
	Oct 6 1975	Oct 10 1975	Dec 27 1975	Dec 31 1975	Apr 13 1976	Apr 26 1976	June 8 1976	June 17 1976	July 13 1976	Aug 9 1976	Nov 3 1976	Avg.
Yorktown II	7.0	7.0	6.6	6.7	6.3	6.0	6.4	6.6	7.0	6.4	6.9	6.6
Omega	6.5	6.0	6.5	6.5	6.5	6.0	5.5	5.5	6.0	5.5	6.5	6.1
Diplomat	6.1	6.0	6.4	6.4	6.4	5.6	5.6	5.7	6.1	5.3	6.6	6.1
Citation	6.2	6.2	4.8	5.1	5.6	5.9	6.8	6.2	6.0	5.7	5.3	5.8
Derby	5.3	5.1	5.4	5.5	5.9	5.9	5.9	6.1	5.8	5.6	5.7	5.6
Loretta	5.8	6.0	5.1	5.2	5.6	6.1	7.3	6.6	5.1	4.0	4.9	5.6
Yorktown	5.0	4.9	6.2	6.4	6.4	5.9	5.3	5.4	4.9	4.6	5.9	5.5
Birdie	5.5	5.5	4.8	5.3	5.5	5.3	5.8	5.5	6.0	6.0	5.8	5.5
Pennfine	5.6	5.7	5.0	5.3	5.7	4.9	5.9	5.6	5.2	5.3	5.6	5.4
Regal	5.0	5.0	5.3	5.3	5.3	4.8	5.5	5.3	5.0	5.5	5.3	5.2
Caravelle	5.3	4.3	7.3	7.3	6.5	7.0	4.8	4.0	3.3	2.5	5.3	5.2
Manhattan	5.3	5.0	5.5	5.8	5.4	5.6	4.9	4.6	4.3	4.2	5.5	5.1
Paramount	5.0	5.0	5.5	5.8	5.3	5.3	4.8	4.5	4.0	3.4	5.0	4.8
Athletic	3.0	4.0	4.0	4.0	5.0	6.0	7.0	7.0	5.0	3.0	2.0	4.5
Ensporta	6.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0	2.0	2.0	4.0	4.4
Score	3.8	4.0	4.8	5.3	5.5	6.0	5.0	4.0	3.8	2.5	4.0	4.4
Sprinter	4.0	5.0	3.0	3.0	5.0	6.0	4.0	5.0	4.0	3.0	3.0	4.1
Eton	3.3	3.3	3.3	3.3	3.5	6.8	6.0	5.0	3.5	2.8	3.5	4.0
NK200	3.5	3.3	3.8	4.3	3.5	6.3	5.3	4.5	2.8	2.3	3.8	3.9
Epic	3.0	3.0	4.0	4.0	5.0	5.0	4.0	6.0	3.0	2.0	2.0	3.7
Sportiva	4.0	5.0	3.5	3.5	5.0	4.0	3.5	3.0	3.0	2.0	3.5	3.6
Pelo	3.5	4.0	4.3	4.5	4.3	4.8	3.8	3.3	2.3	2.0	3.3	3.6
S321	4.0	4.0	3.8	4.3	3.3	3.8	3.5	3.5	3.0	2.3	3.8	3.6
NK100	3.5	3.5	3.8	4.3	3.0	3.8	3.3	3.8	2.5	2.0	2.5	3.3
Mombassa	3.3	3.3	3.5	4.0	2.5	3.5	3.3	3.5	2.8	2.3	3.3	3.2
Linn	3.8	3.3	3.8	3.8	2.5	2.0	3.5	3.0	2.8	2.0	3.8	3.1
Servo	3.0	3.0	3.0	4.0	3.0	3.0	4.0	2.0	2.0	2.0	3.0	2.9
Splendor	3.0	3.0	4.0	3.8	3.3	3.0	2.5	3.3	2.0	2.0	2.8	3.0
U-103 Annual	3.8	4.0	4.0	4.5	1.3	1.3	1.8	1.5	1.5	1.5	1.8	2.3
LSD at 5%												0.6

Table 8. Leaf width and tiller density of perennial ryegrass cultivars grown at Bound Brook, New Jersey.

Cultivar	Tillers per 100 sq. cm.	Leaf width mm
1. Yorktown II	342	1.78
2. Diplomat	304	1.83
3. Citation	303	1.86
4. Derby	295	1.96
5. Pennfine	283	1.86
6. Yorktown	262	1.92
7. Manhattan	262	1.91
LSD at 5%	64	.10

Plots seeded September 17, 1975 near Bound Brook, New Jersey and maintained at a cutting height of 4 cm.

Test irrigated as needed during June, July and August and maintained at moderate fertility.

No fungicide or insecticides were used on test.

Counts and measurements obtained during December 1977.

Table 9. Date of anthesis of perennial ryegrass selections and cultivars grown in a spaced-plant nursery at Adelphia, New Jersey during 1974.

Entry		Mean date of anthesis	Standard error of mean
1.	Linn	May 23	± 0.77
2.	Pennfine	May 25	± 0.64
3.	Oregon perennial	May 26	± 0.80
4.	Citation	May 27	± 0.71
5.	Game	May 27	± 1.01
6.	G. Arika	May 28	± 0.83
7.	Omega	June 1	± 0.72
8.	Yorktown	June 4	± 0.55
9.	NK100	June 5	± 0.65
10.	Diplomat	June 8	± 0.65
11.	Yorktown II	June 8	± 0.56
12.	Combi	June 10	± 0.99
13.	Caprice	June 12	± 0.63
14.	Sportiva	June 12	± 0.69
15.	Manhattan	June 12	± 0.51
16.	Ensporta	June 12	± 0.37
17.	Lofts Syn F	June 12	± 0.44
18.	Norlea	June 13	± 0.47
19.	Pelo	June 13	± 0.63
20.	S-23	June 15	± 0.88
21.	Compas	June 15	± 0.86
22.	Syn G	June 16	± 0.49
23.	Servo	June 16	± 0.68
24.	NK200	June 16	± 0.48
25.	Eton	June 20	± 0.97
26.	Splendor	June 20	± 1.17
27.	Perma	June 21	± 1.14
28.	Lamora	June 22	± 1.16
29.	Sprinter	June 28	± 1.07
30.	Barenza	June 28	± 1.28
31.	Endura	June 29	± 1.16
32.	Athletic	June 30	± 2.20

Table 10. Maturity ratings of perennial ryegrass varieties and selections at New Brunswick, New Jersey.

Variety	Date at which 50% of plants initiated anthesis 1972	
Citation	May 30	a*
Pennfine	June 1	a
Omega	June 4	b
Yorktown	June 6	b
Diplomat	June 10	c
Yorktown II	June 11	c
Lofts Syn F	June 15	d
Manhattan	June 17	d
Syn G	June 20	e

* Dates followed by the same letter do not differ from each other at the 5 percent probability level.

Table 11. Plant height and length of spike of perennial ryegrass selections and cultivars grown in a spaced-plant nursery at Adelphia, New Jersey during 1974.

Entry		Plant height (cm)	Length of spike (cm)
1.	Citation	51	18
2.	Yorktown	53	21
3.	Pennfine	54	19
4.	Omega	56	20
5.	Ensporta	57	20
6.	Diplomat	58	20
7.	Yorktown II	59	20
8.	Manhattan	63	23
9.	Sprinter	63	24
10.	Linn	63	21
11.	Syn F	63	23
12.	Oregon perennial	64	20
13.	Eton	64	23
14.	S-23	67	25
15.	NK-100	69	24
16.	NK-200	70	24
17.	Pelo	72	24
18.	Norlea	76	26

Table 12. Reaction of perennial ryegrass cultivars to crown rust (*Puccinia coronata*) in field nurseries at Adelphia, New Jersey during July 1974.

Cultivar	Number of plants rated	Rust reaction 9 = most rust	Standard error of the mean
Yorktown II	49	2.2	± 0.34
Citation	50	3.2	± 0.40
Pennfine	49	3.5	± 0.30
Manhattan	50	4.2	± 0.19
Yorktown	50	4.6	± 0.19

Table 13. Ligule length of perennial ryegrass cultivars measured at Adelphia, New Jersey during July 1974.

Cultivar	Number of observations	Mean length* of ligule (mm)	Standard error of Meam
Pennfine	60	0.64	± 0.017
Citation	144	0.68	± 0.014
Omega	108	0.74	± 0.021
Diplomat	78	0.79	± 0.022
Yorktown	144	0.84	± 0.019
Yorktown II	94	0.90	± 0.210
NK-100	144	0.94	± 0.020
Linn	135	1.00	± 0.024
Ensporta	108	1.01	± 0.021
Sprinter	141	1.13	± 0.019
Manhattan	117	1.17	± 0.029
S-23	78	1.20	± 0.029
NK-200	62	1.23	± 0.043
Pelo	81	1.30	± 0.036
Norlea	55	1.45	± 0.044

*The leaf immediately below the flag leaf was used for this study.

Table 14. Leaf width of perennnial ryegrass cultivars grown in a spaced plant nursery at Adelphia, New Jersey during 1974.

Entry	Width of leaf immediately below flag leaf mm	Standard error of mean
1. Citation	3.4	± 0.09
2. Pennfine	3.5	± 0.07
3. Omega	3.9	± 0.10
4. Diplomat	3.9	± 0.09
5. Oregon Perennial	4.0	± 0.07
6. Linn	4.0	± 0.08
7. Ensporta	4.4	± 0.09
8. Yorktown II	4.5	± 0.09
9. S-23	4.6	± 0.09
10. Yorktown	4.7	± 0.15
11. NK-100	4.7	± 0.13
12. Manhattan	5.3	± 0.12
13. Sprinter	5.4	± 0.11
14. NK-200	5.6	± 0.10
15. Pelo	5.7	± 0.11
16. Norlea	6.8	± 0.13
17. Eton	7.0	± 0.11

Table 15. Leaf width and tiller density of perennial ryegrass cultivars grown at Bound Brook, New Jersey.

Cultivar	Tillers per 100 sq. cm.	Leaf width mm
Yorktown II	342	1.78
Diplomat	304	1.83
Citation	303	1.86
Derby	295	1.96
Pennfine	283	1.86
Yorktown	262	1.92
Manhattan	262	1.91
LSD at 5%	64	.10

EXHIBIT E

C. Reed Funk directed the breeding of 'Yorktown II' perennial ryegrass. He is an employee of the Soils and Crops Department of the New Jersey Agricultural Experiment Station. He was assisted by other employees of the Soils and Crops Department including William K. Dickson and Kevin J. McVeigh and by Frederick B. Ledeboer, a former employee of Lofts Pedigreed Seed, Inc. Lofts Pedigreed Seed, Inc. is the owner of Yorktown II perennial ryegrass.

WHEREAS, C. Reed Funk, Soils and Crops Department, New Jersey Agricultural Experiment Station, P. O. Box 231, New Brunswick, New Jersey, Frederick B. Ledeboer, c/o Lofts Pedigreed Seed, Inc., P. O. Box 146, Bound Brook, New Jersey, Kevin McVeigh, P. O. Box 186, Gretna, Florida, and William K. Dickson, 20 Kate Terrace, Piscataway, New Jersey have, in cooperation with Lofts Pedigreed Seed, Inc., directed the breeding and development of Yorktown II perennial ryegrass, Plant Variety Protection applied for.

NOW, THEREFORE, in consideration of ONE ($1.00) DOLLAR and other valuable considerations paid to us by Lofts Pedigreed Seed, Inc., Chimney Rock Road, Bound Brook, New Jersey the receipt whereof is acknowledged, we hereby assign unto the said Lofts Pedigreed Seed, Inc. the entire interest in Yorktown II perennial ryegrass for the United States and all foreign countries and any plant variety protection to be issued therefore in the United States or any foreign country. The Commissioner, Plant Variety Protection Office is requested to issue the plant variety protection certificate in accordance herewith.

EXECUTED September 15, 1977

(Seal) C. Reed Funk

C. REED FUNK

COUNTY OF MIDDLESEX

Before me a Notary Public for said County, personally appeared C. Reed Funk known to me to be the person who executed the foregoing instrument and acknowledged it to be his free act and deed.

WITNESS my hand and seal September 15, 1977

Aida Bianca

Notary Public

My commission expires March 29, 1982

EXECUTED September 15, 1977

(Seal) Frederick B. Ledeboer

FREDERICK B. LEDEBOER

COUNTY OF SOMERSET

Before me a Notary Public for said County, personally appeared Frederick B. Ledeboer known to me to be the person who executed the foregoing instrument and acknowledged it to be his free act and deed.

WITNESS my hand and seal September 15, 1977

Helen Piorkowski

Notary Public

My commission expires HELEN PIORKOWSKI
Notary Public of New Jersey
My Commission Expires May 25, 1981

EXECUTED 26 Sept. 1977

STATE OF FLORIDA

(Seal)

Kevin McVeigh
KEVIN McVEIGH

COUNTY OF

Before me a Notary Public for said County, personally appeared Kevin McVeigh known to me to be the person who executed the foregoing instrument and acknowledged it to be his free act and deed.

WITNESS my hand and seal September 26, 1977

Elizabeth C. Lewis
Notary Public

My commission expires September 17, 1980

EXECUTED September 15, 1977

STATE OF NEW JERSEY

(Seal)

William K. Dickson
WILLIAM K. DICKSON

COUNTY OF MIDDLESEX

Before me a Notary Public for said County, personally appeared William K. Dickson known to me to be the person who executed the foregoing instrument and acknowledged it to be his free act and deed.

WITNESS my hand and seal September 15, 1977

Aida Bianca
Notary Public

My commission expires March 29, 1982

DO NOT INCLUDE IN COPIES OF CERTIFICATE

7800001

SECURITY AGREEMENT
AGRICULTURAL INTELLECTUAL PROPERTY COLLATERAL
(Plant Variety Protection Act Certificates)

STATE OF)
) SS.:
COUNTY OF)

WHEREAS, LOFTS SEED INC., a New Jersey corporation (the "Company"), is the listed owner of certain plant variety protection applications and certificates issued by the United States Department of Agriculture Plant Variety Protection Office (the "PVPO")all of which are as of this date as set forth on Schedule A (the "PVPs"), and

WHEREAS, the Company is the sole owner of the entire right, title and interest in and to the PVPs except as otherwise indicated in Schedule A and

WHEREAS, the Company has entered into a Loan and Security Agreement, dated on or about the date hereof (the "Loan Agreement"), between the Company as borrower and Branch Banking and Trust Company (the "Lender"), pursuant to which the Lender has, on the date hereof, made certain loans and other financial accommodations to the Company and may, from time to time hereafter, make additional loans to the Company, and

WHEREAS, pursuant to the Loan Agreement, the Company has agreed to grant to the Lender a continuing security interest in, and a continuing lien on, all of the Company's right, title and interest in and to the following (collectively the "Agricultural Intellectual Property Collateral"),

(a) the PVPs, and

(b) all proceeds thereof to which the Company is entitled, including, but not limited to, any claims and demands arising out of any infringement of the PVPs, including the right to settle disputes concerning such claims and demands,

to secure the payment and performance of the Obligations and Other Obligations (as defined in the Loan Agreement).

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, the Company does hereby grant to the Lender a continuing security interest in, and a continuing lien on, the Company's rights in the Agricultural Intellectual Property Collateral as security for the payment and performance of the Secured Obligations.

The Company hereby appoints Lender with full power of substitution, to file and record this Security Agreement in the PVPO, to transact all business in the PVPO, to receive any confirmatory documents relating thereto, and to take any and all action before the PVPO to give effect to this Agreement and to the Loan Agreement referred to herein.

The Company hereby further acknowledges and affirms that the rights and remedies of the Lender with respect to the security interest in and lien upon the Company's rights in the Agricultural Intellectual Property Collateral made and granted hereby are more fully set forth in the Loan Agreement, the terms and provisions of which are hereby incorporated herein by reference as if fully set forth herein.

Further, by this Security Agreement, the Company agrees to assign to Lender, upon the occurrence of an Event of Default by the Company (as defined in the Loan Agreement), all of the Company's rights in and to the Agricultural Intellectual Property Collateral; provided that this assignment is expressly contingent upon the occurrence of an Event of Default.

This Security Agreement will become effective June 28, 1996 at the Effective Time of the Merger of Budd Acquisition, Inc., a New Jersey corporation, with and into Lofts Seed Inc., a New Jersey corporation, as provided in a Certificate of Merger to be filed with the New Jersey Secretary of State's office.

IN WITNESS WHEREOF, the Company has caused this Security Agreement to be duly executed by its authorized officer of agent as of June 28, 1996.

LOFTS SEED INC.

[Corporate Seal]

By: Richard P. Budd
Name:
Title: CEO

On June 28, 1996, Richard P. Budd personally came before me, Frances D. Swing, a Notary Public for said County and State, Richard P. Budd who being by me duly sworn, says that he is CEO of Lofts Seed Inc., and that said writing was signed and sealed by him on behalf of said corporation by its authority duly given. The said Richard P. Budd acknowledged the said writing to be the act and deed of the corporation.

WITNESS my hand and notarial seal.

Frances D. Swing
Notary Public

My Commission Expires: 2-9-97

Dated this 28th day of June 1996.

NOTARY PUBLIC • OFFICIAL SEAL
COUNTY OF FORSYTH
FRANCES D. SWING
NORTH CAROLINA

R#0185253.01

SCHEDULE A
AGRICULTURAL INTELLECTUAL PROPERTY COLLATERAL
(CERTIFICATES OF PLANT VARIETY PROTECTION)

A. KENTUCKY BLUEGRASS

VARIETY NAME	NUMBER	DATE APPLIED	DATE ISSUED	EXPIRES
Princeton P105	9600228	4-22-96	Pending	
Eagleton	9600277	6-11-96	Pending	
Preakness	9500090	2-13-95	Pending	
Mystic	8100157	8-26-81	5-27-82	5-27-00
Georgetown	8200187	1982	7-24-83	7-21-01
Lofts 1757	8800230	1988	9-30-92	9-30-10
Laser (Rough Bluegrass)	8900288	1989	10-31-91	10-31-09
Co-owned PVPs				
243 (Nassau)*	8400005	1983	12-21-84	12-21-02
Suffolk*	8800072	1988	5-31-88	5-31-06
Ram I**	7800069	1978	3-15-79	3-15-96

* Jacklin Seed Company listed as co-owner
** Mrs. Barbara B. Curtis listed as co-owner

B. PERENNIAL RYEGRASS

VARIETY NAME	NUMBER	DATE APPLIED	DATE ISSUED	EXPIRES
Palmer	8200178	9-8-82	5-31-84	5-31-02
Palmer II	9200209	6-16-92	Pending	
Prelude	8200177	9-8-82	5-31-84	5-31-02
Prelude II	9200210	6-16-92	Pending	
Yorktown III	9200212	6-16-92	Pending	

VARIETY NAME	NUMBER	DATE APPLIED	DATE ISSUED	EXPIRES
Repell	8400148	8-30-84	11-29-85	11-29-03
Yorktown II	7800001	10-6-77	5-1-80	5-1-97
Repell II	9200211	6-16-92	Pending	

C. TALL FESCUE

VARIETY NAME	NUMBER	DATE APPLIED	DATE ISSUED	EXPIRES
Rebel	8000153	8-21-80	5-14-81	5-14-99
Rebel III	9500129	4-10-95	Pending	
Rebel Jr.	9000240	1990	11-30-92	11-30-10
Rebel 3D	9300200	4-21-93	Pending	
Tribute	8800235	9-15-88	2-28-90	2-28-08
Clemfine	8200175	9-7-82	2-28-83	2-28-01
Rebel II	8700195	1987	1-15-88	1-15-06

D. FINE FESCUE

VARIETY NAME	NUMBER	DATE APPLIED	DATE ISSUED	EXPIRES
Reliant	8200168	1982	2-28-83	2-28-01
Jamestown II	9100254	1991	8-31-95	8-31-15

E. BENTGRASS

VARIETY NAME	NUMBER	DATE APPLIED	DATE ISSUED	EXPIRES
L93	9600256	5-8-96	Pending	
Southshore	9200256	1992	10-31-94	10-31-12

F. OTHER

VARIETY NAME	NUMBER	DATE APPLIED	DATE ISSUED	EXPIRES
Salty (weeping alkaligrass)	9500128	4-10-95	Pending	
Laser II (rough bluegrass)	9500238	6-15-95	Pending	

FILED

JAN 14 1998

LONNA R. HOOKS
SECRETARY OF STATE

CERTIFICATE OF MERGER OF
LOFTS SEED, INC. INTO
LOFTS MERGERCO, INC.

To: The Secretary of State
State of New Jersey

Pursuant to the provisions of Section 14A:10-7 Corporations, General, of the New Jersey Statutes, the undersigned corporations hereby execute the following Certificate of Merger.

ARTICLE ONE

The names of the corporations proposing to merge and the states under the laws of which such corporations are organized, are as follows:

Name of Corporation	State of Incorporation
Lofts Seed, Inc.	New Jersey
Lofts Mergerco, Inc.	Nevada

ARTICLE TWO

The laws of the State of Nevada, the state under which such foreign corporation is organized, permit such merger and the applicable provisions of the laws of said jurisdiction have been, or upon compliance with filing and recording requirements will have been, complied with.

ARTICLE THREE

The name of the surviving corporation shall be Lofts Mergerco, Inc. and it shall be governed by the laws of the State of Nevada.

The address of the surviving corporation's registered office is 2700 Sunset Rd., Las Vegas, Nevada 89120 and the name of the registered agent at such address is Johnny Thomas.

ARTICLE FOUR

The following plan of Merger was approved by the shareholders of the undersigned domestic corporation in the manner prescribed by the New Jersey Business Corporation Act, and was approved by the undersigned foreign corporation in the manner prescribed by the laws of the State under which it is organized:

0100731409

FILED
IN THE OFFICE OF THE
SECRETARY OF STATE OF TH
STATE OF NEVADA

JAN 26 1998

C26394-97

DEAN HELLER, SECRETARY OF STATE

CERTIFICATE OF AMENDMENT OF

ARTICLES OF INCORPORATION OF

LOFTS MERGERCO, INC.

Pursuant to the provisions of Nevada Revised Statutes, Title 7, Chapter 78, the undersigned officers do hereby certify:

FIRST: The name of the Corporation is Lofts Mergerco, Inc.

SECOND: The Board of Directors of the Corporation duly adopted the following resolutions on January 12, 1998:

RESOLVED, that it is advisable in the judgment of the Board of Directors of the Corporation that the name of the Corporation be changed, and that, in order to accomplish the same, Article FIRST of the Articles of Incorporation be amended to read as follows:

"FIRST: The name of the corporation (hereinafter called the Corporation) is Lofts Seed Company, Inc."

FURTHER RESOLVED, that a special meeting of the sole stockholder having voting power be and it is hereby called and that notice be given in the manner prescribed by the By-laws of the Corporation and by Nevada Revised Statutes, Title 7, Chapter 78, unless the said stockholder shall waive the notice of meeting in writing or unless the said stockholder shall dispense with the holding of a meeting and shall take action upon the proposed amendment by a consent in writing signed by the sole stockholder; and

FURTHER RESOLVED, that in the event that the said stockholder shall adopt the aforesaid proposed amendment by a vote in favor thereof by at least a majority of the voting power or by a written consent in favor thereof signed by the sole stockholder without a meeting, the Corporation is hereby authorized to make by the hands of its President or a Vice President and by its Secretary or an Assistant Secretary a certificate setting forth the said amendment and to cause the same to be filed pursuant to the provisions of Nevada Revised Statutes, Title 7, Chapter 78.

THIRD: The total number of outstanding shares having voting power of the Corporation is 200, and the total number of votes entitled to be cast by the holder of all of said outstanding shares is 200.

FOURTH: The holder of all of the aforesaid total number of outstanding shares having voting power dispensed with the holding of a meeting of the sole stockholder and adopted the amendment herein certified by a consent in writing signed by the sole stockholder in accordance with the provisions of Nevada Revised Statutes, Title 7, Section 78.320.

January 22 1998

LOFTS MERGERCO, INC.

By: _____
Johnny R. Thomas
President

_____
Kathleen L. Gillespie
Assistant Secretary

State of Nevada)
) SS.:
County of Clark)

On January 22, 1998, personally appeared before me, a Notary Public, for the State and County aforesaid, Johnny R. Thomas, as President and Kathleen L. Gillespie, as Assistant Secretary of Lofts Mergerco, Inc., who acknowledged that they executed the above instrument.

NOTARY PUBLIC
STATE OF NEVADA
County of Clark
C.J. WORTH
My Appointment Expires April 22nd, 1998

_____
Notary Public

G:\WORK\VAL\PARTY\LOFTS\NAMECHNG.LMC

USDA

United States Department of Agriculture

Research, Education, and Economics
Agricultural Research Service

January 21, 1998

Marian R. Minnifield
Secretary
Plant Variety Protection Office
NAL Building, Room 500
10301 Baltimore Boulevard
Beltsville, Maryland 20705-2351

Subj: Expired PVPO's; disposition of

1. The following expired PVPO's have been transferred to the NPGS. Our records have been changed accordingly.

Serial Number		PVP Number	EXPIRED
107423	01	7900099	01/02/1997
107424	01	7800077	01/02/1997
107425	01	7900062	01/02/1997
107428	01	7900095	01/02/1997
107429	01	7700092	01/02/1997
108309	01	7900116	01/29/1997
108310	01	7900117	01/29/1997
108311	01	7900087	01/29/1997
108312	01	7800080	01/29/1997
108313	01	7800020	01/29/1997
109381	01	7900113	03/27/1997
109382	01	7900030	03/27/1997
109383	01	7900102	03/27/1997
109384	01	7900063	03/11/1997
109386	01	7300068	03/11/1997
109387	01	7900120	02/26/1997
109388	01	7700028	02/26/1997
109389	01	7700112	02/26/1997
109390	01	7900040	03/11/1997
109791	01	7800071	02/26/1997
110210	01	8000058	05/15/1997
110211	01	7800103	05/01/1997
110212	02	8000001	05/01/1997
110213	01	7800001	05/01/1997

ars

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110214	02	7200105	04/24/0197
110215	01	8000022	04/24/1997
110216	01	7900060	05/01/1997
110217	01	7900084	05/01/1997
110218	01	8000071	05/15/1997
110219	01	7900101	05/01/1997
110220	01	8000043	05/15/1997
110221	01	8000015	05/15/1997
110222	01	7900111	05/15/1997
110223	01	7900110	05/15/1997
110227	01	7900106	05/15/1997
110228	01	7900071	04/24/1997
110229	01	7900100	05/01/1997
110230	01	7900075	05/01/1997
110231	01	7900108	04/24/1997
110236	01	8000053	05/29/1997
110239	01	7900098	05/29/1997
110240	01	7900006	05/29/1997
110263	01	7900042	06/05/1997
110264	01	8000048	06/05/1997
110265	01	8000063	06/05/1997
110266	01	8000012	06/05/1997
110267	01	8000049	06/05/1997
110268	01	7800092	06/05/1997
112329	01	8000045	06/19/1997
112330	01	7900088	07/10/1997
112331	01	8000044	07/10/1997
112332	01	7800079	06/19/1997
112333	01	7900074	06/26/1997
112334	01	8000061	06/19/1997
112335	01	7700016	07/10/1997
112336	01	7700017	07/10/1997
112337	01	7900105	06/26/1997
112338	01	7900089	06/19/1997
112339	01	7900072	06/19/1997
112342	01	7900090	06/26/1997
112343	01	7900064	07/10/1997
112344	01	8000072	06/19/1997
112345	01	8000009	07/31/1997
112346	01	7800099	07/31/1997
112347	01	8000040	07/31/1997
112348	01	8000039	07/31/1997
112349	01	8000041	07/31/1997
112350	01	7900080	07/31/1997
112351	01	8000006	07/31/1997

112352	01	8000027	07/31/1997
112353	01	8000024	07/31/1997
112354	01	8000076	07/31/1997
112355	01	8000025	07/31/1997
112356	01	8000062	07/31/1997
112357	01	8000102	07/31/1997
112360	01	8000023	07/31/1997
112361	01	7900078	07/31/1997
112362	01	8000093	07/31/1997
112363	01	8000020	07/31/1997
112364	01	7800019	07/31/1997
112365	01	7900079	07/31/1997
113482	01	8000118	09/11/1997
113483	01	8000114	09/11/1997
113484	01	8000119	09/11/1997
113485	01	8000113	09/11/1997
113486	01	8000086	09/11/1997
113487	01	7900070	09/11/1997
113488	01	8000033	09/11/1997
113489	01	8000034	09/11/1997
113490	01	7900022	09/11/1997
113491	01	8000090	09/11/1997
113492	01	8000105	09/11/1997
113493	01	7900056	09/11/1997
113494	01	7900057	09/11/1997
113495	01	8000096	09/11/1997
113498	01	8000099	09/11/1997
113499	02	7900082	09/11/1997
113500	01	7500083	09/11/1997
113501	01	8000013	09/11/1997
113502	01	7900083	09/11/1997
113503	01	7300090	09/11/1997
114293	01	8000130	10/16/1997
114597	01	7900104	10/16/1997
114598	01	8000077	10/16/1997
114599	01	8000111	10/16/1997
114600	01	8000011	10/16/1997
114601	01	8000134	10/16/1997
169608	01	8100103	07/15/1997

Sincerely,

Eugene D. Keys
Computer Assistant
Data Management

STANDARD CULTIVARS

1 = GULF 2 = WIMMERA 62 3 = LINN 4 = PELO
5 = NORLEA 6 = ABERYSTWYTH S-23 7 = MANHATTAN 8 = PENNFINE

9. LEAVES:

[3] VERNATION: 1 = LEAVES ROLLED IN YOUNG SHOOTS
2 = LEAVES SEMI-ROLLED (folded with rolled edges)
3 = LEAVES FOLDED IN YOUNG SHOOTS

[100] % PLANTS WITH ANTHOCYANIN IN LOWER LEAF SHEATH

[3] FOLIAGE COLOR: 1 = YELLOW GREEN 2 = MEDIUM GREEN 3 = BLUE GREEN

10. SPIKE:

[20] MM. SPIKE LENGTH (tip to internode below lowest floret) (See table 11)

[3] MM. SHORTER THAN [7] } USE STANDARD CULTIVARS FROM ABOVE

[1] MM. LONGER THAN [8] }

[ ] MG. PER TEN SPIKES (trimmed to internode below lowest floret)

[ ] MG. LIGHTER PER TEN SPIKES THAN [ ] } USE STANDARD CULTIVARS FROM ABOVE

[ ] MG. HEAVIER PER TEN SPIKES THAN [ ] }

[ ] FLORETS PER SPIKELET

PERCENTAGE OF PLANTS WITH:

RACHIS: [ ] % SMOOTH [ ] % ROUGH

SPIKE COLOR: [ ] % GREEN [ ] % PURPLE

LEMMA: [ ] % AWNED [ ] MM. AWN LENGTH

[ ] MM. GLUME LENGTH

[ ] 1 = SPIKELET LENGTH NEARLY EQUAL TO OUTER GLUMES
2 = SPIKELET LENGTH MUCH LONGER THAN OUTER GLUMES

11. COLEOPTILE:

[100] % PLANTS WITH ANTHOCYANIN IN COLEOPTILE

12. ANTHER COLOR:

[ ] % PLANTS WITH WHITE ANTHERS [ ] % PLANTS WITH YELLOW ANTHERS

[ ] % PLANTS WITH PURPLE ANTHERS

13. ROOT AND PLANT CHARACTERS:

[100] % PLANTS WITH PROSTRATE GROWTH HABIT [0] % PLANTS WITH FLUROESCENT ROOTS

[0] % PLANTS WITH UPRIGHT GROWTH HABIT

14. SEED:

[ ] MG. PER 1,000 SEED [48] MM. TOTAL LENGTH OF 10 SEEDS [12] MM. TOTAL WIDTH OF TEN SEEDS

6

1710 ± 40 47.5 ± 1.4 11.8 ± 0.3