No. 7400066

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Pickseed West, 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, OR 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 (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

KENTUCKY BLUEGRASS

'Touchdown'

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, DC *this* first *day of* June *in the year of our Lord one thousand nine hundred and* seventy-six

Attest:

S. R. Rollin

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Earl L. Butz

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 Touchdown (Expt. designation NJE P-142)	2. KIND NAME Kentucky bluegrass	FOR OFFICIAL USE ONLY PV NUMBER 7400066
3. GENUS AND SPECIES NAME Poa pratensis L.	4. FAMILY NAME *(Botanical)* Gramineae 5. DATE OF DETERMINATION Sept. 20, 1972	FILING DATE 2-21-74 TIME 10:00 A.M. FEE RECEIVED $250 $250 $250 BALANCE DUE $ — $ — $ —
6. NAME OF APPLICANT(S) 1. Thomas F. Rewinski 2. Soils and Crops Dept. N. J. Agricultural Expt. Station	7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)* Sebonac Inlet Road, South Hampton New York 11968 P.O. Box 231, New Brunswick New Jersey 08903	8. TELEPHONE AREA CODE AND NUMBER (516) 283-3506 or home (516) 383-1058 (201) 932-9771
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)* 2. Corporation	10. STATE OF INCORPORATION New Jersey	11. DATE OF INCORPORATION 1880

12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:
1. Mr. W. Kent Wiley, Pickseed West, Inc., Box 888, Tangent, Oregon 97389
2. C. Reed Funk, Soils and Crops Department, New Jersey Agricultural Experiment Station, New Brunswick, New Jersey 08903 (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 (errat letter Sept 30, 1975

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 [X] NO 10/15/75 gjlt

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.

July 24, 1975 (DATE) — C. Reed Funk (SIGNATURE OF APPLICANT)

July 25, 1975 (DATE) — Thomas F. Rewinski (SIGNATURE OF APPLICANT)

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EXHIBIT A

Origin and Breeding History of the Variety

1. Touchdown traces to the discovery of a single facultatively apomictic plant on the ninth fairway of the National Golf Links of America, Southampton, New York by Thomas F. Rewinski, Superintendent, C. Reed Funk, Soils and Crops Department, New Jersey Agricultural Experiment Station, and Alexander M. Radko of the United States Golf Association Green Section visited the golf course during the spring of 1969 and obtained propagules of the grass. Tillers of the selection were propagated in a greenhouse at the New Jersey Agricultural Experiment Station and later transplanted to a field nursery at the Adelphia research farm in September, 1969. Observations and measurements taken during May and June, 1970 confirmed that Touchdown was distinctly different from any of the large collection of Kentucky Bluegrass varieties being observed in the same nursery. A spaced-plant progeny test of Touchdown was established at Adelphia during the late summer of 1970. Examination of this progeny by C. Reed Funk during May and June of 1971 indicated that Touchdown is about 90% apomictic.

2. Seed from the 1970 progeny test and a second progeny test

established in 1971 was sent to a number of Universities and other institutions for additional turf evaluation and to Pickseed West Inc., for seed yield evaluation and experimental increase. A Foundation increase field was established in Madras, Oregon in the late summer of 1972 from Breeder's seed harvested at the New Jersey Agricultural Experiment Station.

3. Up to 10 percent aberrant plants can be found in the progeny of Touchdown. The majority of these plants are smaller and weaker than the maternal type plants and are generally crowded out to a large degree in seed increase fields and turf stands. We have not observed any adverse effect of such aberrant plants on turf quality.

4. Observations of a number of spread-plant progeny tests, a foundation seed increase field in Oregon and turf trials at a number of locations indicate that this variety is highly apomictic and has an acceptable level of uniformity and stability for commercial use.

EXHIBIT "B"

Botanical Description of the Variety

Touchdown Kentucky Bluegrass is a moderately low-growing, Turf-type variety with a pleasing, fresh, moderately dark green color, good density, and medium texture. The original plant, discovered at the National Golf Links, had spread to a diameter of approximately 30 feet under fairway maintenance indicating good persistence and spreading characteristics. Under New Jersey conditions, the variety has exhibited good resistance to the leaf spot and crown rot disease incited by *Helminthosporium vagans*, good resistance to the powdery mildew disease caused by the fungus, *Erysiphe graminis*, and good resistance to the leaf rust disease caused by *Puccinia poae-nemoralis*. It has not shown susceptibility to the stripe smut disease incited by *Ustilago striiformis* to date. Moderate susceptibility of Touchdown to stem rust incited by *Puccinia Graminis* has been noted in Maryland trials. Morphological measurements of Touchdown in comprarison with a number of other Kentucky bluegrass varieties is presented in Table 2. Performance data comparing Touchdown with other bluegrasses is presented in Tables 3 through 7.

AUG 7 1975

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.

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(1-15-73)

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

EXHIBIT C
(Bluegrass)

OBJECTIVE DESCRIPTION OF VARIETY

BLUEGRASS (*POA SPP.*)

NAME OF APPLICANT(S) 1.Thomas F. Rewinski and 2. Soils and Crops Dept., New Jersey Agr. Expt. Station

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

1. Sebonac Inlet Road, South Hampton, New York, 11968

2. P.O.Box231,New Brunswick, N. J. 08903

FOR OFFICIAL USE ONLY

PVPO NUMBER 7400066

VARIETY NAME OR TEMPORARY DESIGNATION TOUCHDOWN

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 is either 99 or less or 9 or less.

1. KIND:

[2] 1 = POA COMPRESSA 2 = P. PRATENSIS 3 = P. TRIVIALIS 4 = OTHER (Specify)

2. REGION OF BEST ADAPTATION:

[1] 1 = NORTHEAST 2 = TRANSITIONAL ZONE 3 = NORTH CENTRAL 4 = PACIFIC N.W. 5 = OTHER (Specify)

3. MATURITY (At First Anthesis):

[2] 1 = EARLY (Delta) 2 = MEDIUM EARLY (Fylking) 3 = MEDIUM (Newport) 4 = LATE (Merion)

[ ][6] NUMBER OF DAYS EARLIER THAN ..... [4]
[ ][3] NUMBER OF DAYS LATER THAN ..... [3]

1 = NUGGET 2 = FYLKING 3 = DELTA 4 = MERION 5 = NEWPORT 6 = BARON

4. PLANT HEIGHT (Longest Shoot from Soil Surface to Top of Head):

[ ][7][4] CM. HEIGHT

[ ][5] CM. SHORTER THAN ..... [5]
[3][1] CM. TALLER THAN ..... [1]

1 = NUGGET 2 = FYLKING 3 = DELTA 4 = MERION 5 = NEWPORT 6 = BARON

5. HABIT:

[2] 1 = PROSTRATE (Fylking) 2 = SEMI-PROSTRATE (Merion) 3 = ERECT (Delta)

6. VEGETATIVE REPRODUCTION (1 = Absent; 2 = Present):

[2] RHIZOMES [1] STOLONS

7. LEAF BLADE:

[3] Color: 1 = LIGHT GREEN (Rough Bluegrass) 2 = BLUE GREEN (Canada Bluegrass) 3 = MODERATELY DARK GREEN (Merion) 4 = DARK GREEN (Adelphi) 5 = OTHER (Specify)

[2] Upper Surface: 1 = SHINY 2 = DULL

[1] Lower Surface: 1 = SHINY 2 = DULL

[4][.6] MM. WIDTH varies with mowing height and season

[ ][ ] MM. LENGTH varies with daylength

8. LEAF SHEATH (Base):

[2] letter 1/12/76 Seedling Color: 1 = GREEN 2 = RED [ ][ ] MM. LENGTH [ ] Keel: 1 = NOT KEELED 2 = KEELED

Surface:

[ ] 1 = GLABROUS 2 = PUBESCENT [ ] 1 = SMOOTH 2 = ROUGH [ ] 1 = NON-GLAUCOUS 2 = GLAUCOUS

9. LEAFINESS (At First Anthesis):

[2] Number of leaves per tiller or shoot: 1 = FEW (1 - 3) 2 = INTERMEDIATE (4 - 6) 3 = MANY (More than 6)

10. PANICLE:

[1][0][1] MM. LENGTH

[ ][3][4] MM. LONGER THAN ..... [1]
[ ][ ][4] MM. SHORTER THAN ..... [5]

1 = NUGGET 2 = FYLKING 3 = DELTA 4 = MERION 5 = NEWPORT 6 = BARON

5

7400066 TOUCHDOWN

FORM GR-470-18 (Reverse)

10. PANICLE (Cont.):

2 3 5 NUMBER OF PANICLES PER PLANT

MILLIGRAMS SEED PER PANICLE

2 Branches LOWEST WHORL: 1 = DROOPING (Prato) 2 = HORIZONAL (Merion) 3 = OTHER (Specify)

1 Panicle Habit: 1 = NODDING (Newport) 2 = UPRIGHT (Nugget)

MM. SPIKELET LENGTH

11. LEMMA

KEEL

LATERAL NERVES

1 = GLABROUS 2 = SLIGHTLY PUBESCENT 3 = PUBESCENT 4 = OTHER (Specify)

Intermediate Nerves: 1 = DISTINCT 2 = OBSCURE

Basal Webbing: 1 = NONE 2 = SCANT 3 = COPIOUS

12. SEED:

2 Apomictin Percentage: 1 = MORE THAN 95 2 = 85 TO 95 3 = LESS THAN 85

Embryo end stained dark while rest of seed remained light

Phenol Reaction: 1 = NONE - LEMMA REMOVED (Merion) 2 = BEIGE (Cougar) 3 = BROWN (Windsor) 4 = BLACK (Delta - 2 hours) 5 = BLACK (Anheuser - 24 hours)

✓ Thickness 0.74 mm

Phone 11/5/75

0 7 9 MM. WIDTH

3 0 5 MM. LENGTH

4 6 5 GRAMS PER 10,000 SEEDS

CHROMOSOME NO. (2n)

13. TURF DENSITY MAINTENANCE AT ONE INCH CUT:

2 1 = POOR 2 = MODERATE (Merion) 3 = SUPERIOR (Nugget) 4 = EXCELLENT

14. VERTICAL GROWTH RATE:

2 1 = SLOW (Nugget) 2 = MEDIUM (Merion) 3 = FAST (Delta) 4 = OTHER (Specify relation to a standard)

15. SPRING GREEN UP:

1 1 = EARLY (Windsor) 2 = MEDIUM (Fylking) 3 = LATE (Nugget)

16. FALL DORMANCY: (1 = Not Dormant; 2 = Intermediate; 3 = Dormant)

1 NORTHERN (42° 30' ± 30' Lat.)

1 INTERMEDIATE (40° ± 30' Lat.)

1 SOUTHERN (37° 30' ± 30' Lat.)

17. SEEDLING VIGOR (Growth Rate):

2 Seedling: 1 = SLOW 2 = MEDIUM 3 = FAST

18. ENVIRONMENTAL RESISTANCE: (0 = Not Tested; 1 = Susceptible; 2 = Resistant)

2 COOL TEMPERATURE (Winter color)	2 COLD (Injury)	0 HEAT	0 DROUGHT
0 SHADE	0 POOR FERTILITY	0 ACID SOIL	0 ALKALINITY
0 SALINITY	0 SOIL COMPACTION	0 POOR DRAINAGE	0 AIR POLLUTION
OTHER (Specify)			

19. DISEASE, INSECTS, AND NEMATODE RESISTANCE: (0 = Not Tested; 1 = Susceptible; 2 = Resistant)

2 HELMINTHOSPORIUM VAGANS	0 H. SOROKINIANUM	0 H. DICTYOIDES	0 RHIZOCTONIA SOLANI
2 ERYSIPHE GRAMINIS	2 USTILAGO STRIIFORMIS	0 FUSARIUM NIVALE	0 F. ROSEUM
0 TYPHULA IOTANA	0 SCELEROTINIA HOMEOCARPA	1 PUCCINIA GRAMINIA	0 P. STRIIFORMIS
0 PYTHIUM ULTIMATUM	0 CRAMBUS BONIFATELLUNS	2 OTHER (Specify) Puccinia poae-nemoralis	per 8/8/75 Phone false

REFERENCE

Nickerson's or any recognized color fan may be used to determine plant colors of the described variety.

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OREGON STATE UNIVERSITY

SEED LABORATORY

CORVALLIS, OREGON 97331

REVISED REPORT

EXAMINATION REPORT

1g

Test No. 79021 Date Recv'd 8-29-74

Laboratory Identification:
Poa pratensis -
Kentucky bluegrass

This sample has been examined for:

10,000 SEED COUNT AND MEASUREMENT.

Found: Touchdown (letter 11/15/74

MEASUREMENT (Based on 25 seeds)

	AVERAGE	RANGE
Length	3.05 mm	2.21 mm to 3.51 mm
Width	0.79 mm	0.66 mm to 0.99 mm
Thickness	0.74 mm	0.58 mm to 0.91 mm

To:
Pickseed West
P. O. Box 888
Tangent, OR 97389

To:

Average weight of 10,000 seeds.
4,653 grams, based on weight of
10 -- 100 seed replicas.

Sender's Identification:
NAME: Kentucky bluegrass
LOT NO.: NJE P-142
AMOUNT:
FIELD NO.:

This report has been revised as to measurement. 10-17-74

7

Date Completed: 9-27-74

E. E. Hardin
E. E. HARDIN, Director

COST CODE

TESTS
p = purity
g = germination
fl = fluorescence
tz = tetrazolium
h = hydrogen peroxide
ct = cutting

EXAMINATIONS
pa = Poa annua
d = pest and disease
c = crop
w = weed
cw = crop and weed
n = noxious weed

OTHERS
r = rush
cc = copies
wt = seed weight
m = moisture
sp = sprout count (monogermity)

The name of Oregon State University or Oregon State University's Seed Laboratory must not be used for advertising purposes in connection with this report.
The test and this report are prepared in accordance with the authority and provisions of Chapter 633, Oregon Revised Statutes. Its correctness is subject to the recognized seed testing tolerances of laboratory accuracy.

OREGON STATE UNIVERSITY

SEED LABORATORY

CORVALLIS, OREGON 97331

EXAMINATION REPORT

gc

Test No. 79021 Date Recv'd 8-29-74

Laboratory Identification:

Poa pratensis -
Kentucky bluegrass

To:

Pickseed West
P. O. Box 888
Tangent, OR 97389

To:

Sender's Identification:

NAME: **Kentucky bluegrass**
LOT NO.: **NJE P-142**
AMOUNT:
FIELD NO.:

This sample has been examined for:

10,000 SEED COUNT AND MEASUREMENT

Found:

MERION BLUEGRASS

MEASUREMENT (based on 25 seeds from one lot)

	AVERAGE	RANGE
Length	2.29 mm	1.93 mm to 3.25 mm
Width	0.71 mm	0.61 mm to 0.86 mm
Thickness	0.71 mm	0.56 mm to 0.84 mm

Nugget Bluegrass weight of 10,000 seeds.

4.976 grams, based on weight of 10- 100 seed replicas.

Date Completed: **11-5-74**

E. E. Hardin

E. E. HARDIN, Director

COST CODE

8

TESTS

p = purity
g = germination
fl = fluorescence
tz = tetrazolium
h = hydrogen peroxide
ct = cutting

EXAMINATIONS

pa = Poa annua
d = pest and disease
c = crop
w = weed
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OTHERS

r = rush
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wt = seed weight
m = moisture
sp = sprout count (monogermity)

The name of Oregon State University or Oregon State University's Seed Laboratory must not be used for advertising purposes in connection with this report.
The test and this report are prepared in accordance with the authority and provisions of Chapter 633, Oregon Revised Statutes. Its correctness is subject to the recognized seed testing tolerances of laboratory accuracy.

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EXHIBIT "D"

Data Indicative of Novelty

Novelty is based on the unique combination of the following characters:

"Touchdown" most closely resembles "Merion", except it has shown:

1. better resistance to leaf rust, stripe smut, and powdery mildew

2. better color in early spring and late fall

3. somewhat weaker performance during hot summer stress conditions

4. more purplish pigmentation of the panicle at time of anthesis

5. an earlier date of anthesis (6 days) 10/9/74 letter 10/3/74

6. a greater nodding of the panicle

7. larger seed and 3.05 vs 2.29 mm length (lab test 9/27-11/15/1974) letter

8. greater injury from tricalcium arsenate

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Table 1. Date of Initiation of Anthesis of Kentucky Bluegrass Varieties at Adelphia, New Jersey, 1970.

Variety	Date flowers first open	
Kenblue*	May 18 to May 24	
Delta	May 20	a**
Nugget	May 23	b
Touchdown	May 23	b
Newport	May 25	c
Fylking	May 26	cd
Pennstar	May 26	cd
Galaxy	May 27	de
Majestic	May 27	de
Bonnieblue	May 27	de
Anheuser Dwarf	May 27	ef
Merion	May 29	fg
Adelphi	May 30	g
Glade	May 30	g
Brunswick	June 2	h

*Kenblue is a mixture of different bluegrass types
**Dates followed by the same letter do not differ statistically at the 5 percent level of probability.

Table 2. Morphological Comparison of Bluegrass Varieties in Spaced Plant Nursery at Adelphia, New Jersey, 1970.

Variety	Plant height cm	Plant diameter cm	Leaf blade width mm	Flat leaf length mm	Panicles per plant No.	Panicle color 0=green 5=purple	Panicle erect or nodding 1=erect 5=nodding	Number of branches at lowest panicle node	Panicle length mm
Touchdown	74	35	4.6	58	235	4.5	3.5	3.8	101
P-27 Galaxy	69	39	3.1	73	124	2.5	3.0	4.0	105
P-29 Glade	64	32	3.0	55	252	2.5	2.0	3.9	88
P-57 Brunswick	68	38	3.6	60	279	1.0	1.5	3.7	98
P-69 Adelphi	73	34	3.7	52	272	2.0	1.8	3.7	104
P-84 Majestic	64	39	3.7	63	223	2.0	2.5	3.9	109
P-106-Bonnieblue	68	44	3.7	67	148	2.0	2.5	3.6	102
Delta	73	17	2.6	67	196	2.0	1.0	4.8	100
Geary	80	24	2.9	80	177	3.0	3.0	4.0	134
Newport	79	30	4.8	77	246	2.5	2.0	4.3	105
Palouse	79	24	3.0	93	151	3.0	3.5	4.4	92
Anheuser	67	30	5.1	51	109	3.0	2.5	3.4	96
Belturf	70	35	3.0	58	201	2.0	2.0	4.0	104
Fylking	60	34	4.0	68	164	3.5	5.0	4.9	118
Merion	70	24	4.3	69	280	2.0	1.5	3.5	102
Pennstar	59	34	3.7	66	132	3.5	4.0	4.5	106
A-20	80	29	4.0	67	107	2.0	3.5	2.9	128
A-34	73	28	3.5	70	239	1.5	2.0	4.5	103
Arista	64	30	3.7	55	302	1.5	2.0	4.6	88
Campus	65	31	3.8	53	301	1.5	2.0	4.6	89
Nugget	43	29	3.0	38	140	5.0	3.0	3.3	67
Prato	64	28	3.5	66	226	2.5	2.0	4.1	103
Primo	81	26	4.9	61	299	3.0	2.0	3.5	96
Sydsport	67	34	4.4	54	202	2.5	2.0	4.7	81

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Table 3. Reaction of Kentucky Bluegrass Varieties to Leaf Rust Incited by Puccinia poae-nemoralis at Adelphia, New Jersey.

Variety	Rust Disease Rating*		
	June 1970	June 1971	Average
1. Glade	0.6	0.6	0.6
2. Anheuser Dwarf	0.6	0.6	0.6
3. NJE P-142 (Touchdown)	0.6	0.6	0.6
4. Nugget	0.5	0.8	0.7
5. Warren's A-20	0.3	1.0	0.7
6. Park	1.0	-	1.0
7. NJE P-69 (Adelphi)	1.3	1.5	1.4
8. Fylking	1.5	1.5	1.5
9. Pennstar	1.5	1.5	1.5
10. Sydsport	1.5	1.5	1.5
11. Primo	1.5	-	1.5
12. Delta	1.5	-	1.5
13. NJE P-106 (Bonnieblue)	1.5	1.7	1.6
14. NJE P-84 (Majestic)	1.5	1.8	1.7
15. NJE P-27 (Galaxy)	1.5	2.0	1.8
16. NJE P-116	2.0	1.5	1.8
17. Prato	2.0	1.5	1.8
18. Birka	1.5	2.1	1.8
19. Belturf	1.5	2.3	1.9
20. S-21	2.0	-	2.0
21. Arista	2.5	2.5	2.5
22. Warren's A-34	2.5	2.8	2.7
23. Campus	3.0	2.5	2.8
24. NJE P-57 (Brunswick)	2.5	3.2	2.9
25. Geary	3.0	-	3.0
26. Palouse	3.0	-	3.0
27. Newport	3.5	2.4	3.0
28. Baron	-	3.0	3.0
29. Merion	3.5	3.4	3.5
30. Vantage	7.5	7.1	7.3

*Rust disease rating 0 = no rust, 9 = most severe.

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Table 4. Performance of Kentucky Bluegrass varieties seeded in turf trials at New Brunswick, New Jersey - Test 1 seeded September, 1970.

Variety	Turf Performance 9 = best		
	1971	1972	March to Sept. 1973
Glade	6.6	7.0	7.2
Plush	6.5	6.7	6.7
Warren's A-34	6.7	6.4	6.6
Adelphi	6.4	6.5	6.7
Touchdown	5.8	6.7	6.8
Bonnieblue	6.1	6.5	6.2
Merion	6.3	5.9	5.5
Birka	4.8	6.5	6.2
Sydsport	5.4	6.0	5.7
Vantage	5.6	5.9	5.3
Baron	5.3	5.7	5.3
Victa	5.0	5.9	5.3
Fylking	4.9	5.6	4.7
Nugget	3.9	4.2	4.5
Windsor	3.8	3.6	3.5
Kenblue	3.5	3.6	3.1
Park	3.4	3.6	2.6
Prato	3.6	3.2	2.4

NOT FOR PUBLICATION

Table 6. 1972 Regional Bluegrass Test - Rutgers 3/4-inch cut.

		Turf Quality 9 = best											
		1972	1973										1973
Rank	Entry	Ave.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ave.
1	Touchdown (P-142)	6.3	8.3	8.7	7.7	6.7	7.0	6.0	6.3	6.7	7.7	8.3	7.3
2	Majestic (P-84)	7.3	7.7	7.7	8.0	7.7	6.3	6.5	6.0	6.3	7.0	7.0	7.0
3	Brunswick (P-57)	5.5	6.7	6.7	6.3	6.7	7.0	8.0	7.0	6.7	7.0	6.7	6.9
4	Merion	6.3	6.0	7.0	5.7	5.7	7.3	8.0	7.7	7.3	7.0	6.7	6.8
5	Ram #1	7.5	6.3	5.3	6.0	6.7	7.7	7.0	6.7	7.0	8.0	7.7	6.8
6	P-141	5.0	7.0	6.7	6.3	7.3	6.7	6.0	6.0	7.0	7.7	7.3	6.8
7	Bonnieblue	6.3	7.3	7.0	7.7	7.0	7.0	6.3	6.3	5.7	6.0	6.7	6.7
8	Adelphi (P-69)	7.0	7.3	7.3	7.0	7.0	7.0	6.2	5.3	6.3	6.3	6.7	6.7
9	Sodco	6.8	5.7	5.7	6.0	6.3	7.0	7.5	7.0	7.0	7.7	7.0	6.7
10	Glade (P-29)	6.5	4.0	4.7	5.7	7.0	8.0	7.2	6.7	7.0	7.0	7.3	6.5
11	Pennstar	6.0	6.3	6.7	7.3	8.0	7.0	6.3	5.3	5.7	6.0	6.3	6.5
12	Parade	6.0	7.3	7.3	6.7	5.0	5.7	6.5	5.7	6.3	7.0	7.7	6.5
13	Plush (P-133)	6.0	5.3	5.7	6.0	6.7	7.3	7.2	6.3	6.3	7.3	7.3	6.5
14	Galaxy (P-27)	6.3	7.0	7.3	6.7	6.7	6.3	6.3	5.3	6.0	6.0	6.0	6.4
15	EVB 282 Enmundi	7.8	6.3	7.0	7.7	7.0	7.3	7.0	5.7	5.0	5.7	5.7	6.4
16	Fylking	6.0	6.3	6.3	6.0	6.7	6.7	6.2	5.7	5.7	6.3	6.7	6.3
17	Ram #2	6.0	5.7	6.0	6.3	6.3	6.7	6.5	6.3	6.0	6.3	6.3	6.2
18	Sydsport	5.0	5.7	5.7	5.7	5.7	5.7	5.8	6.0	6.0	6.7	6.7	6.0
19	W. Freehold OT	6.0	5.0	5.0	5.7	6.3	6.0	6.8	7.0	6.0	5.7	5.3	5.9
20	Baron	4.5	5.7	5.3	4.7	5.0	6.0	6.5	6.0	6.3	5.7	6.0	5.7
21	Victa	4.5	5.3	6.0	5.3	5.3	6.0	6.5	5.7	5.7	5.7	5.7	5.7
22	Cheri	5.5	5.0	5.3	5.0	5.7	5.3	6.3	6.0	5.7	5.7	5.7	5.6
23	EVB 391 Enoble	6.8	6.3	6.0	5.0	5.7	5.7	5.3	5.3	5.3	5.3	5.7	5.7
24	Windsor	4.5	3.7	4.0	4.0	4.7	5.7	6.7	7.0	7.0	6.3	6.3	5.5
25	Monopoly	4.5	6.0	6.0	5.3	5.3	5.3	5.2	5.0	4.7	6.0	6.3	5.5

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1972 Regional Bluegrass Test (Continued)

Rank	Entry	Turf Quality 9 = best											
		1972											1973
		Ave.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ave.
26	EVB 305 Enita	6.8	5.7	5.7	6.3	6.7	5.7	5.2	4.0	4.7	5.3	5.0	5.4
27	EVB 307 Entopper	6.3	6.3	7.0	6.3	6.3	5.7	5.2	4.7	4.3	4.3	4.3	5.4
28	Nugget	7.0	4.0	6.7	8.0	8.3	6.0	4.3	3.3	4.0	4.0	4.3	5.3
29	Vantage	3.8	4.3	4.0	3.7	4.0	5.3	6.0	6.7	5.7	5.3	5.7	5.1
30	Geronimo	5.5	5.0	4.7	4.7	5.0	5.0	5.5	5.3	4.7	4.7	4.3	4.9
31	Campina	5.3	4.3	4.7	4.0	3.0	3.3	3.7	3.7	4.0	4.3	4.7	4.0
32	Delft	4.8	5.3	4.7	4.0	4.0	3.3	2.3	2.0	2.7	2.7	3.7	3.5
33	Kenblue	4.0	3.0	3.3	2.3	2.0	2.7	3.0	3.3	3.7	3.3	3.7	3.0
34	Park	3.8	4.7	3.0	2.3	2.0	2.3	2.3	3.0	3.0	3.0	3.3	2.9
LSD at 5%			1.1	1.0	0.9	1.0	0.9	0.8	1.1	1.1	1.2	0.8	

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Table 7. Tricalcium arsenate injury ratings on Kentucky bluegrass varieties, blends and mixtures - November, 1973 (9 = greatest injury

Variety	Injury Rating	Variety	Injury Rating
1. Touchdown	6.7	26. Victa	1.2
2. Nugget	5.7	27. Brunswick	1.2
3. Enita	5.7	28. Ram #1	1.2
4. Entopper	5.2	29. P-141	1.1
5. Pennstar	4.1	30. Merion	1.0
6. Fylking	3.7	31. Windsor	1.0
7. Plush	3.5	32. Enmundi	1.0
8. Geronimo	3.2	33. W. Freehold OT	0.8
9. Campina	3.1		
10. Sydsport	2.9	LSD at 5%	1.6
11. Enoble	2.8		
12. Majestic	2.7		
13. Galaxy	2.6		
14. Parade	2.5		
15. Bonnieblue	2.0		
16. Adelphi	2.0		
17. Delft	1.9		
18. Cheri	1.8		
19. Vantage	1.7		
20. Park	1.7		
21. Ram #2	1.6		
22. Glade	1.5		
23. Monopoly	1.4		
24. Sodco	1.4		

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EXHIBIT "E"

Thomas F. Rewinski discovered Touchdown Kentucky bluegrass growing on the ninth fairway of the National Golf Links of America where he is Superintendent. C. Reed Funk, an employee of the Soils and Crops Department of the New Jersey Agricultural Experiment Station, collected vegetative propagules of this grass and directed the initial vegetative and seed increase and testing of the variety. Pickseed West, Inc. directed subsequent testing and seed increase of this variety. Pickseed West, Inc. has an exclusive licensee to this variety on the basis of their Agreement with Thomas F. Rewinski, the New Jersey Agricultural Experiment Station and the United States Golf Association Green Section.

WHEREAS, C. Reed Funk, Soils and Crops Department, New Jersey Agricultural Experiment Station, P. O. Box 231, New Brunswick, New Jersey 08903, Alexander M. Radko, United States Golf Association Green Section, P.O. Box 1237, Highland Park, New Jersey 08904 and Thomas F. Rewinski, National Golf Links of America, Sebonac Inlet Road, Southhampton, New York 11968 have cooperated in the breeding and development of 'Touchdown' Kentucky bluegrass, Plant Variety Protection Application No. 7400066.

NOW, THEREFORE, in consideration of one ($1.00) DOLLAR and other valuable considerations paid to us by Pickseed West, Inc., Box 888, Tangent, Oregon 97389 the receipt whereof is acknowledged, we hereby assign unto the said Pickseed West, Inc. our entire interest in Touchdown Kentucky bluegrass 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 July 7, 1976

STATE OF NEW JERSEY

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 July 7, 1976

Aida Bianca

NOTARY PUBLIC

COMMISSION EXPIRES April 3, 1977

EXECUTED Sept 15 1976

STATE OF NEW JERSEY

Alexander M Radko

ALEXANDER M. RADKO

COUNTY OF MIDDLESEX

Before me a Notary Public for said County, personally appeared Alexander Radko 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

Eileen Smith

NOTARY PUBLIC

Commission expires NOTARY PUBLIC OF NEW JERSEY MY COMMISSION EXPIRES NOV. 6, 1980

EXECUTED Sept 20, 1976

STATE OF NEW YORK

Thomas F. Rewinski

Thomas F. Rewinski

COUNTY OF SUSSEX

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

EDNA A. STAUDENMAIER
NOTARY PUBLIC, STATE OF NEW YORK
No. 52-3816530, SUFFOLK COUNTY
COMMISSION EXPIRES MARCH 30, 1977

WITNESS my hand and seal

Edna A. Staudenmaier

NOTARY PUBLIC

COMMISSION EXPIRES March 30, 1977

PV# 7400066

Stauffer Chemical Company

1828 L Street, N.W./Washington, D.C. 20036/Telephone (202) 331-1627

October 20, 1983

Dr. Kenneth Evans
Plant Variety Protection Office
National Agricultural Library Building
Room 500
Beltsville, MD 20705

Subject: Plant Variety Certificate for Pickseed West (TOUCHDOWN)

Dear Dr. Evans:

This written request is a follow-up to my secretary's telephone request for a copy of the above subject matter.

As agreed, enclosed is a check for $21 to cover the photocopy costs for the 20 pages of inserts, plus the certificate.

Thank you for your assistance in expediting this matter.

Sincerely yours,

STAUFFER CHEMICAL COMPANY

Jack J. Wise/cdl

Jack J. Wise
Manager
Regulatory Relations

JJW/cdl
Enclosure

1184

PATENT & TRADEMARK

50-235/219

Oct. 18 1983

PAY TO THE ORDER OF United States Treasurer $21.00/100

Twenty-one and 00/100 DOLLARS

THE BANK OF NEW YORK
COUNTY TRUST REGION
500 ASHFORD AVENUE, ARDSLEY, N.Y. 10502

MEMO Touchdown/US

Jacqueline R. Sylvander

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