No. 7500058

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Otto Bohnert

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. THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS ESTABLISHED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

KENTUCKY BLUEGRASS

'Pacific'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington *this* 14th *day of* May *in the year of our Lord one thousand nine hundred and* seventy-six

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: PACIFIC	2. KIND NAME: Graminae	FOR OFFICIAL USE ONLY PV NUMBER 7500058
3. GENUS AND SPECIES NAME: Poa pratenis	4. FAMILY NAME *(Botanical)*:	FILING DATE 2·20·75 TIME 8 A.M.
	5. DATE OF DETERMINATION: 1968	FEE RECEIVED $ 250 / $ 250 / $ 250 BALANCE DUE $ — / $ — / $ —
6. NAME OF APPLICANT(S): Otto Bohnert	7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*: 4270 Grant Road, Central Point, Oregon 97501	8. TELEPHONE AREA CODE AND NUMBER: 503-664-2512
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)*	10. STATE OF INCORPORATION	11. DATE OF INCORPORATION

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

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.

March 7, 1975
(DATE)

Otto Bohnert
(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.

RECEIVED
MAR 14 1975
DIV.

7500058

PACIFIC

13 a.

A single outstanding plant was selected on May 1, 1966 from a 42 acre field which was producing foundation Merion Kentucky bluegrass seed. The plant was divided into 100 propagules and set in nursery row with plants spaced 24" apart in the row and 40" row spacing.

Seed was harvested from these plants in 1967, and in January 1968 seed was planted in heat-sterilized soil in flats in a greenhouse.

When ready for transplanting, single plants were planted into 2" plastic cups. In April 1968 these plants were set out in nursery rows spaced 40" apart with plants spaced 24" apart in the row.

Seed was harvested from this planting from 1969 through 1973. Plants grown from this seed show the same characteristics as the original plant with less than 6% off type plants.

Off-type plants generally have narrower leaves, or are more erect in growth, or are lighter green in leaf color, or are more susceptible to leafspot (Helminthosporium vagans), or to leaf rust (Puccinia poae-nemoralis), or to stripe rust (Puccinia striiformis), or are less vigorous, or show less spreading habit than Pacific. Off-type plants have been observed in space-planted seed production rows, but have not been apparent in turf plantings. Off-type plants have been found to comprise no more than 6% (six per cent) of single plants in space-planted, seed production rows.

This selection is known as BM-10 with the proposed name of Pacific Kentucky bluegrass.

7500058

PACIFIC

13 b.

The Kentucky bluegrass known as BM10 with the proposed name of Pacific produces a low dense turf with darker green and slightly broader leaves than Merion. It has fair seedling vigor.

It holds its dark green color well even under low soil fertility levels, and is also quite drought resistant. The grass is hardy, grows and spreads rapidly, is quite resistant to mildew, leaf and stripe rust, stripe smut, and helminthosporium leaf spot.

It is a better seed producer than Merion with seed weighing 21 to 22 lbs. per bushel. The seed stalks are very stiff and about 4" taller than Merion. The panicles are larger and longer than Merion and upright like Merion. It matures about 7 days later than Merion.

FORM APPROVED. OMB NO. 40-R3712

FARM GR-470-18 (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): OTTO BOHNERT

ADDRESS (*Street and No. or R.F.D. No., City, State, and ZIP Code*): 4270 Grant Road, Central Point, Oregon 97501

FOR OFFICIAL USE ONLY

PVPO NUMBER:

VARIETY NAME OR TEMPORARY DESIGNATION: PACIFIC (BM-10) JH 3/7/75

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:

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

3. MATURITY (At First Anthesis):

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

[ ][ ] NUMBER OF DAYS EARLIER THAN ..... [ ]
[0][7] NUMBER OF DAYS LATER THAN ..... [4]

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

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

[0][8][1] CM. HEIGHT

[ ][ ] CM. SHORTER THAN ..... [ ]
[1][3] CM. TALLER THAN ..... [4]

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

5. HABIT:

[1] 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

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

[0][4] MM. WIDTH

[9][9] MM. LENGTH

8. LEAF SHEATH (Base):

[1] Seedling Color: 1 = GREEN 2 = RED [3][0] MM. LENGTH

[2] Keel: 1 = NOT KEELED 2 = KEELED

Surface:

[1] 1 = GLABROUS 2 = PUBESCENT [1] 1 = SMOOTH 2 = ROUGH

[1] 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][2][8] MM. LENGTH

[0][5][2] MM. LONGER THAN ..... [4]
[ ][ ][ ] MM. SHORTER THAN ..... [ ]

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

JJH 3/7/75

10. PANICLE (Cont.):

[2 2 5] NUMBER OF PANICLES PER PLANT [1 0 7] MILLIGRAMS SEED PER PANICLE

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

[2] Panicle Habit: 1 = NODDING (Newport) 2 = UPRIGHT (Nugget) [6.0] MM. SPIKELET LENGTH

11. LEMMA

[4] KEEL
[4] LATERAL NERVES
} 1 = GLABROUS 2 = SLIGHTLY PUBESCENT 3 = PUBESCENT 4 = OTHER (Specify) Mixed 1-2- & 3

[2] Intermediate Nerves: 1 = DISTINCT 2 = OBSCURE [1] Basal Webbing: 1 = NONE 2 = SCANT 3 = COPIOUS

12. SEED:

[2] Apomictic Percentage: 1 = MORE THAN 95 2 = 85 TO 95 3 = LESS THAN 85

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

[0.81] MM. WIDTH [2.97] MM. LENGTH [3.18] 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:

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

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

[2] NORTHERN (42° 30' ± 30' Lat.) [2] INTERMEDIATE (40° ± 30' Lat.) [1] SOUTHERN (37° 30' ± 30' Lat.)

17. SEEDLING VIGOR (Growth Rate):

[1] 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)	[2] HEAT	[2] DROUGHT
[1] SHADE	[2] POOR FERTILITY	[2] 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	[2] FUSARIUM NIVALE	[2] F. ROSEUM
[2] TYPHULA IOTANA	[2] SCELEROTINIA HOMEOCARPA	[0] PUCCINIA GRAMINIA	[2] P. STRIIFORMIS
[2] PYTHIUM ULTIMATUM	[0] CRAMBUS BONIFATELLUNS	[2] OTHER (Specify) Puccinia poae-nemoralis	

JJH 3/18/75 from exhibit B & D

REFERENCE

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

PACIFIC

13 d

Pacific Kentucky Bluegrass resembles Merion Kentucky Bluegrass more than it does other varieties. It differs in that its growth is less erect in turf plantings and its leaves are wider than Merion. The leaves of Pacific are a darker green than Merion. Its density is equal to that of Merion.

Pacific is slightly more drought resistant and maintains a greener color under conditions of lower soil fertility than Merion. It is more resistant to stripe smut (Ustilago striiformis) than Merion. Its resistance to helminthosporium leafspot (Helminthosporium vagans) is similar to that of Merion. Seedling vigor of Pacific and Merion are approximately equal.

Pacific differs from Merion in several other characteristics. Its panicles are longer and their spread is greater than those of Merion. The distance from the panicle tip to the first node below the panicle base is greater for Pacific. The diameter of the first node below the panicle base is greater for Pacific. Pacific has a longer flag leaf than Merion.

The leaves of Pacific Kentucky Bluegrass are wider and its growth habit in turf is more prostrate than that of Scenic Kentucky Bluegrass. Pacific starts its spring growth later than Scenic, and its leaf color is a lighter shade of green. Pacific has less seedling vigor than Scenic. Seed heads or panicles of Pacific are more erect than those of Scenic.

Pacific differs from Scenic in several other characteristics. The distance from the panicle tip to the first node below the panicle base, and the diameter of the first node below the panicle base are greater for Pacific than for Scenic. Pacific has a shorter flag leaf than Scenic.

Table 1: Leaf blade width data, three Kentucky bluegrasses, turf plots, Southern Oregon Experiment Station, Medford, Oregon. June 25, 1975

Cultivar		Leaf Blade Width, mm
Merion		2.93
Pacific (BM-10)		3.19
Scenic (BM-14)		2.73
	Mean	2.95
	LSD, 5%	0.104
	1%	0.137
	Coef. Var.	12.9%

Data are means of 102 replications

Table 2: Leaf blade data, three Kentucky bluegrasses, turf plots, Southern Oregon Experiment Station, Medford, Oregon. June 25, 1975

Cultivar	Ave.	Standard Deviation	Std. Error of Mean[1]	Coef. of Var.[2]
Merion	2.93 mm	0.370 mm	0.037 mm	12.6%
Pacific (BM-10)	3.19 mm	0.411 mm	0.041 mm	12.9%
Scenic (BM-14)	2.73 mm	0.328 mm	0.032 mm	12.0%

[1]Std. Error of Mean = Standard Error of Mean.

[2]Coef. of Var. = Coefficient of Variability.

N = 102

The above data are from the Southern Oregon Experiment Station by J. A. Yungen, Assoc. Professor of Agronomy.

Table 3: Emergence of Bluegrasses in a turf plot seeding, Seeded October 24, 1968, Southern Oregon Experiment Station, Medford, Oregon

Cultivar	Visual Appearance of Grass	Height of Growth, mm
Merion	emerged, uniform stand	3
Pacific (BM-10)	barely emerged, uniform stand	2
Scenic (BM-14)	emerged, growing rapidly	16

observations made November 12, 1968

Table 4: Relative degree of stripe and leaf rusts infestations on mature, field grown plants of three Kentucky bluegrasses at the Southern Oregon Experiment Station, Medford, Oregon, 1975 Season

Cultivar	Rust rating, June 27, 1975 [1]
Merion	3.0
Pacific	3.2
Scenic	2.1

[1]Rust rating scale: 1 = no rusts; 3 = moderately rusted; 5 = severely rusted.

The above data are from the Southern Oregon Experiment Station by J. A. Yungen, Associate Professor of Agronomy.

Pacific has shown a high level of tolerance to herbicides approved for and commonly used in seed production fields.

It has been tested for the past 5 years at several experiment stations including Pennsylvania State University under the direction of Dr. Joseph M. Duich.

13 e

The applicant is the breeder and owner.

BLUE

PV No. 75-58

'Pacific'

An excess seed sample of this variety was returned to the PVP Office by the National Seed Storage Laboratory. The excess seed was destroyed by PVPO personnel on _____.

NOV 14 1994

YELLOW GREEN

NECC-5081

For certificate
FOLDER

9 sheets

D J Higgins
1/23/76