No. 7200085

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Rhode Island Agriculture Experiment Station
University of Rhode Island

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

CHEWINGS FESCUE

'Jamestown'

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* seventh *day of* June *in the year of our Lord one thousand nine hundred and* seventy-seven

Attest:

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Secretary of Agriculture

FORM GR-470
(2-12-71)

UNITED STATES DEPARTMENT OF AGRICULTURE
CONSUMER AND 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 Jamestown	2. KIND NAME Chewings fescue	FOR OFFICIAL USE ONLY PVPO NUMBER 7200085
3. GENUS AND SPECIES NAME Festuca rubra commutata Gaud.	4. FAMILY NAME *(Botanical)* Gramineas (Poaceae)	FILING DATE 2-2-72 / TIME 1:30 P.M.
	5. DATE OF DETERMINATION 1962	FEE RECEIVED $750.00 / CHARGES —
6. NAME OF APPLICANT(S) Rhode Island Agriculture Experiment Station, University of Rhode Island	7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)* Woodward Hall, University of R.I. Kingston, R.I. 02881	8. TELEPHONE AREA CODE AND NUMBER 401 792-2476
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)* R.I. Agriculture Experiment Sta.	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:

C.R. Skogley, Turfgrass Specialist,
Dept. of Plant & Soil Science,
University of Rhode Island,
Kingston, R.I. 02881.

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- [X] 12A. Exhibit A, Origin and Breeding History of the Variety *(See Section 52, P.L. 91-577)*
- [X] 12B. Exhibit B, Botanical Description of the Variety
- [X] 12C. Exhibit C, Objective Description of the Variety
- [X] 12D. Exhibit D, Data Indicative of Novelty
- [X] 12E. Exhibit E, Statement of the Basis of Applicant's Ownership

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. *(See Section 52, P.L. 91-577).*

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), P.L. 91-577) (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? Two - Foundation and Certified.

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

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 (P.L. 91-577).

January 28, 1972
(DATE)

C. R. Skogley
(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)

00001

FORM GR-470 (REVERSE)

U.S. DEPARTMENT OF AGRICULTURE
RECEIVED
1972
GRAIN DIVISION

INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and $50.00 fee to U.S. Dept. of Agriculture, Consumer and Marketing Service, Grain Division, Hyattsville, Maryland 20782. Retain one copy for your files. All items on the face of the form are self-explanatory unles noted below.

ITEM

5 Insert the date the applicant determined that he had a new variety.

12a 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.

12b 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.

12c A supplemental form will be furnished by the PVPO to describe in detail a variety for each kind of seed.

12d Provide complete data indicative of novelty. Seed and plant specimens may be submitted and seeds submitted may be sterile. Where possible, include photographs of plant comparisons, chemical tests, etc.

12e Indicate whether applicant is the actual breeder, the employer of the breeder, the owner through purchase or inheritance, etc.

12A. Exhibit A, Origin and Breeding History of the Variety.

The original selection was made from an old green at the abandoned Beavertail Golf and Country Club by Dr. J.A. De France of the R.I. Agric. Expt. Sta. in 1945. A total of 10 selections were made from several greens on this old course located on the southerly end of the island of Conanicut in the town of Jamestown, R.I. The selections were taken to the R.I. experiment station and vegetatively propagated in rows. The selections were numerically designated as fescue No.1 through No.10. The nursery rows were maintained under clean cultivation for several years and seed heads were removed. After several years eight of the selections had deteriorated and nearly died out. They were removed. In 1953 only No.6 and 8 selections remained in uniform and healthy condition. As No.6 appeared somewhat superior the number 8 selection was discarded.

In 1960 Dr. C.R. Skogley assumed the turfgrass research responsibilities at the R.I. Station. It was determined at this time that no seed had been harvested from the isolated nursery row of No.6 fescue. A harvest was made in 1960 and some of this seed was used to establish turf trials. The selection was seeded in plots to compare it with several of the standard red fescue varieties then available. By 1962 it was obvious that No.6 fescue was distinct and that it was considerably superior to available, marketed varieties.

Breeder seed rows of the selection have been maintained and seed harvests have been made annually. Turf trials have been established in many locations throughout the U.S., Canada and Europe with first, second and third generation seed. (First generation grown in R.I., all others grown in Oregon).

There is some slight variation within the cultivar when observing spaced plants. These differences appear to be considerably less than with either standard Chewings fescue or Pennlawn red fescue. When grown in mown turf stands absolutely no variation can be detected. This observation has been made with Breeders, Foundation and Certified seed. Preliminary reports from 15 trials (a portion of NE-57 Regional Research Project) throughout the northeastern 13 states and 4 in the north central region have been very encouraging and indicate the distinctness of this variety. These trials were established in 1968 and are still in progress. Second generation Oregon grown seed was used to establish these trials.

Jamestown red fescue was entered into the Oregon seed certification program during 1967. It was released to a farmer-grower association (Exeter Bentgrass Association) in Oregon and they, in fact, entered it into the seed certification program. This Association was formed to produce quality seed of an earlier Rhode Island release - Exeter Colonial bentgrass. The Rhode Island Agriculture Experiment Station has entered into contract with this Association and is to receive a set percentage of grower price, as royalty, to further turfgrass research. The growers association solicited bids from major seed companies to promote and market the Rhode Island Grasses. Loft Pedigreed Seed Company, Bound Brook, N.J. was the successful bidder and the R.I. station is working closely with them in developing the proper promotional literature. The contract between the growers and marketing agent may be broken should the Jamestown variety not be covered by the Plant Variety Protection Act. There is great concern about the future of any proprietary grass of stature if quality control in production cannot be maintained.

12B. Exhibit B, Botanical Description of the Variety.

Research was done during 1968-70 in an effort to determine morphological or cytological differences between Jamestown fescue and four other cultivars. It was determined that each of the five varieties have 2n = 42 chromosomes. Although some botanical differences among cultivars appeared obvious, variability within cultivars was so great as to preclude statistical differences.

A copy of this research study (thesis) is attached (Exhibit A). It does indicate a definite smallness in stature (leaf length and width) as contrasted to standard varieties.

Research is continuing in an effort to positively identify the Jamestown variety. Current work includes studies of stomatal size and density and microhair length from the leaf epidermis. It appears that there is no difference in stomatal density between Jamestown, Highlight and Pennlawn but differences occur (5% level) in stomatal size and microhair length. (Larger size in Pennlawn). The reproductive stage will also be studied. Such things as inflorescence height and density, panicle length and size, pollen size and the number of nodes on the culm will be

72-85

measured.

There is an indication that seed size of Jamestown is smaller than that of current commercial varieties. This is also being investigated.

12C. Exhibit C, Objective Description of the Variety.

The Jamestown variety of red fescue (Chewings' type) is a very fine textured, low-growing, deep-rich-green colored fescue. Unlike any commercial variety yet observed in trials, Jamestown has developed and maintained excellent (tight) density in pure stand.

Its general characteristics which differentiate it from other varieties are: (a) deep green color, (b) attainment and maintenance of density in pure stand, (c) fine texture, (d) tolerance to close cutting (in putting green trials at 1/4 inch cut, established in 1964, a 40-50 percent stand of Jamestown remains in a plot in which it was blended with Highland bentgrass), (e) apparent resistance or tolerance to leaf spot diseases that routinely thin fescue stands under turf conditions.

12D. Exhibit D, Data Indicative of Novelty.

Exhibit B includes the research paper on the study in which Jamestown variety was first entered, data from the R.I. regional trials for 1971 and for the years 1969 through 1971 and copies of letters and data from researchers at several other locations regarding the performance of this grass. Based on good performance in Canada and Europe we are applying for registration in these locations. We have been asked to do this by representatives of seed companies in Canada, Netherlands and Belgium.

12E. Exhibit E, Statement of the Basis of Applicant's Ownership.

The Jamestown variety of red fescue, Chewings' type, was selected on the basis of agronomic knowledge and experience

72-85

by a Research Professor (Dr. J.A. De France) while on official duty for The Rhode Island Agriculture Experiment Station in 1945. From that date to the present time considerable time, effort and cost have gone into the evaluation, development and release of the variety by other representatives of the R.I. station. It is generally recognized within the turfgrass industry and in the seed trade that Jamestown is a Rhode Island development and that the Rhode Island station has the right and responsibility to release and arrange for production and sale of the variety. We are concerned about the maintenance of quality and believe that only through the Plant Variety Protection Act, the certified seed program and contract arrangements with the producers and marketing agents can this be achieved.

72-85

UNIVERSITY OF RHODE ISLAND
KINGSTON • R. I. 02881

College of Resource Development • Department of Plant and Soil Science

MEMORANDUM

TO : Mr. Joseph J. Higgins
USDA, Grain Division
National Agricultural Library
Beltsville, Maryland 20705

FROM : C. R. Skogley
Plant and Soil Science Department
University of Rhode Island
Kingston, RI 02881

DATE : January 24, 1977

SUBJECT: Chewings fescue application No. 72085, "Jamestown" Novelty Statement.

Jamestown most closely resembles "Highlight" Chewings fescue but Jamestown is darker colored (8.0 vs 4.0, 9 = dark green and 1 = light green) and Jamestown produces fewer tillers (62.6 vs 125.4) 14 weeks after seeding than does Highlight. At 12 weeks after seeding the leaf blades of Jamestown are broader than are those of Highlight (1.68 mm vs 1.45 mm, one inch from sheath).

C. R. Skogley

CRS:rr

00010

72-85

Subject: Chewings Fescue Application No. 72085, "Jamestown"

Exhibit D, Summary Novelty Statement

Jamestown Chewings fescue (Rhode Island No. 6) was first included in turf trials in a study seeded at the Rhode Island Agricultural Experiment Station in 1960. Other fescues included in the trials were creeping red fescue, Illahee, Chewings, Pennlawn and Ranier. The trial was seeded in September 1960.

By the end of the first year following seeding it was a apparent that Jamestown was distinctively different from all other fescues in the trial. It was decidedly darker green in color, established a dense turf more rapidly than all other cultivars with the exception of Illahee and provided a quality of turf superior to all others. Data obtained in 1961 indicated the following:

Cultivar	Color	Turf Score Ave.*	Corticium rating 12/1/61	Seedheads**
Jamestown	Dark	7.3	None	10-15%
Chewings	Medium	5.5	Trace	None
Illahee	Medium	6.4	None	None
Pennlawn	Medium	6.6	Trace	None
Ranier	Medium	6.0	9.5%	None
Creeping red	Medium	5.8	7.5%	None

*10=Maximum, 0=Dead or bare ground

**% tillers showing seedheads on 5/29/61

The enclosed reprint (Agronomy Journal 60, January-February 1968, p. 47-49) by Skogley and Ledeboer present additional data obtained through 1964 on this trial. "U.R.I. Turfgrass Research Review" Vol. 1 No. 3, June 1976 contains an article entitled "New Red Fescues perform well in trials." The trials mentioned were a component of Northeastern regional trials established in 1968. The data cover the period for 1969 through 1974. These trials again indicate the improved quality of Jamestown fescue.

Much of the information on botonical description and data indicative of novelty was submitted with the original application and with subsequent additions. Also, considerable data have been submitted from the Rhode Island station and from other researchers indicating the distinct performance of the variety.

72-85

To summarize the novelty of Jamestown I will present the following observations and data:

(1) Color: Deeper green color in turf stands than all other Chewings fescues observed with the exception of Banner (Ru45c).

(2) Disease: Generally excellent resistance to diseases encountered in this area. Superior to all fescues included in the 1968 regional study (reprint enclosed) under field conditions. The variety is susceptible to powdery mildew (Erysiphe graminis) during winter months under greenhouse conditions. This is a distinguishing characteristic when compared to Highlight or Cascade Chewings fescue. Please note the change in this regard on the objective description submitted with my letter on September 15, 1976 from the form submitted in November, 1975.

(3) Seed size: We have observed that the seed size of Jamestown is generally smaller than for other varieties of red fescue. We have observed this with seed obtained from different seed lots. Weights checked during 1976 provided the following information:

Seed weights/1000 seeds in grams

	Replication				
	I	II	III	IV	Ave.
Jamestown	.808	.800	.820	.826	.814
Highlight	.933	.920	.896	.875	.906
Koket	.978	.958	.985	.990	.978
Pennlawn	.891	.880	.941	.914	.906

(4) Plant stature: We have noted that Jamestown tends to be smaller in stature than some other fescues. It appears to be similar to Highlight in this respect as shown in tables 1 and 2. Jamestown appears to have fewer tillers than Highlight as shown in Table 3.

72-85

Table 1. Length (in mm) of 2nd Lamina over a 14-week period following seeding.

	Weeks after seeding							
Variety	2	4	6	8	10	12	14	*
Jamestown	0.0	41.3	73.6	76.0	100.4	132.1	134.6	a
Cascade	2.6	62.8	97.4	117.0	137.8	160.8	186.9	b
Highlight	7.9	60.6	93.4	104.5	122.7	135.0	138.4	a
Pennlawn	3.8	62.8	88.7	117.2	164.9	170.5	190.2	b
Common creeping red	4.5	71.0	109.6	153.7	192.1	206.5	221.8	c

*5% level of significance at 14 weeks, Duncan's multiple range test.

Note that through the 10th week Jamestown leaves were considerably shorter than those of Highlight.

Table 2. Width (in mm) of 2nd lamina over a 14 week period following seeding.

	Weeks after seeding							
Variety	2	4	6	8	10	12	14	*
Jamestown	.00	.82	.82	.89	1.18	1.21	1.18	a
Cascade	.07	1.00	1.04	1.07	1.32	1.54	1.50	b
Highlight	.21	.85	.93	1.11	1.10	1.29	1.25	a
Pennlawn	.07	.89	1.00	1.07	1.39	1.58	1.50	b
Common creeping red	.11	.89	1.21	1.29	1.61	1.71	1.71	b

*5% level of significance at 14 weeks, Duncan's multiple range test.

72-85

Table 3. Ave. tiller counts taken over a 14 week period following seeding.

	Weeks after seeding							
Variety	2	4	6	8	10	12	14	*
Jamestown	0	2.6	5.4	9.6	20.2	32.6	62.6	b
Cascade	0	3.1	5.5	8.1	19.4	31.3	55.4	b
Highlight	0	2.9	8.4	17.6	44.8	85.0	125.4	a
Pennlawn	0	3.3	5.9	9.4	19.7	33.4	68.5	b
Common creeping red	0	2.7	4.7	10.0	17.6	27.1	44.9	b

*5% level of significance at 14 weeks, Duncan's multiple range test.

On December 14, 1971, twelve weeks after seeding, leaf widths were measured approximately one inch from the sheath. Thirty pots of each cultivar were picked at random and three leaves in each pot were measured. From the analyzed data, there were significant differences between all three cultivars. Pennlawn had the widest leaf width followed by Jamestown and Highlight in that order.

Cultivar	Ave. leaf width	*
Highlight	1.45 mm	a
Pennlawn	2.23 mm	b
Jamestown	1.68 mm	c

*5% level of significance

This paragraph and data were from a M.S. thèsis study by Rida Hui-Fang Wang, published in 1972.

This thesis study title was "Morphological studies of three cultivars of Festuca Rubra L."

Additional morphological measurements were made during this study. Among them were stomatal size, stomatal density, macrohair length and lower epidermis characteristics. No significant differences were noted between Jamestown and Highlight with any of these characteristics. These studies were made on grasses grown from seed under normal greenhouse conditions.

72-85

Additional studies made on plants in controlled environment growth chambers again failed to produce difference between Jamestown and Highlight. Measurements included stomatal size, macrohair length, plant height and flower induction.

We have made many studies in an attempt to morphologically identify Jamestown. Because of the heterozygous nature of a given cultivar of red fescue we have found it extremely difficult to obtain significant character differentiation by morphological means. The prime differences we have seen with Jamestown are: unusual disease resistance, susceptibility to powdery mildew under winter greenhouse conditions, improved performance when mown at 3/4 inch vs. 1 1/2 inch, wide range of adaptation, production of seedheads under mown conditions, generally distinctively darker green color, smaller seed size, shorter and narrower leaves and much less tiller production than Highlight but similar to Cascade.

FORM GR-470-37
(3-76)

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

OBJECTIVE DESCRIPTION OF VARIETY
FESCUE
(Festuca spp.)

NAME OF APPLICANT(S) C.R. Skogley, for:
Rhode Island Agriculture Experiment Station

VARIETY NAME OR TEMPORARY DESIGNATION
Jamestown

ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code)
Woodward Hall, University of Rhode Island,
Kingston, Rhode Island 02881

FOR OFFICIAL USE ONLY
PVPO NUMBER
72085

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. Characteristics described, including numerical measurements, should represent those that are typical for the variety. Ranges may be given also. Measured data should be for SPACED PLANTS. Royal Horticultural Society or any recognized color fan may be used to determine plant colors; designate system used: _____. Describe location of test area Kingston, Rhode Island
All questions need not be answered, however, completeness should be striven for in order to establish the most adequate Variety Identification.

1. SPECIES: (With comparison varieties for use below - use varieties within species of application variety)

[3]

1 = F. ARUNDINACEA (TALL) 11 = ALTA 12 = FAWN 13 = GOAR 14 = KENTUCKY 31
2 = F. PRATENSIS (MEADOW) 21 = ENSIGN 22 = TRADER
3 = F. RUBRA SSP. COMMUTATA (CHEWINGS) 31 = CASCADE 32 = HIGHLIGHT 33 = JAMESTOWN
4 = F. RUBRA SSP. RUBRA (RED) 41 = BOREAL 42 = PENNLAWN 43 = DAWSON
5 = F. OVINA VAR. OVINA (SHEEP)
6 = F. LONGIFOLIA (HARD) 61 = DURAR 62 = BILJART (C-26) 63 = SCALDIS
7 = OTHER (SPECIFY) F. _____

2. CYTOLOGY

[4][2] 2n CHROMOSOME NUMBER

3. ADAPTATION: (0 = Not Tested; 1 = Not Adapted; 2 = Adapted)

[2] NORTHEAST [2] SOUTHEAST -winter overseeding [2] NORTH CENTRAL [2] PACIFIC N.W. [2] OTHER (SPECIFY) Canada Europe

4. MATURITY: (50% Headed) Give Test Area Kingston, Rhode Island

[ ][ ] DAYS EARLIER THAN . . . . . [ ][ ]
MATURITY SAME AS . . . . . [3][2] COMPARISON VARIETY
[ ][2] DAYS LATER THAN . . . . . [3][1]

5. PLANT HEIGHT: (At maturity to top of panicle)

[5][9][7] mm HEIGHT Barfalla
1[2][9] mm SHORTER THAN . . . . . [ ][ ]
HEIGHT SAME AS . . . . . [3][1] COMPARISON VARIETY
[8][9] mm TALLER THAN . . . . . [3][2]

6. GROWTH HABIT (Mature)

[2] 1 = ERECT (KENTUCKY 31) 2 = SEMI-ERECT (HIGHLIGHT) 3 = PROSTRATE

7. RHIZOMES

[ ][ ] mm LENGTH [ ][ ] mm WIDTH

[0] 0 = ABSENT 1 = WEAKLY CREEPING (DAWSON) 2 = STRONGLY CREEPING (BOREAL) 3 = OTHER _____

8. LEAF BLADE:

if [~~3~~] COLOR: 1 = LIGHT GREEN (GOLFROOD) 2 = MODERATELY LIGHT GREEN (HIGHLIGHT) 3 = MEDIUM GREEN (~~JAMESTOWN~~ Cascade, KENTUCKY 31)
4 = DARK GREEN (~~CASCADE~~ Jamestown) 5 = BLUEGREEN 6 = GRAYGREEN 7 = OTHER (SPECIFY) _____

letter 12/16/76 [illegible]

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 72085 JamesTown

8. LEAF BLADE:

[0] ANTHOCYANIN: 0 = ABSENT 1 = PRESENT [1] HAIRS (BASAL): 0 = ABSENT 1 = PRESENT [1] MARGINS: 1 = SMOOTH 2 = SEMI-ROUGH 3 = ROUGH

[0 7 0] mm LENGTH (FIRST LEAF BELOW FLAG LEAF) [0 2] mm WIDTH

[ ] mm SHORTER THAN . . . . [ ] LENGTH SAME AS . . . . . [ ] mm LONGER THAN . . . . . [ ] COMPARISON VARIETY

[ ] mm NARROWER THAN . [ ] WIDTH SAME AS . . [3 2] mm WIDER THAN . . [ ] COMPARISON VARIETY

9. LEAF SHEATH (Plant Base):

[2] COLOR: 1 = WHITE (HIGHLIGHT) 2 = RED =Upper portion green [0] AURICLE HAIRINESS: 0 = ABSENT 1 = PRESENT

10. PANICLE (Mature plant)

[ ] NUMBER OF PANICLES PER PLANT (FIRST YEAR OF PRODUCTION - FALL OR SPRING PLANTING SPECIFY Spring Range from 2.1 to 8.3

[0 9 5] mm LENGTH [ ] GRAMS OF SEED PER PANICLE

Barfalla

[3 2] mm SHORTER THAN . . . [ ] LENGTH SAME AS . . . [ ] mm LONGER THAN . . . [ ] COMPARISON VARIETY

[ ] GRAMS LESS SEED THAN [ ] WEIGHT SAME AS . . [ ] GRAMS MORE SEED THAN [ ] COMPARISON VARIETY

[4] SHAPE: 1 = NARROW-TAPERING 2 = EGG SHAPE 3 = OBLONG 4 = OTHER (SPECIFY) widest at base, tapering to apex

[2] TYPE: 1 = OPEN 2 = INTERMEDIATE 3 = COMPACT

[2] HABIT: 1 = ERECT 2 = NODDING

[ ] BRANCHES: 1 = SMOOTH 2 = ROUGH

[4] COLOR (At 50% flowering): 1 = YELLOWISH GREEN 2 = GREEN 3 = BLUISH GREEN 4 = PURPLISH 5 = REDDISH 6 = OTHER (SPECIFY) ____

11. PALEA:

[2] HAIRS (ON KEELS): 0 = ABSENT 1 = SHORT (OLDS) 2 = LONG (RAINIER)

12. LEMMA:

[0] HAIRS: 0 = ABSENT 1 = PRESENT [2] TEXTURE: 1 = SMOOTH 2 = ROUGH

[4 0] mm LEMMA LENGTH [8 7] mm LEMMA WIDTH

[0 4] mm SHORTER THAN . . . . [3 2] .21 less than Banner LENGTH SAME AS . . . . . [ ] mm LONGER THAN . . . . . [ ] COMPARISON VARIETY

[2 3] mm NARROWER THAN [3 2] .03 less than Banner WIDTH SAME AS . . . [ ] mm WIDER THAN. . . [ ] COMPARISON VARIETY

[1] AWNS: 0 = ABSENT 1 = PRESENT

[1 5] mm AWN LENGTH

00007

72085 Jamestown

16. ADDITIONAL DESCRIPTION: (Use additional sheets as required)

Describe all characteristics that cannot be adequately described in the form above. Comparative varieties should be used as may be appropriate, such as for disease. Append all comparative trial and evaluation data, including measured characters, environmental, and disease tests.

Seed Weights/1000 Seeds (grams)

Variety	Replication I	II	III	IV	Average
Jamestown	.808	.800	.820	.826	813.5
Highlight	.933	.920	.896	.875	906
Koket	.978	.958	.985	.990	977.75
Pennlawn	.891	.880	.941	.914	906.5

U. S. DEPARTMENT
RECEIVED
SEP 20 1976
AMS, GRAIN DIV.
PVPO

Average Tiller Counts

Taken over a 14-week period following seeding.

Variety	Weeks After Seeding 2	4	6	8	10	12	14	*
Jamestown	0	2.6	5.4	9.6	20.2	32.6	62.6	b
Cascade	0	3.1	5.5	8.1	19.4	31.3	55.4	b
Highlight	0	2.9	8.4	17.6	44.8	85.0	125.4	a
Pennlawn	0	3.3	5.9	9.4	19.7	33.4	68.5	b
Common Creeping Red	0	2.7	4.7	10.0	17.6	27.1	44.9	b

*5% level of significance using Duncan's multiple range test.

Width of 2nd lamina over a 14-week period following seeding.

Variety	Weeks After Seeding 2	4	6	8	10	12	14	*
Jamestown	.00	.82	.82	.89	1.18	1.21	1.18	a
Cascade	.07	1.00	1.04	1.07	1.32	1.54	1.50	b
Highlight	.21	.85	.93	1.11	1.10	1.29	1.25	a
Pennlawn	.07	.89	1.00	1.07	1.39	1.58	1.50	b
Common Creeping Red	.11	.89	1.21	1.29	1.61	1.71	1.71	b

*5% level, Duncan's multiple range test.

Length of 2nd lamina over a 14-week period following seeding.

Variety	Weeks After Seeding 2	4	6	8	10	12	14	*
Jamestown	0.0	41.3	73.6	76.0	100.4	132.1	134.6	a
Cascade	2.6	62.8	97.4	117.0	137.8	160.8	186.9	b
Highlight	7.9	60.6	93.4	104.5	122.7	135.0	138.4	a
Pennlawn	3.8	62.8	88.7	117.2	164.9	170.5	190.2	b
Common Creeping Red	4.5	71.0	109.6	153.7	192.1	206.5	221.8	c

72085 Jamestown

12. LEMMA:

	mm SHORTER THAN	
	LENGTH SAME AS	COMPARISON VARIETY
	mm LONGER THAN	

13. SEED:

4 8 8	mm LENGTH	8 6	mm WIDTH
0 7 8	mm SHORTER THAN	3 2	2 4 mm. NARROWER THAN 3 2
.02 less than Banner			.06 less than Banner
	LENGTH SAME AS	COMPARISON VARIETY	WIDTH SAME AS COMPARISON VARIETY
	mm LONGER THAN		mm WIDER THAN

0 8 1 4 GRAMS PER 1000 SEED

0 0 9 2	GRAMS LESS THAN	3 2
	WEIGHT SAME AS	COMPARISON VARIETY
	GRAMS MORE THAN	

See item 16
(Seed weight varies with seed lot)

14. DISEASE, INSECT, AND NEMATODE (0 = Not Tested, 1 = Susceptible, 2 = Resistant):

2	HELMINTHOSPORIUM VAGANS	0	H. SOROKINIANUM	0	H. DICTYOIDES
2	RHIZOCTONIA SOLANI	1	ERYSIPHE GRAMINIS	2	USTILAGO STRIIFORMIS
2	FUSARIUM NIVALE	2	F. ROSEUM	0	TYPHULA IOTANA
2	PUCCINIA GRAMINIS	0	P. STRIIFORMIS	2	P. POAE-NEMORALIS
0	P. CORONATA	0	PYTHIUM ULTIMUM	1-2	CORTICIUM FUSCIFORME
2	SCLEROTINIA HOMEOCARPA	0	INSECT	0	NEMATODE
	OTHER		OTHER		OTHER

15. GIVE VARIETY OR VARIETIES THAT MOST CLOSELY RESEMBLE THE APPLICATION VARIETY. For the following characteristics indicate degree of resemblance (D.R.) by placing in the column marked, D.R., one of the following numbers:
1 = Application variety is less than comparison variety 2 = Same as
3 = More than, better, greater, darker, more disease resistant, etc.

CHARACTER	VARIETY	D.R.	CHARACTER	VARIETY	D. R.
RHIZOME LENGTH	(none)		GROWTH HABIT	Highlight	2
LEAF WIDTH	Highlight	2	LEAF COLOR	Highlight	3
PANICLE COLOR			PANICLE SHAPE		
WINTER COLOR	Highlight	3	COLD INJURY	Highlight	3
SHADE TOLERANCE	Highlight	1	HEAT	Highlight	3
DROUGHT	Highlight	3	DISEASE*	Highlight	3

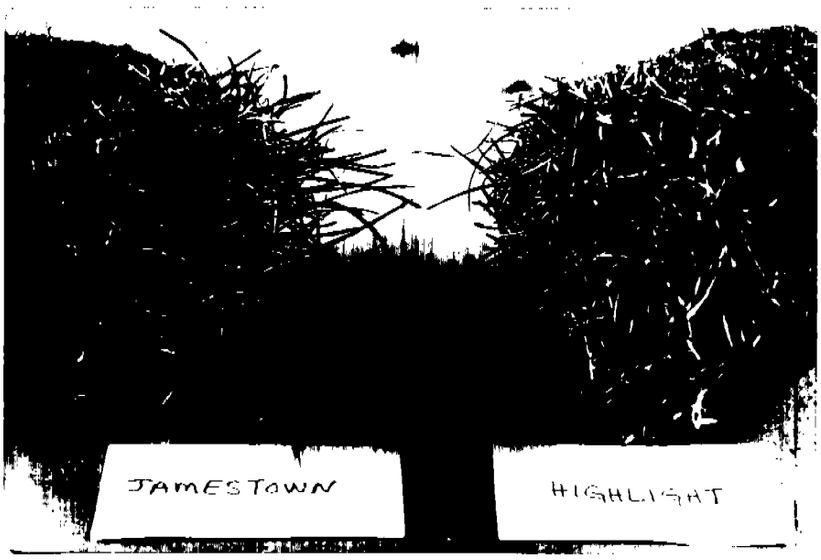
*Specify each disease evaluated.

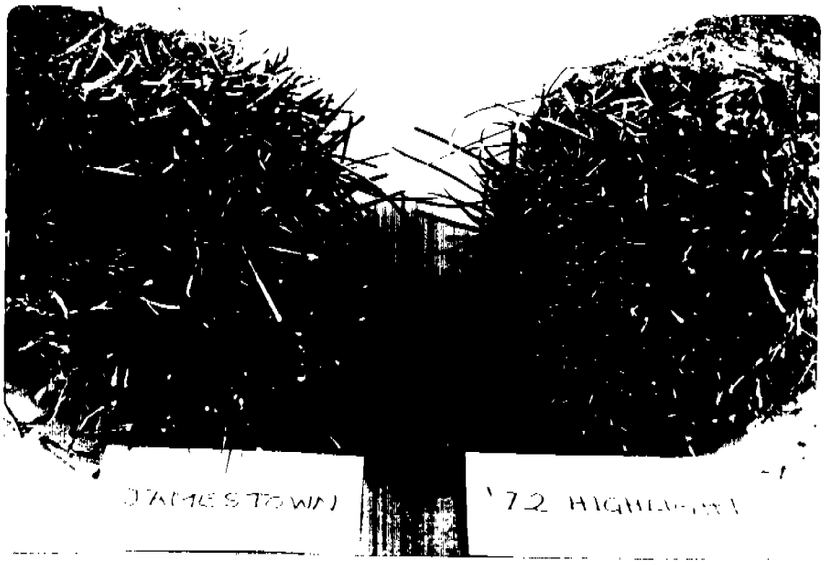
7200085

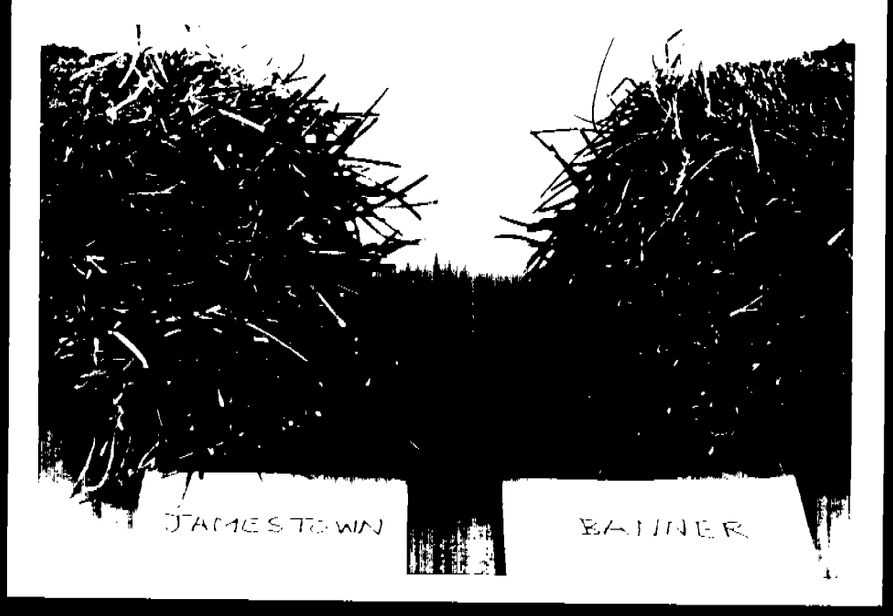
Photographs

from C. R. Sikogley

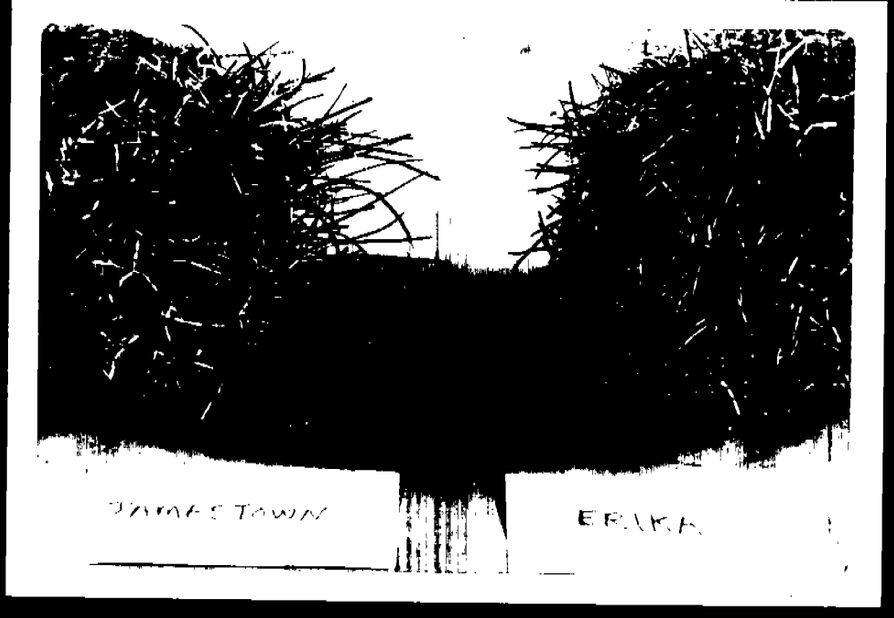
Re: Jamestown Chewings fescue
Application

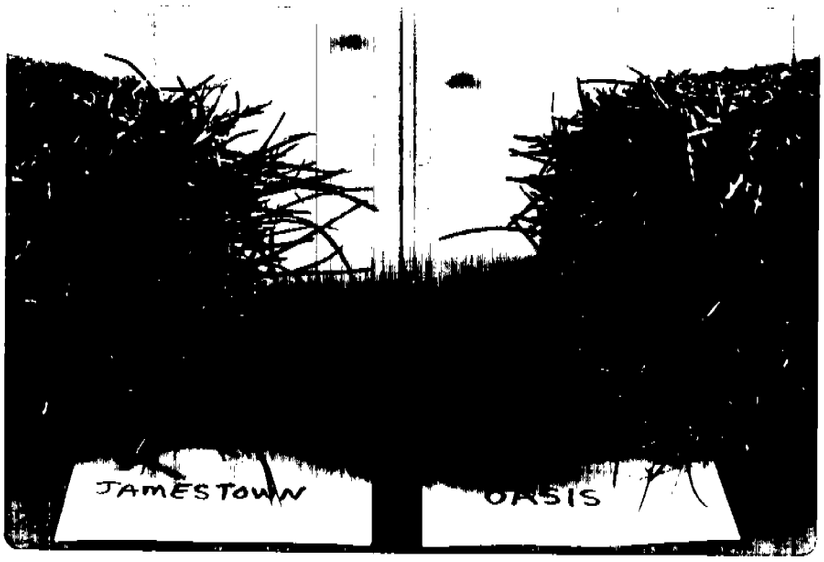

JAMESTOWN
HIGHLIGHT


JAMESTOWN
'72 HIGHLANDS


JAMESTOWN
BANNER

JAMESTOWN
'72


JAMESTOWN
ERIKA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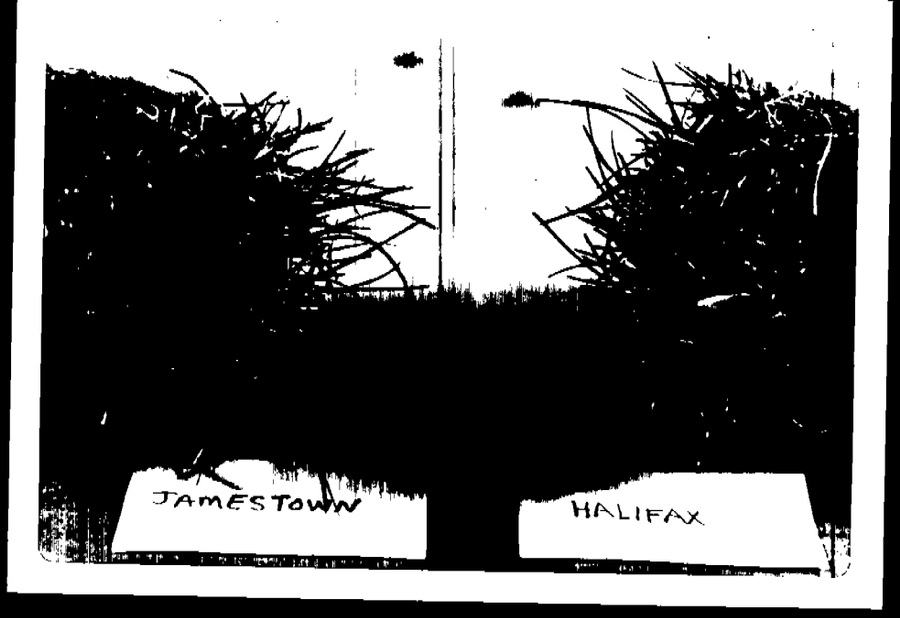
OASIS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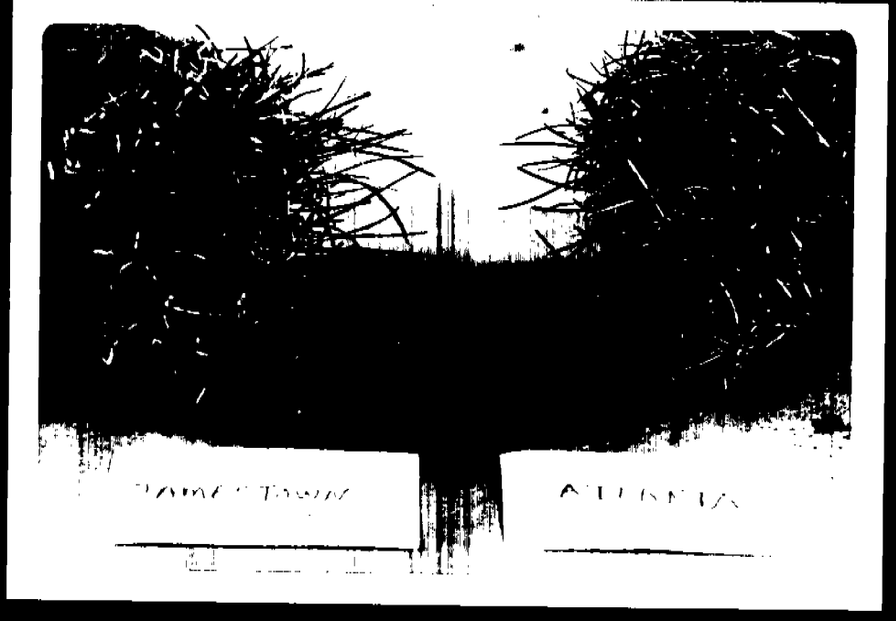
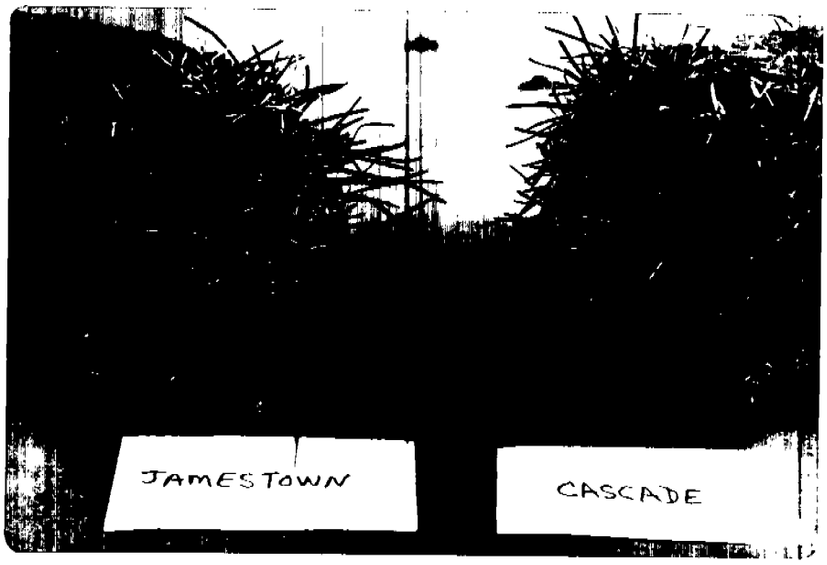
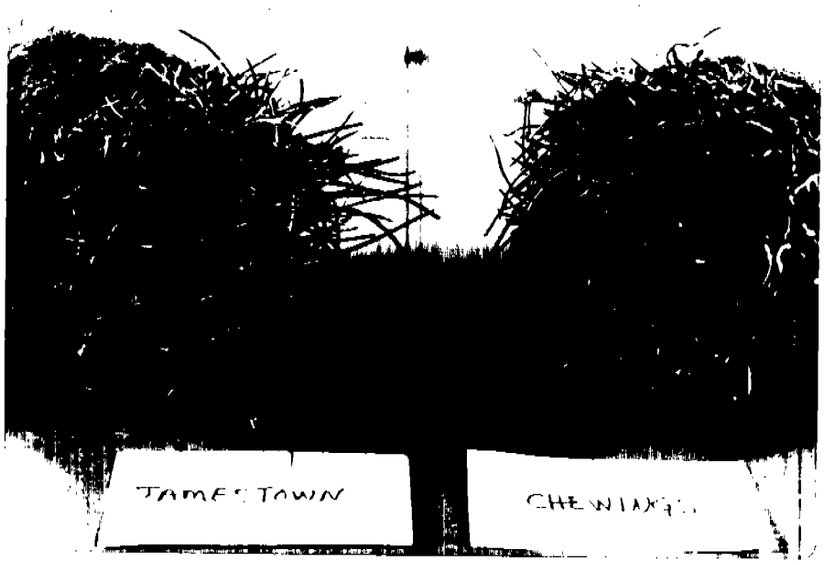
HALIFAX



JAMESTOWN
BARFALLA

JAMESTOWN
KOKET


JAMESTOWN
CASCADE


JAMESTOWN

JAMESTOWN
'12 BARFILLA