No. 7500027

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Seed Research Association, 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. IN THE 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.)

AGROTRICUM

'3425'

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* twelfth *day of* December *in the year of our Lord one thousand nine hundred and* seventy-five

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

Attest:

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	2. KIND NAME	FOR OFFICIAL USE ONLY
3425	Agrotricum	PV NUMBER 7500027
3. GENUS AND SPECIES NAME	4. FAMILY NAME *(Botanical)*	FILING DATE 10.7.74 / TIME 11 A.M.
Agrotricum	Graminaeae	FEE RECEIVED $250.00 / BALANCE DUE $ —
	5. DATE OF DETERMINATION	$250.00 / $ —
	August 1972	$250.00 / $ —

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
Seed Research Association, Inc.	Route 2, Box 48 Scott City, Kansas 67871	AC 316 872-2807

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	Kansas	June 1973

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

Kenneth L. Goertzen, President
Seed Research Association, Inc.

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? 3/25/80
[X] FOUNDATION [X] 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.

3/20/75 (DATE) — Kenneth L. Goertzen (SIGNATURE OF APPLICANT)

(DATE) — (SIGNATURE OF APPLICANT)

7500027

13A Origin & Breeding History:

Triticum aestivum/Agropyron elongatum segregate. Single plant selection in the F_9 generation. Increased from this single plant selection and tested in field trials for greenchop, hay, silage, and pasture. This is a self pollinating and highly homozygous line. Certification will be applied for in 1974-75.

13B Botanical Description:

Seed is larger and more free threshing than Agropyron - more elongated and pointed at ends than most wheats. The texture is similar to that of a soft wheat but with a higher protein than most wheats. The seed germinates at a higher temperature than wheat. The juvenile form of growth is erect. The seedlings have long narrow leaves and a red coleoptile. The plant has many tillers. The leaves are yellowish green color. It usually has five leaves above ground level. The head is long and lax - 18 to 22 spikelets. It has a hard, straw colored glume, short beards, and an extensive root system.

13C Objective description:

Matures 3 to 5 days later than Agrotriticum 2350
Excellent regrowth for pasture.
Good protein level as forage and grain.
Palatability of pasture equal to wheat.
Cold tolerant
Germinates most readily at temperatures above that where wheats grow most readily.
Under conditions with ample moisture and fertility growth is more or less continuous.
Shows resistance to anthracnose, wheat streak, leaf and stem rust.
It has drouth tolerance superior to most wheat.
It is self pollinating and highly homozygous.
36-45 inches tall.

13D Novelty
Growth habit is weakly perennial and different from wheat or Agropyron ancestors.

Seed larger and more free threshing than Agropyron- more elongated and pointed at ends than most wheats. Seed higher in protein than most wheats.

Only commercial variety that resembles it closely is Agrotriticum variety 2350 which is earlier maturing, lower in both forage and grain protein, and slightly shorter in height than 3425.

13E Developed by plant breeder, Kenneth L. Goertzen & Betty L. Goertzen

FORM GR-470-3
(9-1-72)

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

EXHIBIT C
(Agrotricum)

OBJECTIVE DESCRIPTION OF VARIETY
AGROTRICUM

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S): SEED RESEARCH ASSOCIATES INC.

ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*: Route 2, Scott City, Kansas, 67871

FOR OFFICIAL USE ONLY
PVPO NUMBER: 7500027
VARIETY NAME OR TEMPORARY DESIGNATION: 3425

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. TYPE:

[3] 1 = WHEAT-LIKE 2 = GRASS-LIKE 3 = Intermediate

2. SEASON - NUMBER OF DAYS FROM EMERGENCE TO: Scott County, Kansas

[2][8][1] FIRST FLOWERING [2][9][5] LAST FLOWERING

3. MATURITY:

[ ][ ] NO. OF DAYS *EARLIER* THAN ..... [ ]
[0][7] NO. OF DAYS *LATER* THAN ....(8)..... [ ]

WHEAT VARIETIES
1 = CHEYENNE 2 = ARTHUR 3 = SCOUT
4 = CHRIS 5 = LEMHI 6 = NUGAINES
7 = LEEDS 8 = OTHER *(Specify)* 2350

4. PLANT HEIGHT *(From soil level to top of head):*

[1][0][0] CM. HIGH

[ ][ ] CM. SHORTER THAN ..... [ ]
[0][5] CM. TALLER THAN. .....(8)..... [ ]

WHEAT VARIETIES
1 = CHEYENNE 2 = ARTHUR 3 = SCOUT
4 = CHRIS 5 = LEMHI 6 = NUGAINES
7 = LEEDS 8 = OTHER *(Specify)* 2350

5. PLANT COLOR AT BOOTING *(See reverse):*

[1] 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

6. ANTHER COLOR: 1 = YELLOW 2 = PURPLE

[1] 3 = OTHER *(Specify)* _____

7. STEM:

[1] Anthocyanin: 1 = ABSENT 2 = PRESENT

[1] Waxy Bloom: 1 = ABSENT 2 = PRESENT

[1] Hairiness of Last Internode of Rachis: 1 = ABSENT 2 = PRESENT

[1] Internodes: 1 = HOLLOW 2 = SOLID

[0][4] NUMBER OF NODES *(Originating from node above ground)*

[2][3] CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

8. AURICLES:

[1] Anthocyanin: 1 = ABSENT 2 = PRESENT

[1] Hairiness: 1 = ABSENT 2 = PRESENT

9. LEAF:

[1] Hairs of First Leaf Sheath: 1 = ABSENT 2 = PRESENT

[1] Leaf Texture: 1 = SMOOTH 2 = ROUGH

[0][8] MM. LEAF WIDTH *(First leaf below flag leaf)*

[2][6] CM. LEAF LENGTH *(First leaf below flag leaf)*

[1] Waxy Bloom of Flag Leaf Sheath: 1 = ABSENT 2 = PRESENT

10. HEADS:

[1] Density: 1 = LAX 2 = MIDDENSE 3 = DENSE

[1][9] CM. HEAD LENGTH

[4] Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE 4 = OTHER *(Specify)* long cylindrical

[2] Color at Maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED 5 = BRONZE 6 = BROWN 7 = BLACK 8 = OTHER *(Specify)* _____

3

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 25 1975
U. S. DEPARTMENT OF AGRICULTURE
AMS, PVPO

FORM GR-470-3 (REVERSE) 7500027

11. GLUMES AT MATURITY:

[3] Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.) 3 = LONG (CA. 9 mm.)

[3] Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.) 3 = WIDE (CA. 4 mm.)

[1] Shoulder Shape: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED 4 = SQUARE 5 = ELEVATED 6 = APICULATE

[4] Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE 4 = sho

12. COLEOPTILE COLOR:

[3] 1 = WHITE 2 = RED 3 = PURPLE

13. SEEDLING ANTHOCYANIN:

[2] 1 = ABSENT 2 = PRESENT

14. JUVENILE PLANT GROWTH HABIT:

[2] 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

15. SEED:

[3] Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL

[1] Cheek: 1 = ROUNDED 2 = ANGULAR

[3] Brush Size: 1 = SHORT 2 = MEDIUM 3 = LONG

[1] Brush: 1 = NOT COLLARED 2 = COLLARED

[3] Brush Area: 1 = SMALL 2 = MEDIUM 3 = LARGE

[2] Embryo Size: 1 = SMALL 2 = MEDIUM 3 = LARGE

[ ] Phenol Reaction: 1 = IVORY 2 = FAWN 3 = LT. BROWN 4 = BROWN 5 = BLACK

[3] Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify) _____

[0 7] MM. LONG [0 3] MM. WIDE [2 4] GM. PER 1000 SEEDS

16. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[2] STEM RUST (Races) all prevalent

[2] LEAF RUST (Races) all prevalent

[0] STRIPE RUST (Races) _____

[0] LOOSE SMUT

[2] POWDERY MILDEW

[0] BUNT

[2] OTHER (Specify) wheat streak, anthracnose

17. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[0] SAWFLY

[2] APHID (Bydv.)

[2] GREEN BUG

[0] CEREAL LEAF BEETLE

[ ] OTHER (Specify) _____

HESSIAN FLY RACES: [0] GP [0] A [0] B [0] C [0] D [0] E [0] F [0] G

18. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	2350	Seed size	2350
Plant carriage	"	Seed shape	"
Leaf color	"	Coleoptile elongation	"
Leaf carriage	"	Coleoptile pigmentation	"
Leaf width	"	Root structure	"

INSTRUCTIONS

GENERAL: Foliage characteristics should be recorded at the booting stage of the plant.

The following publications may be used as a reference aid for completing this form:

(a) E. L. Smith, E. E. Sebesta, A. M. Schlehuber, and H. C. Young, Jr., 1960, Association of Certain Characters in a Collection of Wheat and Wheat Grass Hybrids, Technical Bulletin T-82, Oklahoma State University.

(b) W. E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts.

(c) L. W. Briggle, and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.

LEAF COLOR: Nickerson's or any recognized color fan should be used to determine the leaf color of the described variety.

RECEIVED FEB 19 1975 U.S. DEPT. OF AGRICULTURE AMS PVPO