

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

**Funk Seeds International,
A Company of Ciba-Geigy Corporation**

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.

THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS 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.)

WHEAT

'W-504'

*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 27th day of June in
the year of our Lord one thousand nine
hundred and seventy-five*

Attest:

S. J. Rollin
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Earl L. Buttz

Secretary of Agriculture

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

1. VARIETY NAME OR TEMPORARY DESIGNATION W-504	2. KIND NAME Wheat	FOR OFFICIAL USE ONLY	
		PVPO NUMBER 7500010	
3. GENUS AND SPECIES NAME <u>Triticum aestivum</u> ssp. <u>Vulgare</u>	4. FAMILY NAME (Botanical) Gramineae	FILING DATE 9.9.74	TIME 10:30 A.M.
	5. DATE OF DETERMINATION Sept. 1973	FEE RECEIVED \$ 750	CHARGES —
6. NAME OF APPLICANT(S) Funk Seeds International, Inc.	7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) P.O. Box 911 1300 W. Washington Bloomington, Illinois 61701	8. TELEPHONE AREA CODE AND NUMBER 309-829-9461	
		9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation	10. STATE OF INCORPORATION Illinois

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

Koy E. Miskin
Manager Wheat Research
1300 W. Washington
Bloomington, Illinois 61701

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- 12A. Exhibit A, Origin and Breeding History of the Variety (See Section 52, P.L. 91-577)
- 12B. Exhibit B, Botanical Description of the Variety
- 12C. Exhibit C, Objective Description of the Variety
- 12D. Exhibit D, Data Indicative of Novelty
- 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.) YES NO

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

14C. If "Yes," to 14B, how many generations of production beyond breeder seed?
Three

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).

6 Sept 1974
(DATE)

Koy E. Miskin
(SIGNATURE OF APPLICANT)

(DATE)

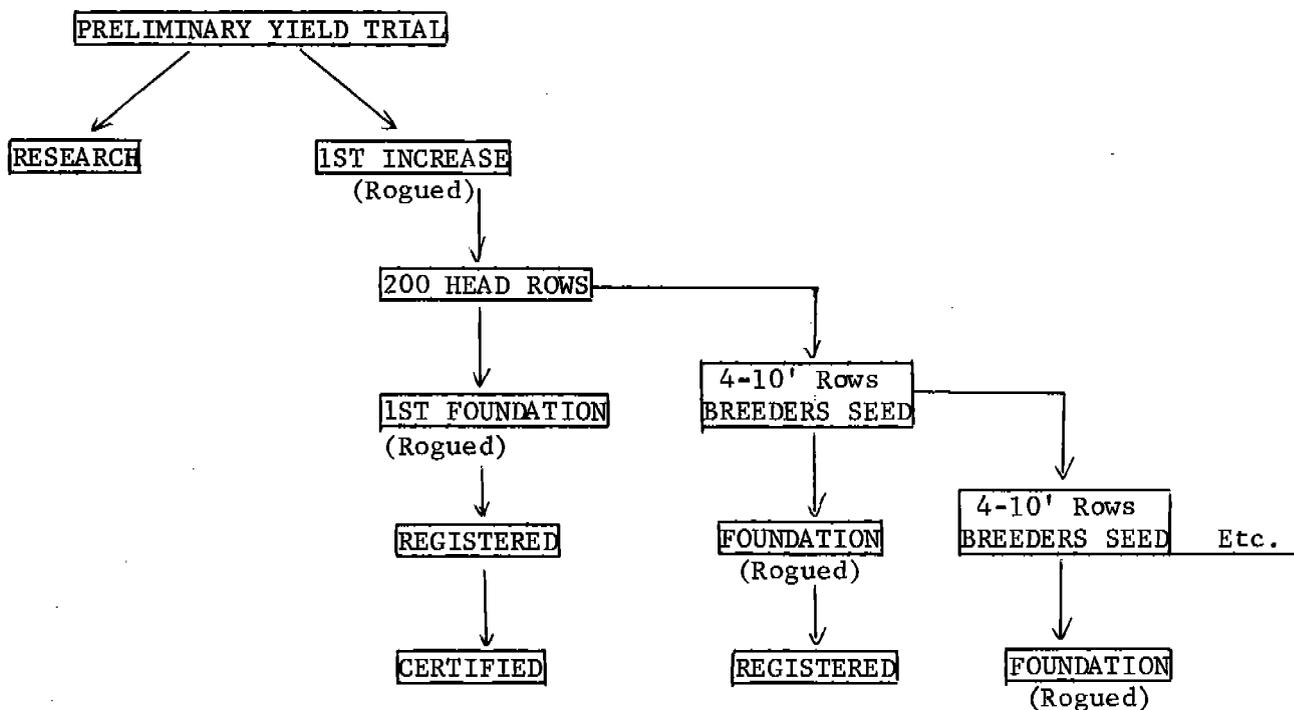
(SIGNATURE OF APPLICANT)

EXHIBIT A

Origin and Breeding History of W-504

1. W-504 originated from a cross composite of a large number of varieties which was put together at Colorado State University. The names of the varieties used are not known.
2. F2 seed of this composite was planted at Bloomington, Illinois, for 1968 harvest. Forty-four F2 plants were selected and subsequently forty-four F3 plant rows were planted for selection and harvest in 1969. In 1969 an F3 row was selected and the subsequent F4 seed was planted in a preliminary yield trial. It was then placed in advanced yield trials in 1971, 1972, 1973, and 1974. It has been tested in the Uniform Eastern Soft Red Winter Wheat Nursery as well as in Funk Seeds International's own yield tests. In 1972, two hundred heads were selected and planted in head rows of which 185 were eventually kept to produce a pure and uniform seed source of W-504. A portion of seed was kept from each head row and planted in 4-10 foot rows (totaling $185 \times 4 = 740$ rows). Seed from these rows is considered Breeder's seed. Fifty grams of each 4 row group is retained for production of the next lot of Breeder's seed. The balance of these Breeder's seed rows is harvested in bulk to be planted and produce Foundation seed.

The following diagram shows the flow of seed:



3. No variants identified.
4. Three years of testing and increase in above manner have shown W-504 to be highly uniform and stable.

EXHIBIT B

1. Seed and seedling characteristics of W-504.

The kernel is red, soft in texture and oval in shape. The crease is medium in width and depth with rounded cheeks. Brush is medium and not collared.

The seedling is semi-erect in growth and does not have anthocyanin present and the coleoptile is white. The plant is green in color with no waxy bloom present.

2. The mature plant is short to medium height, early in maturity, has green foliage and light green head at booting. There is no waxy bloom nor pubescence. The head is dense, fusiform and apically awnletted. Glumes are short and narrow, with ~~oblique~~ *rounded* shoulders and obtuse beaks.

3. W-504 is most like Monon but can be distinguished by its darker red kernels, higher yield, and the head of W-504 is not as yellow as Monon. Monon kernels tend to be slightly more of a yellow red. Also, W-504's awnlets tend to be longer and glume shoulders are more rounded. Monon's glume shoulders are oblique to wanting. W-504 shows some resistance to Wheat Spindle Streak virus.

EXHIBIT D

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

W-504 is most nearly like Monon but differs by its
 (1) resistance to Hessian Fly Race E, partial resistance to Races C and D and (2) resistance to Wheat Spindle Streak Mosaic.

EXHIBIT E

The applicant, Funk Seeds International, Inc., is the Employer of the Breeder.

* Letter of Sept. 23, 74 KAE

BILL OF SALE AND ASSIGNMENT

KNOW ALL MEN BY THESE PRESENTS that AGRIPRO BIOSCIENCES INC., a Delaware corporation (hereinafter referred to as "Seller"), pursuant to that certain Asset Purchase Agreement of even date herewith by and between Seller and AGR ACQUISITION CORPORATION, a Delaware corporation (hereinafter referred to as "Buyer") and for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, does hereby grant, bargain, sell, assign, convey and deliver unto Buyer, all of Seller's right, title and interest in and to the plant varieties owned/registered by Seller and more particularly set forth on Exhibit A attached hereto for which PVP Certificates have been issued by or may be pending before the U. S. Department of Agriculture.

TO HAVE AND TO HOLD UNTO PURCHASER, its successors and assigns forever.

IN WITNESS WHEREOF, Seller has executed this Bill of Sale and Assignment as of the 30th day of June, 1994.

AGRIPRO BIOSCIENCES INC.

BY: W.A. Zama
Title: President

STATE OF KANSAS, COUNTY OF JOHNSON

Before me, the undersigned, a Notary Public of the State and County aforesaid, personally appeared W.A. ZAMA with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence) and who, upon oath, acknowledged himself to be the PRESIDENT of Agripro Biosciences Inc., the within named bargainor, a corporation, and that he as such PRESIDENT, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as PRESIDENT.

WITNESS my hand and Notarial Seal at office the day and year above written.

Alma M. Weaver
Notary Public

My Commission Expires:
June 22, 1998

ALMA M. WEAVER
NOTARY PUBLIC
STATE OF KANSAS
My Appt. Exp. June 22, 1998

Office of the Secretary of State

I, EDWARD J. FREEL, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "AGR ACQUISITION CORPORATION", CHANGING ITS NAME FROM "AGR ACQUISITION CORPORATION" TO "AGRIPRO SEEDS, INC.", FILED IN THIS OFFICE ON THE THIRTIETH DAY OF JUNE, A.D. 1994, AT 4:30 O'CLOCK P.M.

A CERTIFIED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS FOR RECORDING.



Edward J. Freel

SECRETARY OF STATE
AUTHENTICATION:

7169071

DATE:

07-01-94

2394087 8100

944121584

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
AGR ACQUISITION CORPORATION

AGR Acquisition Corporation, a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware,

DOES HEREBY CERTIFY:

FIRST: that the Board of Directors of said corporation, by the unanimous written consent of its members filed with the minutes of the Board, adopted a resolution proposing and declaring advisable the following amendment to the Certificate of Incorporation of said corporation:

RESOLVED, that the Certificate of Incorporation of this corporation be amended by changing the Article thereof numbered "ARTICLE I" so that, as amended, said Article shall be and read as follows:

"ARTICLE I

Name

The name of the corporation (hereinafter called the 'Corporation') is Agripro Seeds, Inc."

SECOND: That in lieu of a meeting and vote of stockholders, the sole shareholder of the corporation has given unanimous written consent to said amendment in accordance with the provisions of Section 228 of the General Corporation Law of the State of Delaware.

THIRD: That the aforesaid amendment was duly adopted in accordance with the applicable provisions of Sections 242 and 228 of the General Corporation Law of the State of Delaware.

FOURTH: That the capital of said corporation shall not be reduced under or by reason of said amendment.

IN WITNESS WHEREOF, said AGR Acquisition Corporation has caused this certificate to be signed by Gary T. Hancock, its President, and attested by Ann Steelman, its Secretary, this 30th day of June, 1994.

AGR ACQUISITION CORPORATION

BY: Gary T. Hancock
Gary T. Hancock, President

ATTEST:

BY: Ann Steelman
Ann Steelman, Secretary

LAW OFFICES

BURCH, PORTER & JOHNSON

130 NORTH COURT AVENUE

MEMPHIS, TENNESSEE 38103

TELEPHONE 901-523-2311
TELECOPIER 901-523-7140

July 25, 1994

CHAS. H. BURCH 1906-1930
H. D. WINDR 1888-1947
CLINTON H. MCKAY 1889-1943
JESSE E. JOHNSON, JR. 1813-1980
JOHN S. PORTER 1909-1980MORGAN KEEGAN OFFICE
30 NORTH FRONT STREET
SUITE 650
MEMPHIS, TENNESSEE 38103
TELEPHONE 901-527-7311
TELECOPIER 901-527-4190LUCIUS E. BURCH, JR.
W. J. MICHAEL CODY
JOEL PORTER
CHARLES F. NEWMAN
C. THOMAS GATES
JOE M. DUNCAN
JOHN A. STEINLEER
J. BROOKE LATHMAN
JEFF FEIBELMAN
DEWITT M. SHY, JR.
R. MICHAEL POTTER
JOHN W. CHANDLER, JR.
DAVID J. HARRIS
WARNER B. RODDA
DAVID W. LILLARD, JR.
MOLLY K. LILLARD
SAM L. CHAIN, JR.
NATHAN A. BICKSSTEPHEN D. CRAWLEY
LAUREL C. WILLIAMSLISA A. KRUPICKA
LEAHNE MARSHALL COX
RICHARD R. SPORE, III
BETH WEEHS BRADLEY
KATHRYN E. STOAY
LES JONES
MELISSA A. MARAVICH
RICKY E. WILKINS
TODD A. ROSE
REVA M. KRIEDEL
SUSAN CLARK TAYLOR
DOUGLAS F. HALIJAN
JOHN W. CAMPBELL
R. PORTER FCILO

Ms. Ann Zempolich
Plant Variety Protection Office
U. S. Department of Agriculture
500 NAL Building
10301 Baltimore Boulevard
Beltsville, MD 20705

Re: Agripro Biosciences Inc. Sale of PVPs to AGR Acquisition Corporation (which has changed its name to Agripro Seeds, Inc.)

Dear Ms. Zempolich:

I am enclosing herewith the Bill of Sale and Assignment wherein Agripro Biosciences Inc. has sold and assigned all of its right, title and interest in and to the PVPs listed on the attachment to the Bill of Sale to AGR Acquisition Corporation and hereby request that your records be changed to show the new owner as Agripro Seeds, Inc., the new name of AGR Acquisition Corporation. It is our understanding that the attachment was generated by someone in your office and forwarded to Agripro Biosciences Inc. at its request, and was subsequently forwarded to our office as attorneys for the purchaser in connection with the sale transaction.

As I indicated to you in our several previous telephone conversations, AGR Acquisition Corporation changed its corporate name to Agripro Seeds, Inc. the same date as the closing of the sale. I am enclosing herewith a copy of the Certificate of Amendment filed by the Delaware Secretary of State wherein the corporate name is changed.

If I counted correctly, there are 149 PVP certificates listed on the attachment to the Bill of Sale and Assignment. I am enclosing a check in the amount of \$3,725.00 payable to United States Treasury in payment of the \$25.00 per certificate fee to change the owner's name on your records.

THIS DOCUMENT HAS A COLORED BACKGROUND - NOT A WHITE BACKGROUND

THIS DOCUMENT HAS A COLORED BACKGROUND



HELENA CHEMICAL COMPANY
Suite 3200 - Clark Tower
5100 Poplar Avenue
Memphis, Tennessee 38137

DATE

CHECK NUMBER

7-8-94

22406

PROTECTION
AMOUNT

PAY EXACTLY **3,725.00**

PAY THIS AMOUNT

\$3,725.00

PAY TO THE
ORDER OF

United States Treasury

HELENA CHEMICAL COMPANY

by

Byron Tatum

AUTHORIZED SIGNATURES

11. HEAD:

2 Density: 1 = LAX 2 = DENSE 10 florets/34 mm 1 Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE
4 = OTHER (Specify) _____

2 Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED

1 Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED
5 = BROWN 6 = BLACK 7 = OTHER (Specify): _____

0 7 CM. LENGTH 1 1 MM. WIDTH

12. GLUMES AT MATURITY:

1 Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.) 3 = LONG (CA. 9 mm.) 1 Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.)
3 = WIDE (CA. 4 mm.)

1 1 Glabrous 2 Pubescent

3 Shoulder shape: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED 4 = SQUARE 5 = ELEVATED 6 = APICULATE 1 Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR: 1 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN: 1 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

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

16. SEED:

2 Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL 1 Cheek: 1 = ROUNDED 2 = ANGULAR

2 Brush: 1 = SHORT 2 = MEDIUM 3 = LONG 1 Brush: 1 = NOT COLLARED 2 = COLLARED

X Phenol reaction (See instructions): 1 = IVORY 2 = FAWN 3 = LT. BROWN (50%)
4 = BROWN (50%) 5 = BLACK

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

0 7 MM. LENGTH 0 3 MM. WIDTH 0 3 GM. PER 1000 SEEDS 2.67

17. SEED CREASE:

2 Width: 1 = 60% OR LESS OF KERNEL 'WINOKA' 2 = 80% OR LESS OF KERNEL 'CHRIS' 3 = NEARLY AS WIDE AS KERNEL 'LEMHI'

2 Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT' 2 = 35% OR LESS OF KERNEL 'CHRIS' 3 = 50% OR LESS OF KERNEL 'LEMHI'

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

1 STEM RUST (Races) 1 LEAF RUST (Races) 0 STRIPE RUST (Races) 0 LOOSE SMUT

1 POWDERY MILDEW 0 BUNT 2 OTHER (Specify) Wheat Spindle Streak virus

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

0 SAWFLY 1 APHID (Bydv.) 0 GREEN BUG 0 CEREAL LEAF BEETLE

OTHER (Specify) _____ HESSIAN FLY RACES: GP A 1 B 2 C moderate resistance
 2 D moderate resistance 2 E F G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Monon	Seed size	
Leaf size		Seed shape	
Leaf color	Monon	Coleoptile elongation	
Leaf carriage	Monon	Seedling pigmentation	

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

(a) L.W. Briggie 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.

(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. (See attachment.)

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