No. 7200072

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

~~ACCO Seed~~ CARGILL Inc

Whereas, THERE HAS BEEN PRESENTED TO THE 8/12/80

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 CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS CIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

COTTON

'Paymaster 101-B'

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* 30th *day of* September *in the year of our Lord one thousand nine hundred and* seventy-four

Attest:

L. J. Rollin

Commissioner
Plant Variety Protection Office
Science and Technology
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
Paymaster 101-B	Cotton	PV NUMBER 72072
3. GENUS AND SPECIES NAME	4. FAMILY NAME *(Botanical)*	FILING DATE 1.5.72 / TIME 1 P.M.
Gossypium hirsutum	Malvaceae	FEE RECEIVED $ 250 / BALANCE DUE $ —
	5. DATE OF DETERMINATION 1965	$ 250 / $ —
		$ 250 / $ —

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
CARGILL, INC ~~ACCO SEED~~ ~~Division of Anderson, Clayton and Company~~ 8/12/80	15615 W. McGINTY RD. ~~515 River Avenue North Belmond, Iowa 50421~~ MINNETONKA MINN 55343	515-444-2291

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	Delaware	

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

Dr. Delbert Hess
ACCO Seed
P. O. Box 1630
Plainview, Texas 79072

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
- [ ] 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 [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.

July 23, 1973
(DATE)

W. I. McKay
(SIGNATURE OF APPLICANT)
W. I. McKay, General Manager, ACCO SEED

(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.

EXHIBIT A

Origin and Breeding History of Variety

Paymaster 101-B has been developed from selections made from Paymaster 101 breeding material which was developed from a cross of Paymaster 54 and a strain designated 9-1 that was developed by Dr. Lester Blank at Texas A & M University. A pedigree method of plant breeding was used in the development of the Paymaster 101, Paymaster 101-A, and Paymaster 101-B varieties. Selection pressure was applied to characteristics such as productivity, fiber properties, storm resistance, adaptability to stripper harvest, and others. First stage multiplication of seed from promising plants and rows has usually been done in Mexico where flowers are self pollinated by hand. Later stage multiplication has been done by growing the variety on the Plains of Texas in fields that were free of volunteer cotton plants and well isolated from other cotton varieties.

No variant type plants have been evident during reproduction and multiplication; however some plants are more closely fruited (the bolls are born closer to the central axis) than others.

EXHIBIT B

Botanical Description of the Variety

Paymaster 101-B has seed that are rather small (seed index of 11.50 - 12.50) and exhibits above average seedling vigor, and has a flower with white petals and white or cream pollen. Bolls are medium in size, and are round to ovoid.

The mature plant is short to medium height and has very stormproof bolls that hold the seed cotton rather compactly. Turn-out or lint percent is relatively high because of the small seed and light burr. Approximate fiber properties are: 2.5 span length, 29/32 to 1 1/32 inch; Pressley strength, 78,000 PSI; micronaire, 4.5 or higher when mature. Paymaster 101-B is very similar to Paymaster 101-A except it has shown (1) superior yeilds and (2) slightly higher lint percent or turn-out.

FORM APPROVED. OMB NO. 40-R3712

FORM GR-470-8
(10-2-72)

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

EXHIBIT C
(Cotton)

OBJECTIVE DESCRIPTION OF VARIETY

COTTON (*GOSSYPIUM SPP.*)

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S)
ACCO SEED

ADDRESS (*Street and No. or R.F.D. No., City, State, and ZIP Code*)
515 River Avenue North
Belmond, Iowa 50421

FOR OFFICIAL USE ONLY

PVPO NUMBER
72072

VARIETY NAME OR TEMPORARY DESIGNATION
Paymaster 101-B

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. SPECIES:

[ ] 1 = GOSSYPIUM HIRSUTUM 2 = GOSSYPIUM BARBADENSE

2. AREA(S) OF ADAPTION (0 = Not Tested, 1 = Not Adapted, 2 = Adapted):

[1] EASTERN [1] DELTA [1] CENTRAL [2] HIGH PLAINS [1] EL PASO AREA
[1] WESTERN LOW HOT VALLEYS [1] SAN JOAQUIN [ ] OTHER (*Specify*) ____

3. MATURITY (50% Open Boll):

[0][7] NO. OF DAYS *EARLIER* THAN ..... [4]
[ ][ ] NO. OF DAYS *LATER* THAN ..... [ ]

1 = COKER 310 2 = DELTAPINE 16 3 = STONEVILLE 213
4 = PAYMASTER 111 5 = ACALA 1517-70 6 = ACALA SJ-1
7 = LANKART 57 8 = OTHER (*Specify*) ____

4. PLANT HABIT:

[2] 1 = SPREADING 2 = INTERMEDIATE 3 = COMPACT

[3] 1 = FOLIAGE SPARSE 2 = DENSE 3 = OTHER (*Specify*) intermediate

5. PLANT HEIGHT:

[0][3] CM. *SHORTER* THAN ..... [4]
[ ][ ] CM. *TALLER* THAN ..... [ ]

1 = COKER 310 2 = DELTAPINE 16 3 = STONEVILLE 213
4 = PAYMASTER 111 5 = ACALA 1517-70 6 = ACALA SJ-1
7 = LANKART 57 8 = OTHER (*Specify*) ____

6. MAIN STEM:

[3] 1 = LAX 2 = ASCENDING 3 = ERECT

[ ] CM. TO FIRST FRUITING BRANCH

[ ][ ] NO. OF NODES TO FIRST FRUITING BRANC (*from cotyledonary node*)

7. LEAF:

[ ][ ] CM. WIDTH OF WIDEST LEAVES AT MATURITY

8. LEAF PUBESCENSE:

[3] 1 = GLABROUS (HAIRS AS SPARSE AS D_2 SMOOTH)
2 = SMOOTH LEAF (DELTAPINE SMOOTH LEAF) 3 = PUBESCENT (STONEVILLE 213)
4 = HEAVY PUBESCENCE (H_1 OR H_2) 5 = OTHER (*Specify*) ____

9. LEAF COLOR:

[2] 1 = VIRESCENT YELLOW 2 = LIGHT GREEN 3 = DARK GREEN (*Acala-442*) 4 = RED
5 = OTHER (*Specify*) ____

10. LEAF TYPE:

[1] 1 = NORMAL 2 = OKRA 3 = SUPER OKRA 4 = OTHER (*Specify*) ____

11. FLOWER:

[2] 1 = NECTARILESS 2 = NECTARIED

[1] Petals: 1 = CREAM 2 = YELLOW [1] Pollen: 1 = CREAM 2 = YELLOW

12. FRUITING BRANCH TYPE:

[3] 1 = CLUSTER 2 = SHORT 3 = NORMAL [2] 1 = DETERMINATE 2 = INDETERMINATE

13. GOSSYPOL CONDITION:

[3] 1 = GLANDLESS 2 = REDUCED GLANDS 3 = NORMAL GLANDS
4 = OTHER (*Specify*) ____

[1] 1 = NORMAL BUD GOSSYPOL
2 = HIGH BUD GOSSYPOL

14. SEEDS:

[1][1][5] ± [2][0] SEED INDEX (*Fuzzy seed basis*)

[2] Seed Fuzz: 1 = SPARSE (GREGG 35) 2 = MODERATE (DPL-16) 3 = HEAVY (ACALA SJ-1) 4 = OTHER (*Specify*) ____

4

15. BOLLS:

[2] Locules: 1 = 3-4, 2 = 4-5

[ ] NO. SEEDS PER BOLL

[3 7 9] LINT PERCENT

[ ] MM. DIAMETER

[3] Pitted: 1 = NONE, 2 = FINELY, 3 = COURSELY

[5 4 0] GRAMS SEED COTTON PER BOLL

[2] Breadth: 1 = BROADER AT BASE, 2 = BROADER AT MIDDLE

[1] Type: 1 = STORMPROOF (WESTBURN 70), 2 = STORM RESISTANT (LANKART 57), 3 = OPEN (DELTAPINE 16)

April 74 letter 2/15/74

[1] Shape: 1 = LENGTH < WIDTH, 2 = LENGTH = WIDTH, 3 = LENGTH > WIDTH

16. BRACTEOLES:

[1] Breadth: 1 = LENGTH < WIDTH 2 = LENGTH = WIDTH 3 = LENGTH > WIDTH

[2] Teeth: 1 = FINE 2 = COURSE

[3] Teeth: 1 = 3-4 2 = 5-7 3 = 8-10 4 = OTHER *(Specify)* _____

17. YIELD: Compared to—

[1 0 4] PERCENT *LESS* THAN .....

[ ] PERCENT *MORE* THAN .....

[4] [ ] 1 = COKER 310 2 = DELTAPINE 16 3 = STONEVILLE 213 4 = PAYMASTER 111 5 = ACALA 1517-70 6 = ACALA SJ-1 7 = LANKART 57

18. FIBER LENGTH (Complete one or more of the following and give the means):

[ ] SPAN LENGTH 50%

[9 3] SPAN LENGTH 2.5%

[ ] U.H.M. LENGTH

[ ] MEAN LENGTH

[3 0] STAPLE LENGTH 32nd INCHES

[ ] UNIFORMITY RATIO (MEAN/U.H.M.)

[ ] UNIFORMITY INDEX (50% SPAN/2.5% SPAN)

19. FIBER STRENGTH AND ELONGATION:

[8 0] 1,000 P.S.I.

[ ] ELONGATION E_1

[ ] STILOMETER T_0

[4 2 5] MICRONAIRE READING

[ ] YARN STRENGTH *(Give test method)* _____

[2 7] STILOMETER T_1

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

[1] VERTICILLIUM WILT

[1] FUSARIUM WILT

[1] ROOT KNOT NEMATODE

[1] BACTERIAL BLIGHT *(Race 1)*

[1] BACTERIAL BLIGHT *(Race 2)*

[0] ASCOCHYTA BLIGHT

[1] PHYMATOTRICHUM ROOT ROT

[0] RHIZOCTONIA

[0] ANTHRACNOSE

[0] RUST

[ ] OTHER *(Specify)* _____

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

[0] BOLL WEEVIL

[0] APHID

[0] FLEAHOPPER

[0] LEAFWORM

[0] FALL ARMYWORM

[0] GRASSHOPPER

[0] LYGUS

[0] PINK BOLLWORM

[0] STINKBUG

[0] THRIP

[0] CUTWORM

[0] SPIDERMITE

[ ] OTHER *(Specify)* _____

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

(1) Brown, Harry B., and J. O. Ware, 1958, Cotton, McGraw-Hill Book Company, Inc., New York.

(2) Lewis, C. F., and H. H. Ramey, Jr., 1971, 1970 Regional Cotton Variety Tests, ARS 34-130, United States Department of Agriculture.

COLORS: Nickerson's or any recognized color fan may be used to determine flower color of the described variety.

EXHIBIT D

Data Indicative of Novelty

Paymaster 101-B is novel in that it has a significantly higher lint percentage that the now obsolete variety Paymaster 101-A, the average lint percentage being 2.7 percent higher in Paymaster 101-B than in its predecessor. The new variety closely resembles Paymaster 101-A in other respects.

Revised Exhibit D and substantiating data
for
Paymaster 101-B.

Four year summary of lint yields per acre of Paymaster 101 cotton strains, Aiken, Texas.

Strain	Year				Average
	1959	1961	1964	1965	
Paymaster 101 B Strains					
A6-485	949	596	706	1048	825
53-M-29	966	766	709	803	811
A5-554	944	617	695	944	800
54-M-98	819	709	672	987	797
54-M-99	1024	656	683	817	795
1214	881	676	697	904	790
56-M-97	914	721	643	830	777
A5-455	987	709	620	766	771
A5-400	884	747	640	803	769
A6-372	916	660	611	873	765
Average	928	686	668	878	790
Paymaster 101 A Strains (Discarded)					
1226	895	690	680	752	754
A6-316	874	716	632	777	750
58-M-194	848	604	590	840	721
A6-369	803	610	643	697	688
56-M-96	771	594	626	828	705
53-M-30	830	541	587	753	678
1239	851	501	580	731	666
Average	839	608	620	768	709
Overall Average	892	654	649	833	757

Four year summary of lint percents of Paymaster 101 cotton strains, Aiken, Texas.

Strain	Year				Average
	1959	1961	1964	1965	
Paymaster 101 B Strains					
A6-485	31.19	23.39	26.88	27.73	27.30
53-M-29	31.84	24.22	28.05	23.20	26.83
A5-554	31.81	24.52	27.35	27.54	27.81
54-M-98	30.44	23.87	28.12	27.21	27.41
54-M-99	30.66	24.58	27.41	22.86	26.38
1214	31.92	22.75	27.51	24.31	26.62
56-M-97	31.22	24.40	26.42	22.51	26.14
A5-455	31.52	23.33	27.04	21.09	25.75
A5-400	29.63	22.86	25.06	23.38	25.23
A6-372	30.75	23.46	26.03	23.65	25.97
Average	31.10	23.74	26.99	24.35	26.54
Paymaster 101 A Strains (Discarded)					
1226	31.03	22.67	26.65	22.04	25.60
A6-316	29.43	23.68	25.94	22.36	25.35
58-M-194	30.72	21.90	26.57	24.18	25.84
A6-369	29.81	22.70	27.16	21.00	25.17
56-M-96	30.92	21.38	25.49	22.73	25.13
53-M-30	29.78	21.51	24.27	22.97	24.63
1239	31.09	22.09	26.88	22.68	25.69
Average	30.39	22.28	26.42	22.57	25.34
Overall Average	30.81	23.14	26.64	23.61	26.05

EXHIBIT E

Statement of the Basis of Applicant's Ownership

All developmental work on this variety was done by breeders employed by the applicant, ACCO SEED, Division of Anderson, Clayton and Company.

This variety was approved for certification by the Texas State Seed and Plant Board on December 18, 1970.

Acco Seed is owner of 'Paymaster 101-13' (letter 2/15/74)