No. 7700040

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Chocolate Bayou Company

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 PART 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.)

RICE

'CB 744'

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* 26th *day of* January *in the year of our Lord one thousand nine hundred and* seventy-eight

PLANT VARIETY PROTECTION OFFICE · UNITED STATES DEPARTMENT OF AGRICULTURE

Attest:

Acting
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Secretary of Agriculture

FORM GR-470
(9-75)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
PLANT VARIETY PROTECTION OFFICE
NATIONAL AGRICULTURAL LIBRARY
BELTSVILLE, MARYLAND 20705

FORM APPROVED
OMB NO. 40-R3712

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: *See Reverse.*

1a. TEMPORARY DESIGNATION OF VARIETY $A681F_3B_1$-488	1b. VARIETY NAME CB 744	FOR OFFICIAL USE ONLY PV NUMBER 7700040
2. KIND NAME Rice	3. GENUS AND SPECIES NAME oryzae satival	FILING DATE 1-31-77 / TIME 4:00 A.M. (P.M.)
4. FAMILY NAME (BOTANICAL) Gramineae	5. DATE OF DETERMINATION 1974	FEE RECEIVED $250.00 / DATE 1-31-77 $250.00 / 3-4-77 $250.00 / 11-21-77
6. NAME OF APPLICANT(S) Chocolate Bayou Company a division of General Crude Oil Company a wholly-owned subsidiary of International Paper Company	7. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code) Post Office Box 1305 Alvin, Texas 77511	8. TELEPHONE AREA CODE AND NUMBER 713/331-6481
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation	10. STATE OF INCORPORATION Delaware	11. DATE OF INCORPORATION July 3, 1974

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

L. E. Crane, Agronomist
Chocolate Bayou Company
Post Office Box 1305
Alvin, Texas 77511

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, Novelty Statement.
- [X] 13C. Exhibit C, Objective Description of the Variety *(Request form from Plant Variety Protection Office.)*
- [X] 13D. Exhibit D, Additional Description of the Variety.

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 5/14/77 [X] REGISTERED [X] CERTIFIED

15. Does the applicant(s) agree to the publication of his/her (their) name(s) and address in the Official Journal? [X] YES [ ] NO

16. The applicant(s) declare(s) 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) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) 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 Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

January 28, 1977
(DATE)

L. E. Crane
(SIGNATURE OF APPLICANT)
L. E. Crane

(DATE)

(SIGNATURE OF APPLICANT)

EXHIBIT 13a

ORIGIN AND BREEDING HISTORY OF THE VARIETY

CB 744 (Oryza sativa L.) is a glaborous, long grain, short straw, very early maturing rice variety developed by Chocolate Bayou Company on its Research Farm approximately six miles south of Alvin, Texas. Chocolate Bayou Company is a division of General Crude Oil Company of Houston, Texas, which is a wholly owned subsidiary of International Paper Company headquartered in New York, New York.

The initial cross, in the development of CB 744 was made at Rosharon, Texas, in 1965 between Bluebelle and CI9545. The F_3 lines for this cross, R651A, were grown in 1967 on an experimental area provided by Mr. Duward Harper on land owned by the Houston Farms Company. One of these F_3 lines, R651A_1-3, appeared uniform in height and was approximately 8 inches shorter than Bluebelle. This F_3 line was crossed back to Bluebelle in 1968 and designated as A681F_3B_1-4. In 1970 F_3 back cross selections were saved and F_4 line was grown in 1971. Five of these rows were 35" - 36" tall and appeared to have all the characteristics of Bluebelle with some variation in grain size. After individual plant selections were made, the five rows were harvested for milling and quality analysis. All five lines produced milled samples as good or better than Bluebelle. One hundred grams of milled rice of each of these selections was sent to the U. S. D. A., A. R. S., Rice Quality Laboratory at Beaumont, Texas. Dr.

Bill Webb reported all five lines had cooking quality similar to Bluebelle and that they were typical of U. S. long grain rice. The 1975 quality results for CB 744 and Bluebelle are reported on GR-470-17 form under Item 18.

The five selections were grown in randomized block yield test, replicated four times, beginning in 1972 and further purified by individual plant selections. In 1974, as a result of the further selecting and testing, head row seed produced in 1973, was designated as CB 744. Table 1 gives the comparative results on CB 744 and Bluebelle for 1972 through 1975.

Approximately one-half acre of CB 744 was grown in 1974 and a 20 acre field including 1,000 rows in a head row block was produced in 1975. From this seed 95.3 acres were planted in 1976 and the production from this acreage was approved by the Seed Division of the Texas State Department of Agriculture as Foundation Seed (see attached letter).

A medium grain tall pubescent variant was found in this years seed production field but the number of plants found were well within the tolerance of the Texas Department of Agriculture standards for Foundation Seed. This variant should be removed in subsequent head row blocks.

EXHIBIT 13b

NOVELTY STATEMENT

CB 744 most closely resembles the rice variety Bluebelle. The outstanding difference is that CB 744 is an average of 21 centimeters or approximately 8 inches shorter in height than Bluebelle. Both varieties have the same number of nodes but all internode lengths are shorter in CB 744 than they are in Bluebelle. This reduction in height should make CB 744 much more resistant to lodging than Bluebelle. Table 1, Exhibit 13b shows four years results of the differences in CB 744 and Bluebelle in height. The other data in this table illustrates how closely CB 744 resembles Bluebelle. The pictures attached to this exhibit Figures 1, 2, 3, and 4 show the difference in plant height between CB 744 and Bluebelle. Figures 5, 6, and 7 depict little or no difference in panicles, rough rice, and milled rice. Figure 8 is a picture of the 1976 CB 744 seed increase field and head row block that was approved by the Seed Division of the Texas Department of Agriculture as Foundation Seed.

CHOCOLATE BAYOU COMPANY
ALVIN, TEXAS

Comparative results from randomized block yield trials between the rice varieties Bluebelle and CB 744

YEAR GROWN	RICE VARIETY	VARIETY/1 TEST No.	POUNDS/2 PER ACRE	PLANT/3 HEIGHT	DAYS TO/4 1ST HEAD	MILLING PERCENT HEAD	MILLING PERCENT TOTAL
1972	Bluebelle	5-E-12	6562	114	81	62	69
	CB 744	5-E-6	6706	94	82	58	70
1973	Bluebelle	3-E-1	4309	102	76	67	72
	CB 744	3-E-11	4090	84	79	65	70
1974	Bluebelle	3-E-1	5995	113	78	69	72
	CB 744	3-E-20	6796	91	80	66	71
1975	Bluebelle	5-E-4	5383	112	81	62	71
	CB 744	5-E-12	5296	89	81	61	71
4 YEAR AVERAGE	Blubelle	ALL	5562	110	79	65	71
	CB 744	TEST	5722	89	80	63	71

/1 All above data based on four replications of each variety in all tests except milling percentage was determined by taking duplicate samples from a composite of all four replications.

/2 Dry weight based on approximately 12% moisture.

/3 Plant height was measured in centimeters from the soil line to the tip of the panicle.

/4 Days from the time the seed was wet from flushing or rain until approximately 10% of the rice was headed.

RECEIVED
JAN 31 1977
U. S. DEPARTMENT OF AGRICULTURE
AMS, GRAIN DIV.
PVPO

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, National Agricultural Library, Beltsville, Maryland 20705. (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 Give the date the applicant determined that he had a new variety based on (1) the definition in Section 41(a) of the Act and (2) the date a decision was made to increase the seed.

13a Give (1), the genealogy, including public and commerical varieties, lines, or clones used, and the breeding method. (2), the details of subsequent stages of selection and multiplication. (3), the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4), evidence of stability.

13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties; (1) identify these varieties and state all differences objectively; (2) Attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.

13c Fill in the Exhibit C, Objective Description form for all characteristics, for which you have adequate data.

13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe; such as; plant habit, plant color, disease resistance, etc.

14A If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled or published or the certificate has been issued. However, if the applicant specifies "NO", he may change his choice. (See Section 180.15 of the Regulations and Rules of Practice.)

FORM GR-470-17
(1-2-73)

FORM APPROVED. OMB NO. 40-R3712

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

EXHIBIT C
(Rice)

OBJECTIVE DESCRIPTION OF VARIETY

REFERENCES: *See Reverse.*

RICE *(ORYZA SATIVA)*

NAME OF APPLICANT(S)
CHOCOLATE BAYOU COMPANY

ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*
Post Office Box 1305
Alvin, Texas 77511

FOR OFFICIAL USE ONLY

PVPO NUMBER 7700040

VARIETY NAME OR TEMPORARY DESIGNATION
CB 744

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. MATURITY (Seeding to 50% Heading):

LOCATION Alvin, Texas AVERAGE DATE SEEDED April

[1] Season: 1 = VERY EARLY (85 days or less) 2 = EARLY (86 - 100) 3 = MIDSEASON (101 - 115) 4 = LATE (115 - or more)

[8 5] NUMBER OF DAYS
80 days to 10% head

[0 0] NO. OF DAYS EARLIER THAN . . . [2]
[- -] NO. OF DAYS LATER THAN . . . . . [ ]

1 = BELLE PATNA 2 = BLUEBELLE 3 = NATO
4 = STARBONNET 5 = CALROSE 6 = REXORO

2. PLANT HABIT (Tiller Angle from Perpendicular at the Early Jointing Stage):

[3] 1 = SPREADING (more than 60°) 2 = INTERMEDIATE 3 = ERECT (less than 30°)

3. STEMS (Full Heading):

[0 8 9] CM. TALL (Soil level to tip of extended panicle on main culm)

[2 1] CM. SHORTER THAN . . . . . [2]
[- -] CM. TALLER THAN. . . . . [-]

1 = BELLE PATNA 2 = BLUEBELLE 3 = NATO
4 = STARBONNET 5 = CALROSE 6 = REXORO

[0 5] NUMBER OF NODES

[1] INTERNODE COLOR (Outside)
[2] SEPTUM COLOR (Inside Node)

1 = LIGHT YELLOW 2 = CREAM 3 = GOLD
4 = GREEN 5 = REDDISH 6 = LIGHT PURPLE
7 = PURPLE 8 = DARK PURPLE 9 = OTHER (Specify) -0-

[3] Tillering Ability (number of culms): 1 = 10 OR LESS (Belle Patna) 2 = 11 - 20 (Bluebonnet) 3 = ABOVE 20 (Century Patna)

[1] Strength: 1 = STURDY (Starbonnet) 2 = INTERMEDIATE (Belle Patna) 3 = WEAK

4. LEAF BLADE (First Leaf Below Flag Leaf):

[3 8] CM. LENGTH [1 1] MM. WIDTH

[2] Color: 1 = PALE GREEN (Starbonnet) 2 = MEDIUM GREEN (Bluebelle) 3 = DARK GREEN (Calrose) 4 = PURPLE 5 = RED 6 = OTHER (Specify)

[1] Pubescence: 1 = GLABROUS 2 = INTERMEDIATE 3 = PUBESCENT

[3] Flag Leaf Angle: 1 = HORIZONAL 2 = ASCENDING 3 = ERECT

[3 8] CM. LENGTH OF FLAG LEAF (Booting Stage)

[1 7] MM. WIDTH (widest point) OF FLAG LEAF (Booting Stage)

5. LEAF SHEATH (First Leaf Below Flag Leaf):

[2] Ligule Length: 1 = NONE 2 = 20 MM. OR LESS 3 = 21 - 34 MM. 4 = MORE THAN 34 MM.

Color:

[2] SHEATH (Outside)
[1] SHEATH (Inside)
[2] SHEATH (Seedling)

[5] COLLAR 11/21/77
[1] LIGULE
[1] AURICLE

1 = COLORLESS 2 = GREEN 3 = RED
4 = PURPLE 5 = OTHER (Specify) 6

(cont'd other side)

EXHIBIT 13d

ADDITIONAL CHARACTERISTICS AND SUPPORTING INFORMATION

In addition to the marked reduction in plant height of CB 744, compared to Bluebelle, the flag leaves of CB 744 are more erect at maturity. This characteristic can be seen in Figures 3 and 4 of Exhibit 13b.

The testing of CB 744 has been confined to land owned by Chocolate Bayou Company in Brazoria County near Alvin, Texas, but by using Bluebelle as the recurrent parent in the development of this variety it is assumed that CB 744 will have the same general adaptation as Bluebelle.

In regard to disease and insect resistance, the plant breeder is always aware of selecting disease and insect free breeding lines. Chocolate Bayou Company does not have the facilities to evaluate rice breeding material for all the insects and diseases that attack rice, but selection for resistance to those that occur in the breeding nursery or testing area is an important part of the breeding program.

The most serious disease of rice in the Texas Gulf Coast is stem rot caused by *Sclerotium oryzae*. This disease has been the main factor in the reduction of Bluebelle acreage. CB 744 will probably be as susceptible to stem rot as Bluebelle. Fortunately, the fungicide Benelate, which controls stem rot and a number of other minor diseases, has recently been approved by the EPA for use on rice.

It is proposed that Chocolate Bayou Company maintain a pure source of CB 744 by producing head row seed blocks.

FORM GR-470-17
(1-2-73)

FORM APPROVED. OMB NO. 40-R3712

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

EXHIBIT C
(Rice)

OBJECTIVE DESCRIPTION OF VARIETY

REFERENCES: *See Reverse.*

RICE *(ORYZA SATIVA)*

NAME OF APPLICANT(S)
CHOCOLATE BAYOU COMPANY

ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*
Post Office Box 1305
Alvin, Texas 77511

FOR OFFICIAL USE ONLY
PVPO NUMBER 7700040
VARIETY NAME OR TEMPORARY DESIGNATION
CB 744

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. MATURITY (Seeding to 50% Heading):

LOCATION Alvin, Texas AVERAGE DATE SEEDED April

1 Season: 1 = VERY EARLY (85 days or less) 2 = EARLY (86 - 100) 3 = MIDSEASON (101 - 115) 4 = LATE (115 - or more)

8 5 NUMBER OF DAYS
80 days to 10% head

0 0 NO. OF DAYS EARLIER THAN . . . 2
- - NO. OF DAYS LATER THAN . . . . .

1 = BELLE PATNA 2 = BLUEBELLE 3 = NATO
4 = STARBONNET 5 = CALROSE 6 = REXORO

2. PLANT HABIT (Tiller Angle from Perpendicular at the Early Jointing Stage):

3 1 = SPREADING (more than 60°) 2 = INTERMEDIATE 3 = ERECT (less than 30°)

3. STEMS (Full Heading):

0 8 9 CM. TALL (Soil level to tip of extended panicle on main culm)

2 1 CM. SHORTER THAN 2
- - CM. TALLER THAN. . . . . -

1 = BELLE PATNA 2 = BLUEBELLE 3 = NATO
4 = STARBONNET 5 = CALROSE 6 = REXORO

0 5 NUMBER OF NODES

1 INTERNODE COLOR (Outside)
2 SEPTUM COLOR (Inside Node)

1 = LIGHT YELLOW 2 = CREAM 3 = GOLD
4 = GREEN 5 = REDDISH 6 = LIGHT PURPLE
7 = PURPLE 8 = DARK PURPLE 9 = OTHER (Specify) -0-

3 Tillering Ability (number of culms): 1 = 10 OR LESS (Belle Patna) 2 = 11 - 20 (Bluebonnet) 3 = ABOVE 20 (Century Patna)

1 Strength: 1 = STURDY (Starbonnet) 2 = INTERMEDIATE (Belle Patna) 3 = WEAK

4. LEAF BLADE (First Leaf Below Flag Leaf):

3 8 CM. LENGTH 1 1 MM. WIDTH

2 Color: 1 = PALE GREEN (Starbonnet) 2 = MEDIUM GREEN (Bluebelle) 3 = DARK GREEN (Calrose) 4 = PURPLE 5 = RED 6 = OTHER (Specify)

1 Pubescence: 1 = GLABROUS 2 = INTERMEDIATE 3 = PUBESCENT

3 Flag Leaf Angle: 1 = HORIZONAL 2 = ASCENDING 3 = ERECT

3 8 CM. LENGTH OF FLAG LEAF (Booting Stage)

1 7 MM. WIDTH (widest point) OF FLAG LEAF (Booting Stage)

5. LEAF SHEATH (First Leaf Below Flag Leaf):

2 Ligule Length: 1 = NONE 2 = 20 MM. OR LESS 3 = 21 - 34 MM. 4 = MORE THAN 34 MM.

Color:

2 SHEATH (Outside) 11/21/77 ~~5~~ 1 COLLAR
1 SHEATH (Inside) 1 LIGULE
2 SHEATH (Seedling) 1 AURICLE

1 = COLORLESS 2 = GREEN 3 = RED
4 = PURPLE 5 = OTHER (Specify) 6

(cont'd other side)

 7700040 CB 744

6. PANICLE:

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

[1] Habit: 1 = DROOPING 2 = INTERMEDIATE 3 = ERECT

[2 5] CM. LENGTH

[3] Exsertion: 1 = LESS THAN 90% 2 = 90 - 99% 3 = 100% EXSERTION

7. SPIKELET:

[1] Stigma Color: 1 = COLORLESS (White) 2 = YELLOW 3 = PURPLE 4 = RED

8. LEMMA AND PALEA:

[0 6] Color at Maturity

[1 2] Apiculus color at maturity

[0 9] Apiculus color at anthesis

01 = COLORLESS (White) 02 = GREEN 03 = YELLOW
04 = TAWNY 05 = STRAW 06 = GOLD
07 = BROWN FURROWS 08 = RED 09 = PURPLE
10 = PIEBALD 11 = BLACK 12 = OTHER (Specify) *

*very slight anthocyanin pigmentation in the apiculus of the mature grain.

[1] Pubescence: 1 = GLABROUS 2 = PUBESCENT ONLY ON LEMMA KEEL 3 = PUBESCENT

[1] Awn: 1 = AWNLESS 2 = TERMINAL SPIKELETS AWNED 3 = AWNED AND AWNLESS 4 = ALL SPIKELETS AWNED

[- -] MM. AWN MAXIMUM LENGTH

9. SEED:

[2] Non-pigmented coat (Pericarp) ("Brown Rice" color): 1 = LIGHT 2 = MEDIUM 3 = DARKER

[-] Pigmented coat (Pericarp): 1 = GOLD 2 = PURPLE 3 = RED 4 = BROWN 5 = SPECKLED BROWN

[1] Scent: 1 = NONSCENTED (Common) 2 = LIGHTLY SCENTED (Sadri) 3 = SCENTED (Popcorn aroma - Della)

[1] Endosperm: 1 = NON-WAXY (common) 2 = WAXY (glutinous)

[1] Endosperm: 1 = TRANSLUCENT, FEW CHALKY SPOTS 2 = CHALKY GERMTIP 3 = WHITE BELLY 4 = LARGE CHALKY CORE 5 = OPAQUE

[2] Shattering (Threshability): 1 = DIFFICULT THRESHING (Conway) 2 = THRESHES READILY 3 = SHATTERS

[1] Dormancy: 1 = LOW (0 days) 2 = MEDIUM (30 days) 3 = HIGH (90 days or more)

10. GRAIN:

[3] Paddy shape (length/width Ratio): 1 = SHORT (less than 2.2:1) 2 = MEDIUM (2.2:1 to 3.4:1) 3 = LONG (greater than 3.4:1)

MEASUREMENTS:

Grain Form	Length (mm.)	Width (mm.)	Thickness (mm.)	L/W Ratio	1000 Grains (Grams)
Paddy	9 0	2 3	1 9	3 9	2 2 3
Brown	7 1	2 1	1 7	3 4	1 9 7
Milled	6 8	2 0	1 6	3 4	1 6 7

MILLING QUALITY

[2 9] % HULLS

[7 1] % TOTAL MILLED RICE = 63%

11. RESISTANCE TO LOW TEMPERATURE:

[1] Germination & Seedling vigor: 1 = LOW (Bluebelle) 2 = MEDIUM (Nato) 3 = HIGH (Caloro)

[2] Flowering (Spikelet fertility): 1 = LOW (Bluebelle) 2 = MEDIUM (Caloro) 3 = HIGH (Calrose)

12. RESISTANCE TO:

[1] Salinity: 1 = LOW (Bluebonnet) 2 = MEDIUM (Blue Rose) 3 = HIGH

[1] Alkalinity: 1 = LOW (Bluebelle) 2 = MEDIUM (Dawn) 3 = HIGH (Arkrose)

13. RESPONSE TO PHOTOPERIOD:

[1] 1 = NON-SENSITIVE (Belle Patna) 2 = WEAKLY SENSITIVE (Blue Rose) 3 = STRONGLY SENSITIVE (Caloro)

 7700040 CB 74

14. PYRICULARIA ORYZAE RESISTANCE (International races found under References, items 2 and 4 below.)
(0 = Not Tested; 1 = Susceptible; 2 = Resistant):

GROUP	IA	IB				IC			ID				IE		IG		IH				
NUMBER	109	1	33	49	54	1	17	19	1	8	13	14	1	3	1	2	1				
RESISTANCE		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				

15. DISEASE RESISTANCE (0 = Not Tested; 1 = Susceptible; 2 = Resistant): See attached statement

0	CERCOSPORA ORYZAE	0	ENTYLOMA ORYZAE	0	FUSARIUM PANICLE BLIGHT
0	HELMINTHOSPORIUM ORYZAE	0	HOJA BLANCA VIRUS	0	LEPTOSPHAERIA SALVINII
0	PYTHIUM SEEDLING BLIGHT	0	RHIZOCTONIA ORYZAE	0	STRAIGHTENED
0	TILLETIA BARCLAYANA	0	WHITE TIP NEMATODE	0	OTHER (Specify) See attached statement

16. INSECT RESISTANCE (0 = Not Tested; 1 = Susceptible; 2 = Resistant)

0	GRASS HOPPER	0	LEAF HOPPER	0	RICE HISPA
0	RICE MIDGE	0	STEM BORER	0	STINK BUG
0	SWARM CATERPILLAR	0	WATER WEEVIL	0	OTHER (Specify) See attached statement

17. INDICATE A VARIETY WHICH MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Tillering	Bluebelle	Seed Shape	Bluebelle
Lodging	Bluebelle	Endosperm Transp.	Bluebelle
Leaf Angle	Bluebelle	Milling Quality	Bluebelle
Leaf Color	Bluebelle	Cook & Proc. Quality	Bluebelle

18. GIVE THE FOLLOWING AVERAGE DATA FOR SUBMITTED AND A SIMILAR VARIETY

VARIETY	PARBOIL CANNING STABILITY (% Loss)	PROTEIN * (%)	AMYLOSE ** (%)	ALKALI REACTION *** 1.7	ALKALI REACTION *** 2.0	GELATINIZATION TEMPERATURE (°C)
SUBMITTED			23.3	6-2	4-3,2-4	Intermediate
SIMILAR			23.3	6-2	2-3,4-4	Intermediate
NAME OF SIMILAR VARIETY			Bluebelle	Blue-belle	Blue-belle	Bluebelle

*Hulled Rice - Dry Wt. **Milled Rice 11 - 12% Moisture ***Average spreading value in 1.7% and 2.0% KOH Solution.

REFERENCES

1. C. R. Adair et al, 1972. Rice in the United States: Varieties and Production. USDA Handbook No. 289 (Rev.), 124 pp.
2. J. G. Atkins, et al, 1967. An International Set of Rice Varieties for Differentiating Race of Pyricularia Oryzae. Phytopath. 57:297-301.
3. Te-Tzu Chang, 1965. The Morphology and Varietal Characteristics of the Rice Plant. IRRI Los Banos, Philippines Tech. Bulletin 4.
4. K. C. Ling and S. H. Ou, 1969. Standardization of the International Race Numbers of Pyricularia Oryzae. Phytopath. 59:339-342.
5. B. D. Webb et al, 1968. Characteristics of Rice Varieties in the USDA Collection. Crop Sci. 8:361-365.
6. Nickerson's or any recognized color fan may be used to determine plant colors of the described variety.

COMMENTS: