No. 7300066

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Borden Peanut Co., 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 ESTABLISHED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

PEANUT

'Valencia McRan'

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, DC *this* 19th *day of* July *in the year of our Lord one thousand nine hundred and* seventy-six

Attest:

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

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 Valencia McRan	2. KIND NAME Peanut	FOR OFFICIAL USE ONLY PV NUMBER 73066
3. GENUS AND SPECIES NAME Arachis Hypogaca	4. FAMILY NAME *(Botanical)* Leguminosae	FILING DATE 3-6-73 / TIME 8:15 A.M.
	5. DATE OF DETERMINATION December 7, 1971	FEE RECEIVED $250.00 / $250.00 / $250.00 BALANCE DUE $00.00 / $00.00 / $00.00
6. NAME OF APPLICANT(S) BORDEN ~~Raldolph~~ Peanut Co. Inc.	7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)* P.O. Box ~~833~~ 28 Portales, New Mexico 88130	8. TELEPHONE AREA CODE AND NUMBER 505/356-4661
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)*	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:

Joe W. Randolph
Box 833
Portales, New Mexico 88130

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? [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.

2-26-73
(DATE)

Joseph W. Randolph
(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)

EXHIBIT A

Origin and History of the Variety

1. McRan originated from one three kernel pod found in a 50 pound bag of raw peanuts which originated in Tangiers, Morocco, North Africa. This pod was from an unknown variety of Valencia type peanut, selected for its general appearance in brightness of the shell color, smoothness and uniformity from one end of the pod to the other.

   When this pod was hand shelled it was noticed that it was harder to break open than normally grown peanuts of the Valencia (Tennessee Red) type grown commercially in the area of Portales, New Mexico. Curiosity as to whether or not peanuts with this kind of shell would reduce mechanical damage in mechanical shelling and processing, led to the idea of seed increases for testing.

2. On June 27, 1967 the three kernels from the one pod were planted in the garden on the Melvin McQuire-Joe Randolph farm 5 1/4 miles southeast of Portales, New Mexico. Hence the name McRan derived from the first syllable of the names of the two men. Two of the resulting three plants were selected on the basis of vigor, healthier plants, uniformity and shape of the mature pods harvested in October of 1967. From the two plants 78 kernels were selected from the more muture and most uniform pods.

   In 1968 seventy two kernels were planted. Six and one half(6 1/2) pounds of seed were obtained after grading and selecting the mature pods for uniformity and shell characteristics.

   There was no increase in 1969.

   In 1970 the six and one half (6 1/2) pounds were planted on June 19, and harvested on October 8th, a period of 111 days. Planting rate was calculated to be 65 pounds per acre and the yield projected on an acre basis was 3,000 pounds. The actual increase was 210 pounds of cleaned seed. The in-shell peanuts graded 73% sound mature kernels (SMK) with three other kernals and 1 damaged kernel. (See attached peanut inspection memorandum).

   The 1971 increase block was three acres planted at the rate of 70 pounds per acre on June 1st. This block was examined several times during the season and undesirable plants were removed. Harvest date was October 7. Yield was 3,000 pounds per acre. Graded 68% SMK (See attached inspection).

3. Although there were no replicated tests, this variety created considerable commercial interest because of its excellent grades and yields compared to the county average of commercially grown valencias.

Application of intent to certify this variety was made with New Mexico Crop Improvement Association December 7, 1971, date of determination.

The first increase for production of foundation generation was completed in 1972 with a yield ranging from 3,000 pounds to a high of 4,123 pounds per acre. Again grades and yield were above the county average. The first commercial sale if this seed is planned for May of 1973.

4. The genetic make up of McRan was stabilized in the first and second increases from the original pod by self pollination and hand selecting and grading of both pods and kernels with more than 80% riding 34/64, spacing set on presizer roller. (See data attached).

5. No replicated tests have been conducted for the following reasons:
   (a). The volume of seed necessary for testing and extensive research was not available until the 1972 crop was harvested.
   (b). The predominant type grown in the area are of unknown varieties of Valencia type, descendants of the Tennessee Red introduction shortly after the turn of the century. No seed improvement has been conducted since this introduction. Therefore no definite varieties were available.
   (c). In 1972 New Mexico State University released a new variety "Valencia A". Some general comparisons have been made between McRan and Valencia A. Now that there is ample seed of these two varieties plans are for a more complete testing program.

NEW MEXICO CROP IMPROVEMENT ASSOCIATION

CERTIFIED SEED

AREA CODE (505) 646-4125 P. O. BOX 3C1-NMSU

LAS CRUCES, NEW MEXICO 88003

February 26, 1973

NEW MEXICO CROP IMPROVEMENT ASSN.

SUNSHINE CERTIFIED SEEDS

To Whom it may concern:

To the best of our knowledge and determination based on more than two years of observations, evaluations and field inspections the McRan variety of valenica type peanut is stabilized in reproduction.

After our first examination of the pods harvested in 1970, we found the identical shell characteristics in the subsequent two year's increases.

In field observations and inspections with plant populations ranging from 60,000 to 90,000 plants per acre no off-type plants were found.

Being a self pollinated crop and handled in such a manner as to prevent mechanical mixing has apparently produced a well stabilized variety.

By: T. C. Perkins
T. C. Perkins
Administrative Officer

By: Robert E. Oyler
Robert E. Oyler
Inspector

RECEIVED
MAR 6 1973
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, 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 B

Botanical Description of the Variety

McRan is an early maturing peanut ranging from 110-120 days. Plant height and branching pattern is similar to valencia type varieties, about 30 inches, the plants are semi-erect with intermediate branching.

The cotyledons have a darker greenish brown coloration than other valencia types. The leaves are some what lighter green in the early stages but there is no visible difference in leaf color in later stages.

The pods are shorter but have a larger diameter than other valencia types. The hull thickness is greater in the McRan variety with less constriction between the seed. The beak of the kernel is not so pronounced as in other valencia types.

The number of kernels per mature pod range from two to four with more than 70% three and four kernel pods. The kernels are compact in the hull with a very low percentage of loose shelled kernels. The seed coat is red, similar to other valenica types. The seed is cylindrical to oval with tapered ends. Seed surface is smooth with inconspicuous veins or ribs.

McRan is susceptable to Blackhull disease. As of this date it hasn't been tested for resistance or suseptability to other diseases or insects.

FORM GR-470-29
(6-17-74)

FORM APPROVED. OMB NO. 40-R3712

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

OBJECTIVE DESCRIPTION OF VARIETY
PEANUT (Arachis hypogaea)

NAME OF APPLICANT(S)
Borden Peanut Co.

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)
P.O. Box 28
Portales, NM 88130

VARIETY NAME OR TEMPORARY DESIGNATION
Valencia McRan

FOR OFFICIAL USE ONLY
PVPO NUMBER
73066

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. BOTANICAL TYPE:

[2] Flowering on the Main Stem: 1 = ABSENT 2 = PRESENT

[2] Branching Pattern: 1 = ALTERNATE – Pairs of vegetative & reproductive branches (Virginia) 2 = SEQUENTIAL – Continuous reproductive branches (Valencia–Spanish) 3 = OTHER (*Specify*) _____

2. PLANT:

[3] Habit: 1 = PROSTRATE (*Florunner*) 2 = DECUMBENT (*NC–5*) 3 = SEMI-ERECT (*Florispan*) 4 = ERECT (*Starr*)

[2] Branching: 1 = SPARSE (*Valencia*) 2 = MODERATE (*Starr*) 3 = PROFUSE (*Florunner*)

3. MATURITY:

[3] Region: 1=VIRGINIA, NORTH CAROLINA 2 = S.E. UNITED STATES 3=S.W.UNITED STATES 4=OTHER

[1][2][0] NUMBER OF DAYS TO MATURITY

[1][0] NO. OF DAYS EARLIER THAN . . . . . [1]

[0][8] NO. OF DAYS LATER THAN . . . . . [ ]

1 = STARR 2 = FLORUNNER 3 = FLORIGIANT 4 = VIRGINIA 61R 5 = NC - 2 6 = NC - 5 7 = SOUTHEASTERN RUNNER 56-15 8 = OTHER (*Specify*) Earlier than all varieties compared to

4. LEAVES:

[2] COLOR AT 60 DAYS: (*Nickerson Color Designation*): 1 = LIGHT GREEN (10Gy 6/9) 2 = MEDIUM GREEN (2.5G 5/9) 3 = DARK GREEN (5G 4/7) 4 = OTHER (*Specify*) _____

[3][0] MM. LEAFLET LENGTH (*Basal leaflet of the youngest fully opened leaf*)

[2][.0][0] LEAFLET LENGTH/WIDTH RATIO

5. POD: (Average for 20 pods at maturity)

[3][7] MM. LENGTH

[1][4] MM. DIAMETER

[3][4][0][0] KG./HA. POD YIELD

[ ][ ][ ] % LESS THAN . . . . . [ ]

[0][2][0] % MORE THAN . . . . . [8]

1 = STARR 2 = FLORUNNER 3 = FLORIGIANT 4 = VIRGINIA 61R 5 = NC - 2 6 = NC - 5 7 = SOUTHEASTERN RUNNER 56-15 8 = OTHER (*Specify*) Commercial Valencia

[8][0] % FANCY SIZE: (*% riding 13.46 mm., 34/64 inch, spacing set on presizer roller*)

EXHIBIT D
Data Indicative of Novelty

Valencia McRan is similar to other valencia types (see paragraph 5, a, b, c, exhibit A) Tennessee Red and Valencia A except that it has:

1. Approximately 4 mm. shorter pods with 3-4 mm. larger diameter on the average (Figure I).

2. Pods with more uniformity from end to end in diameter and smoothness with less constrictions between the kernels.

3. A shell breaking strength which is slightly less than twice that of other valencia types (See Table 1).

4. Approximately .6 mm. thicker shell (see Table 2).

This unique combination of shell characteristics reduces the loss from loose shelled kernels and from mechanical damage in the shelling process.

Figure I. Comparison of pod length and diameter.

Variety	No. Pods	Average Length (mm.)	Average Diameter (mm.)
Valencia McRan	20	37	14
Valencia A (Tennessee Red)	20	42	10
Variety unknown	20	41	11

SUPPLEMENTAL INFORMATION
April 2, 1976

Re: Application No. 73066, Peanut, Valencia McRan.

EXHIBIT A: Additional information (Sec. 6, f.)

6.

f. There are no additional noticeable nor measurable variants in plant type, size, shape or color of the leaves, plants or stems.

EXHIBIT C: See attached form GR-470-29.

EXHIBIT D: For additional information requested on statement of novelty see attached supplemental information and tables.

Table I. Pounds of force required to crack peanut shells of the variety or types of peanuts. Pods at 8% moisture.

Chatillion compression testing machine--reading on 25# circle dial.

Variety	Valencia McRan	Valencia A	(Tennessee Red?) Valencia type variety unknown
No. Pods	100	100	100
High	16.0	10.0	12.0
Low	7.0	2.5	3.0
Mean	11.184	6.125	7.03
Variance	5.222	4.395	3.448
St. Dev.	2.285	2.096	1.857
Coef. of Var.	20.4%	34.2%	26.4%
Confidence interval	95%CI=11.2 ±.44	95%CI=6.125 ±.41	95%CI=7.03 ±.36

Table 2. Shell thickness in MM on Thickness gage. Peanut pods at 8% moisture.

Variety	Valencia McRan	Valencia A	(Tennessee Red?) Valencia type variety unknown
No. Pods	100	100	100
High	2.61	1.99	2.20
Low	1.84	.90	.80
Mean	2.187	1.599	1.608
Variance	.048	.064	.112
St. Dev.	.220	.253	.335
Coef. of Var.	10.1%	15.8%	20.8%
Confidence Interval	95%CI=2.187±.043	95%CI=1.599±.049	95%CI=1.608±.066

73066 VALENCIA McRAN

RECEIVED APR 13 1976

5. POD (Average for 20 pods at maturity):

[5] NUMBER OF SEEDS PER POD: 1 = 1 2 = 2 3 = 3 4 = 3–4 5 = 2–3–4

[1] CONSTRICTION: 1 = SHALLOW OR NONE (*Virginia 56R, Argentine*) 2 = MEDIUM (*Virginia 61R*) 3 = DEEP (*Starr*)

[1] SURFACE: 1 = GLABROUS (*Florunner*) 2 = PUBESCENT (*Florispan*)

[2] BEAK: 1 = ABSENT 2 = INCONSPICUOUS 3 = PRONOUNCED

6. SEED (Mature, cured but not aged):

[0 6] COAT COLOR: 1 = WHITE (*Pearl*) 2 = CREAM 3 = TAN (*Starr*) 4 = BROWN 5 = PINK (*Florigiant*) 6 = RED 7 = PURPLE 8 = DARK PURPLE 9 = VARIGATED 10 = OTHER (*Specify*) _____

[1] COAT SURFACE: 1 = SMOOTH 2 = INDENTED [1] 1 = UNIFORM COLOR 2 = BLEMISHED

[6] SHAPE: 1 = SPHERIODAL (*Starr*) 2 = SHORT-BROAD (*Florunner*) 3 = ELONGATED-SLENDER (*Dixie Runner*) 4 = CYLINDRICAL-TAPERED ENDS 5 = CYLINDRICAL-BLUNT ENDS (*NC–2*) 6 = OTHER (*Specify*) Cylindrical to oval-tapered ends.

[1 3] MM. LENGTH [0 9] MM. WIDTH [5 0] GRAMS PER 100 SEED (*8% Moisture*)

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

0	SOUTHERN STEM ROT	0	RUST
0	EARLY LEAF SPOT	0	VIRUS X
0	SOUTHERN LEAF SPOT	0	MOSAIC
1	POD ROT COMPLEX		OTHER (*Specify*) _____

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

0	THRIPS	0	BURROWING BUG
0	LEAF HOPPER	0	NEMATODE (*Specify species*)
0	SOUTHERN CORN ROOTWORM	0	LESSER CORNSTALK BORER
0	APHID		OTHER (*Specify*) _____

9. COMPARISON OF SUBMITTED VARIETY WITH ONE OR MORE SIMILAR VARIETIES:

VARIETY	OIL* (%)	PROTEIN* (%)	OLEIC: * LINOLEIC ACID RATIO	IODINE* NUMBER	SHELLING (%)	SMK** (%)	ELK+ (%)	MAIN STEM HEIGHT (CM)
SUBMITTED	45.9		0.4		76	74		12
SIMILAR	45.4		0.2		67	65		12
NAME OF SIMILAR VARIETY	Valencia A		Valencia A		Valencia A	Valencia A		Valencia A

* *From Sound Mature Kernels* ** Sound Mature Kernels + Extra Large Kernels

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

CHARACTER	VARIETY	CHARACTER	VARIETY
POD COLOR	Valencia A	SEEDLING VIGOR	Valencia A
SEED DORMANCY	Valencia A	HULL THICKNESS	Valencia A
SEED SIZE		LEAF COLOR	

11. COMMENTS (Additional description or clarification – Such as: Relative disease reactions may be compared with standard varieties)

The laboratory which tested these peanuts have no faciliteis for acquiring the percentage of niacin or protein as evidenced in the chart, paragraph 9.

EXHIBIT D

Statement of Novelty
Supplemental Information

Shell breaking strength and shell thickness:
To establish numerical differences in shell thickness and breaking strength or pounds of force required to break the shell a project was developed at New Mexico State University to conduct the tests.

Project: Valencia type peanut comparison of shell thickness and breaking strength.

Researcher: T. C. Perkins

Programmer: Wendy Mahill

Consultant: Dr. Morris Finkner
Department of Experimental Stastics
New Mexico State University
Las Cruces, NM 88003

Varieties used in the comparative tests were:

1. Valencia McRan, the variety being considered for P. V. P.

2. Valencia "A", a released variety of New Mexico State University in 1972.

3. An unknown variety of Valencia type (descendant of the old Tennessee Red) which has been grown commercially in New Mexico for many years with no seed improvement or selection program.

Four random samples (2 lbs. each) of each variety were taken. These samples were bulk blended, divided and reduced until 100 pod samples were obtained for each variety tested.

See Table 1 and Table 2.

EXHIBIT E

Statement of Applicants Ownership

Joe W. Randolph, owner of Randolph Peanut Co., Portales, New Mexico believes he is the sole discoverer and subsequent developer of the McRan variety of valenica type peanut for which he solicits a certificate of protection.