No. 8000155

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

James T. Keel

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

PEANUT

'K-29'

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* August *in the year of our Lord one thousand nine hundred and* eighty-one.

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

Attest:

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Secretary of Agriculture

FORM GR-470
(1-76)

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	1b. VARIETY NAME	FOR OFFICIAL USE ONLY	
K-29	K-29	PV NUMBER 8000155	
2. KIND NAME	3. GENUS AND SPECIES NAME	FILING DATE	TIME
Peanuts JTK	Arachis hypogaea L.	9/4/80	9:00 (A.M.) P.M.
4. FAMILY NAME (BOTANICAL)	5. DATE OF DETERMINATION	FEE RECEIVED	DATE
Leguminaceae JTK	July 1, 1980	$ 500.00	9/4/80
		$ 250.00	7/13/81
		$	

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
James T. Keel	P.O. Box 878 Greenville, NC 27834	

9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)*	10. IF INCORPORATED, GIVE STATE AND DATE 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:

None

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.)*
- [ ] 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 [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.

7-30-80
(DATE)

James T. Keel
(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)

FORM GR-470 (Reverse)

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.)

EXHIBIT A

Origin and Breeding History of K-29

K-29 is a large seeded Virginia type peanut (Arachis Hypogaea L.) cultivar that arose as a single plant selection in a field of foundation Florigiants near Greenville, North Carolina in 1974. The growth habit of K-29 is upright while Florigiants are decumberent. Seed from this single plant have been increased on a yearly basis since 1975. Only a few off-types in growth habit or pod characteristics have been found and these have been removed. K-29 is very stable showing no variation from year to year except that caused by environmental conditions. Over 20 acres were carefully checked in 1980 as to plant type during the growing season. These were examined for pod characteristics when the plants were inverted during the digging operation.

EXHIBIT B

Novelty Statement of K-29 Peanut

K-29 most closely resembles the Florigiant variety including pod, kernel, and grade characteristics. It differs from Florigiants in growth habit (upright vs. decumberant), length of mainstem, and date of maturity. In pod size, kernel size, kernel color, length of N + 1 and N + 2 order branches leaflet length, and leaflet color, K-29 and Florigiants are almost indistinguishable.

The following tables show these relationships:

TABLE 1: Yield and kernel size comparisons of Florigiants and K-29. Treatment means of 6 replications. Greenville, North Carolina, 1979.

Cultivar	Yield/Acre	Sound Mature Kernels	Other Kernels	Extra Large Kernels	Fancy Size Pods	Support Price 100 lbs.
Florigiant	3,604 lbs.	69.7%	2.8%	32.2%	76.7%	$21.87
K-29	3,179 lbs.	69.3%	2.7%	35.5%	76.3%	$21.82
LSD .05	407 lbs.	N.S.	N.S.	N.S.	N.S.	N.S.

TABLE 2: Maturity determinations of Florigiant and K-29. Average of 5 replications. Greenville, North Carolina, 1980.

Date of Harvest	Extra Large Kernels - %		Medium Plus No. 1 Kernels-%		Total Sound Mature Kernels-%	
	Florigiant	K-29	Florigiant	K-29	Florigiant	K-29
Sept. 1	2.6	14.7	21.7	38.2	24.3	52.9
Sept. 5	12.9	22.9	32.9	47.9	45.8	70.8
Sept. 9	23.2	20.2	36.9	41.1	60.1	61.3
Sept. 12	26.3	17.7	38.0	47.0	64.3	64.7
Sept. 19	26.7	21.5	39.3	41.4	66.0	62.9

(over)

Comments: K-29 had the highest sound mature kernel content on September 5. This decreased due to shedding during the next 3 harvest dates. The Florigiant variety continued to increase in sound mature kernel percentage throughout the test. Based on this test and field experience at 16 other locations during the last 2 years, K-29 matures about 2 weeks earlier than Florigiants.

TABLE 3: Length of mainstem of Florigiants and K-29 60 days after planting at 3 locations in 1980.

Location	Length of Mainstem in CM		
Pitt County	Florigiant	K-29	Total
	17	34	51
	15	31	46
	18.5	35	53.5
	17	32.5	49.5
	16.5	35.5	50
TOTAL	84	166	250
MEAN	16.8	33.2	
LSD .01 = 2.95 CM			

Location	Length of Mainstem in CM		
Martin County	Florigiant	K-29	Total
	16.5	31.5	
	15.5	32.5	
	14	35.0	
	18	34.5	
	17	31.0	
TOTAL	81	164.5	
MEAN	16.2	32.9	
LSD .01 = 3.52 CM			

Table 3- continued

Location	Length of Mainstem in CM		
Bertie County	Florigiant	K-29	Total
	17.5	32.0	
	17.5	32.5	
	15.5	34.5	
	15	34.5	
	16	33.5	
TOTAL	81.5	33.4	
LSD .01 = 2.26 CM			

K-29 has not exhibited any disease resistance in any of our trials. It is susceptible to early and late leafspot, southern stem rot, and black root rot. Since we seldom find Rhizoctonia solani or Pythium myriotylum in our fields we do not know if there is any resistance to them.

K-29 was entered in the peanut variety demonstration program conducted by county agents in 10 counties in North Carolina in 1980. In every case the agents commented that K-29 emerged 1 - 3 days earlier than the other varieties in the demonstration (Florigiatns, NC-6, and NC-7). We suspect that this may be due to a higher calcium content of the seed. These factors will be measured in replicated tests in 1981.

FORM APPROVED. OMB NO. 40-R3712

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

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

OBJECTIVE DESCRIPTION OF VARIETY
PEANUT (Arachis hypogaea)

NAME OF APPLICANT(S): James T. Keel

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code): P.O. Box 878, Greenville, NC 27834

VARIETY NAME OR TEMPORARY DESIGNATION: K-29

FOR OFFICIAL USE ONLY
PVPO NUMBER: 8000155

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:

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

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

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:

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

[1][4][5] NUMBER OF DAYS TO MATURITY

[0][5] NO. OF DAYS EARLIER THAN . . . . . [3]

[0][5] NO. OF DAYS LATER 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*) NC-7

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*) _____

[5][2] MM. LEAFLET LENGTH (*Basal leaflet of the youngest fully opened leaf*)

[1.][7][3] LEAFLET LENGTH/WIDTH RATIO

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

[3][9] MM. LENGTH

[1][5] MM. DIAMETER

[3][5][6][3] KG./HA. POD YIELD

[0][1][3] % LESS THAN . . . . . [3]

[ ][ ][ ] % MORE THAN . . . . . [ ]

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

[7][6] % FANCY SIZE: (*% riding 13.46 mm., 34/64 inch, spacing set on presizer roller*)

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

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

[2] 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 5] 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

[4] 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*) _____

[1 8] MM. LENGTH [0 8] MM. WIDTH [7 8] GRAMS PER 100 SEED (*8% Moisture*)

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

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

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

1	THRIPS	0	BURROWING BUG
1	LEAF HOPPER	1	NEMATODE (*Specify species*)
1	SOUTHERN CORN ROOTWORM	0	LESSER CORNSTALK BORER
1	APHID	0	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	48.13	29.87	-	95.3	72	70	34	33
SIMILAR	48.52	30.80	-	94.7	72	68	32	16
NAME OF SIMILAR VARIETY	Florigiant	Florigiant	Florigiant	Florigiant	Florigiant	Flori-giant	Flori-giant	Flori-giant

* *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	Florigiant	SEEDLING VIGOR	Florigiant
SEED DORMANCY	Florigiant	HULL THICKNESS	Florigiant
SEED SIZE	Florigiant	LEAF COLOR	Florigiant

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