No. 8900009

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Nickerson American Plant Breeders, 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 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, 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 (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'AP 1650'

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, D. C. *this* 28th *day of* April *in the year of our Lord one thousand nine hundred and* eighty-nine.

Attest:

Kenneth A. Evans
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Clayton Yeutter
Secretary of Agriculture

APPROVAL EXPIRES 2-28-88

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

FORM APPROVED: OMB NO. 0581-0055

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

1. NAME OF APPLICANT(S): Nickerson American Plant Breeders

2. TEMPORARY DESIGNATION:

3. VARIETY NAME: AP 1650

4. ADDRESS *(Street and No. or R.F.D. No., City, State, and Zip Code)*: 5201 Johnson Drive, P.O. Box 2955, Mission, KS 66205

5. PHONE *(Include area code)*: (913) 384-4940

FOR OFFICIAL USE ONLY

PVPO NUMBER: 8900009

6. GENUS AND SPECIES NAME: Glycine max

7. FAMILY NAME *(Botanical)*: Leguminosae

FILING — DATE: October 14, 1988 — TIME: 9:30 [X] A.M. [ ] P.M.

8. KIND NAME: Soybean

9. DATE OF DETERMINATION: January 1982

FEES RECEIVED — AMOUNT FOR FILING: $ 1800.00 — DATE: Aug. 22, 1988 — AMOUNT FOR CERTIFICATE: $ 200.00 — DATE: Feb. 16, 1989

10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION *(Corporation, partnership, association, etc.)*: Corporation

11. IF INCORPORATED, GIVE STATE OF INCORPORATION: Delaware

12. DATE OF INCORPORATION:

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS:
Wayne Ellingson, Director of Oilseeds Research
AgriPro Seeds
R.R. #2, Hwy 30 East
Ames, Iowa 50010
PHONE *(Include area code)*: (515) 232-0691

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED

a. [X] Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*
b. [X] Exhibit B, Novelty Statement.
c. [X] Exhibit C, Objective Description of Variety *(Request form from Plant Variety Protection Office.)*
d. [ ] Exhibit D, Additional Description of Variety.
e. [X] Exhibit E, Statement of the Basis of Applicant's Ownership.

15. 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) of the Plant Variety Protection Act.)* [ ] Yes *(If "Yes," answer items 16 and 17 below)* [X] No

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? [ ] Yes [ ] No

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? [ ] Foundation [ ] Registered [ ] Certified

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.? [ ] Yes *(If "Yes," give date)* [X] No

19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES? [X] Yes *(If "Yes," give names of countries and dates)* [ ] No

A small quantity, less than 500 bags, was sold in the U.S during the spring of 1988.

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request 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 Protection Act.

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

SIGNATURE OF APPLICANT: Wayne R. Ellingson — DATE: August 8, 1988

SIGNATURE OF APPLICANT: R E Heerea — DATE: 8-10-88

FORM LS-470 (3-86) *Edition of 7-84 obsolete.*

"EXHIBIT A"
ORIGIN AND HISTORY OF 'AP 1650'

1. AP 1650 originated in Iowa from a hand pollinated cross of "AGRIPRO 20' and 'TC 137'. The cross was made during the summer of 1975. The F1 generation was grown in a greenhouse during the fall and winter of 1975-76. The F2-F4 were grown in Iowa during the summers of 1976-78. Early generations were advanced using a modified single seed descent technique. Single plants of the cross were selected in the F4 generation and the seed was planted as a progeny row in the summer of 1979.

2. ~~In 1981, single plants with brown pods were selected from the variety AP 1776. These were grown in progeny rows in 1982 and only rows conforming to a standard were harvested and bulked.~~

3. AP 1650 has been yield tested in its stable form since 1983. See the attached for 1983-87 data. AP 1650 has been tested under the experimental designation 75212-80-31101Br, 31101Br, 75212-80-31101B, or EX 1650.

4. Discernible variants are not an inherent component of the variety.

2. IN 1981, SINGLE PLANTS WERE RESELECTED FROM THE ORIGINAL F_4 DERIVED LINE. THE PLANTS WITH THE BROWN POD CHARACTERISTIC WERE GROWN IN PROGENY ROWS IN 1982. ONLY ROWS CONFORMING TO A STANDARD AND PURE FOR BROWN POD COLOR WERE HARVESTED AND BULKED

THE GENETIC MAKE-UP OF THE VARIETY WAS STABILIZED IN THE SIXTH GENERATION (1981). THE VARIETY HAS REMAINED STABLE SINCE THE RESELECTION.

OVER-LOCATION MEANS TRIAL #Y3-1001 1983 LOCS: GT, HM, WD

ENTRY NO.	VARIETY OR LINE	MAT.	HT. (in)	LODGE (1-5)	GT YIELD	HM YIELD	WD YIELD	MEAN YIELD	YIELD RANK	WORTH
12	AP120	12.3	31.8	1.3	41.7	59.5	43.9	48.4	22	1.0
01	77080-A80-17259	13.0	36.2	1.6	46.5	48.8	45.4	46.9	25	2.0
21	SIMPSON	13.7	30.8	1.9	46.5	52.4	45.7	48.2	23	1.9
06	74022- 80- 1035	15.8	36.3	1.6	42.2	50.0	47.2	46.5	26	1.7
14	A1564	16.2	38.6	1.7	50.8	50.5	42.5	47.9	24	2.2
28	NK 509-90	16.2	35.1	2.2	45.2	57.0	49.0	50.4	14	1.7
13	ACCO 101	17.3	37.8	1.9	46.6	55.4	44.4	48.8	21	2.0
02	76254-A80-21075	17.8	32.0	1.6	44.1	49.8	45.4	46.4	27	1.8
→ 08	75212- 80-31101BR	18.5	34.7	1.3	49.7	56.2	50.4	52.1	4	1.6
10	74061- 80-27033P	18.5	36.0	1.4	47.3	56.4	49.3	51.0	12	1.7
11	74061- 80-27033W	18.5	36.0	1.4	48.2	58.4	54.1	53.6	2	1.4
27	AP10	19.5	36.6	2.1	45.7	56.8	48.2	50.3	15	2.0
19	PVI 8101	19.8	38.6	1.2	45.1	50.8	51.7	49.2	19	1.2
09	74061- 80-27015	20.2	36.4	1.3	51.0	54.7	50.4	52.0	5	1.6
16	S1346	20.5	29.9	1.4	43.5	56.3	48.4	49.4	17	1.2
15	A1937	20.8	33.6	1.9	43.4	56.0	50.4	49.9	16	1.9
26	HODGSON 78	21.0	35.4	2.1	44.3	56.4	46.3	49.0	20	1.9
03	76062-A80- 5159	21.8	36.0	2.2	49.2	56.7	47.2	51.0	11	2.3
24	LAKOTA	22.2	42.6	2.3	47.8	58.2	48.0	51.3	9	2.4
17	HS220	22.5	39.3	1.8	42.3	47.8	42.4	44.2	28	2.0
22	HP20-20	22.5	36.2	1.7	50.2	52.5	53.1	51.9	6	2.1
07	75212- 80-31101TN	23.0	35.6	1.2	45.2	60.7	45.2	50.4	13	1.4
23	WEBER	23.0	36.9	2.3	46.5	55.5	46.3	49.4	18	2.1
18	P1981	23.5	38.3	1.6	45.7	55.2	54.2	51.7	7	2.0
04	77044-A80-10130	23.7	32.6	1.1	51.6	53.6	48.5	51.2	10	1.6
25	HARDIN	23.7	41.0	3.2	46.0	59.2	50.0	51.7	8	2.3
05	77059-A80-19257	23.8	38.4	2.2	47.2	59.4	50.2	52.2	3	1.9
20	AP200	24.0	38.0	2.7	51.3	56.2	54.1	53.9	1	2.1
	MEAN	19.8	36.1	1.8	46.6	55.0	48.3	50.0		1.8
	C.V.	13.9	8.8	33.4	10.3	8.4	8.5	11.1		35.3
	LSD(.05)	2.1	2.8	.6	7.8NS	7.5	6.7	4.6		.5
	NO. OF REPS	6.0	9.0	9.0	3.0	3.0	3.0	9.0		9.0

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NICKERSON AMERICAN PLANT BREEDERS INC.
SOYBEAN TRIAL SUMMARY REPORT 1984

OVER-LOCATION MEANS TRIAL #Y3-1001 LOCS: GT, HM, HO, WD

ENTRY NO.	VARIETY OR LINE	MAT.	HT. (in)	LODGE (1-5)	GT YIELD	HM YIELD	HO YIELD	WD YIELD	MEAN YIELD	YIELD RANK	WORTH
14	OZZIE	5.3	26.6	1.3	24.1	38.2	33.6	32.7	32.2	28	2.2
15	EVANS	7.3	26.9	1.5	22.8	40.5	36.1	31.6	32.8	27	2.3
09	SIMPSON	10.7	26.9	1.3	24.0	45.6	37.3	29.7	34.2	26	1.9
10	AP120	10.9	30.1	1.5	29.7	45.8	39.1	37.2	37.9	24	1.3
05	75212- 80-31101BR	15.3	31.7	1.2	31.4	49.1	42.9	39.2	40.7	15	1.3
16	HODGSON 78	15.7	33.1	2.1	23.5	45.0	40.7	38.1	36.8	25	2.3
01	76136-A80-20037	16.0	29.7	1.9	38.0	46.7	44.3	40.6	42.4	10	2.1
17	74002- 80-1035	16.1	34.2	1.4	30.2	43.0	39.7	42.4	38.8	23	1.6
03	78101-B81-03101	16.6	35.5	2.7	37.3	47.0	40.1	42.7	41.8	12	2.3
06	75212- 80-31101TN	16.9	32.8	1.3	35.6	49.2	42.2	42.8	42.5	9	1.4
02	78008-A81-19002	17.1	33.8	2.1	36.5	48.9	43.1	44.4	43.2	5	2.3
27	S1346	17.6	29.0	1.4	30.0	50.9	38.9	38.6	39.6	19	1.8
18	AP10	17.7	32.5	2.2	30.0	48.8	40.4	41.6	40.2	17	1.9
26	P1677	17.7	31.3	1.9	27.7	51.2	38.1	40.5	39.4	21	2.5
07	74061- 80-27033W	17.8	35.3	1.7	37.4	43.8	44.4	45.8	42.9	7	2.2
23	4-1206	18.2	34.3	2.0	31.0	43.3	39.8	42.7	39.2	22	2.2
28	LAKOTA	18.2	38.5	3.4	38.7	44.6	43.7	41.3	42.1	11	2.7
13	STINE 1350	18.4	30.8	1.5	32.5	50.0	40.1	49.9	43.1	6	1.8
25	P1981	18.4	36.0	2.5	41.0	45.1	39.4	45.2	42.7	8	2.5
04	78101-A81-32175	18.7	32.5	2.0	35.1	44.8	40.3	39.4	39.9	18	2.0
22	HP20-20	18.8	35.0	2.4	35.9	47.6	40.1	43.5	41.8	13	2.4
11	A1937	18.9	35.1	2.1	43.4	53.2	39.7	45.2	45.4	1	2.1
20	WEBER	19.4	34.4	2.7	32.8	45.0	41.6	38.1	39.4	20	2.3
24	STINE 1480	19.7	31.5	1.7	36.8	53.7	39.9	45.7	44.0	3	1.9
21	S18-84	20.0	35.3	2.8	37.9	48.4	44.1	44.5	43.7	4	2.6
19	AP200	20.2	35.4	2.0	38.9	44.8	41.3	40.0	41.2	14	2.5
12	S14-60	20.4	31.8	2.1	26.1	52.5	41.7	42.0	40.6	16	2.3
08	74022- 80- Y034	21.0	37.5	3.0	40.7	47.6	42.0	49.2	44.9	2	2.8
	MEAN	16.8	32.8	2.0	33.2	46.9	40.5	41.2	40.5		2.1
	C.V.	10.1	8.5	20.1	12.3	6.9	9.0	6.6	9.9		24.8
	LSD(.05)	2.3	2.2	.4	6.6	5.3	5.9NS	4.4	4.5		.5
	NO. OF REPS	9.0	12.0	12.0	3.0	3.0	3.0	3.0	12.0		12.0

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NICKERSON AMERICAN PLANT BREEDERS INC.
SOYBEAN TRIAL SUMMARY REPORT 1985

OVER-LOCATION MEANS TRIAL #CV-1001 LOCS: HM, WD, WM, FB, SP, AI

ENTRY NO.	VARIETY OR LINE	MAT.	HT. (in)	LODGE (1-5)	HM YIELD	WD YIELD	WM YIELD	FB YIELD	SP YIELD	AI YIELD	MEAN YIELD	YIELD RANK	WORTH
15	DAWSON	11.3	34.2	1.9	43.6	39.9	37.6	31.7	44.0	38.9	39.2	25	3.7
13	AP120	12.8	36.8	1.8	41.6	38.9	37.7	27.9	44.5	37.9	38.1	29	3.0
16	S09-90	13.3	35.9	1.7	42.3	42.1	38.7	29.9	40.5	39.9	38.7	27	3.6
14	SIMPSON	13.8	33.8	1.6	45.1	41.4	39.3	30.4	39.9	41.6	39.6	24	3.0
22	AP10	19.8	39.6	2.1	42.3	41.4	40.5	31.2	43.2	43.6	40.4	21	3.4
03	74061- 80-27033	20.0	37.5	1.6	49.6	48.3	42.9	42.0	52.8	48.5	47.4	5	2.8
17	HODGSON 78	20.1	37.3	1.8	41.8	38.1	38.4	31.8	42.9	41.6	39.1	26	3.7
05	78038-B81-38006	20.2	37.7	1.5	43.5	39.7	39.8	30.4	44.5	42.0	40.0	22	2.9
24	S14-60	21.4	35.3	1.7	42.8	33.8	38.7	33.3	51.8	47.3	41.2	19	2.3
→01	73212- 80-31101BR	21.5	39.2	1.5	48.6	51.7	46.2	38.2	50.5	50.5	47.6	4	2.8
02	78008-A81-19002	21.6	37.2	2.1	48.9	44.1	45.9	36.2	47.7	46.4	44.9	14	3.3
10	75212- 80-31101TN	23.4	35.7	1.5	49.5	46.1	49.9	39.8	50.8	48.2	47.4	6	2.2
04	76136-A80-20037	23.8	37.3	1.8	46.8	43.9	44.1	33.1	54.0	48.0	46.0	11	2.7
18	P1677	23.8	38.2	1.8	45.2	40.5	42.9	34.2	47.8	47.5	43.0	17	3.2
26	WEBER	24.3	38.3	2.1	44.2	43.2	42.6	38.8	51.1	50.6	45.1	13	3.7
22	HP20-20	24.4	39.9	1.9	46.0	41.4	38.3	33.5	44.3	43.2	41.1	20	3.6
27	HARDIN	24.7	41.9	2.0	47.1	47.9	40.9	35.3	51.1	49.9	45.4	12	3.9
21	AP200	25.0	39.8	2.1	45.7	50.1	47.4	39.9	51.2	48.2	47.1	8	3.3
07	78004-A81-08007	25.2	39.3	2.0	39.0	41.3	42.0	35.7	47.9	53.0	43.2	16	3.8
19	A1937	27.0	39.6	2.0	46.9	43.2	48.3	42.7	49.4	55.5	47.7	3	3.3
06	79109-B81-26174	29.3	38.4	2.1	46.2	46.8	49.8	42.4	48.9	52.7	47.8	2	2.7
09	78048-A81-24060	29.6	41.7	2.4	50.6	50.6	51.7	44.3	55.8	54.3	51.2	1	3.8
20	P1981	30.5	38.3	1.9	43.5	37.9	46.1	40.8	49.7	50.4	44.8	15	3.0
23	CORSOY 79	31.8	44.4	2.4	33.5	43.6	39.2	34.1	43.6	46.0	40.0	23	4.0
08	79101-B81-09127	32.7	39.0	2.2	45.8	43.7	49.5	42.4	47.4	48.7	46.2	10	2.9
23	S1492	34.5	39.4	2.2	38.8	33.3	45.6	36.1	49.6	48.8	42.0	18	2.9
12	77054-B80-40207	35.9	37.6	1.8	40.7	43.7	51.2	44.4	49.0	50.3	46.6	9	2.8
11	74022- 80- Y034	37.9	40.8	2.4	46.7	38.3	48.3	43.6	51.1	54.3	47.1	7	3.4
	MEAN	24.3	38.4	1.9	44.5	42.7	43.7	36.7	48.0	47.4	43.8		3.2
	C.V.	9.3	6.3	17.1	6.9	6.4	4.7	7.7	6.5	7.6	7.2		18.6
	LSD(.05)	3.3	1.6	.3	5.0	4.4	3.4	4.6	5.1	5.9	3.3		.6
	NO. OF REPS	12.0	18.0	18.0	3.0	3.0	3.0	3.0	3.0	3.0	18.0		15.0

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1986 CV-1001 SUMMARY IN MATURITY ORDER
AI,BS,FI,SP,WM,WD,HM

ENT NO	VARIETY	MAT	HT IN	LODGE	YIELD ALGONA IA	BROOKINGS SD	FREDRICKS IA	SPENCER IA	WELLS MN	WINDOM MN	HANSKA MN	MEAN	RANK	PE CHE
27	DAWSON	9.4	29.9	2.4	44.8	51.5	33.1	31.7	48.5	29.6	30.8	38.6	28	81
11	SIMPSON	12.6	29.2	2.2	37.8	46.3	27.1	36.7	45.7	32.9	45.2	38.8	27	81
17	A1214	18.3	36.6	2.4	43.2	51.0	45.8	38.2	49.9	35.5	40.8	43.5	21	91
13	HODGSON78	19.7	34.2	2.4	42.5	53.0	38.7	35.8	50.7	31.0	36.7	41.2	26	86
9	31101BR	20.3	33.9	2.0	51.2	54.3	42.1	41.4	57.9	37.7	44.7	47.0	7	98
28	FUNK12231	21.1	32.1	2.6	46.3	47.7	40.6	37.5	54.7	39.6	37.5	42.1	25	88
2	79006-A82-09040	21.2	32.5	2.2	52.4	53.6	34.9	38.9	56.9	30.5	46.7	46.1	10	96
12	A1525	22.3	33.5	1.9	45.6	55.8	44.2	41.7	55.6	37.9	49.0	47.1	5	98
14	AP 1776	22.5	35.1	1.9	46.3	53.5	44.2	41.4	51.8	44.4	48.4	47.1	6	98
15	S14-60	22.8	33.8	2.3	48.5	48.5	46.2	38.4	58.1	38.7	41.0	45.6	13	95
21	A1937	22.9	36.3	2.5	47.9	54.9	48.3	43.2	53.9	38.5	46.2	47.6	3	100
7	78048-A81-24060	24.4	34.9	2.4	44.2	47.8	49.9	43.5	59.4	38.4	47.5	47.2	4	99
16	P1677	24.7	34.7	2.4	44.0	52.9	38.6	37.4	54.9	24.0	44.4	42.3	24	88
19	HARDIN	24.7	36.9	2.5	49.9	53.6	43.5	39.9	54.1	28.9	40.1	44.3	18	93
25	S15-50	25.0	39.9	2.4	47.4	53.7	46.1	45.0	54.5	41.6	50.8	48.4	1	101
18	HP 20-20	26.0	36.3	2.3	46.0	55.6	39.9	39.2	53.9	34.8	41.2	44.4	16	93
22	EX 2021	26.0	35.6	2.4	50.0	51.0	44.3	40.5	56.3	34.8	42.4	45.6	14	95
20	AP 200	26.2	39.0	2.5	44.4	50.2	40.9	36.7	53.5	32.6	39.8	42.6	23	89
26	A2187	26.3	38.3	2.1	46.7	52.9	42.9	37.5	52.6	33.3	45.0	44.4	17	93
8	79118-B82-06174	26.8	37.9	2.4	44.7	56.3	49.1	42.1	53.7	37.7	40.6	46.3	9	97
23	EX 2309	26.9	37.0	2.4	48.4	45.9	47.4	41.2	50.5	34.6	44.0	44.6	15	93
6	79038-B82-12098	27.1	37.0	2.3	43.9	52.7	50.0	43.1	54.9	40.9	48.1	47.7	2	100
10	ELGIN	27.2	32.1	2.6	44.5	46.8	51.1	42.6	55.6	36.9	48.9	46.6	8	97
24	CORSOY 79	28.3	40.7	2.7	44.4	48.3	44.3	35.8	51.0	35.8	40.1	42.8	22	89
	MEAN	23.2	35.6	2.3	46.1	51.6	43.2	39.5	53.8	35.5	43.0	44.7		
	C.V.	6.3	9.0	15.3	7.5	8.1	7.4	6.4	6.6	12.7	9.7	8.3		
	LSD (5%)	2.3	5.2	0.5	5.7	6.8	5.2	4.1	5.8	7.3	6.7	5.9		
	F-TEST VALUE	40.0	3.6	3.0	2.1	1.5	8.3	3.8	2.2	2.8	4.7	3.6		
	NO. OF REPS	15.0	18.0	21.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	21.0		

6000068

1987 CV-1001 SUMMARY IN MATURITY ORDER

8900009

VARIETY OR LINE	MAT. (1-5)	HT. (in)	LODGE (1-5)	YIELD Bu/Ac BS	HM	WM	SP	AI	MC	HI	MEAN	YIELD RANK	PER CHECK	WORTH (1-5)	SQ (1-5)
HODGSON78	7.9	42.1	3.2	38.9	54.6	55.4	40.0	49.1	59.1	46.2	49.0	28	90	4.1	0.0
75212-80-31101B	8.1	41.6	1.9	52.7	56.0	53.3	41.9	49.6	58.7	46.8	51.3	24	95	2.8	0.0
A1214	8.2	43.4	2.8	38.3	56.8	52.2	43.0	53.5	58.7	41.3	49.1	27	90	3.7	0.0
FUNK12231	8.9	39.0	2.3	41.4	59.9	51.9	47.8	54.1	60.2	33.7	49.9	26	92	2.8	0.0
AP 1776	9.9	41.4	1.5	50.8	62.4	59.4	49.2	55.8	59.4	50.7	55.4	11	102	2.5	0.0
80158-A83-40086	11.5	40.8	1.8	44.5	60.4	57.4	49.2	56.2	64.5	52.2	54.9	16	101	2.8	0.0
A1525	11.7	43.1	1.6	44.4	64.3	59.6	50.3	53.1	61.1	52.4	55.0	15	101	2.9	0.0
P1677	11.9	42.6	2.4	48.8	65.9	60.2	50.6	54.8	63.9	44.3	55.5	9	102	3.4	0.0
A1937	12.2	43.3	2.5	43.3	61.7	58.4	47.6	53.6	62.7	50.4	54.0	19	100	3.2	0.0
S14-60	12.7	40.3	2.1	44.7	62.8	60.4	52.4	56.4	62.4	48.0	55.3	13	102	2.7	0.0
80160-A83-32142	13.4	42.9	2.2	51.7	64.4	57.0	49.9	54.4	61.6	49.8	55.5	8	102	3.2	0.0
80159-A83-38141	13.5	36.4	1.5	48.1	56.0	55.7	48.9	57.8	60.9	49.8	53.9	20	99	2.5	0.0
HARDIN	13.5	45.8	3.7	41.4	63.0	54.6	46.1	55.5	65.4	49.8	53.7	22	99	4.5	0.0
78048-A81-24060	14.0	43.0	2.9	48.5	65.0	60.7	54.7	56.9	68.5	51.1	57.9	2	107	3.9	0.0
S15-50	15.2	48.7	2.4	42.6	61.7	60.5	53.0	56.1	67.0	49.1	55.7	7	103	3.2	0.0
AP 200	15.5	44.1	2.9	38.8	61.3	61.4	52.3	55.6	63.8	52.9	55.2	14	102	3.8	0.0
A2187	15.7	45.9	2.2	42.4	60.3	54.2	50.9	56.3	63.0	50.0	53.9	21	99	3.3	0.0
AP 2021	16.5	43.6	2.3	44.3	59.3	60.1	50.0	55.3	62.3	52.3	54.8	17	101	2.9	0.0
80159-A83-34152	17.2	44.2	1.5	44.9	58.0	52.0	48.8	53.9	61.4	49.8	52.7	23	97	2.2	0.0
STINE2510	17.6	40.8	2.5	46.3	63.3	64.0	48.2	59.4	64.6	48.5	56.3	5	104	3.1	0.0
80168-B83-10235	18.3	42.2	2.2	43.7	59.8	61.0	52.6	56.1	64.9	49.7	55.4	10	102	2.1	0.0
79038-B82-12098	19.8	45.3	2.2	40.5	65.1	59.4	56.6	60.2	69.4	42.2	56.2	6	104	2.9	0.0
AP 2190	19.8	45.1	2.8	46.6	64.2	61.4	55.1	58.4	68.5	53.6	58.3	1	107	3.2	0.0
CORSOY79	19.9	47.6	3.4	33.2	64.8	55.2	53.8	55.8	64.1	51.5	54.1	18	100	4.4	0.0
80140-A83-09092	20.3	42.0	1.6	43.6	66.9	60.1	57.6	58.2	64.2	52.4	57.6	3	106	1.2	0.0
80122-B83-09094	20.9	43.8	2.3	46.8	58.8	59.6	52.5	57.2	64.2	47.9	55.3	12	102	2.4	0.0
ELGIN	20.9	41.2	2.5	41.4	67.7	65.1	49.5	58.0	68.2	52.9	57.5	4	106	1.4	0.0
80170-B83-18237	24.6	39.6	2.1	23.8	58.0	52.9	51.6	59.2	62.6	49.6	51.1	25	94	1.7	0.0
MEAN	15.0	42.9	2.3	43.4	61.5	58.0	50.1	55.7	63.4	48.9	54.4	0	00	2.9	0.0
C.V.	12.7	6.0	14.4	11.7	7.4	7.1	6.8	4.7	4.7	6.2	6.9	0	00	0.0	0.0
LSD (5%)	1.1	1.8	0.2	8.3	7.5	6.7	5.5	4.2	4.8	4.9	2.5	0	00	0.0	0.0
F-TEST VALUE	26.0	4.4	11.3	3.8	1.7	2.3	4.2	2.8	3.0	5.9	3.4	0	00	0.0	0.0
NO. OF REPS	15.0	20.0	20.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	21.0	0	00	18.0	0.0

"EXHIBIT B"

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

AP 1650 is most similar to the variety "AP 1776". However, AP 1650 differs from AP 1776 in pod color. AP 1650 has brown pods where AP 1776 has tan.

FORM APPROVED: OMB NO. 0581-0055

EXHIBIT C
(Soybean)

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (Glycine max L.)

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
Nickerson American Plant Breeders		AP 1650

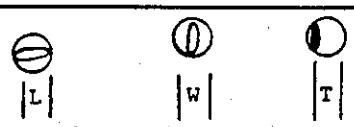
ADDRESS *(Street and No., or R.F.D. No., City, State, and Zip Code)*
5201 Johnson Drive
Mission, KS 66205

FOR OFFICIAL USE ONLY
PVPO NUMBER
8900009

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g., [0][9]). Starred characters ★ are considered fundamental to an adequate soybean variety description. Other characters should be described when information is available.

1. SEED SHAPE:

[2]



1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)
2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)
3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)
4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

★ 2. SEED COAT COLOR: (Mature Seed)

[1] 1 = Yellow 2 = Green 3 = Brown 4 = Black 5 = Other *(Specify)* _____

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

2 RJS 1/4/89 PER APPLICANT'S LETTER OF 12/13/88

[~~1~~] 1 = Dull ('Corsoy 79'; 'Braxton') 2 = Shiny ('Nebsoy'; 'Gasoy 17')

★ 4. SEED SIZE: (Mature Seed)

[1][7] Grams per 100 seeds

★ 5. HILUM COLOR: (Mature Seed)

[1] 1 = Buff 2 = Yellow 3 = Brown 4 = Gray 5 = Imperfect Black 6 = Black 7 = Other *(Specify)* _____

★ 6. COTYLEDON COLOR: (Mature Seed)

[1] 1 = Yellow 2 = Green

★ 7. SEED PROTEIN PEROXIDASE ACTIVITY:

1 RJS 1/4/89

[~~2~~] 1 = Low 2 = High

★ 8. SEED PROTEIN ELECTROPHORETIC BAND:

[2] 1 = Type A ($SP1^a$) 2 = Type B ($SP1^b$)

★ 9. HYPOCOTYL COLOR:

[4] 1 = Green only ('Evans'; 'Davis') 2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')
3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')
4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

★ 10. LEAFLET SHAPE:

[3] 1 = Lanceolate 2 = Oval 3 = Ovate 4 = Other *(Specify)* _____

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11. LEAFLET SIZE:

[2] 1 = Small ('Amsoy 71'; 'A5312') 2 = Medium ('Corsoy 79'; 'Gasoy 17') 3 = Large ('Crawford'; 'Tracy')

12. LEAF COLOR:

[3] 1 = Light Green ('Weber'; 'York') 2 = Medium Green ('Corsoy 79'; 'Braxton') 3 = Dark Green ('Gnome'; 'Tracy')

★ **13. FLOWER COLOR:**

[2] 1 = White 2 = Purple 3 = White with purple throat

★ **14. POD COLOR:**

[2] 1 = Tan 2 = Brown 3 = Black

★ **15. PLANT PUBESCENCE COLOR:**

[1] 1 = Gray 2 = Brown (Tawny)

16. PLANT TYPES:

[1] 1 = Slender ('Essex'; 'Amsoy 71') 2 = Intermediate ('Amcor'; 'Braxton') 3 = Bushy ('Gnome'; 'Govan')

★ **17. PLANT HABIT:**

[3] 1 = Determinate ('Gnome'; 'Braxton') 2 = Semi-Determinate ('Will') 3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

★ **18. MATURITY GROUP:**

[0][4] 1 = 000 2 = 00 3 = 0 4 = I 5 = II 6 = III 7 = IV 8 = V 9 = VI 10 = VII 11 = VIII 12 = IX 13 = X

★ **19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)**

BACTERIAL DISEASES:

★ [0] Bacterial Pustule *(Xanthomonas phaseoli* var. *sojensis)*

★ [0] Bacterial Blight *(Pseudomonas glycinea)*

★ [0] Wildfire *(Pseudomonas tabaci)*

FUNGAL DISEASES:

★ [0] Brown Spot *(Septoria glycines)*

Frogeye Leaf Spot *(Cercospora sojina)*

★ [0] Race 1 [0] Race 2 [0] Race 3 [0] Race 4 [0] Race 5 [ ] Other *(Specify)* _____

[0] Target Spot *(Corynespora cassiicola)*

[0] Downy Mildew *(Peronospora trifoliorum* var. *manshurica)*

[0] Powdery Mildew *(Microsphaera diffusa)*

★ [0] Brown Stem Rot *(Cephalosporium gregatum)*

[0] Stem Canker *(Diaporthe phaseolorum* var. *caulivora)*

19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

FUNGAL DISEASES: (Continued)

★ [0] Pod and Stem Blight *(Diaporthe phaseolorum* var; *sojae)*

[0] Purple Seed Stain *(Cercospora kikuchii)*

[0] Rhizoctonia Root Rot *(Rhizoctonia solani)*

Phytophthora Rot *(Phytophthora megasperma* var. *sojae)*

★ [2] Race 1 [2] Race 2 [1] Race 3 [1] Race 4 [1] Race 5 [1] Race 6 [1] Race 7

[1] Race 8 [1] Race 9 [ ] Other *(Specify)* _____

VIRAL DISEASES:

[0] Bud Blight (Tobacco Ringspot Virus)

[0] Yellow Mosaic (Bean Yellow Mosaic Virus)

★ [0] Cowpea Mosaic (Cowpea Chlorotic Virus)

[0] Pod Mottle (Bean Pod Mottle Virus)

★ [0] Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

Soybean Cyst Nematode *(Heterodera glycines)*

★ [0] Race 1 [0] Race 2 [1] Race 3 [0] Race 4 [0] Other *(Specify)* _____

[0] Lance Nematode *(Hoplolaimus Colombus)*

★ [0] Southern Root Knot Nematode *(Meloidogyne incognita)*

★ [0] Northern Root Knot Nematode *(Meloidogyne Hapla)*

[0] Peanut Root Knot Nematode *(Meloidogyne arenaria)*

[0] Reniform Nematode *(Rotylenchulus reniformis)*

[ ] OTHER DISEASE NOT ON FORM *(Specify)*: _____

20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

★ [2] Iron Chlorosis on Calcareous Soil

[ ] Other *(Specify)* _____

21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

[0] Mexican Bean Beetle *(Epilachna varivestis)*

[0] Potato Leaf Hopper *(Empoasca fabae)*

[ ] Other *(Specify)* _____

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	AP 1776	Seed Coat Luster	AP 1776
Leaf Shape	AP 1776	Seed Size	AP 1776
Leaf Color	AP 1776	Seed Shape	AP 1776
Leaf Size	AP 1776	Seedling Pigmentation	AP 1776

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data 8900009

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/ POD
				CM Width	CM Length	% Protein	% Oil		
Submitted	102	1.8	91	6.1	11.2	38.8	20.6	17	N/D
AP 1776 Name of Similar Variety	104	1.5	93	6.2	11.4	37.8	20.5	17	N/D

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A_2 in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

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"EXHIBIT E"

Nickerson American Plant Breeders, through various changes in corporate structure and purchases, are sole owners of the assets of the previous companies North American Plant Breeders and AgriPro, Inc. The ownership comprises all the soybean genetic material, including the variety AP 1650.

Wayne R. Ellingson
Signature

Wayne R. Ellingson

Director of Oilseeds Research