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International Soybean Variety Experiment

Tenth Report of Results
1983

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FOREWORD

INTSOY has focused its efforts on the improvement of soybean production and use in the tropical and subtropical regions of the world where protein, calorie, and nutrition problems tend to be concentrated. The International Soybean Variety Evaluation Experiment (ISVEX) is the major component of INTSOY's genetic improvement program.

The trials provide cooperating scientists with the opportunity to have their elite breeding material evaluated globally and compared with cultivars from other countries. Information from past trials has added to the broad understanding of soybean genetic response to different environments. Scientists in more than twenty countries have identified cultivars from these trials to grow commercially. Many others have used this germplasm in their breeding programs.

The tenth report of results covers the year 1983. The trials reported in this publication were evaluated by cooperators in fifty countries. Cultivars were contributed by breeders from fourteen countries. Seeds and materials were prepared and distributed by INTSOY at the request of the cooperating scientists. Each cooperator provided land, labor, fertilizer, and management necessary for the experiment. We express our thanks and appreciaton to these scientists and their organizations, whose cooperation is essential to the success of ISVEX. Their names and addresses are listed immediately following this foreword. Also we wish to thank those organizations which assisted in distributing the trials. Notable among these are the Food and Agriculture Organization (FAO), United Nations Development Program (UNDP), and the U.S. and French governments.

Dr. Joseph A. Jackobs provides leadership to the ISVEX trial program. He has been ably assisted by Mr. Danny R. Erickson, Assistant Agronomist in seed increase; Mr. Charles A. Smyth, Assistant Statistician in data analysis; Mrs. Carol Willms in data entry; Mrs. Jean Creswell in the handling of correspondence and records verification; and Ms. Bonnie J. Irwin in editing.

INTSOY is pleased to add this tenth report of results to the INTSOY publication series. We very much welcome your response.

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INTERNATIONAL SOYBEAN VARIETY EXPERIMENT

Tenth Report of Results, 1983

This publication is the tenth report of results from the International Soybean Variety Evaluation Experiment (ISVEX), organized in 1973 by the International Soybean Program (INTSOY) of the University of Illinois at Urbana-Champaign and the University of Puerto Rico at Mayaguez, under a contract with the Agency for International Development, U. S. Department of State.

ISVEX is designed to

- test the adaptation of soybean cultivars (varieties) under a wide range of environmental conditions
- provide research workers with an opportunity to compare local and introduced cultivars
- provide a source of new germplasm which a cooperator can incorporate into a breeding program
- identify areas of the world that have the potential for soybean production
- evaluate the response of soybeans to different environments

MATERIALS AND METHODS

ISVEX Sites

In 1983, institutions and individuals around the world were contacted concerning their interest in conducting ISVEX. Scientists who agreed to participate in the ISVEX network were sent soybean seed and instructions for management and data collection. The seed was packaged for individual row planting and granular inoculant was provided for distribution in the row with the seed. The experiment was designed as a randomized complete block with four replications. Each cultivar was planted in a plot in each of the four blocks (replications). A plot consisted of four rows 5 m long and 60 cm apart. Data were obtained from the center two rows.

It was suggested in the instructions that the trial site have a uniform crop history and well drained soil. A soil analysis was recommended for determination of pH, organic matter, phosphorus, and potassium. It was also recommended that 25 kg/ha N, 25 kg/ha P, and 25 kg/ha K be applied and worked into the plot prior to planting.

Sufficient seed was provided to overplant by approximately 75%. It was recommended that the plants be thinned soon after emergence to a stand of one plant per 5 cm.

Mechanical or chemical methods of weed control were suggested according to the facilities available to the cooperator. Chemicals were suggested for use in control of insects.

Cultivars

Cultivars entered in the 1983 ISVEX were selected for various traits, including agronomic performance, maturity group classification, seed availability, uniform seed quality, and adaptability. Cultivars in earlier trials which demonstrated consistently high yields were selected for introduction into the ISVEX trials. There were forty-three cultivars entered in the 1983 ISVEX (table 1).

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Table 1. Pedigree and origin of soybean cultivars entered in the 1983 International Soybean Variety Evaluation Experiment (ISVEX)

Cultivar	Maturity group	Pedigree	Origin or Sponsor
AGS 66	N/A	Forrest × Shih Shih	S. Shanmugasundaram and K. T. Lee, AVRDC, Taiwan, China
AGS 8	N/A	CH #1 × Anoka	S. Shanmugasundaram T. Tong-Shroung, and K. T. Lee, AVRDC, Taiwan, China
BM-2	N/A	Kahala × Lee 68	N. Banafunzi, Instituto Tecnológico de Monterey, Mexico
Braxton	VII	F59-1505 × (Bragg[3] × D60-7965)	Florida AES and USDA, U.S.A.
BSR 201	II	Pride B216 × AX901-40-2	Iowa Agric. Home Econ. Exp. Stn. and USDA, U.S.A.
Calland	III	(Blackhawk × Harosoy) × Kent	Purdue University AES and USDA, U.S.A.
Clay	0	Renville × Capital	J. W. Lambert, Minnesota AES and USDA, U.S.A.
Corsoy 79	II	Corsoy[6] × Lee 68	R. L. Bernard, Illinois AES and USDA, U.S.A.
Crawford	IV	Williams × Columbus	C. D. Nickell and F. W. Schwenk, Kansas AES and USDA, U.S.A.
Davis	VI	[Roanoke × (Ogden × CNS)] × (Ralsoy × Ogden)	Arkansas AES and USDA, U.S.A.
DB 1601	N/A	Davis × Bragg	J. Rose and L. Jinner, Queensland Department of Primary Industries, Australia
Duocrop	VII	Davis × Columbus	R. Boerma, Georgia AES, U.S.A.
Ecuador 1	N/A	Jupiter × F65-170	E. Calero and G. Diaz, INIAP, Ecuador
EGSY 91-7	N/A	Bethel × Abura	F. Ballon and R. Matias, BPI, Philippines
Essex	V	Lee × S5-7075	T. Smith and H. Camper, Virginia AES and USDA, U.S.A.
Evans	0	Merit × Harosoy	J. Lambert and B. Kennedy, Minnesota AES and USDA, U.S.A.
Fayette	III	Williams × P.I. 88.788	Illinois AES and USDA, U.S.A.
F75-9207	IX	F64-2571 × (D60-7965 × F64-2862)	K. Hinson, University of Florida and USDA, U.S.A.
G 2120	N/A	Selection from P.I. 86.736	S. Shanmugasundaram, AVRDC, Taiwan, China
HM-1	N/A	UPSS-3 × Clark-63	S. R. Khurang and T. P. Yadava, Haryana Agricultural University, India
Hobbit	III	Hodgson[7] × Ransom	OARDC and USDA, U.S.A.
Hodgson 78	I	Hodgson × Merit	J. Lambert and B. Kennedy, Minnesota AES and USDA, U.S.A.
IAC-6	N/A	Selection from bulk RB71-2	M. A. C. Miranda, IAC, Brazil
IAC-8	N/A	Bragg × E70-51	M. A. C. Miranda, IAC, Brazil
ICA L-109	N/A	Hardee × (C. Hill × P.I. 274.454)	G. Bastidas, ICA, Colombia
ICA L-124	N/A	Mandarin × (Davis × Hill)	G. Bastidas, ICA, Colombia

Continued

Table 1. Pedigree and origin of soybean cultivars entered in the 1983 International Soybean Variety Evaluation Experiment (ISVEX), continued

Cultivar	Maturity group	Pedigree	Origin or Sponsor
ICA L-129	N/A	ICA Pance × Uganda local	G. Bastidas, ICA, Colombia
Improved Pelican	VIII	Tanloxi × P.I. 60.406	Louisiana AES, U.S.A.
ISRA/IRAT 44A/73	N/A	72-20(F3) × Geduld	J. Larcher, ISRA and IRAT, Senegal
Jupiter	IX	D49-2491 × P.I. 240.664	K. Hinson, Florida AES and USDA, U.S.A.
Lakota	I	Selection from AP6(S1)C1	Iowa Agric. Home Econ. Exp. Stn. and USDA, U.S.A.
Lawrence	IV	Calland × Williams	R. L. Bernard, Illinois AES and USDA, U.S.A.
Mead	III	Bonus × Wayne	J. Williams, Nebraska AES and USDA, U.S.A.
Pixie	IV	Williams × Ransom	OARDC and USDA, U.S.A.
PK-73-86	N/A	UPSL 85 × Hardee	B. B. Singh, G. B. Pant University of Agriculture and Technology, India
Platte	II	Amsoy 71 × (Adelphia[8] × Mukden)	J. Williams, Nebraska AES and USDA, U.S.A.
R-315	N/A	N/A	R.A. Otero and J.M. Alvarez, Ministerio de Agricultura, Cuba
SH 1274	N/A	Semstar × Hill	J. Rose and L. Jinner, Queensland Department of Primary Industries, Australia
SIATSA 194	N/A	Biloxi × Hardee	J. Romero, SIATSA, Honduras
Sparks	IV	Williams × Calland	Kansas AES and USDA, U.S.A.
UFV-1	VIII	D49-2491(2) × Improved Pelican (Vicoja Selection)	Universidad Federal de Vicosa, Brazil
Weber	I	C1453 × Swift	J. Bahrenfus and W. Fehr, Iowa Agric. Home Econ. Exp. Stn. and Puerto Rico AES, U.S.A.
Williams 82	III	Williams[7] × Kingwa	R. L. Bernard, Illinois AES and USDA, U.S.A.
71-38	N/A	Gilbert × K53	F. Javaheri and D. E. Byth, Department of Agriculture, Zambia

N/A indicates information is not available at this time.

Each year, a high proportion of cultivars from the tropics and subtropics are included in the ISVEX. In 1983, twenty-seven of the forty-three cultivars were adapted to the tropics and subtropics. Of the twenty-seven, eighteen were selected and developed in these regions.

The cultivars were divided into three groups according to their maturity and were distributed among cooperators according to the environmental zone of the site (table 2). Later-maturing cultivars were distributed in subtropical and tropical zones while earlier-maturing cultivars were dispatched to more temperate areas. These groups are designated A (tropical), B (subtropical), and C (temperate).

The ISVEX instructions indicated that the cooperator could substitute one or two local soybean cultivars for those which were supplied by INTSOY. A number of substitutions were made and the data on their performance is included in the analysis of data for each location (tables 9-88).

Table 2. Soybean cultivars grown in the 1983 International Soybean Variety Evaluation Experiment (ISVEX)

Group A — Tropical		Group B — Subtropical		Group C — Temperate	
Cultivar	Days to maturity	Cultivar	Days to maturity	Cultivar	Days to maturity
		AGS 66	102.0		
AGS 8	91.6	AGS 8	110.4		
		BM-2	105.6		
Braxton	93.0	Braxton	107.3		
				BSR 201	107.9
				Clay	96.1
				Corsoy 79	109.4
				Crawford	123.6
Davis	92.8	Davis	114.1		
		DB 1601	112.2		
		Duocrop	116.1		
		Ecuador 1	123.9		
EGSY 91-7	93.6	EGSY 91.7	111.0		
		Essex	105.1		
				Evans	99.6
				Fayette	116.4
F75-9207	101.6				
		G 2120	123.3		
		HM-1	119.2		
				Hobbit	114.2
				Hodgson 78	103.5
IAC-6	105.7				
IAC-8	103.7				
ICA L-109	107.2				
		ICA L-124	117.1		
ICA L-129	100.7				
Improved Pelican	96.0	Improved Pelican	120.3	Improved Pelican	120.3
ISRA/IRAT 44A/73	102.0				
Jupiter	106.8	Jupiter	129.1		
				Lakota	104.2
				Lawrence	120.0
				Mead	112.6
				Pixie	118.2
		PK-73-86	114.9		

Continued

Table 2. Soybean cultivars grown in the 1983 International Soybean Variety Evaluation Experiment (ISVEX), continued

Group A — Tropical		Group B — Subtropical		Group C — Temperate	
Cultivar	Days to maturity	Cultivar	Days to maturity	Cultivar	Days to maturity
				Platte	110.4
R-315	91.3	R-315	108.2		
SH 1274	93.7	SH 1274	111.3		
SIATSA 194	102.0	SIATSA 194	123.9		
				Sparks	121.5
UFV-1	102.7	UFV-1	121.9		
				Weber	105.7
				Williams 82	116.4
71-38	103.8				

Note: Days to maturity as calculated in Table 5.

Experimental Sites

The experimental sites were divided into thirteen environmental zones which were defined by latitude and altitude. These zones were defined by each 10° increment in latitude from the equator, and by three altitude ranges: 0-500 m, 501-1000 m, and over 1000 m (table 3). Separating the trial sites by latitude permitted evaluation of cultivars under different conditions of day length. Separating by altitude permitted evaluation under different conditions of day- and nighttime temperatures. There was some variation within each zone in temperature, moisture, and solar radiation.

Planting date for each site was determined by the environment and plantings were made throughout the year. Many researchers and scientists are beginning to use ISVEX material in various cropping systems.

For the 1983 ISVEX, 159 trials were dispatched to sixty-seven countries. Data were returned for 80 trials from fifty countries (table 4, figure 1). Of the fifty countries, eighteen were in Africa, eleven in Asia, eight in South America, nine in MesoAmerica, and five in Europe, the Middle East, and North America. The cultivars were evaluated under a wide range of environmental conditions. The northernmost site was Novi Sad, Yugoslavia (45°20'N, 19°31'E, 86 m). The southernmost site was Venado Tuerto, Argentina (34°S, 62°W, 100 m). The location of the highest test was Cosio, Aguascalientes, Mexico (22°17'N, 102°15'W, 1,950 m). The lowest site was Contuboel, Guinea-Bissau (12°40'N, 102°15'W, 8.5 m).

Table 3. Description of environmental zones in the 1983 International Soybean Variety Evaluation Experiment (ISVEX)

Zone	Latitude	Elevation (m)	Number of sites
1	0°-10°59'	≤500	19
2	0°-10°59'	501-1,000	3
3	0°-10°59'	>1,000	2
4	11°-20°59'	≤500	16
5	11°-20°59'	501-1,000	6
6	11°-20°59'	>1,000	5
7	21°-30°59'	≤500	10
8	21°-30°59'	501-1,000	1
9	21°-30°59'	>1,000	4
10	31°-40°59'	≤500	8
11	31°-40°59'	501-1,000	2
12	31°-40°59'	>1,000	0
13	≥41°	≥0	1

The symbols >, ≥, and ≤ refer to greater than, greater than or equal to, and less than or equal to, respectively.

TABLE 4. Geographical description of sites where the 1983 International Soybean Variety Evaluation Experiment (ISVEX) was conducted and from which useful data were returned to INTSOY

Country	Site	Trial number	Latitude	Longitude	Elevation (m)	Zone	Group
Algeria	IDCI, Khemis Miliana	83528	36°15'N	2°16'E	289	10	C
Argentina	Venado Tuerto	83526	34°S	62°W	100	10	C
Bangladesh	Feni	83437	23°N	91°25'E	10	7	B
Bolivia	Estación Experimentál "Gran Chaco"	83439	21°57'S	63°39'W	600	8	B
Burma	Ingapu Township	83151	17°24'N	95°02'E	500	1	A
	Kyaikmarau Township, Mon State	83429	18°N	97°E	110	4	B
Cameroon	Dschang	83409	5°27'N	10°05'E	450	3	B
Chile	Pirque, Región Metropolitana de Santiago	83525	33°40'S	70°36'W	654	11	C
China	AVRDC, Taiwan	83400	23°07'N	120°17'E	9	7	B
Colombia	ICA Palmira	83107	3°32'N	76°17'W	1,008	3	A
Costa Rica	Filadelfia, Guanacaste	83163	10'26'N	85°35'W	17	1	A
	Quepos, Pacífico Central	83175	10°N	85°W	30	1	A
	Cañas, Guanacaste	83162	10°25'N	85°10'W	90	1	A
Cuba	Estación Experimentál de Granos	83153	23°51'N	82°31'W	50	7	A
		83427	23°51'N	82°31'W	50	7	B
Dominica	Royal Botanical Gardens, Roseau	83123	16°N	61°W	50	4	A
Ecuador	Estación Experimentál Pichilingue	83125	1°06'S	79°29'W	73	0	A
	Estación Experimentál Boliche	83128	2°15'S	79°15'W	17	1	A
Egypt	Kalubia, Shalakan	83523	30°N	31°E	20	7	C
El Salvador	Estación Experimentál de San Andrés	83164	13°49'N	89°24'W	460	4	A
Gabon	Lebamba	83190	2°03'S	11°12'E	200	1	A
	Ntoum	83102	0°05'N	9°45'E	18	1	A
Gambia	Banjulunding (Site III)	83165	14°N	13°W	15	4	A
Ghana	MIM Brong-Ahafo	83137	7°N	2°W	250	1	A
Guatemala	Cuyuta, Escuintla	83147	14°07'N	91°09'W	48	4	A
	La Maquina	83148	14°23'N	91°35'W	100	4	A
	Chimaltenango	83502	14°39'N	90°49'W	1,800	7	C
Guinea-Bissau	Contuboel	83109	12°40'N	14°25'W	9	1	A
Honduras	Escuela Agrícola Panamericana, El Zamorano	83172	14°N	87°02'W	800	5	A
		83176					A
Indonesia	Bogor	83126	6°40'N	107°E	270	1	A
Korea	Suweon	83517	37°17'N	126°59'E	37	10	C
Laos	Centre de la Recherche National, Naphok	83192	17°08'N	102°06'E	47	4	A
Madagascar	Mandoto Amparihy	83184	19°47'S	46°11'E	900	5	A
		83435	19°47'S	46°11'E	900	5	B

Continued

TABLE 4. Geographical description of sites where the 1983 International Soybean Variety Evaluation Experiment (ISVEX) was conducted and from which useful data were returned to INTSOY, continued

Country	Site	Trial number	Latitude	Longitude	Elevation (m)	Zone	Group
Mali	Station of Sotuba, Bamako	83124	12°39'N	7°56'W	320	4	A
Mexico	Campo Agrícola Experimentál Huastecas	83145	22°35'N	98°10'W	60	7	A
	Estación Experimentál Centro Agropecuario, Aguascalientes	83404	21°58'N	102°21'W	1,800	9	B
	Centro de Bachillerato Tecnológico Agropecuario, Cosio, Aguascalientes	83407	22°17'N	102°15'W	1,950	9	B
Morocco	Moulouya, Semvia Slimania	83412	34°55'N	2°19'E	85	10	B
	Taroudant, Ormva Agadir	83509	30°N	9°E	350	7	C
Nepal	Khumaltar Experimental Farm	83413	27°40'N	85°20'E	1,360	9	B
Pakistan	Peshawar	83433	34°N	72°E	340	10	B
	N.A.R.C. Islamabad	83519	33°N	73°E	550	11	C
	Tsaap Field Center	83902	31°19'N	74°05'E	225	10	I
Paraguay	Instituto Agronómico Nacional, Caacupé	83434	25°24'S	57°06'W	228	7	B
Peru	Universidad Nacional Agrária, Guayabo I	83188	12°06'S	77°07'W	255	4	A
Philippines	General Santos City, South Cotabato	83129	6°07'N	125°11'E	15	1	A
Portugal	Estacao Agronomica Nacional, Oeiras	83506	38°45'N	9°W	10	10	C
Puerto Rico	Isabela	83150	18°N	67°W	128	4	A
Saint Lucia	Union Agricultural Station, Castries	83115	14°51'N	61°21'W	260	4	A
Senegal	Sefa	83156	12°47'N	15°22'W	10	1	A
Somalia	Afgoi	83104	3°30'N	46°35'E	50	1	A
South Africa	Groblersdal	83401	25°24'S	29°22'E	1,009	9	B
	Potchefstroom	83500	26°44'S	27°05'E	1,345	9	C
Sri Lanka	Maha Illuppallama	83108	8°05'N	83°28'E	138	1	A
Sudan	Cezira Research Station, Wad Medani	83134	14°24'N	33°29'E	400	4	A
		83421					B
	Kadugh, Telo	83405	11°N	29°E	501	5	B
	Kenana Research Station, Agadi	83414	12°44'N	34°07'E	435	4	B
Thailand	Srisumrons Field Crop Experiment Station	83132	17°20'N	99°52'E	54	4	A
	Suwan Farm	83168	14°30'N	101°30'E	300	4	A
	Nakornsawon Field Crop Research Center	83171	15°21'N	100°30'E	87	5	A
Turkey	Menemen, Izmir	83901	38°35'N	27°04'E	10	10	I

Continued

TABLE 4. Geographical description of sites where the 1983 International Soybean Variety Evaluation Experiment (ISVEX) was conducted and from which useful data were returned to INTSOY, continued

Country	Site	Trial number	Latitude	Longitude	Elevation (m)	Zone	Group
United States	Weslaco, Texas	83438	26°N	97°W	30	7	B
	Urbana, Illinois	83516	40°07'N	88°13'W	226	10	C
Upper Volta	Nangoloko	83122	10°N	5°W	300	1	A
	Saria Station	83127	12°16'N	2°09'W	300	4	A
Venezuela	Estación Experimentál de Cagua	83159	10°11'N	67°30'W	430	1	A
Yugoslavia	Novi Sad	83529	45°20'N	19°31'E	86	13	C
	Brčko Agricultural Station	83907	44°08'N	18°08'W	90	13	†
Zaire	INERA Station, Gandajika	83169	6°45'S	23°57'E	780	2	A
		83187					A
		83443					B
	INERA, M'vuazi	83431	5°27'S	14°54'E	450	1	B
Zambia	Magoye	83178	16°01'S	27°46'E	1,067	6	A
	Copperbelt Regional Research Station	83179	12°37'S	28°09'E	1,265	6	A
	Misamfu Regional Research Station	83180	10°13'S	31°08'E	1,384	3	A
Zimbabwe	Rattray Arnold Research Station	83419	17°40'S	31°14'E	1,300	6	B
	Harare Research Station	83428	17°48'S	31°03'E	1,506	6	B

† These trials were site specific and were not included in the group analysis.
NOTE: Days to maturity as calculated in Table 5.

DATA COLLECTED

Cooperators reported the following agronomic characteristics for each plot:

Yield: Weight in grams of clean, dry grain from 5 m of the two center rows (harvest area = 6 m^2).

Days to flower: Days from date of emergence to date when 50% of the plants had flowered.

Days to maturity: Days from date of emergence to date when 95% of the pods were ripe.

Plant height at maturity: Height in centimeters from the ground surface to the top of the main stem at maturity.

Lodging score: Estimated rate of lodged plants on a scale of 1 (all erect) to 5 (all down) as observed at time of maturity.

Shattering score: Estimated rating of the amount of shattering of seed from the pods on a scale of 1 (no seed shattered) to 5 (over 50% shattered) at the time of maturity.

Plants harvested: Total number of plants harvested.

Pods per plant: Mean number of pods per plant estimated from ten plants.

Seed weight: Weight in grams of 100 randomly selected seeds from the dried, cleaned grain.

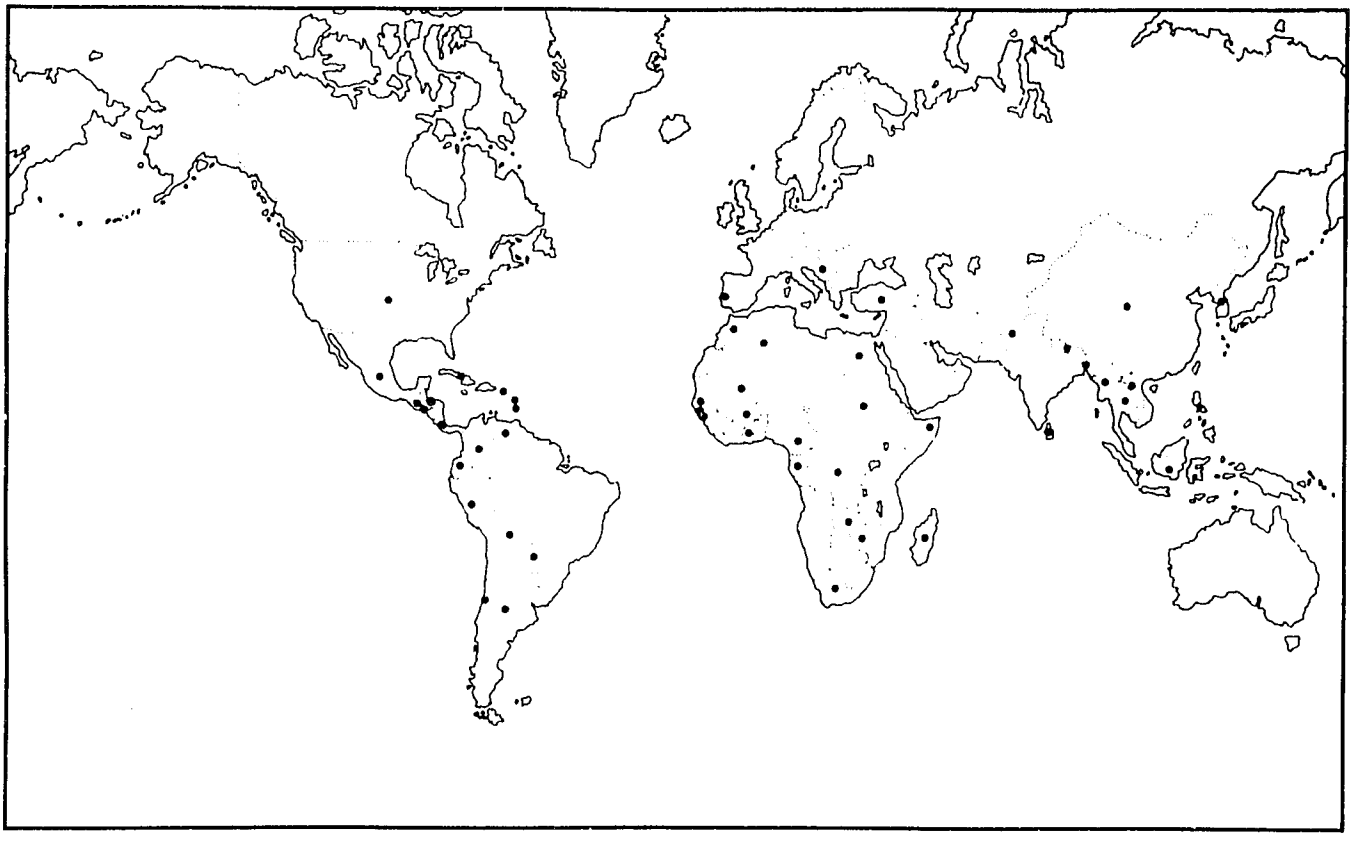
Quality of seed: Estimated rating of seed quality after harvest. Considered were the amount of wrinkling, defective seed coats, off-color seeds, and moldy or rotten seeds. A scale of 1 (very good quality) to 5 (very poor quality) was used.

Seed germination: Number of seeds germinated out of 100 randomly selected seeds.

STATISTICAL ANALYSIS OF DATA

Statistics were computed for variables from each experimental site. For each agronomic characteristic these included the mean, standard error of a cultivar mean, coefficient of variation, and the least significant difference (LSD) of cultivar means at the 5% level. Correlation coefficients were computed between the agronomic characteristics measured for each site, and an analysis of variance (randomized complete block) was performed for complete data. Some missing data were allowed.

Figure 1. Countries from which data were returned in the 1983 International Soybean Variety Evaluation Experiment (ISVEX).



NORTH AMERICA
United States

MESO AMERICA
Costa Rica
Cuba
Dominica
El Salvador
Guatemala
Honduras
Mexico
Puerto Rico
Saint Lucia

SOUTH AMERICA
Argentina
Bolivia
Chile
Colombia
Ecuador
Paraguay
Peru
Venezuela

EUROPE
Portugal
Yugoslavia

MIDDLE EAST
Turkey

AFRICA
Algeria
Cameroon
Egypt
Gabon
Gambia
Ghana
Guinea-Bissau
Madagascar
Mali
Morocco
Senegal
Somalia
South Africa
Sudan
Upper Volta
Zaire
Zambia
Zimbabwe

ASIA
Bangladesh
Burma
China
Indonesia
Korea
Laos
Nepal
Pakistan
Philippines
Sri Lanka
Thailand

The results of these individual analyses were reported to the cooperator(s) and a portion of these results are reproduced in tables 9 - 88.

The performance of each cultivar over the sites in the experiment was characterized. The data were adjusted to remove the effect of location and then combined over locations within cultivar groups (groups A, B, and C). For each agronomic characteristic the adjusted value of each cultivar-location combination was calculated from the observed value at a given location multiplied by the ratio of the mean value of check cultivars over all locations to the mean value of check cultivars at a given location. A check cultivar was defined as any cultivar that was present in almost all trials of a group. It could be missing from up to two experiments.

The adjusted values have had the effect of environment (as measured by the check cultivars) removed. Consequently, the mean of the adjusted values of the checks at each location will be the same as the mean of the check cultivars over all locations. The adjusted values were used to

- give equal weight to each location in determining the relative performance of cultivars over all locations
- permit the comparison of cultivar means where the cultivars are grown at a different number of locations
- determine the relative stability of the performance of a cultivar over a wide range of environments.

The standard deviation of the adjusted values of a cultivar at all locations is a measure of the interaction of a cultivar with location because the effect of location has been removed. Variation in the adjusted values of a cultivar is due to its failure to perform the same (in relation to the checks) at all locations. The magnitude of the standard deviations for the various characters varies widely because they reflect the units of measurement. To make comparisons between cultivars easier, a stability index was calculated as the ratio of the standard deviation of the adjusted values of a cultivar over all locations to the mean standard deviation of all cultivars over all locations. Hence, the average stability index of all cultivars equals 1.

The influence of latitude, altitude, and environment (as measured by the average mean yield of the checks) on the relative performance of cultivars in terms of adjusted yield, days to flowering, and days to maturity was determined through multiple regression. The partial regression coefficients of the adjusted values for yield, days to flower, and days to maturity on the independent factors are a measure of the interaction of the cultivar with the independent factor. In other words, a partial regression coefficient exists because the cultivar did not respond the same as the checks did on average. Multiple regression equations were calculated separately for groups A, B, and C. To further explore the results of the multiple regression analysis, the association between the partial regression coefficients and average days to maturity was calculated. This correlation measures the level of association of the cultivar characterization by days to maturity with the interaction of checks and cultivars given by the partial regression coefficients.

RESULTS AND DISCUSSION

The data in table 5 summarize the performance characteristics of the forty-three cultivars which were included in five or more trials. Data for a cultivar included in more than one group are presented on consecutive lines. In this manner, all information on a cultivar is in one location. Days to maturity is the most important characteristic in determining where a cultivar can be grown successfully. For this reason, the cultivars have been placed in the order of their maturity from latest to earliest. When comparing cultivars, only data from within a group should be used.

Ten cultivars were included in both group A (tropical) and group B (subtropical) trials. The mean adjusted yield of the cultivars in group A (1,696.8 kg/ha) was 179.3 kg/ha lower than that of group B (1,876.1 kg/ha). Within a cultivar the difference was related to relative maturity (figure 2). When moved from the tropics to the subtropics the yields of the later-maturing cultivars were reduced much more than the yields of the earlier-maturing cultivars. The earlier-maturing cultivars performed nearly as well in the tropics as in the subtropics.

Table 5. Performance characteristics[a] of soybean cultivars

Cultivar	Group[b]	Number of trials	Yield (kg/ha)	Days to flower	Days to maturity	Plant height (cm)	Lodging[c]	Shattering[d]	Pod height (cm)	Weight per 100 seeds (g)	Seed quality[e]	Percent germination
ICA L-109	A	41	1,585	44.9	107.2	68.1	1.8	1.2	11.7	11.5	2.6	80.7
Jupiter	A	40	1,844	44.4	106.8	67.9	1.9	1.1	13.9	17.0	2.6	71.9
Jupiter	B	18	1,693	70.2	129.1	86.4	2.8	1.2	17.0	14.9	2.6	63.2
IAC-6	A	41	1,780	44.4	105.7	69.1	2.0	1.1	14.6	13.7	2.4	78.6
71-38	A	40	1,707	39.2	103.8	43.9	1.4	1.3	8.9	12.2	2.8	58.4
IAC-8	A	40	1,877	41.6	103.7	68.5	2.2	1.2	14.7	17.4	2.5	75.5
UFV-1	A	18	2,006	37.6	102.7	43.3	1.2	1.2	9.8	15.4	2.1	70.1
UFV-1	B	8	2,418	56.8	121.9	61.1	1.7	1.1	12.6	14.3	2.3	63.7
ISRA/IRAT 44A/73	A	40	1,781	40.5	102.0	59.4	2.0	1.2	11.2	13.5	2.4	91.0
SIATSA 194	A	41	1,904	40.6	102.0	80.6	2.1	1.4	16.1	18.6	2.5	78.7
SIATSA 194	B	15	1,858	62.2	123.9	96.0	2.6	1.4	17.3	17.0	2.4	65.2
F75-9207	A	41	1,722	35.8	101.6	50.4	1.3	1.2	10.3	14.4	2.2	84.5
ICA L-129	A	41	1,589	38.4	100.7	63.1	1.7	1.2	11.4	15.0	2.6	85.1
Improved Pelican	A	37	1,552	36.2	96.0	71.3	1.7	1.2	13.1	12.9	2.1	68.9
Improved Pelican	B	9	1,385	57.0	120.3	81.8	1.9	1.5	14.0	11.7	2.2	76.8
SH 1274	A	40	1,661	32.7	93.7	66.4	2.1	1.2	10.2	15.4	2.3	67.8
SH 1274	B	20	1,914	46.2	111.3	75.9	2.8	1.3	11.9	15.5	2.3	59.0
EGSY 91-7	A	41	1,679	34.3	93.6	50.7	1.7	1.8	10.6	14.8	2.2	79.0
EGSY 91-7	B	20	1,657	49.0	111.0	63.2	2.5	2.3	12.8	14.6	2.4	66.6
Braxton	A	41	1,571	29.7	93.0	34.1	1.1	1.1	7.3	19.3	2.9	64.3
Braxton	B	20	1,968	42.9	107.3	48.5	1.4	1.2	9.4	19.4	2.6	74.4
Davis	A	40	1,799	31.5	92.8	34.1	1.1	1.2	7.5	17.4	2.4	57.3
Davis	B	19	2,047	47.6	114.1	51.4	1.8	1.3	10.0	16.3	2.6	56.6
AGS 8	A	37	1,500	34.0	91.6	66.3	2.0	1.8	12.4	14.3	2.5	75.0
AGS 8	B	5	1,810	51.1	110.4	97.0	2.6	2.5	15.2	14.6	2.9	60.9
R-315	A	21	1,452	34.2	91.3	54.2	2.0	1.3	10.7	15.2	2.3	68.5
R-315	B	12	2,011	47.4	108.2	60.6	2.3	1.3	11.8	15.8	1.7	59.3
Ecuador 1	B	18	1,809	59.0	123.9	74.9	2.2	1.4	13.8	16.0	2.3	56.6
G 2120	B	10	1,745	74.6	123.3	116.6	3.5	1.5	16.0	6.9	2.7	75.5
HM-1	B	8	1,894	49.1	119.2	61.9	2.3	1.6	9.7	17.7	2.5	53.8
ICA L-124	B	19	2,134	49.1	117.1	64.7	2.7	1.3	13.6	17.3	2.4	67.4
Duocrop	B	11	2,077	50.3	116.1	77.0	2.1	1.3	11.4	16.3	2.3	56.3
PK-73-86	B	17	2,075	48.0	114.9	58.8	2.2	1.3	11.7	15.5	2.3	54.1
DB 1601	B	18	2,267	48.7	112.2	58.1	1.9	1.3	10.5	15.7	2.2	61.7
BM-2	B	20	1,984	45.5	105.6	53.4	2.0	1.3	10.7	15.8	2.4	67.8
Essex	B	20	1,873	42.1	105.1	39.2	1.3	1.4	8.3	15.4	2.8	60.8
AGS 66	B	15	1,988	43.5	102.0	49.0	1.9	1.4	10.3	13.3	2.7	67.9

Continued

Table 5. Performance characteristics[a] of soybean cultivars, continued

Cultivar	Group[b]	Number of trials	Yield (kg/ha)	Days to flower	Days to maturity	Plant height (cm)	Lodging[c]	Shattering[d]	Pod height (cm)	Weight per 100 seeds (g)	Seed quality[e]	Percent germination
Crawford	C	11	2,203	45.0	123.6	1 00.[illegible]	2.1	1.1	12.4	16.9	2.5	97.5
Sparks	C	11	2,480	39.8	121.5	88.1	2.8	1.3	12.2	18.2	2.5	95.9
Lawrence	C	12	2,377	44.0	120.0	80.3	2.0	1.2	12.3	18.0	2.7	95.9
Pixie	C	12	2,353	44.8	118.5	51.1	1.5	1.3	8.6	17.1	2.3	92.0
Williams 82	C	12	2,318	42.0	116.4	82.9	1.9	1.1	11.4	18.3	2.0	95.5
Fayette	C	12	2,207	44.4	116.4	83.4	1.9	1.2	9.7	17.1	2.2	95.3
Hobbit	C	12	2,324	42.3	114.2	49.7	1.3	1.2	9.7	16.7	2.4	92.1
Mead	C	12	2,364	43.4	112.6	67.6	1.5	1.3	9.6	16.3	2.7	95.8
Platte	C	12	2,290	38.7	110.4	72.1	1.3	1.2	8.3	15.8	2.6	94.5
Corsoy 79	C	10	2,402	37.9	109.4	68.7	1.9	1.1	11.2	15.7	2.9	91.1
BSR 201	C	12	2,442	38.0	107.9	66.9	1.8	1.2	6.4	15.9	2.5	91.9
Weber	C	12	2,093	36.5	105.7	67.2	1.6	1.3	8.7	13.8	2.6	91.1
Lakota	C	11	2,659	36.0	104.2	76.8	2.0	1.2	8.3	16.3	2.8	94.0
Hodgson 78	C	10	2,239	32.8	103.5	62.2	1.5	1.3	8.4	16.7	2.5	91.4
Evans	C	11	2,329	34.5	99.6	54.4	1.3	1.2	7.3	16.5	2.6	83.2
Clay	C	11	2,140	33.0	96.1	53.5	1.3	1.3	6.4	16.1	3.2	73.8

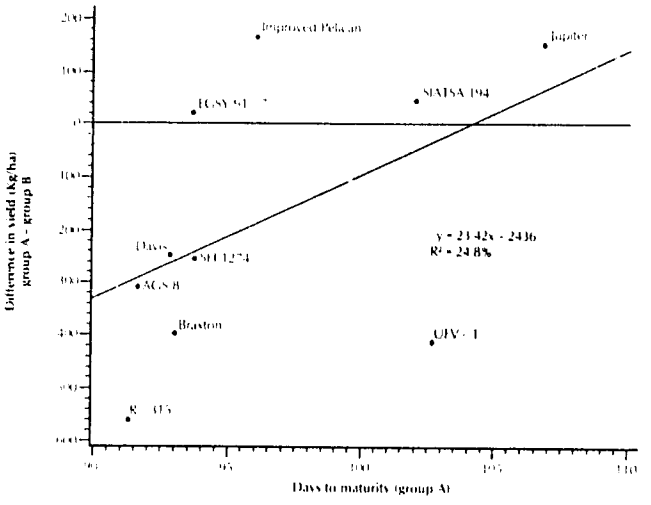
[a] Performance characteristic values given are the mean of adjusted values (y) where:
y = observed value × (mean of checks over all locations/mean of checks at given location)
[b] Group A was sent to tropical, B to semitropical, and C to temperate zones. Comparisons should be made only within each group.
[c] Estimated rate of lodged or down plants on a scale of 1 (all erect) to 5 (all down) as observed at maturity.
[d] Estimated rate of the amount of shattering of seeds from pods at maturity on a scale of 1 (no shattering) to 5 (more than 50% shattered).
[e] Estimated rating of seed quality after harvest considering the amount of wrinkling, defective seed coats, off-colored seed, and moldy or rotten seed on a scale of 1 (very good quality) to 5 (very poor quality).

The difference in days to flower was pronounced, 35.5 days in group A and 53.0 days in group B. The difference in days to maturity was still greater, 96.3 days in group A and 115.8 days in group B. The plants in group A were shorter (56.9 cm) than those in group B (72.2 cm). Average seed weight was greater in group A (16.3 g/100 seed) than in group B (15.6 g/100 seed).

The data from these trials indicate that the yield potential of soybeans may be somewhat lower in the tropics than in the subtropics. Soybeans take the shortest time to flower and mature near the equator and the time increases with distance from the equator. However, weight per seed was greater in the tropics than in the subtropics.

In addition to the average performance of a cultivar, it is important to know if its relative performance is consistent in relation to other cultivars or if it varies widely from one location to another. The standard deviation of the adjusted value for a cultivar across all trials in a group is a measure of consistency because it measures deviations from the average of the check cultivars. If the standard deviation is large, the relative

Figure 2. The difference in yield between the tropic (group A) and the subtropic (group B) cultivars with varying number of days to maturity.



performance of a cultivar varies widely from one location to another. A stability index has been calculated to put all characteristics on the same scale (table 6). It is only valid to compare indices within groups. It is of particular interest to consider the stability indices of the highest yielding cultivars in each group. Davis was very stable while SIATSA 194 was unstable.

The correlations between agronomic characteristics were calculated in each experiment. These are not shown, but the results have been summarized to show the frequency of positive and negative correlations for each combination of characteristics (table 7). If the ratio between the two values is between 0.5 and 2.0, there is little indication that the two characteristics tend to be associated, positively or negatively. In other words, this subjective criterion indicates an association whenever there are more than twice as many positive to negative or negative to positive values. Yield was positively associated with number of plants harvested and seed weight, and negatively associated with seed quality. Days to maturity, pod height, plant height, and lodging were all positively correlated. These characteristics were not correlated with seed size or plants harvested. There were no associations among pod height, seed weight, and seed quality. The correlations among plant characteristics in the trials are a description of the association of characteristics in existing cultivars. This does not necessarily indicate that observed associations cannot be broken by plant breeders as they develop cultivars with desired combinations of characteristics.

The differential responses of cultivars to latitude, altitude, and general yield level were determined by calculating the multiple regression of adjusted yield, days to flowering, and days to maturity on these independent variables (table 8). Because days to maturity is the most distinctive difference between cultivars, the cultivars within each group have been ranked according to maturity. The average adjusted days to maturity are given. The correlation between each set of partial regression coefficients and days to maturity is given at the bottom of each column.

The correlations between partial regression coefficients for yield on altitude was significant only in group C (-0.878***). With increases in altitude the relative performance of the earlier-maturing cultivars was better. The same situation was found in the case of latitude. With increases in latitude the relative performance of the earlier-maturing cultivars was better. Days to flowering was influenced by altitude. In the tropics (group A) the flowering of the later-maturing cultivars was delayed more with increases in altitude than was the flowering of earlier-maturing cultivars. The opposite was true in the temperate regions where the flowering of the early-maturing cultivars was delayed more with increase of altitude. The same was true for latitude except the correlation in group A was not significant. In group C flowering of the earlier-maturing cultivars was delayed more with increases in latitude than the flowering of the later-maturing cultivars. In the tropics the yield level was associated with time to flower. In group A, time to flowering was relatively later in the early-maturing cultivars where the yield level of the location was high. The opposite was true in group C. The delay in flowering was greatest in the late-maturing cultivars. Time to maturity was greater in the late-maturing cultivars with increases in both altitude and latitude.

SUMMARY

Forty-three soybean cultivars were tested in the 1983 International Soybean Variety Evaluation Experiment. The experimental sites were divided into thirteen environmental zones which were defined by latitude and altitude. Three sets of

Table 6. Relative stability of cultivars

Cultivar	Group[a]	Yield (kg/ha)	Days to flower	Days to maturity	Plant height (cm)	Lodging	Shat-tering	Pod height (cm)	Weight per 100 seeds (g)	Seed quality	Percent germi-nation
ICA L-109	A	0.76	0.84	1.01	0.72	0.80	0.64	0.77	1.03	0.77	1.19
Jupiter	A	0.90	1.34	0.98	0.80	1.02	0.50	1.12	1.01	0.91	0.62
Jupiter	B	1.40	1.34	1.29	0.79	1.22	0.49	1.38	1.57	1.29	0.91
IAC-6	A	1.07	1.04	1.25	1.31	0.89	0.79	1.47	1.04	1.12	1.03
71-38	A	1.10	1.02	1.04	1.18	0.94	0.83	1.03	1.08	1.23	1.00
IAC-8	A	0.90	0.95	1.33	1.17	1.76	0.67	1.52	1.17	1.25	1.14
UFV-1	A	1.04	0.74	0.99	0.99	0.56	0.57	0.98	0.97	1.13	0.22
UFV-1	B	1.43	0.81	0.98	1.26	0.62	0.61	0.93	0.96	1.46	1.82
ISRA/IRAT 44A/73	A	1.26	1.69	1.06	0.91	1.53	0.81	0.86	1.13	1.04	1.69
SIATSA 194	A	1.49	0.75	0.91	1.48	1.38	1.28	1.89	1.29	0.90	0.86
SIATSA 194	B	0.96	0.92	0.91	2.26	2.35	1.40	1.44	1.09	1.15	0.65
F75-9207	A	1.26	0.97	1.18	1.12	0.49	0.79	1.06	1.15	1.09	0.93
ICA L-129	A	1.22	0.61	0.82	0.98	0.80	0.64	1.24	1.08	1.19	1.36
Improved Pelican	A	1.07	0.69	0.86	1.48	0.99	0.73	0.87	0.99	0.91	0.67
Improved Pelican	B	1.18	1.70	1.56	2.44	1.37	1.69	0.86	1.01	1.44	0.97
SH 1274	A	0.71	1.14	0.98	1.43	1.42	0.87	1.13	1.12	0.95	0.64
SH 1274	B	1.05	0.99	1.10	1.68	1.79	0.83	0.76	0.72	1.05	1.22
EGSY 91-7	A	1.08	0.79	0.93	0.89	0.97	2.93	0.93	1.10	0.88	1.39
EGSY 91-7	B	1.24	1.00	1.20	0.79	1.38	4.40	1.01	0.91	1.16	1.76
Braxton	A	1.08	1.16	1.30	0.67	0.51	0.63	0.74	0.89	0.98	0.94
Braxton	B	0.81	0.72	0.88	0.60	0.62	0.50	0.54	0.96	0.99	1.07
Davis	A	0.86	0.69	0.84	0.59	0.49	0.72	0.72	0.75	0.85	0.74
Davis	B	0.63	0.68	0.88	0.59	0.56	0.63	0.71	0.84	1.07	0.68
AGS 8	A	1.12	1.02	1.22	1.68	1.40	2.65	1.12	1.10	1.05	1.49
AGS 8	B	0.81	1.03	0.93	2.34	0.64	2.95	0.87	0.47	1.23	0.73
R-315	A	1.04	0.75	0.91	0.85	1.60	1.63	0.79	1.28	0.92	1.12
R-315	B	0.94	0.92	0.70	1.37	1.42	0.25	0.86	0.68	0.85	0.68
Ecuador 1	B	0.92	1.40	1.22	0.69	0.72	1.10	0.70	0.92	1.29	1.20
G 2120	B	1.59	2.22	1.02	1.62	2.14	1.60	1.49	0.68	1.64	0.83
HM-1	B	0.91	0.95	1.74	0.81	0.72	1.48	0.60	0.38	0.70	1.14
ICA L-124	B	1.26	1.27	1.24	0.54	1.59	0.98	2.54	0.78	0.92	0.61
Duocrop	B	1.15	1.26	1.24	1.83	1.39	0.73	0.85	1.07	1.69	1.81
PK-73-86	B	0.79	0.83	1.30	0.74	0.99	0.20	0.81	0.89	1.07	1.36
DB 1601	B	1.38	0.82	0.78	0.40	0.67	0.45	0.88	0.67	1.14	1.16
BM-2	B	1.01	0.95	0.82	0.97	0.83	0.49	0.66	0.71	0.94	0.89
Essex	B	0.80	0.66	0.94	0.49	0.61	0.60	0.81	0.97	1.22	0.59
AGS 56	B	0.90	1.36	1.07	0.67	0.80	0.78	0.62	1.03	0.91	0.58

Continued

Table 6. Relative stability of cultivars, continued

Cultivar	Group[a]	Yield (kg/ha)	Days to flower	Days to maturity	Plant height (cm)	Lodging	Shattering	Pod height (cm)	Weight per 100 seeds (g)	Seed quality	Percent germination
Crawford	C	1.54	1.52	1.34	1.21	1.00	0.49	1.19	1.18	0.77	1.39
Sparks	C	1.32	1.10	1.22	0.96	1.68	1.73	1.25	1.60	1.24	1.19
Lawrence	C	0.93	1.38	1.21	0.85	2.79	1.16	1.45	1.46	1.35	1.10
Pixie	C	0.90	1.18	1.36	0.72	1.06	1.43	1.00	1.15	0.64	0.97
Williams 82	C	1.10	0.84	1.10	1.16	0.96	0.68	1.16	0.98	0.55	0.94
Fayette	C	1.07	1.40	1.11	1.17	1.05	0.46	1.08	1.17	0.86	1.33
Hobbit	C	1.03	0.94	1.09	0.88	0.57	0.91	1.07	0.73	1.09	0.82
Mead	C	0.90	1.18	1.11	0.54	0.91	1.58	0.92	0.84	0.76	0.85
Platte	C	1.12	0.54	0.82	0.73	0.57	0.53	0.78	0.65	0.99	0.79
Corsoy 79	C	0.74	0.80	0.37	1.39	0.74	0.51	1.36	0.68	0.88	0.18
BSR 201	C	1.00	1.21	1.18	1.13	0.84	0.60	0.46	0.72	1.20	0.51
Weber	C	0.93	0.43	0.45	0.95	0.69	1.39	1.19	0.59	0.99	0.67
Lakota	C	0.82	0.83	0.59	0.78	1.16	1.03	0.99	0.73	1.16	1.03
Hodgson 78	C	0.75	0.52	0.76	1.10	0.60	1.34	0.78	1.06	1.05	0.25
Evans	C	0.95	1.19	1.04	1.05	0.61	1.04	0.90	1.60	1.22	1.26
Clay	C	0.90	0.93	1.24	1.40	0.77	1.11	0.42	0.87	1.25	2.72

Note: The relative stability index is x/y where:
x = the standard deviation of the adjusted values of a cultivar over all locations within a group, and
y = the average standard deviation of all cultivars over all locations within a group.
[a] Group A was sent to tropical, B to semitropical, and C to temperate zones. Comparisons should be made only within each group.

cultivars were sent out: group A to the tropics; group B, subtropics; and group C, temperate regions. The performance characteristics: yield, days to flowering, days to maturity, plant height, height to the first pod, seed size, and several other characteristics are presented for all locations and summarized over all the locations where a given cultivar was grown.

The relative stability of the performance of a cultivar over a wide range of environments was determined. It was found that the relative stability estimates for cultivars were quite consistent in different groups. Davis was very stable while SIATSA 194 was unstable.

The association of the various characteristics was studied by calculating the correlation coefficients among the characteristics measured at each location. Yield was positively correlated with number of plants harvested and seed weight and negatively associated with seed quality. These and other relationships can help plant breeders determine if it may be difficult to get the combination of characters desired in new cultivars.

Days to maturity is one of the most important characteristics in determining whether a cultivar is well adapted to a given location. The association of this characteristic with the response of cultivars to latitude, altitude, and environment (as measured by general yield level) was studied by calculating the correlation coefficients between days to maturity and the partial regressions of each cultivar for yield, days to flower, and days to maturity on altitude, latitude, and the environment. Relationships were studied for the effect of

Table 7. Total positive and negative correlations among adjusted values of plant characteristics of cultivars within locations

	Yield	Days to flower	Days to maturity	Plant height	Lodging	Shattering	Plants harvested	Pod height	Weight per 100 seeds	Seed quality
Yield		158/156	171/143	198/128	127/142	68/121	227/73	169/127	154/59	64/212
Days to flower	42/33		285/17	296/12	231/31	85/84	88/205	254/24	56/220	116/127
Days to maturity	43/22	73/2		299/9	215/43	89/88	76/209	250/34	115/181	148/124
Plant height	50/26	71/5	67/9		257/14	110/78	152/133	272/9	83/229	141/126
Lodging	28/39	52/15	49/18	63/5		108/65	138/128	220/30	75/190	133/107
Shattering	17/32	18/31	18/31	31/19	34/13		108/77	100/78	80/100	100/72
Plants harvested	55/20	35/40	32/43	37/39	34/33	29/20		168/163	143/156	122/142
Pod height	41/32	68/5	61/12	72/2	51/15	29/20	49/24		87/193	115/143
Weight per 100 seeds	57/13	19/51	33/37	28/43	26/37	16/31	37/33	34/34		150/123
Seed quality	16/47	32/31	37/26	31/33	30/29	23/21	35/28	25/37	32/29	

Note: The value in the upper left-hand side of an intersect is the number of positive correlations and the number in the lower right-hand side is the number of negative correlations. The values in the lower left-hand side of the table are for 1983 and those in the upper right-hand side of the table are the sum of the positive and negative correlations for 1979-1982.

altitude, latitude, and environment on the response of late-maturing cultivars in terms of days to flower, days to maturity, and yield.

Cooperators participating in the 1983 ISVEX are listed after the Foreword. A list of abbreviations and acronyms used in this report is given at the end.

At the end of this report are six tables of results from 1982. These were not received in time for inclusion in the International Soybean Variety Experiment, Ninth Report of Results 1982 (INTSOY Series number 27) but are included here to complete the report of 1982 results. Two tables previously reported from 1982 experiments have been corrected and are also included.

Table 8. Multiple regression coefficients indicating the influence of latitude, altitude, and average observed yield at a location on adjusted yield, days to flowering, and days to maturity

Cultivar	Adjusted yield (kg/ha)			Adjusted days to flowering			Adjusted days to maturity			Adjusted days to maturity
	Altitude (meters)	Latitude (degrees)	Observed mean yield (kg/ha)	Altitude (meters)	Latitude (degrees)	Observed mean yield (kg/ha)	Altitude (meters)	Latitude (degrees)	Observed mean yield (kg/ha)	
GROUP A										
	$\times 10^{-1}$	$\times 10^{1}$	$\times 10^{-2}$	$\times 10^{-3}$	$\times 10^{-1}$	$\times 10^{-3}$	$\times 10^{-3}$	$\times 10^{-1}$	$\times 10^{-4}$	
ICA L-109	0.60	−0.67	−0.61	1.31	0.75	−0.07	8.19**	1.12	−9.40	107.2
Jupiter	−0.16	−1.25	−8.98	2.05	−0.86	1.86**	4.61**	2.80**	17.09*	106.8
IAC-6	−0.40	0.11	6.99	2.09*	1.69**	−0.08	10.75**	2.26*	4.25	105.7
71-38	0.65	−0.48	12.76*	−2.88**	1.61**	0.13	−2.31	2.69*	25.64**	103.8
IAC-8	1.29	−0.74	10.90	1.61*	−0.85	−0.54	11.62**	1.10	33.93**	103.7
UFV-1	0.67	−1.95	8.77	−1.31*	1.84**	1.04*	−4.67*	3.83*	−8.98	102.7
ISRA/IRAT 44A/73	−0.96	−1.04	−19.33**	−0.27	−0.03	2.02*	−2.97	1.97	−7.26	102.0
SIATSA 194	−1.51	−1.72	−11.42	−0.72	1.19**	0.59	−0.15	2.01*	−16.63*	102.0
F75-9207	−0.75	0.13	13.17	−1.97**	1.99**	−0.08	−7.46**	3.51**	9.78	101.6
ICA L-129	2.05	−2.67**	0.05	−0.72	0.58	−0.09	1.05	1.28	−9.15	100.7
Improved Pelican	1.81	−1.50	−11.12	−3.55**	1.45**	−0.38	2.83	2.28*	−15.28	96.0
SH 1274	−1.84	1.34	0.58	−3.40**	1.76**	−1.03**	−5.10**	2.95**	−0.07	93.7
EGSY 91-7	−3.11*	1.12	−17.14**	−3.49**	−0.26	−0.41	−6.24**	2.74**	−4.89	93.6
Braxton	−0.28	1.39	4.40	−2.61**	0.09	−0.75	−11.41**	−1.78	−23.42**	93.0
Davis	−0.25	0.24	3.74	−0.79	0.03	−1.00**	−1.54	−2.25*	16.39*	92.8
AGS 8	1.11	−1.29	−14.12*	−1.02	−0.83	−0.99*	−2.54	−1.46	1.54	91.6
P-315	−2.02	−1.06	6.85	−4.52**	0.14	−1.16**	−0.70	−0.39	−15.18	91.3
r	0.31	−0.36	0.19	0.73**	0.22	0.68**	0.58*	0.57*	0.34	
GROUP B										
	$\times 10^{-1}$	$\times 10^{1}$	$\times 10^{-2}$	$\times 10^{-3}$	$\times 10^{-1}$	$\times 10^{-3}$	$\times 10^{-3}$	$\times 10^{-1}$	$\times 10^{-4}$	
Jupiter	−6.46**	−2.20	−20.65	4.25**	0.50	0.18	5.91**	1.61	16.56	129.1
SIATSA 194	0.59	−3.27*	10.02	2.19*	2.11*	−2.20**	−1.04	3.81**	−14.70	123.9
Ecuador 1	−1.01	−0.66	−12.33	−3.78**	1.12	−1.45	1.77	1.14	20.67	123.9
G 2120	−11.98**	2.01	−71.29**	−1.19	−2.18	−5.08**	−1.80	4.17**	−28.53*	123.3
UFV-1	−2.27	−4.72	−23.23	6.63**	4.25**	−2.88**	12.30**	2.77**	17.56*	121.9
Improved Pelican	1.67	−9.80**	34.74	−3.34	−5.02	7.04**	5.67**	9.65**	−11.28	120.3
HM-1	0.62	−4.25	11.87	−2.49**	−8.78**	7.38**	−6.71**	12.80**	−35.32	119.2
ICA L-124	3.02*	3.23*	−43.01**	−1.56	0.80	−3.71**	1.24	1.47	−30.00**	117.1
Duocrop	1.98	−2.82	23.78*	−1.56	0.46	−4.09**	−2.70	1.78	−24.61*	116.1
PK-73-86	−0.04	0.32	3.92	0.93	−0.54	−0.02	−0.77	−0.39	44.37**	114.9
Davis	0.64	−1.33	6.06	0.99	−1.19	0.05	1.74	−0.78	−14.98	114.1
DB 1601	0.75	−4.97**	−10.20	−1.53*	−1.51	−0.71	0.47	1.02	−16.48	112.2
SH 1274	1.57	−2.76	1.35	−2.49**	1.30	−1.44	2.43	3.14*	1.02	111.3
EGSY 91-7	−1.30	−5.24**	12.57	−4.09**	−1.53*	−0.93	0.36	1.11	28.38**	111.0
AGS 8	−9.28*	4.99	−70.94*	−7.99**	−8.43**	0.04	−8.05*	−17.67*	72.07	110.4
R-315	3.81**	−3.30	5.90	−0.83	1.39	−3.46**	2.38*	−0.53	−11.81	108.2
Braxton	3.16**	1.38	13.84	−2.82**	0.58	−0.14	−0.35	1.30	−11.05	107.3
BM-2	0.59	−4.26**	−1.31	−0.75	−0.52	−1.52	0.22	−1.41	1.41	105.6
Essex	0.34	1.44	5.73	−1.56	0.10	−0.29	−1.10	−0.13	−3.28	105.1
AGS 66	0.29	−4.37**	10.60	−1.48	−2.45	−0.72	4.00**	−0.96	−24.04**	102.0
r	−0.38	−0.07	−0.24	0.41	0.11	0.05	0.21	0.40	−0.01	

Table 8. Multiple regression coefficients indicating the influence of latitude, altitude, and average observed yield at a location on adjusted yield, days to flowering, and days to maturity, continued

Cultivar	Adjusted yield (kg/ha)			Adjusted days to flowering			Adjusted days to maturity			Adjusted days to maturity
	Altitude (meters)	Latitude (degrees)	Observed mean yield (kg/ha)	Altitude (meters)	Latitude (degrees)	Observed mean yield (kg/ha)	Altitude (meters)	Latitude (degrees)	Observed mean yield (kg/ha)	
					GROUP C					
	$\times 10^{-1}$	$\times 10^{1}$	$\times 10^{-2}$	$\times 10^{-3}$	$\times 10^{-1}$	$\times 10^{-3}$	$\times 10^{-3}$	$\times 10^{-1}$	$\times 10^{-4}$	
Crawford	−15.44**	−11.39**	−9.64	−8.76*	1.81	−4.05**	2.73	11.66**	−14.78*	123.6
Sparks	−7.35	−2.54	−9.54	−8.93*	−1.34	−5.15**	6.42*	−2.45	−18.73**	121.5
Lawrence	−6.65*	−3.73	−22.00**	−12.13**	−2.64	−1.85	9.00**	8.52**	23.54**	120.0
Pixie	−3.91	−1.03	−28.78**	−1.61	8.16**	−5.56**	6.16**	6.58**	15.59*	118.5
Williams 82	−5.43	−2.21	−18.27	−5.14	4.48	−2.27*	2.45	0.00	23.22**	116.4
Fayette	−1.85	1.15	−10.12	−2.26	5.93*	−2.08*	12.29**	5.55	20.12	116.4
Hobbit	5.33	5.93*	−18.31*	−9.41**	0.96	−2.92**	2.90	3.08*	19.42**	114.2
Mead	0.30	3.72	−15.52	−4.25	4.45	−1.46	4.01	3.42*	23.83**	112.6
Platte	7.00	9.88**	7.73	−3.44	0.72	−2.25	0.12	−2.96**	0.20	110.4
Corsoy 79	−0.03	2.97	−5.02	0.50	−4.40**	2.65**	0.20	−1.25	8.46	109.4
BSR 201	−3.48	2.50	−21.91**	−6.17	3.97	−2.24*	6.40	−5.19	−4.48	107.9
Weber	6.85*	7.71**	−12.64	−1.09	0.14	−0.36	2.16*	1.92**	−6.39*	105.7
Lakota	5.50	3.96	−16.15	2.26	−3.93**	1.09*	−2.49	−2.81*	29.96**	104.2
Hodgson 78	9.04*	5.02	15.86	−1.64	−2.75**	−0.93**	9.91**	1.56	19.23*	103.5
Evans	10.53**	5.52*	3.85	−5.57*	−5.60**	−1.15	−0.19	−2.33	14.87	99.6
Clay	10.49**	4.83*	−11.25	−0.89	−6.39**	1.03*	−5.69	−13.47**	−1.29	96.1
r	−0.878	**−0.729**	−0.409	−0.589*	−0.593*	−0.714**	0.542*	0.737**	−0.122	

Note: Adjusted days to maturity for each cultivar is given. The correlation coefficient (*r*) between days to maturity and the coefficients of each column is given in the bottom line.

* $p \leq 0.05$

** $p \leq 0.01$

Agronomic Characteristics for Individual Sites, 1983

Table 9. Trial 83528, 1983

Country: ALGERIA
Region: AFRICA

Latitude: 36°15'N
Longitude: 2°16'E

Zone: 10 Group: C
Elevation (m): 289

Site: IDCI STATION REGIONALE, KHEMIS MILIANA
Cooperator(s): DIRECTEUR

Date planted: April 10, 1984 Date harvested: August 1, 1984
Soil information: pH 8.4
Fertilizer used (kg/ha): P 44.0, K 66.4
Total moisture (mm): 691
Number of irrigations: 31 (total amount 580 mm)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
88	Lakota	1,680.4	55.0	109.0	51.5	1.0	1.0
57	Corsoy 79	1,519.3	55.0	116.8	57.5	1.0	1.0
103	Mead	1,449.9	64.0	118.0	50.4	1.0	1.0
36	Evans	1,349.9	58.0	101.0	36.9	1.0	1.0
71	Hodgson 78	1,313.8	55.0	112.0	40.8	1.0	1.0
93	BSR 201	1,247.1	58.0	118.3	48.1	1.0	1.0
85	Pixie	1,094.3	64.0	130.0	40.0	1.0	1.0
87	Clay	1,062.9 (3)	58.0 (3)	114.0 (3)	59.2 (3)	1.0 (3)	1.0 (3)
102	Lawrence	894.4	62.5	122.0	58.4	5.0	1.0
107	Weber	844.4	58.0	117.5	45.9	1.0	1.0
98	Hobbit	827.7	64.0	118.0	40.4	1.0	1.0
89	Williams 82	741.6	58.0	119.0	73.8	2.0	1.0
84	Sparks	691.6	64.0	129.5	70.3	3.0	1.0
104	Platte	644.4	58.0	116.0	48.3	1.0	1.0
86	Fayette	525.0	64.0	129.5	66.3	1.0	1.0
35	Crawford	411.1	64.0	131.0	81.8	2.0	1.0
	Grand mean	1,017.9	60.0	118.9	54.3	1.5	1.0
	Standard error of cultivar mean	521.0	3.7	8.6	14.6	1.1	0.0
	Coefficient of variation (%)	51.2	6.1	7.2	27.0	71.3	0.0
	5% LSD Cultivar means (*****=ns)	*****	*****	*****	*****	0.0	0.0

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
88	Lakota	173.8	16.7	5.8		3.0	
57	Corsoy 79	247.0	18.5	5.9		5.0	
103	Mead	253.3	21.5	4.3		3.0	
36	Evans	151.0	24.6	4.7		5.0	
71	Hodgson 78	227.3	22.2	4.7		3.0	
93	BSR 201	219.5	15.4	4.9		2.0	
85	Pixie	228.0	26.8	3.8		4.0	
87	Clay	254.0 (3)	20.0 (3)	3.9		4.0	
102	Lawrence	267.5	21.5	5.2		2.0	
107	Weber	259.3	23.5	5.7		3.0	
98	Hobbit	250.3	16.4	6.4		3.0	
89	Williams 82	292.3	52.0	4.8		2.0	
84	Sparks	235.3	22.7	5.3		3.0	
104	Platte	277.5	16.0	4.5		3.0	
86	Fayette	241.8	50.9	5.0		2.0	
35	Crawford	319.8	35.0	6.3		3.0	
	Grand mean	243.4	25.3	5.1		3.1	
	Standard error of cultivar mean	53.0	12.5	1.0		0.9	
	Coefficient of variation (%)	21.8	49.4	19.5		30.1	
	5% LSD Cultivar means (*****=ns)	*****	*****	*****		0.0	

Table 10. Trial 83526, 1983

Country: ARGENTINA
Region: SOUTH AMRICA

Latitude: 34°S
Longitude: 62°W

Zone: 10 Group: C
Elevation (m): 100

Site: VENADO TUERTO
Cooperator(s): ING. RICARDO R. SICILIANO, ING. L. JUAN DE PAZ

Date planted: November 21, 1983 Date harvested: February 23, 1984
Soil information: loam 15%, silt 60%, clay 25%, pH 6.8
Total moisture (mm): 500

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
84	Sparks	4,104.2	34.5	127.5	85.0	2.0	1.0
35	Crawford	3,899.7	37.0	127.0	98.8	1.0	1.0
89	Williams 82	3,486.3	34.5	122.0	82.5	2.0	1.0
103	Mead	3,286.2	35.0	117.0	62.5	2.0	1.0
86	Fayette	3,178.2	34.0	116.5	85.0	2.0	1.5
85	Pixie	3,140.7	35.0	117.0	52.5	1.0	1.0
102	Lawrence	3,114.8	35.0	135.5	70.0	1.0	1.0
104	Platte	2,706.7	34.5	113.5	75.0	1.0	1.0
98	Hobbit	2,672.8	34.5	117.0	50.0	1.0	1.0
93	BSR 201	2,639.7	32.0	117.5	77.5	2.0	1.0
87	Clay	2,036.0	27.5	84.0	57.5	1.0	2.0
71	Hodgson 78	1,973.5	28.0	95.0	72.5	1.0	2.5
88	Lakota	1,884.2	30.0	94.0	82.5	1.0	1.0
107	Weber	1,881.5	32.0	99.0	75.0	1.0	1.0
36	Evans	1,687.8	28.0	85.0	65.0	1.0	1.0
57	Corsoy 79	1,678.4	29.5	101.0	70.0	2.0	1.0
	Grand mean	2,710.7	32.6	110.5	72.6	1.4	1.2
	Standard error of cultivar mean	118.7	0.2	0.2	2.2	0.0	0.1
	Coefficient of variation (%)	8.8	1.1	0.4	6.0	0.0	17.8
	5% LSD Cultivar means (*****=ns)	338.1	0.5	0.6	6.2	0.0	0.3

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
84	Sparks	116.0		7.5	25.2	4.0	
35	Crawford	65.0		10.0	21.2	2.5	
89	Williams 82	108.0		10.0	22.0	3.0	
103	Mead	91.3		7.5	18.7	3.5	
86	Fayette	88.0		10.0	21.6	2.0	
85	Pixie	102.0		10.0	20.6	3.0	
102	Lawrence	94.0		10.0	24.7	5.0	
104	Platte	97.3		5.0	17.1	4.0	
98	Hobbit	101.3		10.0	15.8	4.0	
93	BSR 201	92.0		5.0	15.9	5.0	
87	Clay	107.3		5.0	13.6	3.5	
71	Hodgson 78	116.5		7.5	14.7	4.0	
88	Lakota	123.0		10.0	13.5	4.0	
107	Weber	80.3		7.5	12.6	4.0	
36	Evans	107.8		5.0	11.5	2.5	
57	Corsoy 79	109.8		5.0	14.7	3.5	
	Grand mean	100.0		7.8	17.7	3.6	
	Standard error of cultivar mean	3.0		0.0	0.1	0.2	
	Coefficient of variation (%)	6.0		0.0	1.6	10.7	
	5% LSD Cultivar means (*****=ns)	8.6		0.0	0.4	0.6	

Table 11. Trial 83437, 1983

Country: BANGLADESH Latitude: 23°N Zone: 7 Group: B
Region: ASIA Longitude: 91°25'E Elevation (m): 10

Site: FENI
Cooperator(s): DR. GORDON ZOOK, MR. ERIC KLASSEN

Date planted: December 13, 1983 Date harvested: April 14, 1984
Soil information: loam 22%, silt 62%, clay 16%, pH 6.3
Fertilizer used (kg/ha): N 25.0, P 26.2, K 25.0
Total moisture (mm): 607
Substituted cultivars: Bragg, Williams

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
9	Jupiter	3,568.0	87.0	160.0	82.7	4.5	
82	PK-73-86	3,349.2	63.0	152.0	52.8	2.0	
92	BM-2	3,130.5	69.0	144.0	58.3	2.0	
69	Essex	3,114.8	55.0	144.8	37.2	1.0	
94	DB 1601	2,844.0	69.0	154.0	58.8	2.8	
81	Ecuador 1	2,817.9	78.0	152.0	65.0	3.5	
90	AGS 8	2,771.1	66.0	145.0	113.0	3.5	
106	SH 1274	2,719.0	66.0	137.0	75.3	3.8	
19	Davis	2,567.9	65.0	154.0	50.9	2.3	
2	UFV-1	2,411.7	65.0	152.0	48.5	2.0	
75	Braxton	2,286.6	55.0	124.0	33.7	1.0	
95	Duocrop	2,114.8	74.0	152.0	91.4	5.0	
37	G 2120	1,781.4	99.0	156.0	117.4	5.0	
25	Bragg	1,458.5	55.0	124.0	28.0	1.0	
14	Williams	1,385.5	51.0	123.0	32.5	1.0	
96	EGSY 91-7	786.5	67.0	156.0	58.7	5.0	
	Grand mean	2,444.2	67.8	145.6	62.8	2.8	
	Standard error of cultivar mean	274.1	0.0	0.4	3.5	0.2	
	Coefficient of variation (%)	22.4	0.0	0.6	11.2	17.2	
	5% LSD Cultivar means (*****=ns)	780.8	0.0	1.2	10.0	0.7	

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
9	Jupiter	174.8	16.5	25.3	16.5	3.3	31.8
82	PK-73-86	175.0	15.1	13.1	17.0	5.0	0.3
92	BM-2	200.8	13.7	14.9	17.2	2.0	73.0
69	Essex	232.5	12.7	10.1	16.8	3.8	37.3
94	DB 1601	149.8	15.6	13.9	15.7	5.0	16.5
81	Ecuador 1	152.5	16.8	16.5	17.9	4.5	14.3
90	AGS 8	201.3	17.5	23.4	15.7	2.3	63.3
106	SH 1274	175.8	17.1	11.0	15.9	2.0	9.0
19	Davis	135.8	19.4	9.8	14.9	5.0	52.8
2	UFV-1	134.5	15.0	11.1	14.0	4.8	8.8
75	Braxton	162.3	12.4	9.2	18.9	1.0	92.5
95	Duocrop	183.8	19.5	13.9	14.5	5.0	0.0
37	G 2120	123.5	33.6	21.9	5.7	3.0	56.3
25	Bragg	121.5	9.0	8.5	18.6	1.0	97.0
14	Williams	62.8	15.3	7.2	17.9	1.0	96.8
96	EGSY 91-7	87.5	14.4	12.1	12.9	5.0	3.5
	Grand mean	154.6	16.5	13.9	15.6	3.3	40.8
	Standard error of cultivar mean	10.5	1.1	1.1	0.6	0.2	9.2
	Coefficient of variation (%)	13.6	13.6	15.8	7.6	10.8	45.0
	5% LSD Cultivar means (*****=ns)	30.0	3.2	3.1	1.7	0.5	26.2

Table 12. Trial 83439, 1983

Country: BOLIVIA
Region: SOUTH AMERICA

Latitude: 21°57'S
Longitude: 63°39'W

Zone: 8 Group: B
Elevation (m): 600

Site: ESTACION EXPERIMENTAL "Gran Chaco"
Cooperator(s): ING. ROBERTO DELGADILLO V.

Date planted: January 12, 1984 Date harvested: April 20, 1984
Soil information: loam 12.4%, silt 35.2%, clay 52.4%, pH 6.2
Fertilizer used (kg/ha): N 25.0, P 25.0, K 25.0
Total moisture (mm): 1,177

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
75	Braxton	3,025.6	30.0	96.0	63.5	1.3	1.0
69	Essex	2,900.6	30.0	92.0	50.3	1.5	2.0
2	UFV-1	2,804.7	41.0	116.0	80.8	2.3	1.0
95	Duocrop	2,796.4	35.0	100.0	97.8	1.8	1.0
47	PK-73-94	2,592.2	35.0	96.0	59.5	2.5	1.0
9	Jupiter	2,392.2	49.0	118.0	111.3	3.8	1.0
76	SIATSA 194	2,375.5	41.0	118.0	119.3	3.3	1.0
96	EGSY 91-7	2,346.3	35.0	96.0	77.8	2.8	2.0
19	Davis	2,321.3	35.0	96.0	64.5	3.5	2.0
81	Ecuador 1	2,208.8	41.0	116.0	92.5	3.5	2.0
73	Century	2,175.4	22.0	92.0	58.0	1.0	3.0
77	ICA L-124	2,096.3	35.0	96.0	78.8	3.8	1.0
106	SH 1274	2,029.6	30.0	92.0	108.3	4.0	1.0
37	G 2120	1,975.4	54.0	116.0	135.5	4.0	1.0
92	BM-2	1,842.0	35.0	92.0	66.0	3.5	2.0
90	AGS 8	1,754.5	35.0	96.0	105.5	4.0	3.0
	Grand mean	2,352.3	36.4	101.8	85.6	2.9	1.6
	Standard error of cultivar mean	137.1	0.0	0.0	4.3	0.3	0.0
	Coefficient of variation (%)	11.7	0.0	0.0	10.1	21.9	0.0
	5% LSD Cultivar means (*****=ns)	390.6	0.0	0.0	12.3	0.9	0.0

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
75	Braxton	141.0	41.5	8.7	20.9	2.0	75.0
69	Essex	152.8	36.3	9.6	16.2	3.0	70.0
2	UFV-1	134.3	56.8	15.4	17.4	1.0	80.0
95	Duocrop	147.5	44.5	11.5	19.7	3.0	74.0
47	PK-73-94	140.0	79.3	8.4	18.5	3.0	70.0
9	Jupiter	135.8	75.8	18.3	20.6	2.0	80.0
76	SIATSA 194	126.8	65.8	18.7	20.1	3.0	76.0
96	EGSY 91-7	122.5	49.8	15.1	17.3	2.0	70.0
19	Davis	165.5	50.0	7.2	16.9	3.0	71.0
81	Ecuador 1	118.3	72.3	8.5	21.0	2.0	70.0
73	Century	144.8	37.3	5.1	19.4	3.0	60.0
77	ICA L-124	130.5	56.3	40.4	18.7	3.0	72.0
106	SH 1274	135.8	73.0	11.8	17.3	3.0	60.0
37	G 2120	152.3	122.5	12.2	8.1	3.0	85.0
92	BM-2	147.0	41.5	12.8	16.1	3.0	50.0
90	AGS 8	138.5	59.0	13.4	16.7	3.0	60.0
	Grand mean	139.6	60.1	13.5	17.8	2.6	70.2
	Standard error of cultivar mean	11.1	4.9	7.8	0.0	0.0	0.0
	Coefficient of variation (%)	15.9	16.2	114.9	0.0	0.0	0.0
	5% LSD Cultivar means (*****=ns)	*****	13.9	*****	0.0	0.0	0.0

Table 13. Trial 83151, 1983

Country: BURMA Latitude: 17°24'N Zone: 1 Group: A
Region: ASIA Longitude: 95°02'E Elevation (m): 500

Site: INGAPU TOWNSHIP
Cooperator(s): DR. ERVIN T. BULLARD, MR. UAUNG KYAW MYINT

Date planted: December 11, 1983 Date harvested: March 04, 1984
Soil information: loam 21%, silt 50%, clay 29%, pH 5.45
Fertilizer used (kg/ha): N 25.0, P 26.2, K 25.0

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
76	SIATSA 194	777.3	34.0	98.5	41.9	1.3	2.8
75	Braxton	631.4	32.5	88.0	26.7	1.0	2.8
9	Jupiter	609.7	32.8	83.3	36.9	1.3	2.3
90	AGS 8	543.7	37.5	96.0	37.2	1.0	1.5
97	F75-9207	531.6	34.8	90.0	34.8	1.0	1.5
106	SH 1274	531.2	37.3	97.0	46.3	1.5	2.0
96	EGSY 91-7	519.9	33.3	91.0	23.3	1.0	1.3
19	Davis	414.0	31.8	78.0	21.8	1.0	2.5
45	ICA L-109	399.8	39.3	98.5	38.4	1.5	2.3
79	71-38	342.2	32.8	88.8	35.5	1.0	1.8
99	IAC-6	326.1	41.8	107.0	45.6	1.3	1.5
2	UFV-1	311.0	34.8	86.0	33.0	1.5	3.0
10	Improved Pelican	307.2	36.3	102.8	43.1	1.3	2.3
101	ICA L-129	295.3	36.8	104.3	43.8	1.3	2.3
78	ISRA/IRAT 44A/73	284.5	40.8	111.8	44.3	1.0	1.8
100	IAC-8	224.4	40.0	101.8	29.8	1.3	2.0
	Grand mean	440.6	36.0	95.2	36.4	1.2	2.1
	Standard error of cultivar mean	140.8	3.1	9.9	9.1	0.2	0.6
	Coefficient of variation (%)	63.9	16.9	20.8	50.0	40.9	55.0
	5% LSD Cultivar means (*****=ns)	*****	*****	*****	*****	*****	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
76	SIATSA 194	209.3	13.8	4.0	10.4	2.3	84.0
75	Braxton	193.8	14.8	4.5	13.5	2.8	82.5
9	Jupiter	166.3	15.5	3.9	13.0	2.5	88.5
90	AGS 8	194.8	16.8	6.4	9.6	3.5	83.3
97	F75-9207	191.8	10.0	4.6	14.4	3.3	86.0
106	SH 1274	191.8	18.5	5.0	8.8	3.3	82.3
96	EGSY 91-7	162.3	21.3	2.8	9.7	2.3	88.0
19	Davis	173.8	14.0	4.6	12.5	2.0	85.8
45	ICA L-109	171.8	14.0	7.4	9.6	2.5	90.8
79	71-38	200.5	11.8	5.2	11.3	3.0	88.3
99	IAC-6	174.3	15.8	6.3	10.5	3.5	84.0
2	UFV-1	199.8	14.5	7.4	10.3	3.0	89.5
10	Improved Pelican	186.8	12.3	5.7	9.6	3.0	86.8
101	ICA L-129	162.5	18.5	5.1	8.7	3.0	87.8
78	ISRA/IRAT 44A/73	194.0	16.5	4.5	12.2	3.3	87.0
100	IAC-8	177.5	9.5	6.8	8.5	3.8	84.3
	Grand mean	184.4	14.8	5.3	10.8	2.9	86.2
	Standard error of cultivar mean	16.4	3.3	1.4	0.1	0.5	1.5
	Coefficient of variation (%)	17.8	44.5	51.8	2.2	33.5	3.4
	5% LSD Cultivar means (*****=ns)	*****	*****	*****	0.3	*****	4.2

Table 14. Trial 83429, 1983

Country: BURMA
Region: ASIA

Latitude: 18°N
Longitude: 97°E

Zone: 4 Group: B
Elevation (m): 110

Site: KYAIKMARAU TOWNSHIP, MON STATE
Cooperator(s): MR. U NGWE TUN

Date planted: December 1983 Date harvested: March 1984

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
37	G 2120	699.7	49.3	90.0	57.3	1.0	2.8
2	UFV-1	549.3	35.0	82.3	21.8	1.0	2.0
94	DB 1601	534.7	33.5	83.0	21.7	1.0	2.0
77	ICA L-124	533.4	39.0	89.3	28.1	1.0	2.0
9	Jupiter	510.9	40.5	93.0	32.6	1.0	2.0
81	Ecuador 1	383.8	39.0	88.0	28.0	1.0	2.0
92	BM-2	333.8	27.0	69.5	22.6	1.0	2.0
91	AGS 66	316.7	25.5	70.3	22.2	1.0	2.0
95	Duocrop	301.7	35.5	92.0	23.9	1.0	2.5
76	SIATSA 194	293.0	39.0	93.0	36.5	1.0	2.8
19	Davis	282.1	28.0	85.0	19.4	1.0	3.0
69	Essex	279.2	25.0	69.5	21.2	1.0	2.0
82	PK-73-86	238.4	25.0	68.3	21.2	2.0	2.3
75	Braxton	237.6	25.5	69.0	20.1	1.0	2.0
106	SH 1274	212.1	25.5	70.5	17.9	1.0	2.0
96	EGSY 91-7	153.8	29.0	68.0	21.1	1.0	3.0
	Grand mean	366.3	32.6	80.0	26.0	1.1	2.3
	Standard error of cultivar mean	39.4	0.8	0.7	1.0	0.0	0.1
	Coefficient of variation (%)	21.5	4.9	1.7	7.9	0.0	11.8
	5% LSD Cultivar means (*****=ns)	112.3	2.3	2.0	2.9	0.0	0.4

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
37	G 2120		60.3	3.0	7.3	3.0	100.0
2	UFV-1		16.0	3.0	16.0	1.0	100.0
94	DB 1601		15.0	3.0	13.8	1.0	91.3
77	ICA L-124		12.8	3.0	16.8	1.0	98.5
9	Jupiter		27.5	3.0	21.5	1.0	100.0
81	Ecuador 1		13.3	3.0	16.8	1.0	100.0
92	BM-2		16.5	3.0	13.5	2.0	92.0
91	AGS 66		17.0	3.0	10.3	2.0	96.0
95	Duocrop		17.5	3.0	17.3	1.0	99.5
76	SIATSA 194		22.3	3.1	21.8	1.0	100.0
19	Davis		10.3	3.0	14.3	2.0	86.5
69	Essex		12.0	3.0	12.5	2.0	100.0
82	PK-73-86		12.5	3.0	12.5	2.0	100.0
75	Braxton		11.8	3.0	16.5	2.0	100.0
106	SH 1274		13.5	3.0	14.8	2.0	99.8
96	EGSY 91-7		11.3	3.0	12.5	2.0	100.0
	Grand mean		18.1	3.0	14.9	1.6	97.7
	Standard error of cultivar mean		3.0	0.0	0.4	0.0	1.4
	Coefficient of variation (%)		33.6	2.1	5.7	0.0	2.8
	5% LSD Cultivar means (*****=ns)		8.7	*****	1.2	0.0	3.9

Table 15. Trial 83409, 1983

Country: CAMEROON
Region: AFRICA

Latitude: 5°27'N
Longitude: 10°05'E

Zone: 3 Group: B
Elevation (m): 450

Site: DSCHANG
Cooperator(s): DR. PATRICK SALEZ

Date planted: July 15, 1983 Date harvested: October 28, 1983
Soil information: loam 39%, silt 32%, clay 29%, pH 5.6

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
94	DB 1601	1,050.6	52.3	112.5	32.3	1.0	1.0
77	ICA L-124	923.9	53.0	115.5	29.0	1.0	1.0
92	BM-2	886.0	52.5	108.8	35.8	1.0	1.0
106	SH 1274	741.8	48.8	104.0	28.5	1.3	1.0
76	SIATSA 194	709.3	61.5	118.3	39.5	1.0	1.0
9	Jupiter	682.6	63.0	126.0	42.8	1.0	1.0
105	R-315	676.4	51.3	109.5	24.3	1.0	1.0
82	PK-73-86	649.7	51.8	108.3	29.0	1.3	1.0
81	Ecuador 1	643.1	60.0	114.3	35.5	1.0	1.0
10	Improved Pelican	624.3	56.8	113.5	29.3	1.0	1.0
80	HM-1	539.3	53.5	108.0	24.5	1.5	1.0
19	Davis	523.9	54.0	120.8	34.3	1.0	1.0
96	EGSY 91-7	503.9	52.8	108.8	27.0	1.0	1.0
91	AGS 66	487.6	49.3	104.0	28.5	1.3	1.0
75	Braxton	288.0	47.5	105.5	22.5	1.3	1.0
69	Essex	260.9	48.3	103.0	18.8	1.3	1.0
	Grand mean	637.0	53.5	111.3	30.1	1.1	1.0
	Standard error of cultivar mean	58.3	0.4	0.6	1.3	0.2	0.0
	Coefficient of variation (%)	18.3	1.4	1.1	8.7	26.3	0.0
	5% LSD Cultivar means (*****=ns)	166.0	1.0	1.8	3.7	*****	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
94	DB 1601	177.3	18.0	4.3	15.2	2.0	99.3
77	ICA L-124	185.3	12.3	6.0	17.2	2.0	99.3
92	BM-2	190.0	12.8	7.0	14.2	1.0	96.0
106	SH 1274	190.0	11.3	7.3	13.7	1.0	97.8
76	SIATSA 194	194.0	10.5	9.0	15.1	1.3	98.8
9	Jupiter	178.8	11.0	11.3	13.9	2.0	
105	R-315	194.8	13.0	6.3	14.7	1.3	98.3
82	PK-73-86	195.8	10.5	7.8	13.6	2.0	90.3
81	Ecuador 1	187.8	12.0	8.0	13.9	1.0	97.8
10	Improved Pelican	193.8	14.0	5.5	11.4	1.0	95.8
80	HM-1	195.5	10.8	7.5	15.7	2.0	89.5
19	Davis	144.0	10.0	6.0	12.1	1.8	
96	EGSY 91-7	187.3	13.0	6.8	13.8	1.5	92.3
91	AGS 66	185.5	10.5	6.5	10.4	2.0	100.0
75	Braxton	170.3	5.5	5.8	20.9	2.0	99.0
69	Essex	184.8	7.8	4.0	12.1	3.0	95.5
	Grand mean	184.7	11.4	6.8	14.2	1.7	96.4
	Standard error of cultivar mean	6.1	1.4	0.4	0.4	0.1	2.1
	Coefficient of variation (%)	6.6	23.9	11.5	5.7	15.0	4.3
	5% LSD Cultivar means (*****=ns)	17.3	3.9	1.1	1.2	0.4	6.0

Table 16. Trial 83525, 1983

Country: CHILE Latitude: 33°40'S Zone: 11 Group: C
Region: SOUTH AMERICA Longitude: 70°36'W Elevation (m): 654

Site: PIRQUE, REGION METROPOLITANA DE SANTIAGO
Cooperator(s): DR. P. C. PARODI, ING. I. M. NEBREDA, ING. P. P. GREZ

Date planted: October 30, 1983 Date harvested: February 8, 1984
Soil information: pH 8.2
Fertilizer used (kg/ha): N 58.0, P 40.1
Number of 4rrigations: 10

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
104	Platte	3,800.3	51.5	125.3	108.0	1.0	1.0
36	Evans	3,734.3	42.8	109.0	84.5	1.0	1.0
107	Weber	3,726.0	50.3	115.0	96.0	1.5	1.0
85	Pixie	3,699.3	57.8	135.8	84.8	2.5	1.0
88	Lakota	3,664.5	53.3	118.5	115.5	4.0	1.0
57	Corsoy 79	3,655.3	52.5	122.0	105.0	2.5	1.0
103	Mead	3,559.0	57.5	130.5	100.5	1.3	1.0
98	Hobbit	3,527.5	54.8	133.3	69.0	1.0	1.0
93	BSR 201	3,390.3	53.5	123.3	110.5	3.0	1.0
71	Hodgson 78	3,323.8	44.0	116.8	93.0	1.0	1.0
102	Lawrence	3,287.8	58.3	141.3	121.0	1.5	1.0
86	Fayette	3,161.5	58.5	145.0	146.3	3.5	1.0
89	Williams 82	3,062.8	56.5	135.3	111.5	2.5	1.0
84	Sparks	3,051.0	53.5	141.3	140.0	4.3	1.0
87	Clay	2,987.5	48.0	101.0	67.8	1.0	1.0
35	Crawford	2,532.5	62.0	154.5	148.3	4.0	1.0
	Grand mean	3,385.2	53.4	128.0	106.3	2.2	1.0
	Standard error of cultivar mean	187.0	1.6	1.9	5.0	0.4	0.0
	Coefficient of variation (%)	11.1	6.0	3.0	9.4	36.7	0.0
	5% LSD Cultivar means (*****=ns)	532.7	4.6	5.4	14.2	1.2	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
104	Platte	127.5	32.0	11.4	15.9	1.3	95.8
36	Evans	129.5	39.3	7.4	14.6	1.3	96.5
107	Weber	133.0	29.0	11.3	14.0	1.3	94.8
85	Pixie	139.5	30.0	12.5	16.0	1.0	95.8
88	Lakota	145.5	28.5	8.5	16.6	1.3	95.3
57	Corsoy 79	134.3	33.0	48.2	15.6	1.0	96.3
103	Mead	143.0	36.3	10.4	16.2	1.0	96.3
98	Hobbit	122.0	35.5	9.3	16.0	1.8	93.3
93	BSR 201	142.0	29.0	8.9	15.7	2.0	95.3
71	Hodgson 78	129.0	30.0	9.3	16.7	2.0	95.5
102	Lawrence	147.8	36.3	16.0	17.3	1.0	97.0
86	Fayette	144.3	35.0	14.3	17.5	1.0	98.0
89	Williams 82	144.3	32.3	15.6	16.7	1.0	99.5
84	Sparks	119.8	34.0	13.4	17.7	1.0	95.0
87	Clay	93.3	34.3	9.5	16.6	1.0	94.3
35	Crawford	134.3	40.8	19.3	14.1	2.0	96.8
	Grand mean	133.1	33.4	14.1	16.1	1.3	95.9
	Standard error of cultivar mean	8.9	3.3	5.6	0.5	0.1	1.0
	Coefficient of variation (%)	13.4	19.5	79.9	6.6	21.4	2.1
	5% LSD Cultivar means (*****=ns)	25.3	*****	16.0	1.5	0.4	2.8

Table 17. Trial 83400, 1983

Country: CHINA (TAIWAN) Latitude: 23°07'N Zone: 7 Group: B
Region: ASIA Longitude: 120°17'E Elevation (m): 9

Site: AVRDC, TAIWAN
Cooperator(s): DR. SUNDAR SHANMUGASUNDARAM

Date planted: June 28, 1983 Date harvested: September 30, 1983
Fertilizer used (kg/ha): N 30.0, P 60.0, K 80.0
Total moisture (mm): 639
Number of irrigations: 2 (amount not reported)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
69	Essex	3,568.5	32.5	101.3	53.3	1.0	
91	AGS 66	3,357.0	33.8	91.0	65.5	2.5	
92	BM-2	3,242.5	35.8	103.5	69.9	2.8	
94	DB 1601	3,038.0	38.0	98.8	76.1	3.0	
19	Davis	3,036.5	38.3	99.0	64.0	1.5	
75	Braxton	2,940.0	35.3	106.0	68.1	2.0	
82	PK-73-86	2,853.0	42.0	111.0	77.3	2.0	
96	EGSY 91-7	2,762.5	42.0	110.3	100.1	2.8	
76	SIATSA 194	2,547.0	52.0	112.5	202.9	3.5	
77	ICA L-124	2,384.5	41.0	102.5	91.2	3.3	
106	SH 1274	2,199.5	41.0	105.8	158.5	2.8	
105	R-315	2,172.0	41.0	96.8	112.6	4.0	
80	HM-1	1,874.5	46.0	125.8	82.4	2.8	
10	Improved Pelican	1,785.5	49.0	113.5	190.8	3.8	
9	Jupiter	1,690.0	59.8	113.3	111.8	3.3	
81	Ecuador 1	1,673.0	54.0	109.8	109.2	2.5	
	Grand mean	2,570.[illegible]	42.6	106.3	102.1	2.7	
	Standard error of cultivar mean	234.0	0.9	2.6	5.2	0.3	
	Coefficient of variation (%)	18.2	4.4	4.8	10.2	20.9	
	5% LSD Cultivar means (*****=ns)	666.5	2.7	7.3	14.8	0.8	

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
69	Essex	168.0	31.6		16.6	2.8	
91	AGS 66	172.0	41.2		12.9	2.0	
92	BM-2	147.5	32.1		14.9	2.0	
94	DB 1601	147.3	49.1		12.3	2.0	
19	Davis	165.8	42.9		13.1	2.0	
75	Braxton	156.3	33.5		13.7	2.0	
82	PK-73-86	152.3	62.6		11.9	2.3	
96	EGSY 91-7	131.3	69.5		12.3	2.0	
76	SIATSA 194	165.5	75.1		15.6	2.5	
77	ICA L-124	138.3	46.1		14.4	2.3	
106	SH 1274	149.8	48.1		12.1	2.5	
105	R-315	186.3	52.2		12.1	2.0	
80	HM-1	154.0	50.1		15.6	3.0	
10	Improved Pelican	130.5	100.5		11.4	2.8	
9	Jupiter	136.3	88.1		11.4	2.5	
81	Ecuador 1	140.0	72.4		12.1	2.5	
	Grand mean	152.6	55.9		13.3	2.3	
	Standard error of cultivar mean	9.9	6.6		0.3	0.2	
	Coefficient of variation (%)	13.0	23.6		4.1	19.2	
	5% LSD Cultivar means (*****=ns)	28.3	18.8		0.8	0.6	

Table 18. Trial 83107, 1983

Country: COLOMBIA Latitude: 3°32'N Zone: 3 Group: A
Region: SOUTH AMERICA Longitude: 76°17'W Elevation (m): 1,008

Site: ICA PALMIRA
Cooperator(s): GILBERTO BASTIDAS RAMOS

Date planted: April 28, 1983 Date harvested: July 29, 1983
Soil information: arcilloso
Total moisture (mm): 348
Number of irrigations: 6 (total amount 180 mm)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
100	IAC-8	4,305.0	40.0	103.3	66.3	1.0	1.3
99	IAC-6	3,729.9	40.0	108.3	63.5	1.0	1.0
9	Jupiter	3,659.1	40.0	101.3	61.3	1.0	1.0
78	ISRA/IRAT 44A/73	3,571.5	32.0	89.3	49.3	1.0	2.0
45	ICA L-109	3,425.7	40.0	100.5	57.5	1.0	1.3
101	ICA L-129	3,379.8	32.0	93.3	58.5	1.0	1.0
76	SIATSA 194	3,288.2	33.0	90.0	70.3	1.0	2.0
10	Improved Pelican	2,975.6	26.0	83.0	62.5	1.0	1.0
19	Davis	2,854.7	26.0	85.0	27.0	1.0	1.3
90	AGS 8	2,596.3	26.0	82.0	63.0	1.0	3.0
79	71-38	2,588.0	32.0	99.0	29.5	1.0	1.8
97	F75-9207	2,558.8	26.0	89.5	32.0	1.0	1.8
105	R-315	2,283.8	26.0	82.0	42.0	1.0	1.3
106	SH 1274	2,229.6	26.0	82.0	45.8	1.0	1.8
96	EGSY 91-7	1,737.9	26.0	82.0	36.3	1.0	2.5
75	Braxton	1,366.9	23.0	78.0	23.0	1.0	1.0
	Grand mean	2,909.4	30.9	90.5	49.2	1.0	1.6
	Standard error of cultivar mean	198.9	0.0	0.7	2.4	0.0	0.2
	Coefficient of variation (%)	13.7	0.0	1.6	9.9	0.0	22.2
	5% LSD Cultivar means (*****=ns)	566.4	0.0	2.1	7.0	*****	0.5

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
100	IAC-8	114.3	59.9	8.3	19.8 (1)	1.0 (1)	98.0 (1)
99	IAC-6	120.3	53.7	10.5	17.7 (1)	1.0 (1)	100.0 (1)
9	Jupiter	112.8	53.2	10.3	19.2 (1)	2.0 (1)	97.0 (1)
78	ISRA/IRAT 44A/73	116.8	58.7	7.8	14.3 (1)	2.0 (1)	100.0 (1)
45	ICA L-109	123.5	66.1	8.8	13.2 (1)	2.0 (1)	99.0 (1)
101	ICA L-129	112.5	58.0	9.8	16.3 (1)	2.0 (1)	100.0 (1)
76	SIATSA 194	127.5	55.8	9.8	19.8 (1)	3.0 (1)	97.0 (1)
10	Improved Pelican	139.5	51.5	9.0	15.3 (1)	3.0 (1)	100.0 (1)
19	Davis	157.5	40.6	5.5	21.7 (1)	3.0 (1)	99.0 (1)
90	AGS 8	150.3	51.1	10.3	14.9 (1)	2.0 (1)	100.0 (1)
79	71-38	107.5	56.0	4.5	13.8 (1)	4.0 (1)	89.0 (1)
97	F75-9207	133.8	47.6	7.0	17.9 (1)	1.0 (1)	98.0 (1)
105	R-315	134.8	39.3	7.8	19.4 (1)	3.0 (1)	100.0 (1)
106	SH 1274	116.8	35.1	7.3	18.0 (1)	2.0 (1)	99.0 (1)
96	EGSY 91-7	125.8	39.7	7.0	18.2 (1)	3.0 (1)	98.0 (1)
75	Braxton	138.0	28.6	6.8	21.8 (1)	4.0 (1)	94.0 (1)
	Grand mean	127.0	49.7	8.1	17.6	2.4	98.0
	Standard error of cultivar mean	6.9	5.6	0.6	2.7	1.0	2.9
	Coefficient of variation (%)	10.9	22.4	13.5	15.4	40.3	3.0
	5% LSD Cultivar means (*****=ns)	19.7	15.9	1.6	*****	*****	*****

Table 19. Trial 83163, 1983

Country: COSTA RICA Latitude: 10′ 26′N Zone: 1 Group: A
Region: MESO AMERICA Longitude: 85°35′W Elevation (m): 17

Site: FILADELFIA, GUANACASTE
Cooperator(s): ING. GERMAN QUESADA HERRERA, ING. TONG SHROUNG TOUNG

Date planted: September 8, 1983 Date harvested: December 4, 1983
Fertilizer used (kg/ha): N 15.0, P 19.8, K 12.4

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
99	IAC-6	2,510.7	33.5	87.5	58.6	2.0	
75	Braxton	2,510.2	24.5	86.8	32.2	1.0	
100	IAC-8	2,406.9	36.5	88.8	66.7	3.0	
2	UFV-1	2,391.3	30.5	90.3	27.3	1.0	
96	EGSY 91-7	2,357.3	30.3	85.3	52.0	1.8	
9	Jupiter	2,306.4	39.3	94.3	62.6	2.0	
76	SIATSA 194	2,223.4	35.3	86.0	80.7	2.0	
79	71-38	2,079.9	34.0	91.3	33.4	1.0	
106	SH 1274	2,067.7	27.8	85.5	59.5	2.0	
10	Improved Pelican	2,040.8	30.5	84.3	76.2	2.0	
97	F75-9207	2,022.4	30.0	88.8	39.8	1.0	
19	Davis	2,020.5	26.5	86.3	27.1	1.0	
45	ICA L-109	1,933.2	38.0	92.3	62.5	1.8	
101	ICA L-129	1,897.4	31.8	88.3	58.7	1.8	
90	AGS 8	1,854.5	29.5	84.8	82.9	3.0	
	Grand mean	2,174.8	31.9	88.0	54.7	1.9	
	Standard error of cultivar mean	192.3	0.8	0.8	3.8	0.2	
	Coefficient of variation (%)	17.7	5.1	1.8	14.0	23.8	
	5% LSD Cultivar means (*****=ns)	*****	2.3	2.3	10.9	0.6	

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
99	IAC-6	181.5	26.5	16.7	15.8	1.8	
75	Braxton	168.5	20.0	8.4	22.6	1.5	
100	IAC-8	168.3	25.0	14.4	19.3	1.3	
2	UFV-1	150.5	19.3	8.6	18.6	1.5	
96	EGSY 91-7	142.0	24.3	14.6	16.8	2.3	
9	Jupiter	149.3	26.5	16.6	18.9	1.8	
76	SIATSA 194	181.5	21.5	18.4	20.5	1.5	
79	71-38	158.8	25.3	8.9	12.3	3.0	
106	SH 1274	114.5	25.3	11.7	17.4	1.0	
10	Improved Pelican	163.3	24.3	15.3	13.8	1.5	
97	F75-9207	158.3	23.3	11.1	16.4	2.5	
19	Davis	163.0	17.5	8.7	18.5	2.0	
45	ICA L-109	155.8	27.5	13.3	11.8	3.0	
101	ICA L-129	179.3	24.5	10.9	15.6	3.8	
90	AGS 8	151.8	21.3	16.0	15.9	2.3	
	Grand mean	159.1	23.5	12.9	16.9	2.0	
	Standard error of cultivar mean	13.5	2.9	1.3	0.4	0.4	
	Coefficient of variation (%)	17.0	24.7	20.0	4.2	42.9	
	5% LSD Cultivar means (*****=ns)	*****	*****	3.7	1.0	1.2	

Table 20. Trial 83175, 1983

Country: COSTA RICA Latitude: 10°N Zone: 1 Group: A
Region: MESO AMERICA Longitude: 85°W Elevation (m): 30

Site: QUEPOS, PACIFICO CENTRAL
Cooperator(s): ING. GERMAN QUESADA HERRERA, ING. RODRIGO ALFARO M., ING. ADRIAN MORALES

Date planted: October 25, 1983 Date harvested: not reported
Soil information: pH 5.0, franco arcilloso
Fertilizer used (kg/ha): N 20.0, P 35.2, K 33.2

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
76	SIATSA 194	1,946.2	41.0	95.5	92.3	2.3	
2	UFV-1	1,934.7	39.8	102.3	38.7	0.0	
97	F75-9207	1,902.3	37.3	102.8	50.8	0.0	
45	ICA L-109	1,892.5	41.0	97.0	66.8	0.3	
101	ICA L-129	1,835.0	41.0	99.8	64.6	0.8	
78	ISRA/IRAT 44A/73	1,827.0	41.0	97.0	73.6	2.3	
19	Davis	1,815.9	34.5	94.3	31.1	0.0	
69	Essex	1,789.7	33.0	91.8	29.7	0.0	
100	IAC-8	1,777.7	41.0	99.0	75.2	3.5	
79	71-38	1,716.0	41.0	101.5	41.4	0.0	
9	Jupiter	1,670.4	44.0	111.8	80.9	2.3	
99	IAC-6	1,576.2	41.0	95.0	64.3	0.3	
106	SH 12[illegible]	1,486.5	39.8	86.5	74.1	1.3	
75	Braxton	1,426.5	33.0	90.0	31.6	0.0	
96	EGSY 91-7	1,308.6	39.8	94.0	55.9	0.8	
10	Improved Pelican	1,291.0	41.0	90.5	84.3	1.3	
	Grand mean	1,699.8	39.3	96.8	59.7	0.9	
	Standard error of cultivar mean	145.1	0.7	2.7	2.9	0.4	
	Coefficient of variation (%)	17.1	3.7	5.7	9.6	96.3	
	5% LSD Cultivar means (*****=ns)	413.2	2.1	7.8	8.1	1.3	

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
76	SIATSA 194	106.8	46.6	18.5			
2	UFV-1	145.8	29.2	12.2			
97	F75-9207	125.5	42.2	11.8			
45	ICA L-109	142.5	36.9	14.2			
101	ICA L-129	154.0	30.5	12.6			
78	ISRA/IRAT 44A/73	146.8	45.7	13.8			
19	Davis	128.3	22.2	8.3			
69	Essex	189.5	21.8	7.5			
100	IAC-8	156.8	28.2	16.4			
79	71-38	149.3	30.0	9.5			
9	Jupiter	132.8	42.9	16.9			
99	IAC-6	151.0	28.8	17.6			
106	SH 1274	88.0	50.8	14.4			
75	Braxton	88.0	25.0	9.1			
96	EGSY 91-7	114.8	39.1	12.6			
10	Improved Pelican	100.8	36.7	15.1			
	Grand mean	132.5	34.8	13.2			
	Standard error of cultivar mean	13.2	5.1	0.9			
	Coefficient of variation (%)	19.9	29.2	13.9			
	5% LSD Cultivar means (*****=ns)	37.6	14.5	2.6			

Table 21. Trial 83162, 1983

Country: COSTA RICA
Region: MESO AMERICA

Latitude: 10°25'N
Longitude: 85°10'W

Zone: 1 Group: A
Elevation (m): 90

Site: CANAS, GUANACASTE
Cooperator(s): ING. GERMAN QUESADA HERRERA, ING. TONG SHROUNG TOUNG

Date planted: August 12, 1983 Date harvested: November 11, 1983
Fertilizer used (kg/ha): N 20.0, P 26.2, K 16.6

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
79	71-38	3,135.7	39.8	97.5	37.3	1.0	1.0
76	SIATSA 194	3,011.6	41.0	95.8	84.8	3.5	1.0
100	IAC-8	2,760.7	41.5	100.3	72.0	3.3	1.0
2	UFV-1	2,663.5	37.8	98.3	45.8	1.0	1.3
99	IAC-6	2,616.8	43.5	95.3	63.8	2.0	1.0
9	Jupiter	2,487.5	43.5	102.0	63.3	2.3	1.0
97	F75-9207	2,428.1	36.3	97.0	49.3	1.0	1.0
78	ISRA/IRAT 44A/73	2,398.4	42.8	98.5	61.3	3.0	1.0
75	Braxton	2,331.9	30.8	91.3	34.0	1.0	1.0
45	ICA L-109	2,235.6	45.0	98.0	57.3	1.3	1.0
101	ICA L-129	2,222.4	41.3	98.0	57.8	1.3	1.0
19	Davis	2,170.0	31.8	92.0	28.8	1.0	1.0
90	AGS 8	2,163.5	37.0	92.5	63.8	2.3	1.5
96	EGSY 91-7	1,979.0	36.8	89.8	51.3	1.8	1.8
10	Improved Pelican	1,905.4	38.0	90.3	66.5	1.5	1.3
106	SH 1274	1,881.8	32.5	89.3	61.8	2.0	1.0
	Grand mean	2,399.5	38.7	95.3	56.1	1.8	1.1
	Standard error of cultivar mean	296.3	0.9	1.6	2.8	0.3	0.2
	Coefficient of variation (%)	24.7	4.6	3.3	9.9	35.7	34.1
	5% LSD Cultivar means (*****=ns)	*****	2.5	4.5	7.9	0.9	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
79	71-38	179.0	30.0	8.5	13.3	2.8	
76	SIATSA 194	172.0	24.0	19.5	21.5	2.0	
100	IAC-8	193.3	30.5	16.3	20.7	1.0	
2	UFV-1	184.0	34.0	12.5	16.2	1.5	
99	IAC-6	173.3	27.8	18.3	14.8	1.0	
9	Jupiter	160.8	30.5	18.5	18.5	1.8	
97	F75-9207	168.5	31.5	11.8	16.2	1.3	
78	ISRA/IRAT 44A/73	170.5	35.0	12.8	13.2	1.8	
75	Braxton	159.8	15.8	10.5	22.9	2.3	
45	ICA L-109	163.0	33.0	15.0	11.5	1.8	
101	ICA L-129	160.3	30.0	13.3	16.8	2.3	
19	Davis	160.5	18.0	9.3	19.1	1.8	
90	AGS 8	165.8	19.0	15.8	16.2	1.3	
96	EGSY 91-7	157.3	19.8	16.8	15.7	1.0	
10	Improved Pelican	146.5	33.3	16.8	12.5	1.0	
106	SH 1274	132.5	26.8	[illegible]	17.2	1.0	
	Grand mean	165.4	27.4	14.4	16.6	1.6	
	Standard error of cultivar mean	8.7	2.8	1.0	0.7	0.4	
	Coefficient of variation (%)	10.6	20.5	14.2	8.3	44.4	
	5% LSD Cultivar means (*****=ns)	24.9	8.0	2.9	2.0	1.0	

Table 22. Trial 83153, 1983

Country: CUBA | Latitude: 23°51'N | Zone: 7 Group: A
Region: MESO AMERICA | Longitude: 82°31'W | Elevation (m): 50

Site: ESTACION EXPERIMENTAL DE GRANOS
Cooperator(s): DR. FERNANDO FUNES, ING. ELIO MOSELEY MORE, ING. MANUEL IRANETA

Date planted: September 1, 1983 Date harvested: November 25, 1983
Soil information: loam 7.7%, silt 13.4%, clay 78.9%, pH 6.4, latosolico hidratado
Fertilizer used (kg/ha): N 25.0, P 26.0, K 25.0
Total moisture (mm): 642
Number of irrigations: 5 (total amount 150 mm)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
79	71-38	3,869.2	38.5	86.5	67.8	1.3	1.0
19	Davis	3,713.5	31.5	74.3	45.3	1.0	1.0
2	UFV-1	3,696.3	41.0	84.8	66.5	1.0	1.0
97	F75-9207	3,453.1	32.8	79.5	68.1	1.5	1.0
106	SH 1274	3,374.5	29.8	77.0	92.0	4.5	1.0
99	IAC-6	3,336.5	42.3	85.5	91.2	4.0	1.0
100	IAC-8	3,317.7	41.0	87.0	90.7	3.0	1.0
75	Braxton	3,230.2	32.5	72.3	53.2	1.0	1.0
78	ISRA/IRAT 44A/73	3,155.2	37.0	83.5	86.8	5.0	1.0
76	SIATSA 194	3,013.1	42.0	86.3	112.5	2.5	1.0
101	ICA L-129	3,004.7	34.8	83.5	90.7	3.5	1.0
9	Jupiter	2,781.8	41.8	89.3	94.8	3.0	1.0
45	ICA L-109	2,531.9	38.5	81.8	90.2	3.0	1.0
96	EGSY 91-7	2,509.0	28.8	73.8	83.3	4.0	1.0
10	Improved Pelican	2,442.3	37.3	76.0	96.3	1.5	1.0
90	AGS 8	2,393.4	31.3	74.3	93.6	3.0	1.0
	Grand mean	3,113.9	36.3	80.9	82.7	2.7	1.0
	Standard error of cultivar mean	199.0	0.5	1.2	2.4	0.3	0.0
	Coefficient of variation (%)	12.8	2.5	2.9	5.8	18.5	0.0
	5% LSD Cultivar means (*****=ns)	566.9	1.3	3.4	6.9	0.7	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
79	71-38	152.3	47.8	11.2	14.1	1.0	91.8
19	Davis	135.5	27.0	8.1	21.9	2.8	81.8
2	UFV-1	149.8	28.3	12.2	20.3	1.0	93.0
97	F75-9207	155.0	30.3	13.1	18.8	1.0	90.3
106	SH 1274	137.0	31.5	8.6	21.6	2.0	95.0
99	IAC-6	153.0	28.0	16.8	19.3	1.0	92.5
100	IAC-8	153.0	45.3	15.1	24.6	1.0	91.8
75	Braxton	147.3	21.5	7.9	26.5	4.5	73.3
78	ISRA/IRAT 44A/73	142.5	41.5	12.4	18.5	1.0	91.0
76	SIATSA 194	142.0	37.0	14.3	24.4	1.0	93.3
101	ICA L-129	147.3	34.3	11.3	20.0	1.3	92.0
9	Jupiter	134.0	31.5	18.1	21.4	1.0	89.8
45	ICA L-109	143.0	42.0	9.4	16.8	1.5	93.3
96	EGSY 91-7	139.3	26.0	11.9	17.8	2.0	88.5
10	Improved Pelican	152.3	29.0	17.1	17.8	1.0	93.0
90	AGS 8	135.3	25.3	12.4	20.9	1.0	93.3
	Grand mean	144.9	32.9	12.5	20.3	1.5	90.2
	Standard error of cultivar mean	7.6	3.4	1.6	0.6	0.1	2.2
	Coefficient of variation (%)	10.5	20.5	26.0	6.2	18.3	5.0
	5% LSD Cultivar means (*****=ns)	*****	9.6	4.6	1.8	0.4	6.4

Table 23. Trial 83427, 1983

Country: CUBA | Latitude: 23°51'N | Zone: 7 Group: B
Region: MESO AMERICA | Longitude: 82°31'W | Elevation (m): 50

Site: ESTACION EXPERIMENTAL DE GRANOS
Cooperator(s): DR. FERNANDO FUNES, ING. ELIO MOSELEY MORE, ING. MANUEL IRANETA IRANETA, ING. LORENZO BARREIRO ARBEL

Date planted: September 6, 1983 Date harvested: November 28, 1983
Soil information: loam 7.7%, silt 13.4%, clay 78.9%, pH 6.4, latosolico hidratado
Fertilizer used (kg/ha): N 25.0, P 26.0, K 25.0
Total moisture (mm): 621
Number of irrigations: 5 (total amount 150 mm)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
95	Duocrop	3,829.6	29.5	86.8	89.4	1.5	1.0
82	PK-73-86	3,818.1	29.5	93.5	66.3	2.3	1.0
94	DB 1601	3,762.9	37.5	80.5	61.3	1.3	1.0
19	Davis	3,632.8	36.8	81.5	51.4	1.3	1.0
75	Braxton	3,615.6	41.5	78.3	52.8	1.0	1.0
9	Jupiter	3,496.8	42.5	90.8	100.2	4.3	1.0
91	AGS 66	3,288.0	41.5	73.0	56.2	1.8	1.0
81	Ecuador 1	3,260.4	35.5	91.8	87.3	3.8	1.0
76	SIATSA 194	3,224.0	40.3	89.0	109.9	3.5	1.0
69	Essex	3,189.1	36.8	77.8	39.9	1.0	1.0
106	SH 1274	2,933.9	29.5	81.0	96.8	5.0	1.0
92	BM-2	2,932.3	30.3	77.0	58.0	1.8	1.0
77	ICA L-124	2,922.4	30.5	93.3	68.1	4.8	1.0
96	EGSY 91-7	2,685.0	33.0	81.5	86.8	5.0	1.0
105	R-315	2,553.2	30.3	78.0	72.7	3.5	1.0
37	G 2120	2,031.4	37.0	85.3	110.7	4.8	1.0
	Grand mean	3,198.5	35.1	83.7	75.5	2.9	1.0
	Standard error of cultivar mean	167.3	0.5	0.9	3.4	0.3	0.0
	Coefficient of variation (%)	10.5	2.8	2.2	9.0	17.1	0.0
	5% LSD Cultivar means (*****=ns)	476.7	1.4	2.7	9.7	0.7	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
95	Duocrop	163.5	21.3	10.7	22.8	1.0	
82	PK-73-86	157.0	26.3	11.2	21.8	2.0	
94	DB 1601	169.0	25.5	10.8	21.1	2.0	
19	Davis	172.0	24.8	11.8	21.6	2.0	
75	Braxton	175.0	24.0	12.7	26.4	3.8	
9	Jupiter	159.8	26.8	19.1	22.5	1.0	
91	AGS 66	142.3	35.0	9.4	16.9	4.5	
81	Ecuador 1	135.5	26.8	20.0	21.1	1.0	
76	SIATSA 194	146.3	23.8	15.5	24.1	1.0	
69	Essex	160.8	25.3	9.0	23.1	5.0	
106	SH 1274	154.5	20.3	10.1	22.3	2.8	
92	BM-2	154.3	20.5	10.1	20.9	2.0	
77	ICA L-124	158.5	21.0	11.6	22.5	2.0	
96	EGSY 91-7	164.5	21.5	15.4	19.3	2.0	
105	R-315	164.0	21.3	12.9	19.9	1.0	
37	G 2120	169.0	38.0	10.3	7.3	1.0	
	Grand mean	159.1	25.1	12.5	20.8	2.1	
	Standard error of cultivar mean	5.2	1.7	1.5	0.8	0.1	
	Coefficient of variation (%)	6.5	13.2	24.2	7.6	10.8	
	5% LSD Cultivar means (*****=ns)	14.7	4.7	4.3	2.3	0.3	

Table 24. Trial 83123, 1983

Country: DOMINICA Latitude: 16°N Zone: 4 Group: A
Region: MESO AMERICA Longitude: 61°W Elevation (m): 50

Site: ROYAL BOTANICAI GARDENS, ROSEAU
Cooperator(s): PLENTY CANADA

Date planted: November 19, 1983 Date harvested: February 5, 1984
Soil information: pH 6.4
Total moisture (mm): 499
Number of irrigations: 8 (total amount 40 mm)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
9	Jupiter	676.8	15.8	102.8	40.0	2.8	1.3
45	ICA L-109	610.2	38.5	112.0	45.0	1.0	1.0
76	SIATSA 194	513.3	32.0	97.8	42.3	1.8	1.8
78	ISRA/IRAT 44A/73	499.8	10.8	99.3	41.3	2.0	1.3
105	R-315	493.6	30.0	90.8	33.8	2.0	1.3
106	SH 1274	463.4	31.3	91.0	38.5	2.5	1.0
79	71-38	456.1	31.0	96.0	22.8	1.3	1.5
100	IAC-8	452.6 (3)	33.3	103.8	45.0	3.3	1.3
90	AGS 8	414.4	32.8	91.5	47.5	1.5	1.8
101	ICA L-129	405.1	33.0	97.8	38.0	1.0	1.0
96	EGSY 91-7	390.5	30.5	91.5	29.0	3.0	2.8
99	IAC-6	383.2	34.3	100.3	43.5	2.8	1.0
97	F75-9207	349.9	29.5	97.3	25.0	1.3	1.8
10	Improved Pelican	316.5	31.0	89.5	42.5	1.5	1.0
19	Davis	298.8	29.0	88.8	24.3	1.0	1.3
75	Braxton	248.9	29.8	96.8	24.3	1.0	1.3
	Grand mean	435.5	29.5	96.7	36.4	1.8	1.4
	Standard error of cultivar mean	188.9	1.8	3.5	2.8	0.3	0.3
	Coefficient of variation (%)	43.4	12.3	7.2	15.3	29.1	35.8
	5% LSD Cultivar means (*****=ns)	*****	5.2	9.9	7.9	0.8	0.7

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
9	Jupiter	112.8	19.0	8.0	20.3	2.0	
45	ICA L-109	127.3	21.3	8.3	15.9	2.0	
76	SIATSA 194	127.5	20.0	8.8	21.5	2.0	
78	ISRA/IRAT 44A/73	132.3	24.5	7.5	14.5	2.0	
105	R-315	116.8	17.3	5.5	20.3	2.0	
106	SH 1274	123.0	19.0	5.5	18.5	3.0	
79	71-38	135.8	19.3	9.0	13.0	2.0	
100	IAC-8	124.0 (3)	16.3	9.8	20.3 (3)	2.3	
90	AGS 8	127.3	17.0	9.8	15.7	2.0	
101	ICA L-129	116.0	17.5	8.8	15.5	2.0	
96	EGSY 91-7	128.8	13.3	5.5	16.8	2.3	
99	IAC-6	131.0	18.8	8.5	14.3	2.3	
97	F75-9207	112.5	13.8	5.8	15.4	2.5	
10	Improved Pelican	120.8	23.5	8.8	14.4	2.0	
19	Davis	128.8	9.0	6.3	18.2	2.0	
75	Braxton	104.3	9.3	5.8	21.8	2.0	
	Grand mean	123.0	17.4	7.6	17.2	2.1	
	Standard error of cultivar mean	15.8	2.0	1.3	3.9	0.1	
	Coefficient of variation (%)	12.9	22.6	35.4	22.7	12.2	
	5% LSD Cultivar means (*****=ns)	*****	5.6	*****	*****	0.4	

Table 25. Trial 83125, 1983

Country: ECUADOR
Region: SOUTH AMERICA

Latitude: 1°06'S
Longitude: 79°29'W

Zone: 0 Group: A
Elevation (m): 73

Site: ESTACION EXPERIMENTAL PICHILINGUE
Cooperator(s): ING. GORKY DIAZ

Date planted: June 14, 1983
Date harvested: September 12, 1983
Total moisture (mm): 1,072
Substituted cultivar: INIAP 302

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
19	Davis	2,705.5	30.0	98.8	41.0	1.0	1.0
75	Braxton	2,499.3	30.5	95.8	44.5	1.0	1.0
97	F75-9207	2,470.5	34.8	101.5	66.8	1.8	1.0
100	IAC-8	2,121.3	39.0	96.0	74.8	3.3	1.0
99	IAC-6	2,120.4	39.0	99.0	78.3	2.5	1.0
76	SIATSA 194	2,005.4	37.0	97.5	113.0	3.0	1.0
96	EGSY 91-7	1,993.3	34.8	90.0	68.0	2.8	2.0
250	INIAP 302	1,991.2	31.0	110.0	85.5	2.0	1.0
79	71-38	1,968.3	37.0	108.5	53.5	3.8	1.0
101	ICA L-129	1,891.6	35.0	104.0	75.0	3.3	1.0
90	AGS 8	1,817.0	31.5	90.0	95.8	3.0	1.8
106	SH 1274	1,780.4	30.5	90.0	102.0	5.0	1.5
45	ICA L-109	1,676.2	41.0	114.0	77.8	4.0	1.0
105	R-315	1,669.1	32.0	90.0	75.3	2.5	1.3
9	Jupiter	1,650.3	45.0	101.5	83.0	2.3	1.0
78	ISRA/IRAT 44A/73	1,330.7	39.0	107.8	68.0	4.0	1.0
	Grand mean	1,980.7	35.4	99.6	75.1	2.8	1.2
	Standard error of cultivar mean	150.9	0.6	1.7	2.6	0.3	0.1
	Coefficient of variation (%)	15.2	3.2	3.4	7.0	19.4	19.1
	5% LSD Cultivar means (*****=ns)	429.9	1.6	4.8	7.4	0.8	0.3

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
19	Davis	163.3	27.8	10.8	21.7	3.3	95.8
75	Braxton	157.0	24.8	9.3	23.7	3.5	95.3
97	F75-9207	143.0	57.5	13.0	18.2	3.0	98.5
100	IAC-8	151.0	67.5	12.5	19.6	1.5	94.5
99	IAC-6	163.3	63.8	12.8	16.6	1.0	99.0
76	SIATSA 194	160.3	65.5	16.8	20.6	3.8	91.8
96	EGSY 91-7	142.8	39.3	9.3	15.6	3.0	93.5
250	INIAP 302	42.8	55.0	9.8	19.7	3.5	97.0
79	71-38	124.8	57.5	7.5	14.7	2.8	91.0
101	ICA L-129	153.0	48.8	9.5	18.6	3.8	97.8
90	AGS 8	133.3	46.5	12.8	15.3	2.8	98.0
106	SH 1274	137.3	50.5	10.5	15.7	3.3	96.3
45	ICA L-109	124.3	112.3	8.3	12.6	2.8	92.3
105	R-315	111.8	38.5	11.3	16.0	2.3	95.3
9	Jupiter	139.8	70.8	10.0	17.9	3.3	93.3
78	ISRA/IRAT 44A/73	146.0	66.3	8.8	15.2	4.3	85.5
	Grand mean	137.1	55.8	10.8	17.6	3.0	94.7
	Standard error of cultivar mean	6.7	6.6	0.8	0.6	0.4	3.2
	Coefficient of variation (%)	9.8	23.6	15.5	6.3	26.4	6.8
	5% LSD Cultivar means (*****=ns)	19.2	18.8	2.4	1.6	1.1	*****

Table 26. Trial 83128, 1983

Country: ECUADOR
Region: SOUTH AMERCIA

Latitude: 2°15'S
Longitude: 79°15'W

Zone: 1 Group: A
Elevation (m): 17

Site: ESTACION EXPERIMENTAL BOLICHE
Cooperator(s): ING. EDUARDO MALDONADO A.

Date planted: August 24, 1983 Date harvested: December 6, 1983
Total moisture (mm): 175
Number of irrigations: 4 (total amount 175 mm)
Substituted cultivar: INIAP-301

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
9	Jupiter	1,726.6	44.0	128.5	60.0	2.3	1.0
79	71-38	1 503.7	35.0	119.3	40.0	2.3	1.0
45	ICA L-109	1,549.1	40.0	128.5	62.3	2.5	1.0
100	IAC-8	1,514.9	40.0	119.3	63.5	2.3	1.0
96	EGSY 91-7	1,498.6	33.0	107.3	53.0	2.8	1.8
75	Braxton	1,437.8	28.0	112.5	27.3	1.0	1.0
105	R-315	1,414.0	33.0	107.3	48.5	2.5	1.0
281	INIAP-301	1,397.0	37.0	128.5	37.8	2.0	1.0
97	F75-9207	1,381.1	33.0	116.3	44.3	1.8	1.0
99	IAC-6	1,346.5	40.0	130.8	66.5	3.0	1.0
101	ICA L-129	1,262.8	35.0	121.0	65.0	2.5	1.0
78	ISRA/IRAT 44A/73	1,199.4	40.0	125.5	53.8	3.3	1.0
106	SH 1274	1,178.6	28.0	113.8	56.8	2.8	1.0
90	AGS 8	1,150.7	33.0	106.0	66.3	2.3	1.8
76	SIATSA 194	1,150.2	40.0	128.5	85.3	3.8	1.3
10	Improved Pelican	1,116.9	33.0	117.3	62.0	2.5	1.0
	Grand mean	1,370.5	35.8	119.4	55.8	2.5	1.1
	Standard error of cultivar mean	228.6	0.0	2.8	3.7	0.4	0.2
	Coefficient of variation (%)	33.4	0.0	4.8	13.2	29.0	32.8
	5% LSD Cultivar means (*****=ns)	*****	0.0	8.1	10.5	1.0	0.5

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
9	Jupiter	148.8	45.5	9.5	25.4	2.0	
79	71-38	159.5	44.5	8.5	15.5	2.0	
45	ICA L-109	182.3	37.3	11.5	18.6	2.3	
100	IAC-8	152 8	45.3	10.8	24.7	2.8	
96	EGSY 91-7	164.8	29.5	11.3	18.0	3.0	
75	Braxton	168.5	29.5	8.5	24.7	2.3	
105	R-315	155.3	29.3	8.5	19.8	2.0	
281	INIAP-301	86.0	56.3	7.8	21.9	2.3	
97	F75-9207	181.0	33.5	9.0	19.0	2.3	
99	IAC-6	166.0	41.5	9.3	20.3	2.3	
101	ICA L-129	178.5	39.0	24.8	18.4	2.3	
78	ISRA/IRAT 44A/73	182.8	43.3	10.5	19.1	3.3	
106	SH 1274	147.8	40.5	8.8	21.9	3.3	
90	AGS 8	187.0	39.8	11.8	18.1	2.0	
76	SIATSA 194	168.3	47.0	12.8	20.4	2.5	
10	Improved Pelican	169.8	40.8	11.5	18.5	2.0	
	Grand mean	162.4	40.1	10.9	20.3	2.4	
	Standard error of cultivar mean	13.4	4.7	3.7	0.8	0.3	
	Coefficient of variation (%)	16.4	23.4	67.3	8.0	21.0	
	5% LSD Cultivar means (*****=ns)	38.0	13.4	*****	2.3	0.7	

Table 27. Trial 83523, 1983

Country: EGYPT Latitude: 30°N Zone: 7 Group: C
Region: AFRICA Longitude: 31°E Elevation (m): 20

Site: KALUBIA, SHALAKAN
Cooperator(s): PROF. DR. NABIH IBRAHIM ASHOUR

Date planted: May 23, 1983 Date harvested: not reported
Soil information: loam 58%, silt 10%, clay 32%, pH 7.9, loamy clay loam
Fertilizer used (kg/ha): N 25.0, P 25.0, K 25.0
Total moisture (mm): 800
Number of irrigations: 8 (800 mm)
Substituted cultivars: Forrest, Columbus

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
35	Crawford	1,979.6	34.0	115.8	86.8	1.8	1.3
84	Sparks	1,850.4	30.5	117.0	84.0	1.5	2.0
93	BSR 201	1,804.5	28.0	93.8	62.8	1.0	1.3
88	Lakota	1,779.5	26.3	89.8	68.5	1.0	1.0
102	Lawrence	1,637.8	27.8	109.5	61.3	1.0	1.8
85	Pixie	1,629.5	31.5	102.8	32.8	2.0	2.0
32	Columbus	1,435.7	36.0	129.5	84.5	2.0	1.0
89	Williams 82	1,344.0	31.8	102.5	71.5	1.0	1.0
98	Hobbit	1,277.3	30.3	106.0	30.0	1.0	1.0
86	Fayette	1,246.1	31.5	103.3	74.8	1.0	1.0
87	Clay	1,162.7	24.5	82.8	39.5	1.0	1.0
107	Weber	1,108.6	26.3	94.5	55.5	1.0	1.0
104	Platte	1,037.7	30.5	100.3	55.0	1.0	1.0
103	Mead	1,016.9	32.5	100.8	55.5	1.0	1.5
18	Forrest	991.9	54.5	133.8	81.3	1.3	1.5
36	Evans	733.5	25.8	78.3	37.5	1.0	1.0
	Grand mean	1,377.2	31.3	103.8	61.3	1.2	1.3
	Standard error of cultivar mean	168.1	1.0	1.8	3.1	0.1	0.2
	Coefficient of variation (%)	24.4	6.1	3.5	10.1	18.6	33.5
	5% LSD Cultivar means (*****=ns)	478.7	2.7	5.2	8.8	0.3	0.6

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
35	Crawford	90.0	48.0	9.6	17.1	1.0	95.0
84	Sparks	87.0	45.0	10.2	15.7	2.0	85.0
93	BSR 201	128.8	38.3	4.2	15.4	1.0	67.5
88	Lakota	160.3	39.8	3.2	16.0	1.3	91.3
102	Lawrence	130.3	36.8	7.4	16.5	1.0	87.5
85	Pixie	137.5	37.3	3.4	16.5	1.3	62.5
32	Columbus	110.3	53.3	5.6	15.0	1.3	87.5
89	Williams 82	127.0	42.5	5.7	16.5	1.0	80.0
98	Hobbit	120.0	29.0	4.2	16.5	1.5	70.0
86	Fayette	118.0	39.3	6.1	14.8	1.0	90.0
87	Clay	132.0	34.8	3.9	14.3	2.0	52.5
107	Weber	80.8	45.0	4.7	13.6	1.3	77.5
104	Platte	85.8	40.8	4.6	13.5	1.3	82.5
103	Mead	82.5	36.5	4.4	16.2	1.5	85.0
18	Forrest	126.5	40.5	5.4	13.1	1.8	77.5
36	Evans	83.3	34.8	4.0	15.9	2.0	57.5
	Grand mean	112.5	40.1	5.4	15.4	1.4	78.1
	Standard error of cultivar mean	14.1	3.3	0.6	0.7	0.2	4.7
	Coefficient of variation (%)	25.2	16.5	23.6	9.4	27.1	12.1
	5% LSD Cultivar means (*****=ns)	40.3	9.4	1.8	2.1	0.5	13.5

Table 28. Trial 83164, 1983

Country: EL SALVADOR
Region: MESO AMERICA

Latitude: 13°49'N
Longitude: 89°24'W

Zone: 4 Group: A
Elevation (m): 460

Site: ESTACION EXPERIMENTAL DE SAN ANDRES
Cooperator(s): ING. NELSON ROLANDO VASQUEZ FLORES

Date planted: August 18, 1983 Date harvested: November 8, 1983
Soil information: loam 65%, silt 20%, clay 15%, pH 7.2
Fertilizer used (kg/ha): N 30.0, P 16.4
Total moisture (mm): 462
Number of irrigations: 2

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
100	IAC-8	4,544.8	36.8	103.5	64.3	2.5	
97	F75-9207	4,107.3	28.0	93.5	50.8	1.0	
9	Jupiter	4,055.2	36.3	103.5	71.8	2.3	
2	UFV-1	3,786.4	32.0	99.0	41.8	1.0	
76	SIATSA 194	3,569.0	35.8	90.8	84.3	2.0	
79	71-38	3,372.5	31.8	96.5	30.5	1.0	
99	IAC-6	3,128.0	39.3	103.5	52.8	1.3	
78	ISRA/IRAT 44A/73	3,080.1	38.8	94.0	52.5	1.3	
10	Improved Pelican	2,811.3	32.3	82.0	73.8	1.3	
106	SH 1274	2,678.7	28.0	81.0	62.5	1.7 (3)	
101	ICA L-129	2,619.0	33.8	92.5	54.5	1.0	
19	Davis	2,457.1	27.8	89.0	24.5	1.0	
96	EGSY 91-7	2,430.8	31.5	80.5	45.8	1.0	
75	Braxton	2,395.3	26.3	86.5	32.8	1.0	
45	ICA L-109	2,393.9	38.5	94.0	59.0	1.3	
90	AGS 8	2,021.7	31.8	82.8	68.3	1.5	
	Grand mean	3,090.7	33.0	92.0	54.3	1.4	
	Standard error of cultivar mean	361.4	0.6	1.8	4.1	0.6	
	Coefficient of variation (%)	23.4	3.4	3.8	15.0	44.2	
	5% LSD Cultivar means (*****=ns)	1029.5	1.6	5.0	11.6	*****	

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
100	IAC-8	94.0	43.5	12.5	23.2		
97	F75-9207	112.3	34.0	11.3	18.6		
9	Jupiter	106.3	44.5	12.5	22.9		
2	UFV-1	104.8	44.3	10.8	18.6		
76	SIATSA 194	127.0	33.3	11.3	19.9		
79	71-38	93.5	56.3	8.0	15.9		
99	IAC-6	109.5	34.0	11.3	17.7		
78	ISRA/IRAT 44A/73	102.5	41.0	10.0	15.4		
10	Improved Pelican	116.5	39.8	12.5	18.2		
106	SH 1274	108.8	33.3 (3)	12.5	16.8		
101	ICA L-129	119.3	31.5	10.0	18.6		
19	Davis	109.8	25.8	8.5	21.4		
96	EGSY 91-7	112.0	31.5 (2)	12.5	17.2		
75	Braxton	111.0	21.5	11.3	20.8		
45	ICA L-109	119.0	50.0	11.3	14.0		
90	AGS 8	121.5	29.5	11.3	19.5		
	Grand mean	110.5	37.3	11.1	18.7		
	Standard error of cultivar mean	8.4	15.3	1.2	1.1		
	Coefficient of variation (%)	15.2	40.8	22.3	12.2		
	5% LSD Cultivar means (*****=ns)	*****	*****	*****	3.2		

Table 29. Trial 83190, 1983

Country: GABON
Region: AFRICA

Latitude: 2°03'S
Longitude: 11°12'E

Zone: 1 Group: A
Elevation (m): 200

Site: LEBAMBA
Cooperator(s): DR. R. RAVOAVY

Date planted: February 9, 1984 Date harvested: May 4, 1984
Soil information: loam 69%, silt 4%, clay 27%, pH 4.5
Fertilizer used (kg/ha): N 20.0 P 37.0, K 16.7
Total moisture (mm): 756

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
99	IAC-6	1,453.1	36.0	87.5	62.3	1.0	1.0
101	ICA L-129	1,337.5	31.0	85.3	51.8	1.0	1.0
106	SH 1274	1,325.0	31.0	76.3	70.3	1.0	1.0
90	AGS 8	1,312.5	31.0	79.8	55.3	1.0	1.0
9	Jupiter	1,187.5	36.0	93.0	56.0	1.0	1.0
97	F75-9207	1,115.6	31.0	78.5	40.3	1.0	1.0
75	Braxton	768.8	26.0	74.0	44.5	1.0	1.0
96	EGSY 91-7	528.1	26.0	75.5	50.5	1.0	1.0
	Grand mean	1,128.5	31.0	81.2	53.8	1.0	1.0
	Standard error of cultivar mean	163.8	0.0	1.2	3.8	0.0	0.0
	Coefficient of variation (%)	29.0	0.0	3.0	14.1	0.0	0.0
	5% LSD Cultivar means (*****=ns)	481.7	0.0	3.6	11.2	*****	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
99	IAC-6	252.5		25.8			
101	ICA L-129	236.0		15.9			
106	SH 1274	239.5		32.9			
90	AGS 8	251.0		22.6			
9	Jupiter	224.8		23.0			
97	F75-9207	237.8		15.3			
75	Braxton	254.0		13.8			
96	EGSY 91-7	227.3		15.1			
	Grand mean	240.3		20.5			
	Standard error of cultivar mean	10.7		3.2			
	Coefficient of variation (%)	8.9		30.9			
	5% LSD Cultivar means (*****=ns)	*****		9.3			

Table 30. Trial 83102, 1983

Country: GABON
Region: AFRICA

Latitude: 0°05'N
Longitude: 9°45'E

Zone: 1 Group: A
Elevation (m): 18

Site: NTOUM
Cooperator(s): MR. G. VAN DE PLAS, MR. CARLI CARLO

Date planted: March 25, 1983 Date harvested: July 4, 1983
Soil information: loam 22%, silt 65%, clay 14%, pH 5.0
Fertilizer used (kg/ha): N 25.0, P 10.9, K 41.6
Total moisture (mm): 452

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
76	SIATSA 194	2,356.7	34.8	107.5	81.8	1.8	1.0
78	ISRA/IRAT 44A/73	2,352.1	40.5	101.3	71.3	2.0	1.3
100	IAC-8	2,242.1	39.0	103.0	78.4	1.5	1.0
9	Jupiter	2,200.4	41.0	106.3	81.3	1.0	1.0
101	ICA L-129	2,148.4	34.0	103.0	67.6	1.0	1.0
97	F75-9207	2,148.4	31.0	103.0	60.1	1.0	1.0
99	IAC-6	2,104.6	39.0	108.0	68.6	1.3	1.0
79	71-38	2,040.0	37.0	103.8	66.6	1.0	1.5
96	EGSY 91-7	2,040.0	31.0	104.8	65.0	1.5	1.0
10	Improved Pelican	2,001.2	33.5	103.8	77.6	1.3	1.3
90	AGS 8	1,973.3	32.3	109.8	68.5	1.3	1.0
106	SH 1274	1,952.5	29.3	102.5	69.5	1.8	1.0
19	Davis	1,924.5	28.0	101.0	46.5	1.0	1.0
45	ICA L-109	1,902.5	41.0	107.5	74.5	1.3	1.0
105	R-315	1,875.4	30.0	106.0	69.6	1.3	1.8
75	Braxton	1,792.0	28.0	105.8	53.8	1.3	1.0
	Grand mean	2,065.9	34.3	104.8	68.8	1.3	1.1
	Standard error of cultivar mean	132.2	0.4	1.0	3.8	0.3	0.2
	Coefficient of variation (%)	12.8	2.4	1.9	11.1	39.3	30.3
	5% LSD Cultivar means (*****=ns)	*****	1.2	2.8	10.9	*****	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
76	SIATSA 194	161.5	49.8	12.3	20.0	1.3	96.0
78	ISRA/IRAT 44A/73	142.8	69.3	9.3	14.8	1.8	98.0
100	IAC-8	146.0	36.5	11.8	20.0	1.0	95.5
9	Jupiter	132.5	63.0	14.3	21.4	2.0	97.5
101	ICA L-129	160.0	50.3	11.3	16.1	1.0	96.0
97	F75-9207	161.8	54.8	10.3	14.5	1.0	96.5
99	IAC-6	148.8	44.3	10.0	15.8	1.3	98.8
79	71-38	149.8	52.3	8.3	13.5	1.3	97.5
96	EGSY 91-7	176.5	33.3	12.3	13.8	1.3	93.3
10	Improved Pelican	171.3	37.0	15.0	13.1	1.0	99.0
90	AGS 8	164.5	39.5	9.8	16.2	1.0	96.5
106	SH 1274	144.0	37.8	12.0	14.9	1.0	95.0
19	Davis	157.3	28.0	8.3	17.5	1.3	95.5
45	ICA L-109	162.8	52.3	10.3	11.2	1.0	95.5
105	R-315	163.0	28.0	11.4	14.3	1.3	93.0
75	Braxton	173.3	26.3	8.3	19.1	1.0	91.5
	Grand mean	157.2	43.9	10.9	16.0	1.2	95.9
	Standard error of cultivar mean	14.3	7.4	1.3	0.7	0.2	2.0
	Coefficient of variation (%)	18.2	33.6	23.2	8.4	28.3	4.1
	5% LSD Cultivar means (*****=ns)	*****	21.0	3.6	1.9	0.5	*****

Table 31. Trial 83165, 1983

Country: GAMBIA
Region: AFRICA

Latitude: 14°N
Longitude: 13°W

Zone: 4 Group: A
Elevation (m): 15

Site: BANJULUNDING (SITE III)
Cooperator(s): DR. S. TAAL, MR. A. COX

Date planted: July 22, 1983 Date harvested: September 27, 1983
Soil information: loam 67%, silt 29%, clay 4%, pH 5.4, ultic eutrustox, Chamen series
Fertilizer used (kg/ha): N 25.0, P 25.0, K 25.0
Total moisture (mm): 424

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
79	71-38	3,503.1	35.0	92.0	50.8	1.8	1.8
97	F75-9207	3,211.4	33.8	92.0	70.3	1.0	1.0
96	EGSY 91-7	2,950.0	33.0	69.0	58.5	1.8	2.0
19	Davis	2,791.7	27.0	62.0	39.3	1.0	2.3
99	IAC-6	2,769.7	42.0	81.5	71.8	1.5	1.0
78	ISRA/IRAT 44A/73	2,768.1	35.8	83.0	62.0	1.0	1.3
106	SH 1274	2,722.9	36.5	77.0	79.1	1.5	2.0
2	UFV-1	2,694.4	35.3	85.0	42.5	1.0	1.8
100	IAC-8	2,469.8	34.5	83.0	63.5	1.0	2.0
76	SIATSA 194	2,468.0	35.0	87.0	91.8	2.0	1.8
10	Improved Pelican	2,434.8	44.8	96.3	62.8	1.3	1.5
90	AGS 8	1,877.0	30.5	72.0	68.3	2.0	1.0
45	ICA L-109	1,857.3	40.0	92.0	77.0	2.8	2.3
9	Jupiter	1,695.8	42.0	87.0	62.3	1.0	1.0
101	ICA L-129	1,675.7	27.0	57.8	47.0	1.3	1.5
75	Braxton	1,435.4	27.0	62.0	32.0	1.0	2.3
	Grand mean	2,457.8	34.9	79.9	61.2	1.4	1.6
	Standard error of cultivar mean	0.0	0.0	0.0	1.8	0.2	0.3
	Coefficient of variation (%)	0.0	0.0	0.0	5.8	24.5	30.1
	5% LSD Cultivar means (*****=ns)	0.0	0.0	0.0	5.0	0.5	0.7

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
79	71-38	145.0	46.5	16.8	7.7	4.3	
97	F75-9207	137.5	47.5	16.5	12.2	1.3	
96	EGSY 91-7	138.8	29.3	17.3	11.9	2.0	
19	Davis	141.3	31.3	6.3	13.4	3.0	
99	IAC-6	141.3	35.3	20.3	10.9	2.3	
78	ISRA/IRAT 44A/73	137.5	38.3	11.3	10.6	1.8	
106	SH 1274	130.0	32.3	16.3	13.3	2.3	
2	UFV-1	147.5	25.5	14.5	12.3	3.5	
100	IAC-8	147.5	27.5	15.3	14.2	4.8	
76	SIATSA 194	141.3	25.8	19.0	16.7	3.5	
10	Improved Pelican	165.0	26.5	18.8	12.7	2.5	
90	AGS 8	135.0	26.5	16.0	12.9	2.8	
45	ICA L-109	137.5	49.8	14.0	9.0	4.5	
9	Jupiter	145.0	30.3	18.8	13.5	4.8	
101	ICA L-129	105.0	23.5	9.3	8.9	1.0	
75	Braxton	137.5	21.5	4.8	14.8	5.0	
	Grand mean	139.5	32.3	14.7	12.2	3.1	
	Standard error of cultivar mean	0.0	3.5	0.0	0.5	0.3	
	Coefficient of variation (%)	0.0	21.4	0.0	8.5	22.0	
	5% LSD Cultivar means (*****=ns)	0.0	9.9	0.0	1.5	1.0	

Table 32. Trial 83137, 1983

Country: GHANA | Latitude: 7°N | Zone: 1 Group: A
Region: AFRICA | Longitude: 2°W | Elevation (m): 250

Site: MIM BRONG-AHAFO
Cooperator(s): ENG. ELMO SCHMIDT

Date planted: May 2, 1983 Date harvested: August 10, 1983
Soil information: loam 10%, silt 60%, clay 30%, pH 7.7
Fertilizer used (kg/ha): N 25.0, P 25.0, K 25.0
Total moisture (mm): 880

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
96	EGSY 91-7	1,079.4	33.3	97.3	62.2	2.3	1.8
75	Braxton	1,021.0	36.8	111.5	35.4	1.0	1.0
19	Davis	996.0	35.8	97.3	36.2	1.3	1.0
10	Improved Pelican	858.5	32.5	111.3	102.0	2.5	1.0
76	SIATSA 194	766.8	33.3	111.0	105.3	3.3	1.5
100	IAC-8	687.6	34.5	111.8	67.0	3.0	1.0
101	ICA L-129	666.8	36.8	112.0	65.0	3.0	1.0
90	AGS 8	662.6	32.8	111.0	72.7	2.8	1.8
105	R-315	633.5	34.0	111.0	70.3	4.3	1.3
78	ISRA/IRAT 44A/73	614.3	35.8	111.0	69.5	3.8	1.3
106	SH 1274	612.6	34.8	111.0	99.1	4.3	1.8
99	IAC-6	591.8	36.5	110.8	75.2	3.3	1.0
79	71-38	520.9	36.0	101.8	51.2	1.3	1.0
9	Jupiter	516.8	37.3	116.3	65.3	2.3	1.0
97	F75-9207	454.3	33.0	116.5	51.9	1.8	1.0
45	ICA L-109	304.2	36.8	116.8	75.1	2.8	1.0
	Grand mean	686.7	35.0	109.9	69.0	2.7	1.2
	Standard error of cultivar mean	135.0	0.7	3.8	4.1	0.5	0.2
	Coefficient of variation (%)	39.3	4.0	6.9	12.0	34.9	26.2
	5% LSD Cultivar means (*****=ns)	384.5	2.0	10.8	11.8	1.3	0.5

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
96	EGSY 91-7	178.8	42.6	8.5	18.0 (1)	3.0	17.0 (1)
75	Braxton	202.8	36.1	6.6	22.0 (1)	3.5	58.0 (1)
19	Davis	171.8	30.7	5.5	19.0 (1)	1.8	27.0 (1)
10	Improved Pelican	175.0	64.2	7.1	16.5 (1)	3.5	18.0 (1)
76	SIATSA 194	162.5	80.9	9.1	18.0 (1)	3.8	39.0 (1)
100	IAC-8	177.5	39.8	9.0	17.5 (1)	3.3	93.0 (1)
101	ICA L-129	177.8	49.9	6.9	17.0 (1)	2.5	39.0 (1)
90	AGS 8	182.8	51.5	10.5	18.0 (1)	4.0	38.0 (1)
105	R-315	182.0	47.7	9.0	20.0 (1)	3.5	15.0 (1)
78	ISRA/IRAT 44A/73	165.0	66.3	8.8	13.5 (1)	3.3	23.0 (1)
106	SH 1274	177.5	58.0	8.2	19.5 (1)	3.3	28.0 (1)
99	IAC-6	180.0	65.3	8.3	15.5 (1)	3.0	27.0 (1)
79	71-38	165.5	87.4	6.9	12.0 (1)	4.5	64.0 (1)
9	Jupiter	142.5	50.8	6.6	16.5 (1)	4.0	43.0 (1)
97	F75-9207	180.8	44.5	6.1	16.0 (1)	4.0	45.0 (1)
45	ICA L-109	135.0	71.9	6.9	13.5 (1)	4.3	48.0 (1)
	Grand mean	172.3	55.5	7.7	17.0	3.4	38.9
	Standard error of cultivar mean	13.0	6.6	0.8	2.6	0.4	20.3
	Coefficient of variation (%)	15.1	23.9	20.8	15.2	25.8	52.3
	5% LSD Cultivar means (*****=ns)	*****	18.9	2.3	*****	1.3	*****

Table 33. Trial 83147, 1983

Country: GUATEMALA
Region: MESO AMERICA

Latitude: 14°07'N
Longitude: 91°09'W

Zone: 4 Group: A
Elevation (m): 48

Site: CUYUTA, ESCUINTLA
Cooperator(s): ING. DANILO AGUSTIN GONZALEZ ARAUZ

Date planted: July 21, 1983 Date harvested: October 24, 1983
Soil information: loam 77%, silt 15%, clay 8%, pH 4.6
Fertilizer used (kg/ha): N 30.0, P 13.2, K 24.9

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
97	F75-9207	3,128.1	33.0	107.0	74.5	1.0	1.0
76	SIATSA 194	3,021.4	36.5	98.0	122.5	1.0	1.0
100	IAC-8	2,783.9	35.8	98.0	97.5	1.5	1.0
96	EGSY 91-7	2,698.5	30.0	98.0	73.8	1.0	1.0
99	IAC-6	2,667.2	39.5	98.0	106.3	1.3	1.0
79	71-38	2,554.3	35.0	110.0	61.5	1.0	1.0
90	AGS 8	2,500.5	31.3	98.0	102.5	2.0	1.0
106	SH 1274	2,438.0	30.5	98.0	103.8	1.8	1.0
10	Improved Pelican	2,375.5	31.0	98.0	107.5	1.0	1.0
105	R-315	2,260.9	31.3	88.0	66.0	1.5	1.0
45	ICA L-109	2,175.4	40.0	110.0	91.0	1.8	1.0
9	Jupiter	2,000.4	35.8	98.0	91.3	1.5	1.0
101	ICA L-129	1,948.3	33.5	98.0	102.5	1.5	1.0
78	ISRA/IRAT 44A/73	1,629.9	35.3	107.0	58.0	1.0	1.0
19	Davis	1,534.9	26.0	101.0	50.8	1.0	1.0
75	Braxton	851.4	26.8	110.0	34.5	1.0	1.0
	Grand mean	2,285.5	33.2	100.9	84.0	1.3	1.0
	Standard error of cultivar mean	208.2	0.6	1.3	3.8	0.2	0.0
	Coefficient of variation (%)	18.2	3.5	2.6	8.9	32.4	0.0
	5% LSD Cultivar means (*****=ns)	593.0	1.7	3.8	10.7	0.6	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
97	F75-9207	150.8	57.0	15.8	12.8	3.0	58.8
76	SIATSA 194	154.3	40.5	11.3	18.3	2.8	74.3
100	IAC-8	120.5	59.3	20.0	14.8	2.8	71.0
96	EGSY 91-7	106.3	43.0	8.8	13.3	3.0	55.0
99	IAC-6	126.0	56.8	13.8	10.8	2.5	57.8
79	71-38	126.3	66.5	10.8	9.3	2.8	33.8
90	AGS 8	146.8	42.8	13.8	12.5	4.0	45.3
106	SH 1274	96.3	52.0	12.5	14.5	3.8	36.7 (3)
10	Improved Pelican	120.5	48.0	13.8	10.8	2.3	30.8
105	R-315	149.5	47.5	12.8	13.0	2.8	42.8
45	ICA L-109	139.5	87.0	15.5	8.8	3.0	60.3
9	Jupiter	81.5	60.8	10.0	14.8	3.0	57.0
101	ICA L-129	128.8	54.3	13.8	14.0	3.3	78.8
78	ISRA/IRAT 44A/73	25.3	98.0	6.8	14.0 (3)	3.7 (3)	60.3 (3)
19	Davis	126.8	39.3	9.5	15.5	4.3	14.8
75	Braxton	144.0	33.0	5.0	15.8	5.0	1.8
	Grand mean	121.4	55.3	12.1	13.3	3.2	48.7
	Standard error of cultivar mean	10.2	3.7	1.8	2.6	0.9	22.6
	Coefficient of variation (%)	16.8	13.4	29.8	19.8	27.0	46.4
	5% LSD Cultivar means (*****=ns)	29.1	10.6	5.1	*****	*****	*****

Table 34. Trial 83148, 1983

Country: GUATEMALA Latitude: 14°23'N Zone: 4 Group: A
Region: MESO AMERICA Longitude: 91°35'W Elevation (m): 100

Site: LA MAQUINA
Cooperator(s): ING. DANILO AGUSTIN GONZALEZ ARAUZ, MR. M. SOLARES

Date planted: July 19, 1983 Date harvested: October 25, 1983
Soil information: loam 40%, silt 24.5%, clay 35.5%, pH 6.5
Fertilizer used (kg/ha): N 30.0, P 13.2, K 24.9

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
19	Davis	3,424.4	29.0	91.0	58.8	1.8	1.0
75	Braxton	2,979.8	30.5	106.0	51.3	1.0	1.0
76	SIATSA 194	2,971.0	36.0	106.0	121.3	2.8	1.0
78	ISRA/IRAT 44A/73	2,734.3	36.3	106.0	85.0	3.0	1.0
105	R-315	2,733.9	33.8	91.0	72.5	4.5	1.0
106	SH 1274	2,665.5	33.8	106.0	101.3	4.8	1.0
9	Jupiter	2,620.5	39.5	106.0	83.8	2.8	1.0
99	IAC-6	2,591.8	39.8	106.0	87.5	3.8	1.0
97	F75-9207	2,563.4	35.0	106.0	77.5	2.0	1.0
96	EGSY 91-7	2,516.8	33.0	106.0	72.5	4.5	2.5
79	71-38	2,499.3	35.8	106.0	62.5	2.8	1.0
100	IAC-8	2,478.4	35.3	106.0	77.5	3.8	1.0
101	ICA L-129	2,251.3	35.0	91.0	90.0	4.0	1.0
45	ICA L-109	2,207.9	39.8	91.0	90.0	2.5	1.0
10	Improved Pelican	1,796.6	35.0	106.0	98.8	4.0	1.0
90	AGS 8	1,579.9	33.5	106.0	98.8	4.5	2.8
	Grand mean	2,538.4	35.1	102.3	83.1	3.3	1.2
	Standard error of cultivar mean	184.0	0.8	0.0	3.8	0.4	0.1
	Coefficient of variation (%)	14.5	4.5	0.0	9.1	23.8	15.6
	5% LSD Cultivar means (*****=ns)	524.1	2.2	0.0	10.7	1.1	0.3

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
19	Davis	240.8	43.8	10.0	22.3	2.8	26.5
75	Braxton	196.5	33.0	11.3	25.0	3.8	68.0
76	SIATSA 194	224.5	55.0	25.0	25.5	2.8	72.8
78	ISRA/IRAT 44A/73	207.5	67.5	21.3	17.8	3.0	84.0
105	R-315	217.0	36.0	15.0	18.8	2.5	71.3
106	SH 1274	187.5	48.8	26.3	21.0	3.8	43.3
9	Jupiter	166.5	68.8	22.5	20.3	2.5	72.0
99	IAC-6	197.0	60.0	22.5	17.8	2.3	63.5
97	F75-9207	205.3	59.8	20.0	17.0	1.8	80.8
96	EGSY 91-7	208.8	50.5	18.8	17.5	3.0	49.0
79	71-38	213.8	69.0	11.3	16.0	2.0	68.0
100	IAC-8	174.8	70.0	22.5	20.5	2.3	56.8
101	ICA L-129	224.3	53.3	20.5	18.5	3.3	69.5
45	ICA L-109	217.0	70.0	22.5	13.8	2.8	65.8
10	Improved Pelican	196.3	55.5	23.8	17.0	2.3	34.5
90	AGS 8	208.3	41.5	28.8	18.0	3.8	15.8
	Grand mean	205.3	55.1	20.1	19.2	2.8	58.8
	Standard error of cultivar mean	11.8	4.8	2.0	1.0	0.2	5.2
	Coefficient of variation (%)	11.5	17.2	19.8	9.9	16.8	17.5
	5% LSD Cultivar means (*****=ns)	33.7	13.5	5.7	2.7	0.7	14.7

Table 35. Trial 83502, 1983

Country: GUATEMALA
Region: MESO AMERICA

Latitude: 14°39'N
Longitude: 90°49'W

Zone: 7 Group: C
Elevation (m): 1,800

Site: CHIMALTENANGO
Cooperator(s): ING. DANILO AGUSTIN GONZALEZ ARAUZ, MR. R. DE VALLE

Date planted: June 23, 1983 Date harvested: October 10, 1983
Soil information: pH 6.0
Fertilizer used (kg/ha): N 30.0, P 13.2, K 24.9
Total moisture (mm): 536

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
87	Clay			133.0 (1)	30.5 (1)	1.0 (1)	1.0 (1)
36	Evans			133.0 (1)	38.1 (1)	1.0 (1)	1.0 (1)
57	Corsoy 79			133.0 (1)	38.1 (1)	1.0 (1)	1.0 (1)
88	Lakota			133.0 (1)	73.7 (1)	1.0 (1)	1.0 (1)
71	Hodgson 78			133.0 (1)	43.2 (1)	1.0 (1)	1.0 (1)
35	Crawford	3,416.1		123.0	136.5	1.3	1.0
102	Lawrence	3,031.9		123.0	104.2	1.0	1.0
84	Sparks	2,953.5		123.0	92.1	3.0	1.0
89	Williams 82	2,710.5		110.3	73.7	1.5	1.0
85	Pixie	2,338.0		106.0	57.8	1.0	1.0
103	Mead	2,135.8		106.0	73.1	1.0	1.0
104	Platte	1,878.7		112.8	76.2	1.0	1.0
86	Fayette	1,662.0		110.3	71.8	1.0	1.0
98	Hobbit	1,567.8		106.0	57.8	1.0	1.0
93	BSR 201	1,398.6		96.0	46.4	1.0	1.0
107	Weber	1,385.7		123.0	69.1	1.3	1.0
	Grand mean	2,225.3		114.7	74.7	1.2	1.0
	Standard error of cultivar mean	147.3		11.4	27.9	0.6	0.0
	Coefficient of variation (%)	13.2		9.9	37.4	47.9	0.0
	5% LSD Cultivar means (*****=ns)	425.4		*****	*****	*****	0.0

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
87	Clay						
36	Evans						
57	Corsoy 79			10.0 (1)			
88	Lakota						
71	Hodgson 78						
35	Crawford	209.5	24.3	8.3	18.5	2.3	92.0
102	Lawrence	249.0	20.0	6.5	18.3	3.0	93.5
84	Sparks	249.5	18.5	6.0	20.5	3.0	91.5
89	Williams 82	235.5	20.0	5.0	18.8	2.3	90.5
85	Pixie	265.8	16.3	4.5	19.0	2.0	93.5
103	Mead	235.0	20.0	6.8	17.8	3.0	94.3
104	Platte	205.3	15.0	3.8	16.3	3.8	90.3
86	Fayette	204.3	16.3	7.0	16.8	2.5	82.3
98	Hobbit	244.0	15.5	5.3	17.5	2.8	86.5
93	BSR 201	271.0	15.0	4.8	14.5	2.5	96.0
107	Weber	221.0	21.5	3.5	16.3	3.8	79.8
	Grand mean	235.4	18.4	5.7	17.6	2.8	90.0
	Standard error of cultivar mean	12.2	1.5	2.0	0.9	0.2	3.4
	Coefficient of variation (%)	10.3	16.2	36.1	10.1	15.3	7.5
	5% LSD Cultivar means (*****=ns)	35.1	4.3	*****	2.6	0.6	9.8

Table 36. Trial 83109, 1983

Country: GUINEA-BISSAU
Region: AFRICA

Latitude: 12°40'N
Longitude: 14°25'W

Zone: 1 Group: A
Elevation (m): 9

Site: CONTUBOEL
Cooperator(s): DIRECTOR (DEPA)

Date planted: July 1, 1983
Fertilizer used (kg/ha): P 12.6
Total moisture (mm): 874

Date harvested: September 26, 1983

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
78	ISRA/IRAT 44A/73	733.3	55.0	97.0	46.8	1.3	1.0
96	EGSY 91-7	662.0	46.5	88.3	39.3	1.0	1.0
76	SIATSA 194	632.4	54.5	96.8	63.0	1.5	1.0
9	Jupiter	582.4	56.0	111.3	56.3	1.5	1.0
100	IAC-8	510.5	55.3	96.5	53.8	1.5	1.3
97	F75-9207	498.2	53.5	97.5	39.8	1.3	1.0
99	IAC-6	454.1	54.5	111.3	43.5	1.3	1.0
45	ICA L-109	423.4	54.8	110.8	57.5	1.0	1.0
75	Braxton	403.8	46.3	84.3	32.5	1.5	1.5
101	ICA L-129	400.3	52.5	94.5	45.3	1.0	1.0
10	Improved Pelican	377.8	46.8	88.3	44.8	1.3	1.0
19	Davis	377.6	38.0	82.0	24.5	1.0	1.0
106	SH 1274	362.8	42.0	84.8	47.0	1.3	1.0
105	R-315	312.6	47.8	82.8	39.8	1.3	1.3
79	71-38	301.3	55.0	98.8	39.3	1.5	1.0
90	AGS 8	275.7	41.0	86.3	45.5	1.3	1.0
	Grand mean	456.8	50.0	94.4	44.9	1.3	1.1
	Standard error of cultivar mean	100.1	1.3	0.8	3.8	0.2	0.1
	Coefficient of variation (%)	43.8	5.1	1.7	16.8	37.2	21.6
	5% LSD Cultivar means (*****=ns)	285.2	3.6	2.3	10.7	*****	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
78	ISRA/IRAT 44A/73	120.3	14.0	16.5	13.9	1.3	
96	EGSY 91-7	133.0	15.8	17.5	14.5	2.0	
76	SIATSA 194	120.5	14.8	24.3	16.5	2.5	
9	Jupiter	128.0	15.3	18.0	14.8	2.3	
100	IAC-8	128.5	10.5	18.5	14.1	2.8	
97	F75-9207	120.8	24.3	12.5	11.9	2.8	
99	IAC-6	136.5	13.3	18.3	14.3	1.8	
45	ICA L-109	124.8	17.8	18.0	12.6	4.3	
75	Braxton	116.0	17.5	12.3	16.6	3.5	
101	ICA L-129	133.0	13.8	17.8	14.5	2.5	
10	Improved Pelican	134.5	18.0	19.8	13.1	2.3	
19	Davis	131.3	13.5	12.3	13.8	2.0	
106	SH 1274	118.8	17.3	14.0	12.5	2.5	
105	R-315	109.5	12.5	16.3	12.6	2.0	
79	71-38	135.3	19.3	20.8	9.8	5.0	
90	AGS 8	113.8	13.0	16.8	13.3	2.8	
	Grand mean	125.3	15.6	17.1	13.7	2.6	
	Standard error of cultivar mean	7.5	3.3	2.2	0.7	0.5	
	Coefficient of variation (%)	12.0	42.8	25.9	10.1	35.5	
	5% LSD Cultivar means (*****=ns)	*****	*****	6.3	2.0	1.3	

Table 37. Trial 83172, 1983

Country: HONDURAS Latitude: 14°N Zone: 5 Group: A
Region: MESO AMERICA Longitude: 87°02'W Elevation (m): 800

Site: ESCUELA AGRICOLA PANAMERICANA, EL ZAMORANO
Cooperator(s): DR. JORGE F. CHANG

Date planted: September 9, 1983 Date harvested: December 19, 1983
Soil information: loam 69%, silt 17.5%, clay 13.5%, pH 6.6 , franco arenoso
Fertilizer used (kg/ha): N 20.0, P 28.8
Total moisture (mm): 358
Number of irrigations: 1 (10 mm)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
9	Jupiter	1,753.1	42.0	90.5	71.3	1.5	1.0
2	UFV-1	1,700.0	29.0	84.3	24.5	1.0	1.0
97	F75-9207	1,640.6	25.8	82.0	30.8	1.0	1.0
96	EGSY 91-7	1,621.9	28.8	78.3	44.3	1.0	1.5
101	ICA L-129	1,578.1	30.3	83.0	50.0	1.3	1.0
100	IAC-8	1,471.9	38.0	89.3	68.3	1.5	1.0
45	ICA L-109	1,462.5	38.5	86.0	53.8	1.3	1.0
76	SIATSA 194	1,456.3	32.8	85.0	48.0	1.0	1.0
79	71-38	1,440.6	27.3	86.0	18.8	1.0	1.3
99	IAC-6	1,384.4	38.3	86.8	56.3	1.5	1.0
106	SH 1274	1,375.0	26.0	86.0	47.5	1.0	1.0
10	Improved Pelican	1,365.6	29.0	81.0	49.0	1.0	1.0
78	ISRA/IRAT 44A/73	1,301.3	33.3	85.5	49.0	1.8	1.0
75	Braxton	1,284.4	25.0	77.3	24.5	1.0	1.0
19	Davis	1,225.0	25.0	82.8	20.8	1.0	1.0
69	Essex	1,093.8	25.0	81.0	21.0	1.0	1.0
	Grand mean	1,449.0	30.9	84.0	42.3	1.2	1.1
	Standard error of cultivar mean	157.9	0.3	1.6	4.4	0.2	0.1
	Coefficient of variation (%)	21.8	2.2	3.7	20.5	28.7	18.6
	5% LSD Cultivar means (*****=ns)	*****	1.0	4.4	12.4	0.5	0.3

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
9	Jupiter	87.0	31.5	8.3	12.5	2.5	
2	UFV-1	76.5	32.8	1.5	15.6	2.0	
97	F75-9207	67.3	34.8	2.0	15.3	2.8	
96	EGSY 91-7	108.5	33.0	4.5	14.1	2.0	
101	ICA L-129	84.3	32.3	5.3	12.5	1.8	
100	IAC-8	92.0	34.5	10.8	14.6	2.0	
45	ICA L-109	63.3	52.5	4.5	10.4	2.0	
76	SIATSA 194	99.5	27.8	9.3	14.3	2.0	
79	71-38	75.5	35.0	1.0	13.4	2.5	
99	IAC-6	72.8	31.8	6.8	11.4	2.0	
106	SH 1274	51.5	38.3	2.3	14.1	2.0	
10	Improved Pelican	87.0	36.3	6.3	12.9	2.0	
78	ISRA/IRAT 44A/73	68.5	39.5	5.0	10.5	2.0	
75	Braxton	87.5	23.0	2.0	20.0	3.0	
19	Davis	80.8	24.3	1.3	16.2	2.3	
69	Essex	78.5	22.5	1.5	15.1	3.5	
	Grand mean	80.0	33.1	4.5	13.9	2.3	
	Standard error of cultivar mean	9.3	4.2	0.9	0.5	0.2	
	Coefficient of variation (%)	23.1	25.3	40.3	7.5	13.9	
	5% LSD Cultivar means (*****=ns)	26.4	11.9	2.6	1.5	0.5	

Table 38. Trial 83176, 1983

Country: HONDURAS Latitude: 14°N Zone: 5 Group: A
Region: MESO AMERICA Longitude: 87°02'W Elevation (m): 800

Site: ESCUELA AGRICOLA PANAMERICANA, EL ZAMORANO
Cooperator(s): DR. JORGE F. CHANG

Date planted: October 13, 1983 Date harvested: January 12, 1984
Soil information: loam 67%, silt 18%, clay 15%, pH 6.0, franco arenoso
Fertilizer used (kg/ha): N 20.0, P 28.8
Total moisture (mm): 108
Number of irrigations: 3 (30 mm)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
10	Improved Pelican	1,312.5	29.3	76.3	51.3	1.3	1.0
2	UFV-1	1,306.3	27.0	76.5	33.5	1.0	1.0
78	ISRA/IRAT 44A/73	1,300.0	31.8	76.8	46.0	1.5	1.0
100	IAC-8	1,256.3	36.0	85.3	77.0	2.0	1.0
19	Davis	1,240.6	24.5	75.5	25.8	1.0	1.0
101	ICA L-129	1,184.4	30.5	76.5	50.3	1.0	1.0
76	SIATSA 194	1,146.9	31.5	81.5	67.0	1.3	1.0
97	F75-9207	1,121.9	23.8	75.0	32.8	1.3	1.0
79	71-38	1,115.6	25.5	76.5	27.3	1.0	1.0
75	Braxton	1,084.4	24.8	73.8	28.8	1.0	1.0
106	SH 1274	1,043.8	24.3	75.0	46.5	1.0	1.0
96	EGSY 91-7	1,018.8	28.5	73.0	40.3	1.0	1.0
90	AGS 8	1,015.6	30.5	76.8	55.0	2.0	1.0
9	Jupiter	1,009.4	37.3	83.0	62.8	1.5	1.0
99	IAC-6	965.6	36.5	82.5	71.5	2.0	1.0
45	ICA L-109	816.9	35.8	82.5	67.3	1.8	1.0
	Grand mean	1,121.2	29.8	77.9	48.9	1.3	1.0
	Standard error of cultivar mean	90.2	0.4	0.7	2.5	0.2	0.0
	Coefficient of variation (%)	16.1	2.9	1.8	10.1	23.4	0.0
	5% LSD Cultivar means (*****=ns)	257.0	1.3	2.0	7.0	0.5	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
10	Improved Pelican	122.8	26.0	5.8	13.5	2.5	
2	UFV-1	126.0	19.0	4.5	11.8	2.8	
78	ISRA/IRAT 44A/73	137.8	28.8	4.8	8.3	2.5	
100	IAC-8	128.0	22.5	13.3	13.8	3.0	
19	Davis	109.0	19.8	2.8	13.3	2.0	
101	ICA L-129	122.8	23.5	5.8	10.5	2.3	
76	SIATSA 194	118.8	24.5	9.5	15.5	2.5	
97	F75-9207	122.8	19.3	2.0	10.5	2.8	
79	71-38	133.8	16.8	2.8	11.0	2.5	
75	Braxton	105.5	15.3	2.3	15.8	3.5	
106	SH 1274	107.8	19.8	4.3	11.5	2.5	
96	EGSY 91-7	119.3	23.0	5.3	11.5	2.0	
90	AGS 8	94.8	26.3	6.3	11.3	2.5	
9	Jupiter	103.3	23.0	9.5	11.5	2.8	
99	IAC-6	145.5	26.5	12.0	10.0	2.8	
45	ICA L-109	122.3	26.5	9.3	13.0	3.3	
	Grand mean	120.0	22.5	6.2	12.0	2.6	
	Standard error of cultivar mean	9.2	2.8	0.9	0.8	0.3	
	Coefficient of variation (%)	15.3	24.4	30.3	12.8	22.3	
	5% LSD Cultivar means (*****=ns)	26.2	7.8	2.7	2.2	0.8	

Table 39. Trial 83126, 1983

Country: INDONESIA
Region: ASIA

Latitude: 6°40'N
Longitude: 107°E

Zone: 1 Group: A
Elevation (m): 270

Site: BOGOR
Cooperator(s): DR. SUMARNO, MR. AHMAD DIMYATI, DR. RUSLI HAKIM

Date planted: June 8, 1983 Date harvested: August 31, 1983
Soil information: pH 5.5, latosol
Fertilizer used (kg/ha): N 25.0, P 26.4, K 24.9
Total moisture (mm): 599
Number of irrigations: 3 (amount not reported)
Substituted cultivar: Wilis

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
5000	Wilis	1,157.0	25.8	77.0	48.3		
90	AGS 8	1,142.0	27.3	75.5	59.0		
106	SH 1274	1,124.5	26.5	74.0	49.8		
19	Davis	1,117.5	24 8	77.0	27.5		
78	ISRA/IRAT 44A/73	981.5	33.0	80.8	45.3		
75	Braxton	942.0	24.5	76.3	28.8		
10	Improved Pelican	939.0	27.3	76.3	52.0		
97	F75-9207	919.0	25.5	78.5	41.5		
96	EGSY 91-7	906.5	25.8	77.8	42.8		
45	ICA L-109	849.0	32.0	81.3	42.5		
76	SIATSA 194	829.0	31.8	81.0	56.3		
79	71-38	761.0	27.3	81.0	28.8		
100	IAC-8	754.5	33.0	79.3	51.5		
99	IAC-6	739.5	32.0	81.0	47.3		
105	R-315	630.5	25.8	76.3	40.0		
101	ICA L-129	265.0	28.3	81.0	35.0		
	Grand mean	878.6	28.1	78.4	43.5		
	Standard error of cultivar mean	73.9	0.4	0.6	2.5		
	Coefficient of variation (%)	16.8	3.0	1.6	11.3		
	5% LSD Cultivar means (*****=ns)	210.4	1.2	1.8	7.0		

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
5000	Wilis	230.8	35.5	12.1	8.1	1.3	94.0
90	AGS 8	200.8	31.0	12.1	10.1	1.3	79.8
106	SH 1274	211.8	32.8	9.5	9.8	1.0	58.0
19	Davis	227.0	25.0	8.2	11.5	1.0	49.0
78	ISRA/IRAT 44A/73	209.8	37.5	10.8	9.1	1.3	84.5
75	Braxton	207.3	18.8	9.7	12.4	1.3	78.8
10	Improved Pelican	239.5	33.3	13.6	9.0	2.0	58.8
97	F75-9207	223.3	24.3	9.6	10.4	1.3	73.8
96	EGSY 91-7	169.8	21.5	10.9	14.0	1.0	71.5
45	ICA L-109	194.0	37.8	10.7	6.6	2.3	54.8
76	SIATSA 194	221.3	31.8	14.0	11.3	1.8	77.3
79	71-38	215.8	28.5	9.3	7.6	2.5	10.0
100	IAC-8	220.8	34.0	12.2	10.9	2.0	51.8
99	IAC-6	242.0	33.0	14.5	8.3	2.8	72.0
105	R-315	187.3	21.5	10.0	12.3	1.3	59.0
101	ICA L-129	201.8	19.5	8.8	13.1	2.0	69.8
	Grand mean	212.7	29.1	11.0	10.3	1.6	65.2
	Standard error of cultivar mean	17.0	2.0	1.0	0.5	0.3	4.7
	Coefficient of variation (%)	16.0	13.8	17.4	9.9	38.1	14.6
	5% LSD Cultivar means (*****=ns)	*****	5.7	2.7	1.5	0.9	13.5

Table 40. Trial 83517, 1983

Country: KOREA
Region: ASIA

Latitude: 37°17'N
Longitude: 126°59'E

Zone: 10 Group: C
Elevation (m): 37

Site: SUWEON
Cooperator(s): DR. EUN-HI HONG

Date planted: June 24, 1983 Date harvested: September 20, 1983
Soil information: pH 7.0, Bonryang series, loam
Fertilizer used (kg/ha): N 40.0, P 30.5, K 49.8
Total moisture (mm): 622
Substituted cultivar: Jangyeobkong

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
102	Lawrence	2,409.0	33.3	118.3	76.5	1.3	1.0
36	Evans	2,149.7	43.0	115.8	49.5	1.3	1.0
260	Jangyeobkong	2,086.1	41.0	120.0	87.0	1.5	1.0
89	Williams 82	2,031.4	33.5	117.0	72.5	1.0	1.0
103	Mead	1,973.6	33.8	109.3	57.3	1.5	1.0
85	Pixie	1,837.2	34.5	117.5	42.0	1.0	1.0
84	Sparks	1,735.1	33.0	117.8	67.5	2.5	1.0
57	Corsoy 79	1,635.7	31.5	103.8	57.0	1.3	1.0
86	Fayette	1,583.6	32.8	110.8	59.5	2.3	1.0
88	Lakota	1,544.0	29.5	98.8	65.0	2.0	1.0
104	Platte	1,539.9	32.8	104.0	56.0	1.3	1.0
93	BSR 201	1,535.7	32.0	103.5	53.0	1.0	1.0
98	Hobbit	1,419.0	33.0	116.5	52.3	1.0	1.0
107	Weber	1,282.1	32.5	100.5	55.5	1.8	1.0
71	Hodgson 78	1,110.2	28.5	90.5	45.3	1.3	1.0
87	Clay	1,061.8	28.3	89.0	41.0	1.3	1.0
	Grand mean	1,683.4	33.3	108.3	58.6	1.4	1.0
	Standard error of cultivar mean	190.4	0.4	0.6	3.1	0.2	0.0
	Coefficient of variation (%)	22.6	2.3	1.1	10.5	33.0	0.0
	5% LSD Cultivar means (*****=ns)	542.4	1.1	1.7	8.8	0.7	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
102	Lawrence	150.8	23.5	16.5	20.1	3.0	96.3
36	Evans	110.8	18.5	22.0	29.7	1.0	96.0
260	Jangyeobkong	128.3	32.0	16.8	21.2	2.5	99.5
89	Williams 82	147.5	24.8	15.5	21.2	2.8	98.3
103	Mead	157.8	23.0	14.0	18.3	3.8	100.0
85	Pixie	129.5	23.5	11.8	20.7	3.0	97.0
84	Sparks	144.5	15.8	18.8	19.3	3.5	94.8
57	Corsoy 79	151.3	23.3	15.3	15.1	4.5	98.5
86	Fayette	143.8	22.0	15.5	17.2	3.5	94.5
88	Lakota	150.5	22.5	14.5	16.1	2.5	99.3
104	Platte	120.5	26.8	14.3	17.0	3.0	98.3
93	BSR 201	132.3	23.0	11.3	16.7	2.8	98.8
98	Hobbit	151.0	23.5	14.0	17.3	2.3	97.0
107	Weber	140.5	21.8	13.5	12.8	3.0	97.8
71	Hodgson 78	145.8	16.5	12.3	14.9	3.5	96.0
87	Clay	149.8	15.5	11.8	14.9	4.5	84.3
	Grand mean	140.9	22.2	14.8	18.3	3.1	96.6
	Standard error of cultivar mean	5.9	2.0	1.0	0.4	0.3	1.3
	Coefficient of variation (%)	8.4	17.8	13.7	3.9	16.8	2.7
	5% LSD Cultivar means (*****=ns)	16.8	5.6	2.9	1.0	0.7	3.7

Table 41. Trial 83192, 1983

Country: LAOS
Region: ASIA

Latitude: 17°08'N
Longitude: 102°06'E

Zone: 4 Group: A
Elevation (m): 47

Site: CENTRE DE LA RECHERCHE NATIONAL, NAPHOK
Cooperator(s): MR. BOUN PHAVANH KANYAVONG

Date planted: April 30, 1984 Date harvested: August 17, 1984
Soil information: loam 18%, silt 45%, clay 37%, pH 4.5
Fertilizer used (kg/ha): N 25.0, P 26.2, K 29.2
Total moisture (mm): 1883

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
106	SH 1274		34.5	141.5	93.0	4.0	1.5
79	71-38		50.8	157.5	76.1	1.3	2.3
2	UFV-1		39.8	164.8	67.1	1.0	2.0
99	IAC-6	630.1	47.0	163.3	104.7	2.0	1.5
78	ISRA/IRAT 44A/73	603.9	48.8	156.5	86.2	4.0	1.5
96	EGSY 91-7	594.3	29.3	163.3	85.0	1.0	1.3
19	Davis	415.1	28.3	117.5	47.7	1.0	1.0
9	Jupiter	406.3	46.8	164.8	83.3	1.0	1.0
97	F75-9207	388.8	39.8	168.0	75.9	2.0	1.8
100	IAC-8	381.7	48.8	106.5	91.6	2.0	1.3
90	AGS 8	353.8	30.3	102 5	71.3	2.0	3.0
75	Braxton	348.8	23.0	164.0	48.3	1.0	1.5
101	ICA L-129	294.6	37.5	156.0	100.6	2.0	2.0
76	SIATSA 194	243.8	44.8	162.8	108.7	1.3	1.8
10	Improved Pelican	236.7	35.5	154.8	119.9	3.0	1.8
45	ICA L-109	218.8	48.3	157.3	103.9	2.0	2.0
	Grand mean	393.6	39.6	150.1	85.2	1.9	1.7
	Standard error of cultivar mean	80.5	2.1	3.6	1.2	0.1	0.3
	Coefficient of variation (%)	40.9	10.4	4.8	2.8	9.0	29.1
	5% LSD Cultivar means (*****=ns)	230.9	5.8	10.2	3.3	0.2	0.7

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
106	SH 1274	72.0	50.4	8.0			
79	71-38	78.0	64.0	8.2			
2	UFV-1	79.5	18.8	8.8			
99	IAC-6	76.5	61.5	9.3		5.0	
78	ISRA/IRAT 44A/73	76.5	92.1	7.0		4.0	
96	EGSY 91-7	69.5	24.1	6.6		4.8	
19	Davis	78.3	21.8	7.6		4.0	
9	Jupiter	75.8	35.4	7.5		4.5	
97	F75-9207	74.8	46.3	8.4		4.3	
100	IAC-8	74.0	95.9	13.6		4.5	
90	AGS 8	77.8	33.5	11.5		4.3	
75	Braxton	75.5	20.6	7.5		4.3	
101	ICA L-129	76.0	61.7	9.1		4.8	
76	SIATSA 194	76.3	42.1	13.0		4.5	
10	Improved Pelican	77.3	63.1	6.7		4.5	
45	ICA L-109	73.0	47.7	8.3		4.3	
	Grand mean	75.7	48.7	8.8		4.4	
	Standard error of cultivar mean	1.4	1.1	0.9		0.2	
	Coefficient of variation (%)	3.7	4.5	20.1		10.7	
	5% LSD Cultivar means (*****=ns)	4.0	3.1	2.5		*****	

Table 42. Trial 83184, 1983

Country: MADAGASCAR Latitude: 19°47'S Zone: 5 Group: A
Region: AFRICA Longitude: 46°11'E Elevation (m): 900

Site: MANDOTO AMPARIHY
Cooperator(s): ENTERPRISE SOCIALISTE MAMISOA

Date planted: December 21, 1983 Date harvested: March 2, 1984
Soil information: loam 43%, silt 14%, clay 43%, pH 4.5
Fertilizer used (kg/ha): N 25.0, P 22.0, K 41.5
Total moisture (mm): 806

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
2	UFV-1	2,020.0	50.0	125.0	44.7	1.0	1.0
101	ICA L-129	2,003.4	50.0	118.0	52.6	1.0	1.0
99	IAC-6	1,943.0	62.0	134.0	70.0	1.0	1.0
79	71-38	1,938.8	53.0	125.0	50.2	1.0	1.0
45	ICA L-109	1,876.3	62.0	134.0	66.8	1.0	1.0
97	F75-9207	1,863.8	51.0	118.0	55.1	1.0	1.0
19	Davis	1,786.2	41.0	109.0	31.1	1.0	1.0
100	IAC-8	1,783.7	53.0	124.0	64.6	1.0	1.0
106	SH 1274	1,734.1	41.0	110.0	55.7	1.0	1.0
76	SIATSA 194	1,711.8	53.0	118.0	61.4	1.0	1.0
78	ISRA/IRAT 44A/73	1,684.7	50.0	118.0	57.5	1.0	1.0
9	Jupiter	1,663.9	61.0	125.0	66.3	1.0	1.0
90	AGS 8	1,551.5	39.0	102.0	52.5	1.0	1.0
10	Improved Pelican	1,376.7	48.0	109.0	56.1	1.0	1.0
96	EGSY 91-7	1,370.7	42.0	104.0	45.4	1.8	1.0
75	Braxton	1,317.2	35.0	71.0	31.5	1.0	1.0
	Grand mean	1,726.6	49.4	115.3	53.8	1.1	1.0
	Standard error of cultivar mean	151.1	1.3	0.0	3.0	0.1	0.0
	Coefficient of variation (%)	17.5	5.1	0.0	11.0	11.9	0.0
	5% LSD Cultivar means (*****=ns)	430.3	3.6	0.0	8.4	0.2	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
2	UFV-1	268.0	14.3	9.6	17.5	1.0	
101	ICA L-129	248.0	20.6	6.5	16.3	1.0	
99	IAC-6	282.3	26.1	14.1	10.0	1.0	
79	71-38	263.8	23.1	5.1	15.0	1.0	
45	ICA L-109	223.8	33.1	11.0	7.8	1.0	
97	F75-9207	259.5	18.5	12.0	17.5	1.0	
19	Davis	273.0	10.4	5.2	20.0	1.0	
100	IAC-8	258.3	22.3	11.6	16.3	1.0	
106	SH 1274	249.8	14.3	8.4	17.5	1.0	
76	SIATSA 194	256.0	18.1	9.7	20.0	1.0	
78	ISRA/IRAT 44A/73	273.0	17.9	6.9	16.3	1.0	
9	Jupiter	223.0	24.2	10.9	18.8	1.0	
90	AGS 8	279.5	9.5	8.5	16.0	1.0	
10	Improved Pelican	251.8	17.2	10.0	12.0	1.0	
96	EGSY 91-7	235.3	13.6	7.5	17.0	1.0	
75	Braxton	240.8	8.1	5.2	21.8	1.0	
	Grand mean	255.3	18.2	8.9	16.2	1.0	
	Standard error of cultivar mean	16.7	3.1	1.3	1.0	0.0	
	Coefficient of variation (%)	13.1	34.3	30.0	12.8	0.0	
	5% LSD Cultivar means (*****=ns)	*****	8.9	3.8	3.0	*****	

Table 43. Trial 83435, 1983

Country: MADAGASCAR Latitude: 19°47'S Zone: 5 Group: B
Region: AFRICA Longitude: 46°11'E Elevation (m): 900

Site: MANDOTO AMPARIHY
Cooperator(s): ENTERPRISE SOCIALISTE MAMISOA

Date planted: December 22, 1983 Date harvested: March 30, 1984
Soil information: loam 43.2%, silt 13.6%, clay 43.2%, pH 4.5
Fertilizer used (kg/ha): N 25.0, P 22.0, K 41.5
Total moisture (mm): 806

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
2	UFV-1	2,744.7	51.0	122.0	65.9	1.0	1.0
81	Ecuador 1	2,490.7	54.0	119.0	61.4	1.0	1.0
77	ICA L-124	2,403.2	42.0	111.0	41.8	1.0	1.0
95	Duocrop	2,392.8	42.0	111.0	45.1	1.0	1.0
9	Jupiter	2,268.9	61.0	125.0	62.5	1.0	1.0
106	SH 1274	2,238.7	42.0	111.0	54.1	1.0	1.0
75	Braxton	1,989.8	35.0	100.0	37.6	1.0	1.0
82	PK-73-86	1,960.7	43.0	111.0	41.5	1.0	1.0
76	SIATSA 194	1,951.3	54.0	119.0	62.0	1.0	1.0
92	BM-2	1,656.6	30.0	101.0	40.0	1.0	1.0
19	Davis	1,633.1	40.0	111.0	34.2	1.0	1.0
69	Essex	1,629.6	35.0	101.0	30.2	1.0	1.0
90	AGS 8	1,555.6	39.0	100.0	47.1	1.5	1.0
37	G 2120	1,460.9	63.0	111.0	63.4	1.0	1.0
94	DB 1601	1,398.2	42.0	106.0	37.4	1.0	1.0
96	EGSY 91-7	1,366.1	42.0	103.0	39.2	1.0	1.0
	Grand mean	1,946.3	44.7	110.1	47.7	1.0	1.0
	Standard error of cultivar mean	261.6	0.0	0.0	4.3	0.1	0.0
	Coefficient of variation (%)	26.9	0.0	0.0	18.0	14.0	0.0
	5% LSD Cultivar means (*****=ns)	745.1	0.0	0.0	12.2	0.2	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
2	UFV-1	316.0	18.7	8.1	15.0	1.0	
81	Ecuador 1	244.5	21.5	9.7	17.0	1.0	
77	ICA L-124	282.8	17.3	15.0	16.5	1.0	
95	Duocrop	291.0	14.4	6.8	16.8	1.0	
9	Jupiter	219.3	25.8	11.7	17.0	1.0	
106	SH 1274	247.5	15.9	8.9	18.3	1.0	
75	Braxton	259.5	11.5	5.2	23.5	1.0	
82	PK-73-86	247.3	12.0	7.6	18.0	1.0	
76	SIATSA 194	259.0	15.9	12.0	18.0	1.0	
92	BM-2	257.8	12.8	5.8	18.3	1.0	
19	Davis	248.0	11.0	5.1	18.3	1.0	
69	Essex	269.5	8.1	4.9	18.5	1.0	
90	AGS 8	281.0	9.3	7.7	17.8	1.0	
37	G 2120	282.0	18.4	8.6	8.0	1.0	
94	DB 1601	262.3	11.7	6.5	19.0	1.0	
96	EGSY 91-7	244.8	11.1	9.4	18.5	1.0	
	Grand mean	263.3	14.7	8.3	17.4	1.0	
	Standard error of cultivar mean	14.3	2.5	2.2	1.0	0.0	
	Coefficient of variation (%)	10.9	34.6	53.9	11.8	0.0	
	5% LSD Cultivar means (*****=ns)	40.8	7.3	*****	2.9	*****	

Table 44. Trial 83124, 1983

Country: MALI
Region: AFRICA

Latitude: 12°39'N
Longitude: 7°56'W

Zone: 4 Group: A
Elevation (m): 320

Site: SOTUBA STATION, BAMAKO
Cooperator(s): DR. DIELIMOUSSA SOUMANO

Date planted: June 27, 1983 Date harvested: September 20, 1983
Soil information: loam 59%, silt 10%, clay 31%, pH 5.8
Fertilizer used (kg/ha): N 15.2, P 50.4
Total moisture (mm): 599

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
97	F75-9207	2,150.0	36.3	101.5	58.4	1.0	1.0
19	Davis	2,100.0	32.3	94.8	39.7	1.0	1.5
9	Jupiter	1,825.0	46.0	105.0	65.8	1.0	1.0
100	IAC-8	1,575.0	37.0	103.5	69.9	2.0	1.0
99	IAC-6	1,550.0	47.0	103.5	77.7	2.3	2.5
45	ICA L-109	1,400.0	47.0	105.0	84.9	2.5	2.3
79	71-38	1,375.0	40.8	105.0	52.4	1.3	1.0
101	ICA L-129	1,350.0	39.5	99.0	70.5	1.3	1.0
78	ISRA/IRAT 44A/73	1,350.0	41.5	102.0	60.6	1.0	1.0
75	Braxton	1,325.0	29.3	90.8	35.6	1.0	1.0
96	EGSY 91-7	1,225.0	33.5	98.3	60.9	2.5	1.8
106	SH 1274	1,200.0	29.5	92.5	87.3	3.3	1.0
76	SIATSA 194	1,150.0	40.3	103.5	92.6	1.5	3.5
10	Improved Pelican	950.0	36.0	92.3	85.6	3.3	1.8
105	R-315	675.0	31.8	86.5	63.9	5.0	1.0
90	AGS 8	550.0	30.3	84.3	75.4	5.0	1.0
	Grand mean	1,359.4	37.4	98.0	67.6	2.2	1.5
	Standard error of cultivar mean	267.8	1.1	2.4	2.8	0.4	0.4
	Coefficient of variation (%)	39.4	5.6	4.9	8.3	40.3	53.4
	5% LSD Cultivar means (*****=ns)	762.8	3.0	6.8	8.0	1.3	1.1

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
97	F75-9207	108.8		11.8	12.2	1.8	42.5
19	Davis	129.3		9.2	18.8	1.0	62.5
9	Jupiter	77.8		15.0	16.0	3.0	30.5
100	IAC-8	130.0		13.3	16.8	3.0	30.3
99	IAC-6	145.5		17.3	12.6	2.3	39.8
45	ICA L-109	114.0		10.8	9.5	2.3	22.8
79	71-38	132.5		11.0	9.8	3.5	3.5
101	ICA L-129	125.8		13.1	13.9	2.0	65.8
78	ISRA/IRAT 44A/73	119.5		11.8	12.5	1.8	77.3
75	Braxton	123.3		8.9	18.0	1.8	69.3
96	EGSY 91-7	149.3		12.4	15.0	1.3	60.8
106	SH 1274	85.3		12.6	15.8	1.5	49.8
76	SIATSA 194	118.5		16.8	20.3	1.0	48.0
10	Improved Pelican	139.5		13.4	11.4	2.0	51.0
105	R-315	78.0		9.9	13.8	2.0	41.8
90	AGS 8	73.3		10.8	11.3	2.3	43.8
	Grand mean	115.6		12.4	14.2	2.0	46.2
	Standard error of cultivar mean	10.8		1.0	0.5	0.3	8.9
	Coefficient of variation (%)	18.7		16.7	7.6	25.0	38.5
	5% LSD Cultivar means (*****=ns)	30.7		2.9	1.5	0.7	25.3

Table 45. Trial 83145, 1983

Country: MEXICO Latitude: 22°35'N Zone: 7 Group: A
Region: MESO AMERICA Longitude: 98°10'W Elevation (m): 60

Site: CAMPO AGRICOLA EXPERIMENTAL HUASTECAS
Cooperator(s): ING. M. C. NICOLAS MALDONADO M., DR. JORGE NIETO HATEM

Date planted: July 27, 1983 Date harvested: October 25, 1983
Soil information: loam 24%, silt 17%, clay 59%, pH 8.4
Total moisture (mm): 431

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
76	SIATSA 194	3,062.8	50.0	107.0	86.5	3.0	1.0
106	SH 1274	2,948.1	42.0	104.0	84.5	3.0	1.0
100	IAC-8	2,761.3	43.0	108.0	53.3	1.0	1.0
9	Jupiter	2,746.3	54.0	108.0	66.5	2.0	1.0
96	EGSY 91-7	2,680.6	40.0	104.0	47.8	1.0	1.0
97	F75-9207	2,649.4	44.0	110.0	69.8	1.0	1.0
99	IAC-6	2,642.8	51.0	108.0	76.3	3.0	1.0
19	Davis	2,584.4	33.0	104.0	31.0	1.0	1.0
78	ISRA/IRAT 44A/73	2,553.1	54.0	108.0	69.5	3.0	1.0
79	71-38	2,442.8	47.0	112.0	57.0	4.0	1.0
45	ICA L-109	2,408.8	54.0	111.0	77.3	2.0	1.0
75	Braxton	2,298.8	33.0	105.0	33.3	1.0	1.0
105	R-315	1,937.2	36.0	99.0	51.0	1.0	1.0
10	Improved Pelican	1,580.6	42.0	103.0	63.3	1.0	1.0
90	AGS 8	1,559.4	36.5	99.0	74.5	3.0	1.0
101	ICA L-129	1,001.3	44.0	108.0	61.8	1.0	1.0
	Grand mean	2,366.1	44.0	106.1	62.7	1.9	1.0
	Standard error of cultivar mean	115.4	0.1	0.0	3.1	0.0	0.0
	Coefficient of variation (%)	9.8	0.6	0.0	9.8	0.0	0.0
	5% LSD Cultivar means (*****=ns)	328.7	0.4	0.0	8.7	0.0	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
76	SIATSA 194	186.5	32.8	22.0	20.0	2.0	94.8
106	SH 1274	203.0	34.8	17.5	13.5	2.0	96.0
100	IAC-8	215.3	30.3	9.0	17.5	2.0	98.0
9	Jupiter	227.0	31.8	21.3	16.3	2.0	99.0
96	EGSY 91-7	217.3	24.8	12.3	12.9	2.0	89.0
97	F75-9207	226.5	37.5	15.0	13.3	2.0	99.5
99	IAC-6	215.0	35.5	23.3	12.8	2.0	99.0
19	Davis	249.0	22.5	4.3	17.0	3.0	62.0
78	ISRA/IRAT 44A/73	228.8	39.8	18.3	13.0	2.0	89.8
79	71-38	250.3	47.3	13.0	10.6	2.0	88.3
45	ICA L-109	252.5	46.8	18.5	11.4	2.0	99.0
75	Braxton	230.5	21.3	4.5	17.8	3.0	61.0
105	R-315	229.8	19.8	12.0	13.3	2.0	89.0
10	Improved Pelican	241.5	22.5	12.8	10.5	1.0	82.5
90	AGS 8	206.3	23.0	13.8	14.1	3.0	71.0
101	ICA L-129	249.0	13.5	12.3	15.4	3.0	69.8
	Grand mean	226.8	30.2	14.3	14.3	2.2	86.7
	Standard error of cultivar mean	8.1	2.2	1.4	0.3	0.0	4.2
	Coefficient of variation (%)	7.1	14.8	19.1	3.8	0.0	9.7
	5% LSD Cultivar means (*****=ns)	22.9	6.4	3.9	0.8	0.0	12.0

Table 46. Trial 83404, 1983

Country: MEXICO
Region: MESO AMERICA

Latitude: 21°58'N
Longitude: 102°21'W

Zone: 9 Group: B
Elevation (m): 1,800

Site: ESTACION EXPERIMENTAL CENTRO AGROPECUARIO, AGUASCALIENTES
Cooperator(s): ING. ALFONSO DE LUNA JIMENEZ

Date planted: April 29, 1983 Date harvested: September 4, 1983
Soil information: loam 48%, silt 26%, clay 26%, pH 7.2
Fertilizer used (kg/ha): N 72.0, P 18.8
Number of irrigations: 5 (amount not reported)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
69	Essex	1,881.2 (2)	84.0 (2)	158.5 (2)	46.1		2.5 (2)
94	DB 1601	1,875.4	96.3	150.3	80.1		2.5
91	AGS 66	1,692.0	104.0	152.3	63.9		2.3
77	ICA L-124	1,691.6	84.0	183.3	83.0		3.5
105	R-315	1,567.0	103.8	154.0	61.9		2.0
19	Davis	1,667.0	104.0	157.5	72.3		1.8
75	Braxton	1,583.7	84.0	153.0	69.5		2.0
92	BM-2	1,517.4	104.0	155.0	56.4		1.8
82	PK-73-86	1,398.2	93.8	167.8	82.8		2.0
80	HM-1	1,362.8	84.0	175.5	91.2		3.8
106	SH 1274	1,3[illegible].2	84.0	176.0	91.9		3.3
81	Ecuador 1	1,046.5	84.0	186.0	96.2		3.8
96	EGSY 91-7	762 2	83.0	170.5	101.9		3.3
10	Improved Pelican	699.0	84.0	186.0	111.9		4.0
	Grand mean	1,424.2	91.5	166.4	80.4		2.7
	Standard error of cultivar mean	599.3	15.7	14.4	21.0		1.1
	Coefficient of variation (%)	42.1	17.1	8.6	26.1		40.2
	5% LSD Cultivar means (*****=ns)	*****	*****	*****	*****		*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
69	Essex	211.0 (2)	28.7 (2)	11.0 (2)	15.5 (2)		
94	DB 1601	181.0	22.3	21.2	16.9		
91	AGS 66	154.0	27.9	19.9	15.4		
77	ICA L-124	166.3	17.1	20.6	18.3		
105	R-315	174.3	21.3	19.4	18.2		
19	Davis	227.5	19.6	21.9	18.8		
75	Braxton	185.5	19.5	14.3	23.2		
92	BM-2	132.3	24.1	16.2	18.3		
82	PK-73-86	116.3	28.4	35.5	15.9		
80	HM-1	118.5	32.6	19.7	19.1		
106	SH 1274	141.5	21.8	25.8	20.9		
81	Ecuador 1	158.8	23.3	29.8	16.5		
96	EGSY 91-7	137.5	18.6	36.5	16.3		
10	Improved Pelican	214.8	20.7	27.8	11.9		
	Grand mean	164.0	23.1	23.3	17.6		
	Standard error of cultivar mean	59.5	8.4	11.0	3.6		
	Coefficient of variation (%)	36.3	36.3	47.3	20.3		
	5% LSD Cultivar means (*****=ns)	*****	*****	*****	*****		

Table 47. Trial 83407, 1983

Country: MEXICO Latitude: 22°17'N Zone: 9 Group: B
Region: MESO AMERICA Longitude: 102°15'W Elevation (m): 1,950

Site: CENTRO DE BACHILLERATO TECNOLOGICO AGROPECUARIO, COSIO, AGUASCALIENTES.
Cooperator(s): ING. RICARDO VAZQUEZ GONZALEZ, ING. ELIAS MORENO NAVARRO

Date planted: May 18, 1983 Date harvested: October 8, 1983
Soil information: loam 34.4%, silt 32.2%, clay 33.4%, pH 7.5, arcillo-arenoso
Fertilizer used (kg/ha): N 25.0, P 26.2
Total moisture (mm): 883
Number of irrigations: 4 (total amount 471 mm)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
9	Jupiter		146.0				
76	SIATSA 194		132.0				
75	Braxton	2,354.6	79.0	155.0	81.2	2.0	
77	ICA L-124	2,062.9	98.0	172.0	109.2	2.0	
91	AGS 66	1,983.7	85.0	160.0	88.6	2.0	
92	BM-2	1,844.1	81.0	153.0	84.2	2.0	
69	Essex	1,817.0	84.0	159.0	79.1	2.0	
94	DB 1601	1,771.2	92.0	167.0	95.6	2.0	
19	Davis	1,742.0	90.0	169.8	98.1	2.0	
105	R-315	1,621.2	89.0	164.0	87.7	2.0	
82	PK-73-86	1,552.4	93.0	168.0	88.9	2.0	
81	Ecuador 1	1,412.8	108.0	176.0	97.5	2.0	
106	SH 1274	1,312.8	83.0	158.0	123.2	2.0	
80	HM-1	1,277.3	92.0	165.0	109.2	2.0	
10	Improved Pelican	975.2	108.0	181.0	122.8	2.0	
96	EGSY 91-7	879.3	86.0	161.0	94.1	2.0	
	Grand mean	1,614.8	96.6	164.9	97.1	2.0	
	Standard error of cultivar mean	201.6	0.7	1.0	6.4	0.0	
	Coefficient of variation (%)	25.0	1.5	1.2	13.2	0.0	
	5% LSD Cultivar means (*****=ns)	576.6	2.1	2.9	18.3	*****	

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
9	Jupiter						
76	SIATSA 194						
75	Braxton	192.0	53.7	8.5	17.7		
77	ICA L-124	144.0	72.9	8.1	15.1		
91	AGS 66	120.0	85.8	7.9	13.0		
92	BM-2	128.5	61.1	7.9	13.7		
69	Essex	170.5	59.2	9.3	13.8		
94	DB 1601	147.5	69.1	11.6	14.2		
19	Davis	160.0	67.9	11.3	15.7		
105	R-315	143.3	71.6	10.2	14.2		
82	PK-73-86	130.8	85.6	10.4	14.7		
81	Ecuador 1	130.8	55.5	12.5	13.8		
106	SH 1274	131.8	79.9	9.8	13.6		
80	HM-1	136.0	67.8	6.4	16.1		
10	Improved Pelican	140.0	56.7	16.4	8.7		
96	EGSY 91-7	129.0	61.9	10.3	14.0		
	Grand mean	143.1	67.7	10.0	14.2		
	Standard error of cultivar mean	12.0	12.0	1.7	0.6		
	Coefficient of variation (%)	16.8	35.4	34.5	8.2		
	5% LSD Cultivar means (*****=ns)	34.4	*****	5.0	1.7		

Table 48. Trial 83412, 1983

Country: MOROCCO Latitude: 34°55'N Zone: 10 Group: B
Region: AFRICA Longitude: 2°19'E Elevation (m): 85

Site: MOULOUYA, SEMVIA SLIMANIA
Cooperator(s): ING. AGR. DRISS NADAH, ORMRA MOULOUYA

Date planted: May 30, 1983 Date harvested: November 1, 1983
Soil information: loam 12%, silt 38%, clay 50%, pH 7.5
Fertilizer used (kg/ha): N 25.0, P 26.2, K 25.0
Total moisture (mm): 768
Number of irrigations: 12 (total amount 720 mm)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
69	Essex	2,681.8	57.0	152.0	101.0	3.5	1.0
19	Davis	2,072.3	87 0	154.0	156.8	4.5	1.0 (3)
91	AGS 66	1,949.7	62.0	150.0	138.3	5.0	1.0
94	DB 1601	1,694.8	77.0	150.0	157.5	5.0	1.0
92	BM-2	1,444.8	69.0	152.0	98.0	3.3	1.0
80	HM-1	1,413.8	87.0	161.0	182.3	5.0	1.0 (3)
77	ICA L-124	1,340.8	78.8	159.0	184.3	5.0	1.0
82	PK-73-86	1,116.8	90.5	174.0	104.5	3.3	1.0 (3)
75	Braxton	1,067.0	70.0	156.0	130.5	4.0	1.0 (3)
10	Improved Pelican	845.8	113.5	159.0	166.0	4.5	1.0 (3)
105	R-315	528.0	87.0	154.0	106.3	3.8	1.0 (3)
	Grand mean	1,468.7	79.9	156.5	138.7	4.3	1.0
	Standard error of cultivar mean	301.1	1.1	1.5	10.0	0.5	0.0
	Coefficient of variation (%)	41.0	2.8	1.9	14.4	23.3	0.0
	5% LSD Cultivar means (*****=ns)	869.7	3.3	4.3	28.9	1.4	0.0

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
69	Essex	166.3	41.3	12.0	18.6		95.3
19	Davis	155.3	40.5	18.0	20.5		83.8
91	AGS 66	140.5	50.3	21.5	14.9		88.0
94	DB 1601	142.8	45.3	17.5	16.6		85.0
92	BM-2	128.5	34.3	23.8	18.8		82.8
80	HM-1	146.8	24.0	30.3	19.2		92.3
77	ICA L-124	133.0	30.0	27.0	17.6		88.5
82	PK-73-86	143.5	23.3	34.8	15.9		91.8
75	Braxton	155.3	27.5	20.8	19.9		84.8
10	Improved Pelican	157.0	21.0	28.3	11.0		92.3
105	R-315	152.5	14.0	27.5	14.7		84.0
	Grand mean	147.4	31.9	23.8	17.0		88.0
	Standard error of cultivar mean	7.5	6.0	3.1	1.0		3.6
	Coefficient of variation (%)	10.2	37.9	25.6	11.9		8.1
	5% LSD Cultivar means (*****=ns)	21.7	17.5	8.8	2.9		*****

Table 49. Trial 83509, 1983

Country: MOROCCO Latitude: 30°N Zone: 7 Group: C
Region: AFRICA Longitude: 9°E Elevation (m): 350

Site: TAROUDANT, ORMVA AGADIR
Cooperator(s): ING. AGR. DRISS NADAH

Date planted: May 27, 1983 Date harvested: September 5, 1983
Soil information: loam 65%, silt 18%, clay 16%, pH 8.3
Fertilizer used (kg/ha): N 25.0, P 26.2, K 49.9
Total moisture (mm): 428
Number of irrigations: 2 (total amount 414 mm)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
86	Fayette	4,095.2	30.0	122.0	66.9	1.0	2.0
93	BSR 201	4,060.7	25.0	117.0	56.8	1.0	2.0
98	Hobbit	4,025.9	30.0	122.0	36.0	1.0	2.8
57	Corsoy 79	3,956.5	30.0	122.0	59.5	1.0	2.0
36	Evans	3,956.3	25.0	117.0	44.8	1.0	1.8
88	Lakota	3,887.0	25.0	117.0	67.3	1.0	3.0
35	Crawford	3,817.6	21.0	113.0	92.5	1.0	2.0
71	Hodgson 78	3,713.5	21.0	113.0	57.3	1.0	2.0
103	Mead	3,644.8	30.0	122.0	60.1	1.0	3.0
89	Williams 82	3,435.7	30.0	122.0	65.3	1.0	2.0
104	Platte	3,366.4	25.0	117.0	61.3	1.0	2.0
102	Lawrence	3,297.0	30.0	122.0	62.6	1.0	2.3
84	Sparks	3,192.9	25.0	117.0	74.3	1.0	3.0
85	Pixie	3,192.9	30.0	122.0	36.8	1.0	2.8
107	Weber	3,123.5	21.0	113.0	49.3	1.0	3.0
87	Clay	2,290.5	25.0	117.0	41.5	1.0	3.0
	Grand mean	3,566.0	26.4	118.4	58.2	1.0	2.4
	Standard error of cultivar mean	424.2	0.0	0.0	5.3	0.0	0.1
	Coefficient of variation (%)	23.8	0.0	0.0	18.3	0.0	10.4
	5% LSD Cultivar means (*****=ns)	*****	0.0	0.0	15.1	*****	0.4

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
86	Fayette	215.3	25.4	0.5	21.1		100.0
93	BSR 201	206.5	25.1	1.0	19.6		100.0
98	Hobbit	250.3	32.6	2.5	20.0		100.0
57	Corsoy 79	212.8	34.9	2.5	19.3		100.0
36	Evans	238.5	27.6	1.5	19.7		100.0
88	Lakota	218.0	24.8	2.0	20.2		100.0
35	Crawford	212.3	40.1	1.5	19.0		100.0
71	Hodgson 78	240.8	24.3	1.5	21.9		100.0
103	Mead	224.0	33.4	2.0	19.4		100.0
89	Williams 82	212.0	25.7	2.0	19.9		100.0
104	Platte	248.3	24.7	2.0	20.0		100.0
102	Lawrence	217.5	25.6	1.8	20.1		100.0
84	Sparks	232.0	27.9	3.0	20.7		100.0
85	Pixie	235.5	25.5	2.0	15.8		100.0
107	Weber	247.5	25.2	3.0	16.5		100.0
87	Clay	209.0	22.9	1.5	18.7		100.0
	Grand mean	226.3	27.8	1.9	19.5		100.0
	Standard error of cultivar mean	12.2	3.5	0.2	1.2		0.0
	Coefficient of variation (%)	10.7	25.0	23.1	12.1		0.0
	5% LSD Cultivar means (*****=ns)	*****	9.9	0.6	*****		*****

Table 50. Trial 83413, 1983

Country: NEPAL
Region: ASIA

Latitude: 27°40'N
Longitude: 85°20'E

Zone: 9 Group: B
Elevation (m): 1,360

Site: KHUMALTAR EXPERIMENTAL FARM
Cooperator(s): DR. RAJMAN P. CHAUDHARY, MR. B. N. JHA

Date planted: June 1, 1983 Date harvested: September 21, 1983
Fertilizer used (kg/ha): N 25.0, P 60.0, K 30.0
Total moisture (mm): 1,074

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
19	Davis	4,815.0	60.8	131.8	70.6		
105	R-315	4,760.0	60.5	119.0	69.8		
82	PK-73-86	4,430.0	63.0	134.0	81.2		
77	ICA L-124	4,235.0	63.3	127.0	76.1		
75	Braxton	4,190.0	54.0	121.0	59.0		
96	EGSY 91-7	4,166.0	59.5	130.0	77.4		
80	HM-1	4,150.0	65.0	127.0	87.0		
106	SH 1274	3,890.0	62.0	130.0	75.7		
91	AGS 66	3,655.0	51.8	113.0	64.6		
94	DB 1601	3,600.0	60.0	127.0	69.3		
81	Ecuador 1	3,047.0	77.0	141.0	109.7		
92	BM-2	2,790.0	55.0	116.0	66.4		
76	SIATSA 194	2,565.0	77.0	139.0	95.7	3.0	
69	Essex	2,553.0	51.3	112.0	40.7		
10	Improved Pelican	2,540.0	76.5	137.0	95.1	2.0	
9	Jupiter	1,040.0	86.0	151.0	107.2		
	Grand mean	3,526.6	64.0	128.5	77.8	2.5	
	Standard error of cultivar mean	393.7	0.7	1.9	4.9	0.0	
	Coefficient of variation (%)	22.3	2.0	3.0	12.6	0.0	
	5% LSD Cultivar means (*****=ns)	1121.5	1.9	5.5	14.0	0.0	

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
19	Davis	164.8	22.0	18.5	14.8	2.0	69.0
105	R-315	160.0	20.4	14.3	14.5	1.0	71.0
82	PK-73-86	161.3	23.5	13.5	12.0	2.0	69.0
77	ICA L-124	153.0	20.3	12.6	14.0	3.0	82.0
75	Braxton	165.8	21.9	16.3	16.5	2.0	55.0
96	EGSY 91-7	105.0	28.0	13.3	13.5	2.0	87.0
80	HM-1	115.5	18.2	11.7	15.3	2.0	82.0
106	SH 1274	165.5	29.3	12.8	11.5	2.0	56.0
91	AGS 66	116.3	27.2	12.0	13.5	2.0	83.0
94	DB 1601	136.8	21.0	13.8	14.3	2.0	89.0
81	Ecuador 1	154.0	27.2	20.7	12.8	3.0	94.0
92	BM-2	149.8	25.4	15.2	14.3	3.0	84.0
76	SIATSA 194	131.5	27.7	16.6	13.3	3.0	79.0
69	Essex	150.8	17.0	9.1	12.8	3.0	47.0
10	Improved Pelican	150.3	34.5	17.2	10.8	3.0	95.0
9	Jupiter	103.8	30.7	14.6	11.0	3.0	94.0
	Grand mean	142.7	24.6	14.5	13.4	2.4	77.3
	Standard error of cultivar mean	8.5	2.2	0.9	0.6	0.0	0.0
	Coefficient of variation (%)	11.9	17.5	12.4	8.6	0.0	0.0
	5% LSD Cultivar means (*****=ns)	24.2	6.1	2.6	1.6	0.0	0.0

Table 51. Trial 83433, 1983

Country: PAKISTAN
Region: ASIA

Latitude: 34°N
Longitude: 72°E

Zone: 10 Group: B
Elevation (m): 340

Site: PESHAWAR
Cooperator(s): DR. ABDUR RHAMAN KHAN, DR. TILA MOHAMMAD

Date planted: July 19, 1983 Date harvested: October 24, 1983
Soil information: loam 18%, silt 60%, clay 22%, pH 8.0
Fertilizer used (kg/ha): N 25.0, P 49.9
Total moisture (mm): 265

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
82	PK-73-86	2,817.9	54.5	128.5	58.4		
69	Essex	2,600.9 (3)	42.0 (3)	110.0 (3)	38.1 (3)		
77	ICA L-124	2,225.5	50.3	118.5	61.7		
75	Braxton	2,048.9	48.5	119.3	54.0		
19	Davis	1,918.5	48.8	113.0	46.8		
37	G 2120	1,532.9	70.8	138.5	113.4		
95	Duocrop	1,472.2	50.0	117.8	61.4		
96	EGSY 91-7	1,397.5	55.0	123.5	58.0		
81	Ecuador 1	1,390.8	64.3	133.0	68.9		
106	SH 1274	1,383.0	55.8	128.8	75.0		
94	DB 1601	1,355.5	48.0	116.8	52.9		
2	UFV-1	1,306.0	62.0	131.8	67.9		
91	AGS 66	1,229.7	43.3	101.5	40.4		
76	SIATSA 194	1,180.0	60.5	131.0	82.3		
9	Jupiter	1,152.4	71.5	140.8	85.5		
92	BM-2	1,088.0	46.8	107.3	38.7		
	Grand mean	1,615.8	54.7	122.7	63.1		
	Standard error of cultivar mean	619.0	8.9	11.3	19.5		
	Coefficient of variation (%)	38.3	16.2	9.2	30.9		
	5% LSD Cultivar means (*****=ns)	*****	*****	*****	*****		

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
82	PK-73-86	55.0	122.8		12.6		
69	Essex	97.7 (3)	81.0		11.3 (3)		
77	ICA L-124	72.8	98.8		12.1		
75	Braxton	60.5	110.8		13.2		
19	Davis	75.5	75.0		10.9		
37	G 2120	85.0	110.8		5.1		
95	Duocrop	60.8	72.8		9.8		
96	EGSY 91-7	36.0	112.8		9.3		
81	Ecuador 1	56.5	103.5		11.1		
106	SH 1274	25.0	118.0		9.8		
94	DB 1601	48.0	118.3		9.5		
2	UFV-1	61.0	115.8		7.8		
91	AGS 66	28.8	140.5		8.6		
76	SIATSA 194	53.3	89.8		11.4		
9	Jupiter	46.3	103.8		8.3		
92	BM-2	46.0	81.5		10.3		
	Grand mean	56.1	103.8		10.0		
	Standard error of cultivar mean	22.1	31.9		2.2		
	Coefficient of variation (%)	39.4	30.7		22.2		
	5% LSD Cultivar means (*****=ns)	*****	*****		*****		

Table 52. Trial 83519, 1983

Country: PAKISTAN Latitude: 33°N Zone: 11 Group: C
Region: ASIA Longitude: 73°E Elevation (m): 550

Site: N.A.R.C. ISLAMABAD
Cooperator(s): DR. AKHTAR BEG, DR. ABDUR RAHMAN KHAN

Date planted: August 13, 1983 Date harvested: October 20, 1983
Soil information: loam 15%, silt 30%, clay 55%, pH 7.1
Fertilizer used (kg/ha): N 80.0, P 57.5
Total moisture (mm): 361

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
89	Williams 82	1,516.6	28.0	76.0	55.6	1.5	1.0
35	Crawford	1,413.0	31.0	82.0	57.5	1.3	1.0
85	Pixie	1,366.9	34.0	91.0	34.6	1.0	1.0
98	Hobbit	1,285.7	29.0	73.0	40.0	1.3	1.0
86	Fayette	1,271.3	29.0	74.0	51.1	1.5	1.0
104	Platte	1,259.2	28.0	70.0	48.5	1.5	1.3
93	BSR 201	1,236.9	29.0	68.0	42.5	1.5	1.3
102	Lawrence	1,224.4	33.0	78.0	46.4	1.3	1.3
84	Sparks	1,218.2	33.0	84.0	52.5	1.5	1.0
57	Corsoy 79	1,159.8	27.0	73.8	42.0	1.5	1.0
87	Clay	1,156.5	26.0	65.0	45.8	1.8	1.0
88	Lakota	1,119.0	25.0	65.0	49.7	2.5	1.0
107	Weber	1,115.2	27.0	67.0	45.4	1.8	1.8
103	Mead	1,028.3	29.0	68.0	41.0	1.3	1.8
36	Evans	1,006.0	25.0	66.0	42.3	1.5	1.3
71	Hodgson 78	699.1	26.0	65.0	42.0	2.0	1.0
	Grand mean	1,192.3	28.7	72.9	46.0	1.5	1.2
	Standard error of cultivar mean	89.7	0.0	0.1	2.4	0.4	0.2
	Coefficient of variation (%)	15.1	0.0	0.2	10.5	47.1	27.2
	5% LSD Cultivar means (*****=ns)	255.6	0.0	0.2	6.9	*****	0.5

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
89	Williams 82	203.3	18.8	13.3	17.5	2.0	
35	Crawford	193.0	21.7	9.5	17.2	2.8	
85	Pixie	200.8	17.8	9.5	16.7	1.5	
98	Hobbit	233.8	19.6	9.0	15.0	2.3	
86	Fayette	215.0	17.6	11.4	15.9	1.8	
104	Platte	184.8	23.4	6.9	14.3	2.8	
93	BSR 201	192.8	21.6	7.5	14.6	2.5	
102	Lawrence	218.0	14.5	13.1	17.6	3.0	
84	Sparks	201.0	15.1	13.2	17.3	1.5	
57	Corsoy 79	186.5	20.4	9.8	15.6	2.8	
87	Clay	201.3	24.3	7.5	16.2	3.8	
88	Lakota	208.5	19.4	8.8	14.7	4.0	
107	Weber	192.3	18.4	10.5	12.8	3.0	
103	Mead	208.5	15.8	10.5	14.5	2.8	
36	Evans	194.0	16.8	10.9	14.2	2.8	
71	Hodgson 78	201.3	17.8	11.7	13.6	2.3	
	Grand mean	202.2	18.9	10.2	15.5	2.6	
	Standard error of cultivar mean	9.0	2.1	1.2	0.6	0.5	
	Coefficient of variation (%)	8.9	22.5	23.9	7.8	39.0	
	5% LSD Cultivar means (*****=ns)	25.5	*****	3.5	1.7	1.4	

Table 53. Trial 83902, 1983

Country: PAKISTAN
Region: ASIA

Latitude: 31°19'N
Longitude: 74°05'E

Zone: 10 Group: -
Elevation (m): 225

Site: TSAAP FIELD CENTER
Cooperator(s): MR. J. R. LOCKMAN

Date planted: March 02, 1984 Date harvested: June 07, 1984
Soil information: pH 8.2, silty clay loam
Fertilizer used (kg/ha): N 10.0, P 26.2, K 25.0
Total moisture (mm): 390
Number of irrigations: 6 (total amount 300 mm)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
9008	ISRA/IRAT 2672		44.0		116.5	1.0	
9009	KHSB 2		41.8		92.8	1.0	
84	Sparks	1,721.6	36.0	109.0	39.3	1.0	1.8
102	Lawrence	1,615.4	39.0	105.5	35.8	1.0	1.5
86	Fayette	1,548.1	38.0	100.5	35.0	1.0	1.8
235	Douglas	1,497.9	37.8	109.0	32.8	1.0	1.0
241	BSR 302	1,438.8	39.0	102.3	36.3	1.0	1.8
35	Crawford	1,428.9	36.8	105.3	41.8	1.0	1.3
9003	FUNK 12155	1,409.3	38.8	97.5	24.5	1.3	2.0
85	Pixie	1,354.3	40.0	100.3	20.5	1.0	2.0
9010	Clark 63	1,349.8	36.0	106.3	37.0	1.0	1.3
9002	FUNK A-2	1,300.5	36.0	96.3	22.5	1.3	2.0
9006	Alomonazar	1,138.4	38.0	104.0	30.0	1.0	1.3
9004	FUNK 12213	1,112.1	39.8	98.5	25.0	1.0	1.3
9007	AGS 154	802.2	40.5	109.0	49.3	1.0	5.0
59	Will	777.5	41.0	105.3	22.7 (3)	1.0	1.5
89	Williams 82	685.2	38.8	108.0	30.0	1.0	1.3
238	Sprite	654.1	38.5	97.8	17.8	1.0	2.0
232	Gnome	510.4	39.0	98.5	12.5	1.0	1.5
9005	FUNK G3236	260.7	41.0	107.5	24.8	1.0	1.8
	Grand mean	1,144.7	39.0	103.4	37.5	1.0	1.8
	Standard error of cultivar mean	168.3	0.5	1.3	24.8	0.1	0.2
	Coefficient of variation (%)	29.4	2.3	2.5	66.0	15.6	24.7
	5% LSD Cultivar means (*****=ns)	477.8	1.3	3.7	*****	*****	0.6

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
9008	ISRA/IRAT 2672	0.0					
9009	KHSB 2	0.0					
84	Sparks	119.8	12.8	4.3			
102	Lawrence	93.5	15.5	4.5			
86	Fayette	95.5	15.4	4.0			
235	Douglas	78.3	13.7	3.0			
241	BSR 302	93.5	15.7	6.3			
35	Crawford	96.0	18.3	3.0			
9003	FUNK 12155	147.8	12.3	3.3			
85	Pixie	104.0	13.9	2.5			
9010	Clark 63	71.8	17.1	3.3			
9002	FUNK A-2	122.0	9.5	4.5			
9006	Alomonazar	97.8	13.1	4.5			
9004	FUNK 12213	140.8	11.2	2.5			
9007	AGS 154	123.3	19.3	7.8			
59	Will	52.8	15.7	2.7			
89	Williams 82	51.8	14.8	1.3			

Continued

Table 53. Trial 83902, 1983 Continued

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
238	Sprite	71.0	10.0	2.0			
232	Gnome	60.5	10.5	0.5			
9005	FUNK G3236	20.5	11.4	3.5			
	Grand mean	82.0	13.9	3.5			
	Standard error of cultivar mean	10.3	1.4	2.2			
	Coefficient of variation (%)	25.2	20.2	61.6			
	5% LSD Cultivar means (*****=ns)	29.3	4.0	*****			

Table 54. Trial 83434, 1983

Country: PARAGUAY Latitude: 25°24'S Zone: 7 Group: B
Region: SOUTH AMERICA Longitude: 57°06'W Elevation (m): 228

Site: INSTITUTO AGRONOMICO NACIONAL, CAACUPE
Cooperator(s): ING. OSCAR AGUILERA, ING. ROBERTO CASSACIA

Date planted: November 3, 1983 Date harvested: March 8, 1984
Soil information: loam 66%, silt 18%, clay 16%, pH 5.3
Fertilizer used (kg/ha): N25.0, P 25.0, K 25.0
Total moisture (mm): 1009
Substituted cultivar: Bragg

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
90	AGS 8	2,265.3	50.0	126.0	71.3	1.0	1.5
69	Essex	1,692.4	47.0	127.5	29.8	1.0	1.0
19	Davis	1,510.2	55.0	146.3	36.8	1.0	1.0
95	Duocrop	1,327.9	55.0	155.8	71.0	1.0	1.0
92	BM-2	1,249.8	48.0	139.5	41.3	1.0	1.0
77	ICA L-124	1,213.4	55.0	147.5	51.0	1.0	1.0
25	Bragg	1,076.2 (3)	51.0 (3)	133.3 (3)	33.3 (3)	1.0 (3)	1.3 (3)
94	DB 1601	1,041.5	55.0	148.0	45.3	1.0	1.0
	Grand mean	1,433.2	52.0	140.7	47.9	1.0	1.1
	Standard error of cultivar mean	650.7	3.3	11.9	16.9	0.0	0.3
	Coefficient of variation (%)	45.4	6.3	8.5	35.3	0.0	27.4
	5% LSD Cultivar means (*****=ns)	*****	0.0	*****	*****	0.0	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
90	AGS 8	195.3	36.5	5.3	16.8	3.3	
69	Essex	195.8	29.3	5.0	17.4	3.3	
19	Davis	179.5	46.5	4.8	16.9	5.0	
95	Duocrop	192.0	34.5	10.0	18.6	5.0	
92	BM-2	173.3	37.5	7.5	20.7	4.5	
77	ICA L-124	155.3	46.5	6.8	18.6	5.0	
25	Bragg	46.3 (3)	48.0 (3)	5.0 (3)	21.2 (3)	4.7	
94	DB 1601	170.0	56.5	5.8	16.9	5.0	
	Grand mean	167.2	41.7	6.3	18.3	4.5	
	Standard error of cultivar mean	45.1	12.0	2.3	2.0	0.9	
	Coefficient of variation (%)	27.0	28.8	36.5	11.0	19.1	
	5% LSD Cultivar means (*****=ns)	*****	*****	*****	*****	*****	

Table 55. Trial 83188, 1983

Country: PERU
Region: SOUTH AMERICA

Latitude: 12°06'S
Longitude: 77°07'W

Zone: 4 Group: A
Elevation (m): 255

Site: UNIVERSIDAD NACIONAL AGRARIA, GUAYABO I
Cooperator(s): DR. HUGO SOPLIN V.

Date planted: February 14, 1984 Date harvested: May 26, 1984
Soil information: loam 60%, silt 24%, clay 16%, pH 7.9, la molina
Number of irrigations: 5 (amount not reported)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
97	F75-9207	3,006.3	38.3	110.5	70.0	1.0	1.0
99	IAC-6	2,856.3	55.8	130.5	103.8	2.3	1.0
106	SH 1274	2,835.0	29.8	98.5	84.0	1.3	1.0
2	UFV-1	2,758.8	41.3	108.8	63.0	1.0	1.0
79	71-38	2,741.0	44.8	116.8	63.3	1.0	1.0
19	Davis	2,724.5	31.3	109.0	43.5	1.0	1.0
100	IAC-8	2,622.8	51.0	124.5	99.0	1.3	1.0
76	SIATSA 194	2,615.3	47.0	110.3	85.8	1.3	1.0
96	EGSY 91-7	2,471.5	35.5	97.0	58.5	1.0	1.0
45	ICA L-109	2,400.8	55.5	123.8	100.5	1.5	1.0
101	ICA L-129	2,300.0	47.0	118.3	90.8	1.5	1.0
75	Braxton	2,273.8	27.5	92.3	27.0	1.0	1.0
9	Jupiter	2,161.3	55.0	121.5	91.3	1.0	1.0
78	ISRA/IRAT 44A/73	1,506.0	48.0	106.0	65.5	1.0	1.0
90	AGS 8	1,399.3	37.3	98.0	76.0	1.0	1.0
10	Improved Pelican	1,349.3	36.8	99.8	82.5	1.0	1.0
	Grand mean	2,376.[illegible]	42.6	110.3	75.3	1.2	1.0
	Standard error of cultivar mean	255.5	0.4	1.8	3.2	0.2	0.0
	Coefficient of variation (%)	21.5	1.8	3.3	8.5	24.7	0.0
	5% LSD Cultivar means (*****=ns)	727.8	1.1	5.1	9.1	0.4	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
97	F75-9207	151.3	33.0	7.0	14.3	1.0	
99	IAC-6	145.3	39.0	9.3	12.0	4.0	
106	SH 1274	167.3	35.8	6.8	14.0	1.3	
2	UFV-1	172.0	27.0	7.5	14.0	1.0	
79	71-38	134.3	41.8	8.3	12.5	2.0	
19	Davis	177.0	24.5	4.5	16.8	1.5	
100	IAC-8	179.3	30.8	13.3	14.0	2.0	
76	SIATSA 194	173.5	31.3	11.3	18.5	2.5	
96	EGSY 91-7	165.3	32.5	8.5	13.0	1.0	
45	ICA L-109	161.5	38.3	7.3	9.8	3.5	
101	ICA L-129	158.8	32.8	9.5	12.5	2.0	
75	Braxton	155.0	22.0	3.5	21.3	3.8	
9	Jupiter	116.0	33.5	10.8	14.[illegible]	4.0	
78	ISRA/IRAT 44A/73	203.5	34.3	9.5	11.8	2.5	
90	AGS 8	179.8	27.3	10.0	11.0	1.0	
10	Improved Pelican	161.5	25.8	11.0	9.5	1.0	
	Grand mean	162.6	31.8	8.6	13.7	2.1	
	Standard error of cultivar mean	8.9	2.8	0.8	0.8	0.2	
	Coefficient of variation (%)	10.9	17.7	18.7	12.0	20.3	
	5% LSD Cultivar means (*****=ns)	25.3	8.0	2.3	2.4	0.6	

Table 56. Trial 83129, 1983

Country: PHILIPPINES Latitude: 6°07'N Zone: 1 Group: A
Region: ASIA Longitude: 125°11'E Elevation (m): 15

Site: GENERAL SANTOS CITY, SOUTH COTABATO
Cooperator(s): DR. FREDERICO B. BALLON, MRS. EMILY A. LORION

Date planted: November 11, 1983 Date harvested: February 16, 1984
Soil information: pH 6.8
Fertilizer used (kg/ha): N 25.0, P 31.0, K 25.0
Total moisture (mm): 110
Number of irrigations: 2 (total amount 110 mm)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
76	SIATSA 194	2,962.5	38.5	103.0	54.8	1.0	1.0
78	ISRA/IRAT 44A/73	2,327.8	40.0	95.5	37.3	1.0	1.0
101	iCA L-129	2,237.7	35.0	98.5	45.0	1.0	1.0
90	AGS 8	1,959.6	35.0	101.8	49.0	1.3	1.5
9	Jupiter	1,591.9	43.3	105.3	45.3	1.0	1.0
106	SH 1274	1,530.0	32.3	95.0	41.3	1.0	1.0
10	Improved Pelican	1,510.7	34.5	95.8	61.0	1.0	1.0
96	EGSY 91-7	1,185.2	33.0	97.8	32.5	1.0	1.5
45	ICA L-109	1,025.4	43.3	105.5	40.5	1.0	1.0
100	IAC-8	923.3	40.0	104.5	46.5	1.0	1.0
79	71-38	883.2	35.0	107.5	25.8	1.0	1.0
99	IAC-6	831.1	40.0	107.5	37.8	1.0	1.0
97	F75-9207	789.5	33.5	103.0	29.0	1.0	1.0
75	Braxton	777.0	29.0	103.0	23.8	1.0	1.0
105	R-315	767.1	34.0	96.5	35.5	1.0	1.0
19	Davis	738.4	33.0	99.3	21.0	1.0	1.0
	Grand mean	1,377.5	36.2	101.2	39.1	1.0	1.1
	Standard error of cultivar mean	205.1	0.4	1.2	1.8	0.1	0.1
	Coefficient of variation (%)	29.8	2.4	2.4	9.2	12.3	18.6
	5% LSD Cultivar means (*****=ns)	584.1	1.2	3.5	5.1	*****	0.3

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
76	SIATSA 194	141.3	37.5	15.0	19.3	2.3	99.8
78	ISRA/IRAT 44A/73	140.5	62.3	9.8	16.0	2.0	99.8
101	ICA L-129	141.8	43.8	9.0	16.0	2.0	93.8
90	AGS 8	140.0	45.3	9.8	15.0	2.5	99.5
9	Jupiter	139.8	42.0	11.3	16.3	3.3	98.8
106	SH 1274	138.8	64.8	6.3	14.5	2.5	99.5
10	Improved Pelican	139.3	58.0	9.5	14.5	2.0	99.8
96	EGSY 91-7	139.5	31.0	9.3	15.8	2.5	99.8
45	ICA L-109	138.0	48.3	9.5	14.0	2.8	100.0
100	IAC-8	138.5	28.3	16.3	14.5	2.5	99.5
79	71-38	139.0	35.8	8.5	14.8	4.0	96.5
99	IAC-6	140.0	32.3	13.0	13.3	3.0	100.0
97	F75-9207	147.3	32.8	8.3	13.8	2.8	100.0
75	Braxton	141.3	21.8	6.8	17.3	4.5	99.3
105	R-315	139.0	39.3	7.5	15.8	3.0	100.0
19	Davis	139.0	19.3	6.8	16.8	3.8	98.5
	Grand mean	140.2	40.1	9.8	15.5	2.8	99.0
	Standard error of cultivar mean	2.2	3.8	0.9	1.3	0.3	1.6
	Coefficient of variation (%)	3.2	19.0	17.9	16.6	22.2	3.2
	5% LSD Cultivar means (*****=ns)	*****	10.9	2.5	*****	0.9	*****

Table 57. Trial 83506, 1983

Country: PORTUGAL Latitude: 38°45'N Zone: 10 Group: C
Region: EUROPE Longitude: 9°W Elevation (m): 10

Site: ESTACAO AGRONOMICA NACIONAL, OEIRAS
Cooperator(s): DR. ABILIO MENDES GASPAR

Date planted: May 11, 1983 Date harvested: August 31, 1983
Soil information: loam 57.1%, silt 18.4%, clay 24.5%, pH 8.0, aluviossolo
Fertilizer used (kg/ha): N 25.0, P 26.4, K 25.0
Total moisture (mm): 390
Number of irrigations: 7 (total amount 315 mm)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
57	Corsoy 79	3,960.3	51.3	116.8	98.8	3.3	1.0
71	Hodgson 78	3,884.3	41.0	114.0	91.5	2.5	1.0
36	Evans	3,756.2	41.0	101.5	88.5	1.5	1.0
87	Clay	3,643.2	41.0	101.3	71.0	1.3	1.0
88	Lakota	3,606.2	47.8	117.5	104.8	3.8	1.0
104	Platte	3,406.2	49.0	115.8	94.5	1.3	1.0
93	BSR 201	3 327.1	46.5	114.8	84.8	3.3	1.0
107	Weber	3,296.3	46.5	111.5	85.5	1.8	1.0
98	Hobbit	3,113.6	54.0	115.8	70.3	1.5	1.0
103	Mead	3,060.4	55.0	115.5	84.3	1.5	1.0
86	Fayette	3,054.7	54.0	117.5	101.8	2.0	1.0
89	Williams 82	2,877.1	53.8	119.3	99.5	2 3	1.0
102	Lawrence	2,782.4	55.5	119.5	100.3	2.3	1.0
84	Sparks	2,772.5	49.0	120.8	108.8	3.8	1.3
85	Pixie	2,471.0	56.0	118.8	77.8	3.3	1.0
35	Crawford	2,101.8	56.8	130.8	113.5	3.3	1.0
	Grand mean	3,194.6	49.9	115.7	92.2	2.4	1.0
	Standard error of cultivar mean	155.1	1.0	1.3	4.0	0.4	0.1
	Coefficient of variation (%)	9.7	4.0	2.2	8.6	30.0	12.3
	5% LSD Cultivar means (*****=ns)	441.8	2.8	3.7	11.3	1.0	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
57	Corsoy 79	227.8	33.5	11.3	17.5	2.0	96.3
71	Hodgson 78	216.8	27.0	9.8	19.6	1.5	98.8
36	Evans	218.5	29.3	9.5	17.4	1.5	97.8
87	Clay	239.0	28.3	8.0	17.7	3.0	92.0
88	Lakota	225.5	26.8	9.3	18.7	2.5	94.3
104	Platte	223.8	25.3	11.0	15.5	1.5	98.5
93	BSR 201	216.3	26.3	7.3	17.0	2.0	97.0
107	Weber	203.3	24.8	8.3	15.6	1.5	99.3
98	Hobbit	202.5	32.3	11.8	16.2	2.0	98.3
103	Mead	212.3	27.3	13.0	14.7	1.8	99.5
86	Fayette	198.3	31.5	9.3	16.4	2.0	97.8
89	Williams 82	210.8	26.0	15.5	17.2	1.5	98.3
102	Lawrence	218.5	27.3	13.8	15.6	2.5	94.5
84	Sparks	210.5	26.0	14.5	15.5	2.0	96.5
85	Pixie	200.0	31.5	10.8	14.7	2.0	97.5
35	Crawford	191.3	28.0	12.8	15.5	1.8	95.3
	Grand mean	213.4	28.2	11.0	16.5	1.9	96.9
	Standard error of cultivar mean	6.5	2.5	1.3	0.6	0.2	1.0
	Coefficient of variation (%)	6.1	18.0	23.0	7.8	21.9	2.1
	5% LSD Cultivar means (*****=ns)	18.5	*****	3.6	1.8	0.6	2.8

Table 58. Trial 83150, 1983

Country: PUERTO RICO
Region: MESO AMERICA

Latitude: 18°N
Longitude: 67°W

Zone: 4 Group: A
Elevation (m): 128

Site: ISABELA
Cooperator(s): JOSE BRAVO

Date planted: June 23, 1983

Date harvested: not reported

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
19	Davis	2,582.5	36.3	95.3	46.8	1.0	1.0
75	Braxton	2,533.3	30.8	103.0	40.1	1.0	1.0
96	EGSY 91-7	2,527.8 (3)	38.7 (3)	101.0 (3)	58.7 (3)	1.0 (3)	1.0 (3)
90	AGS 8	2,490.8	35.0	90.8	92.9	2.0	1.0
2	UFV-1	2,413.6	44.3	113.5	62.4	1.0	1.0
97	F75-9207	2,260.3 (3)	46.0 (3)	126.3 (3)	92.3 (3)	1.3 (3)	1.0 (3)
100	IAC-8	2,235.7	44.5	105.8	92.6	1.0	1.0
106	SH 1274	2,203.3	36.8	101.8	101.9	2.3	1.0
99	IAC-6	2,130.4	55.5	111.5	110.7	1.8	1.0
76	SIATSA 194	1,971.2	47.0	104.5	126.2	2.0	1.0
9	Jupiter	1,840.6	56.0	115.8	93.5	1.8	1.0
10	Improved Pelican	1,794.2	43.3	104.5	105.8	1.0	1.0
45	ICA L-109	1,611.8	54.3	115.5	111.0	1.5	1.0
101	ICA L-129	1,437.3	45.5	103.0	103.6	1.8	1.0
78	ISRA/IRAT 44A/73	1,394.1	49.3	106.0	92.0	1.3	1.0
79	71-38	1,292.3	50.3	114.3	79.7	1.0	1.0
	Grand mean	2,033.7	44.7	106.8	88.5	1.4	1.0
	Standard error of cultivar mean	506.2	7.5	8.5	24.8	0.6	0.0
	Coefficient of variation (%)	24.9	16.7	7.9	28.0	39.4	0.0
	5% LSD Cultivar means (*****=ns)	*****	*****	*****	*****	*****	0.0

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
19	Davis	167.0	153.5	9.3			
75	Braxton	149.8	89.3	5.9			
96	EGSY 91-7	149.0 (3)	105.7 (3)	10.7			
90	AGS 8	151.5	152.0	13.3			
2	UFV-1	169.3	178.8	10.7			
97	F75-9207	177.0 (3)	219.7 (3)	14.9			
100	IAC-8	135.3	162.0	18.5			
106	SH 1274	130.8	126.3	13.8			
99	IAC-6	167.8	190.3	19.1			
76	SIATSA 194	135.8	159.0	24.7			
9	Jupiter	150.0	205.5	18.4			
10	Improved Pelican	127.0	162.5	18.9			
45	ICA L-109	158.0	242.8	10.7			
101	ICA L-129	138.5	124.5	12.7			
78	ISRA/IRAT 44A/73	117.3	148.5	17.7			
79	71-38	143.0	240.0	10.5			
	Grand mean	147.4	166.4	14.4			
	Standard error of cultivar mean	21.2	54.7	5.4			
	Coefficient of variation (%)	14.4	32.9	37.6			
	5% LSD Cultivar means (*****=ns)	*****	*****	*****			

Table 59. Trial 83115, 1983

Country: SAINT LUCIA
Region: MESO AMERICA

Latitude: 14°51'N
Longitude: 61°21'W

Zone: 4 Group: A
Elevation (m): 260

Site: UNION AGRICULTURAL STATION, CASTRIES
Cooperator(s): MR. MICHAEL SLIGH

Date planted: October 4, 1983 Date harvested: January 6, 1984
Soil information: pH 5.2, clay loam
Fertilizer used (kg/ha): N 15.0, P 50.0, K 20.0
Total moisture (mm): 580

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
9	Jupiter	2,597.0	39.5	111.5	97.4	2.8	2.0
79	71-38	2,451.8	34.0	102.8	41.1	1.0	2.0
99	IAC-6	2,292.3	36.3	101.3	70.8	2.0	2.0
90	AGS 8	2,274.5	30.3	89.5	87.5	1.8	2.0
78	ISRA/IRAT 44A/73	2,097.5	36.0	102.5	77.2	2.5	1.8
76	SIATSA 194	2,093.8	34.0	100.5	95.3	3.0	1.8
100	IAC-8	2,047.8	35.0	99.8	83.8	2.0	1.0
10	Improved Pelican	2,037.0	33.5	100.0	90.5	1.8	2.0
105	R-315	1,973.5	31.0	91.0	66.8	1.5	1.0
97	F75-9207	1,852.3	32.8	101.8	53.8	1.3	1.8
101	ICA L-129	1,831.8	35.0	108.3	74.0	1.5	2.0
45	ICA L-109	1,767.8	38.3	103.0	77.3	2.8	2.3
19	Davis	1,757.3	29.3	91.8	39.4	1.0	1.8
106	SH 1274	1,700.8	31.3	94.3	84.8	1.5	1.5
96	EGSY 91-7	1,649.0	34.8	103.8	69.0	2.5	1.8
75	Braxton	1,530.3	27.3	94.8	51.3	1.0	1.0
	Grand mean	1,997.1	33.6	99.8	72.5	1.9	1.7
	Standard error of cultivar mean	191.7	0.8	1.1	4.7	0.2	0.2
	/ Coefficient of variation (%)	19.2	4.7	2.2	13.1	23.5	22.8
	5% LSD Cultivar means (*****=ns)	546.2	2.3	3.1	13.5	0.6	0.6

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
9	Jupiter	115.0	66.6	13.9	25.1	1.3	
79	71-38	118.8	68.2	4.1	15.5	2.5	
99	IAC-6	118.0	48.0	12.9	19.5	2.3	
90	AGS 8	123.8	48.1	12.1	18.4	4.0	
78	ISRA/IRAT 44A/73	119.0	65.5	8.6	17.1	2.5	
76	SIATSA 194	126.0	45.2	15.1	23.0	2.8	
100	IAC-8	120.5	51.4	14.3	23.4	1.8	
10	Improved Pelican	124.8	55.4	11.5	18.3	1.5	
105	R-315	116.3	43.6	9.8	20.5	1.0	
97	F75-9207	118.8	46.3	7.5	18.7	2.5	
101	ICA L-129	115.3	37.3	8.0	18.5	2.8	
45	ICA L-109	116.3	60.8	7.0	16.1	2.3	
19	Davis	123.3	31.2	3.7	21.7	2.5	
106	SH 1274	93.8	50.8	8.1	18.5	3.0	
96	EGSY 91-7	116.5	37.4	7.9	18.1	2.8	
75	Braxton	140.0	35.1	5.9	24.2	3.0	
	Grand mean	119.1	49.4	9.4	19.8	2.4	
	Standard error of cultivar mean	6.9	5.0	1.0	0.5	0.3	
	Coefficient of variation (%)	11.5	20.1	21.2	5.4	25.1	
	5% LSD Cultivar means (*****=ns)	19.5	14.1	2.8	1.5	0.9	

Table 60. Trial 83156, 1983

Country: SENEGAL
Region: AFRICA

Latitude: 12°47'N
Longitude: 15°22'W

Zone: 1 Group: A
Elevation (m): 10

Site: SEFA
Cooperator(s): DR. JACQUES LARCHER

Date planted: not reported

Date harvested: not reported

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
9	Jupiter	3,003.1	49.0	97.0	68.3	2.3	1.0
100	IAC-8	2,573.4	40.0	94.0	69.0	2.0	1.0
79	71-38	2,528.8	44.0	102.0	48.5	2.3	1.3
78	ISRA/IRAT 44A/73	2,527.2	45.0	97.0	63.0	1.0	1.0
106	SH 1274	2,366.7	30.5	93.0	71.0	2.3	1.3
19	Davis	2,357.1	30.5	85.0	33.8	1.0	1.0
97	F75-9207	2,343.4	40.0	101.0	56.0	2.0	1.0
99	IAC-6	2,340.9	49.0	96.0	69.0	2.5	1.5
96	EGSY 91-7	2,200.0	35.0	91.0	59.5	1.8	2.3
75	Braxton	2,158.4	26.0	85.0	31.3	1.0	1.0
76	SIATSA 194	1,932.1	44.0	92.0	84.8	1.5	2.0
45	ICA L-109	1,931.6	49.0	102.0	74.8	3.8	1.8
105	R-315	1,752.0	34.0	82.0	60.5	3.0	1.5
101	ICA L-129	1,752.0	41.0	94.3	63.8	1.3	1.3
90	AGS 8	1,300.7	33.0	82.0	61.0	2.0	1.3
10	Improved Pelican	1,238.6	33.0	84.0	70.5	2.5	1.0
	Grand mean	2,144.1	38.9	92.3	61.5	2.0	1.3
	Standard error of cultivar mean	204.1	1.1	0.3	3.9	0.2	0.2
	Coefficient of variation (%)	19.0	5.6	0.7	12.8	24.3	33.8
	5% LSD Cultivar means (*****=ns)	581.4	3.1	0.9	11.2	0.7	0.6

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
9	Jupiter	148.5	67.4	13.9	16.5	2.3	
100	IAC-8	169.5	57.8	12.2	17.1	4.5	
79	71-38	160.5	77.1	9.1	9.7	3.5	
78	ISRA/IRAT 44A/73	136.8	102.3	9.1	12.2	2.5	
106	SH 1274	149.5	55.4	12.1	17.3	2.8	
19	Davis	186.5	37.2	6.0	17.8	3.0	
97	F75-9207	137.3	72.4	9.1	12.2	1.0	
99	IAC-6	182.3	49.5	14.1	11.3	1.8	
96	EGSY 91-7	167.0	42.1	11.6	15.1	3.0	
75	Braxton	167.8	28.5	4.2	19.1	4.5	
76	SIATSA 194	163.3	68.4	16.0	19.8	3.5	
45	ICA L-109	125.3	94.5	9.3	9.9	4.0	
105	R-315	179.0	30.6	11.1	16.0	2.8	
101	ICA L-129	171.5	50.9	10.0	13.9	2.5	
90	AGS 8	177.0	29.1	10.2	14.4	3.3	
10	Improved Pelican	152.8	44.4	11.0	11.0	1.5	
	Grand mean	160.9	56.7	10.5	14.6	2.9	
	Standard error of cultivar mean	12.8	5.9	1.0	0.4	0.4	
	Coefficient of variation (%)	15.9	20.8	19.6	5.2	27.4	
	5% LSD Cultivar means (*****=ns)	36.4	16.8	3.0	1.1	1.1	

Table 61. Trial 83104, 1983

Country: SOMALIA
Region: AFRICA

Latitude: 3°30'N
Longitude: 46°35'E

Zone: 1 Group: A
Elevation (m): 50

Site: AFGOI
Cooperator(s): DR. SALAD G. OSSOBLE

Date planted: May 15, 1983 Date harvested: August 24, 1983
Soil information: loam 13%, silt 16%, clay 71%, pH 7.7
Fertilizer used (kg/ha): N 25.0, P 25.0, K 25.0
Total moisture (mm): 175
Number of irrigations: 4 (amount not reported)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
9	Jupiter	2,194.9 (3)	43.0	121.0	55.5	1.5	1.0
79	71-38	1,625.3 (3)	39.0	129.5	34.9	1.0	1.0
100	IAC-8	1,555.9 (3)	41.0	129.5	53.5	1.0	1.0
105	R-315	1,547.5 (3)	34.0	107.0	39.9	1.0	1.0
76	SIATSA 194	1,464.2 (3)	39.5	126.5	63.6	1.3	2.3
101	ICA L-129	1,408.6 (3)	36.0	125.8	55.5	1.0	1.0
45	ICA L-109	1,378.1 (3)	44.5	135.0	47.7	1.0	1.0
10	Improved Pelican	1,336.4 (3)	34.5	115.3	54.7	1.0	1.5
99	IAC-6	1,325.3 (3)	41.0	135.0	56.5	1.0	1.0
78	ISRA/IRAT 44A/73	1,261.4 (3)	41.0	134.3	48.4	1.0	1.0
106	SH 1274	1,116.9 (3)	29.8	110.5	54.0	1.0	1.3
96	EGSY 91-7	1,080.8 (3)	34.0	110.5	43.0	1.0	3.8
19	Davis	966.9 (3)	29.3	122.0	28.5	1.0	2.5
90	AGS 8	897.4 (3)	34.0	101.8	51.3	1.0	2.0
97	F75-9207	839.1 (3)	34.0	135.0	38.9	1.0	1.0
75	Braxton	691.8 (3)	26.0	135.0	28.1	1.0	1.0
	Grand mean	1,293.1	36.3	123.3	47.1	1.1	1.5
	Standard error of cultivar mean	161.0	0.2	2.7	1.8	0.1	0.2
	Coefficient of variation (%)	21.6	1.3	4.3	7.7	18.6	31.3
	5% LSD Cultivar means (*****=ns)	464.9	0.7	7.6	5.2	0.3	0.7

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
9	Jupiter	259.5	27.3	11.7	26.5 (3)	3.3	
79	71-38	231.8	50.0	7.9	13.3 (3)	3.0	
100	IAC-8	213.3	35.5	9.7	24.7 (3)	3.7	
105	R-315	252.8	22.5	9.7	18.8 (3)	3.7	
76	SIATSA 194	216.0	35.0	12.0	22.8 (3)	3.3	
101	ICA L-129	214.3	29.3	9.0	18.0 (3)	3.0	
45	ICA L-109	218.3	31.3	8.1	15.2 (3)	2.7	
10	Improved Pelican	221.8	24.3	11.6	11.8 (3)	2.7	
99	IAC-6	252.0	32.3	9.3	18.7 (3)	3.0	
78	ISRA/IRAT 44A/73	204.8	29.3	10.3	15.3 (3)	3.0	
106	SH 1274	163.8	25.3	9.0	19.5 (3)	3.3	
96	EGSY 91-7	197.3	19.8	10.8	18.0 (3)	3.3	
19	Davis	269.5	15.8	8.7	18.8 (3)	4.3	
90	AGS 8	220.0	23.0	10.8	14.2 (3)	4.0	
97	F75-9207	196.3	31.0	8.7	15.7 (3)	3.3	
75	Braxton	232.3	16.8	6.6	19.8 (3)	4.7	
	Grand mean	222.7	28.0	9.6	18.2	3.4	
	Standard error of cultivar mean	9.5	2.9	0.7	0.4	0.3	
	Coefficient of variation (%)	8.5	20.9	13.9	3.4	14.0	
	5% LSD Cultivar means (*****=ns)	26.9	8.3	1.9	1.0	0.8	

Table 62. Trial 83401, 1983

Country: SOUTH AFRICA
Region: AFRICA

Latitude: 25°24'S
Longitude: 29°22'E

Zone: 9 Group: B
Elevation (m): 1,009

Site: GROBLERSDAL
Cooperator(s): MR. T.E.M. ODENDAAL

Date planted: November 22, 1983 Date harvested: March 20, 1984
Soil information: loam 75%, silt 3%, clay 22%, pH 6.3
Fertilizer used (kg/ha): P 67.5
Total moisture (mm): 730
Number of irrigations: 17 (total amount 442 mm)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
75	Braxton	3,335.0	49.8	136.0	75.0	1.3 (3)	1.0 (3)
19	Davis	2,826.8	48.0	135.8	91.8	1.3	1.0
77	ICA L-124	2,761.7	50.0	134.5	117.5	3.0	1.0
106	SH 1274	2,511.9	53.8	129.8	128.8	2.8	1.0
94	DB 1601	2,502.3	48.0	135.8	93.8	1.0	1.0
82	PK-73-86	2,455.3	54.0	126.3	91.0	1.0	1.0
92	BM-2	2,384.7	55.8	121.8	68.5	1.0	1.0
105	R-315	2,340.5	51.8	123.0	89.5	1.0	1.0
80	HM-1	2,195.6	61.0	155.8	107.5	3.8	1.0
69	Essex	2,147.7	57.0	119.3	55.5	1.0	1.0
81	Ecuador 1	2,020.7	84.0	155.0	130.0	2.5	1.0
91	AGS 66	1,642.3	35.0	113.5	65.5	1.5	1.0
76	SIATSA 194	1,613.6	86.0	158.5	157.5	4.3	1.3
9	Jupiter	1,316.3	97.0	159.8	152.5	5.0	1.0
10	Improved Pelican	1,226.8	86.0	155.0	137.5	1.8	1.0
96	ECSY 91-7	792.7	46.0	126.0	103.8	1.0	5.0
	Grand mean	2,129.6	60.2	136.6	104.1	2.1	1.3
	Standard error of cultivar mean	225.6	5.9	2.6	4.1	1.4	1.0
	Coefficient of variation (%)	21.2	19.5	3.8	7.8	69.3	77.7
	5% LSD Cultivar means (*****=ns)	642.7	16.8	7.3	11.6	*****	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
75	Braxton	133.3	45.0	13.5	20.9	3.0	
19	Davis	124.0	32.5	20.0	20.7	2.5	
77	ICA L-124	116.3	48.0	22.8	20.1	2.5	
106	SH 1274	99.8	47.5	28.3	16.5	3.3	
94	DB 1601	124.8	32.8	20.0	17.2	2.8	
82	PK-73-86	115.8	47.8	18.3	17.2	2.0	
92	BM-2	111.0	31.0	15.8	16.8	3.3	
105	R-315	117.8	31.0	15.5	15.6	2.8	
80	HM-1	133.3	67.8	16.3	18.2	2.5	
69	Essex	116.0	34.3	11.0	16.4	3.5	
81	Ecuador 1	112.5	48.5	36.8	18.1	1.8	
91	AGS 66	114.3	45.5	14.0	12.3	4.0	
76	SIATSA 194	123.8	43.0	46.3	16.2	3.3	
9	Jupiter	114.5	49.8	55.0	11.9	3.0	
10	Improved Pelican	112.0	47.5	34.5	11.1	2.0	
96	ECSY 91-7	115.3	39.3	20.3	16.7	2.5	
	Grand mean	117.8	43.2	24.3	16.6	2.8	
	Standard error of cultivar mean	7.5	6.2	2.7	1.0	0.3	
	Coefficient of variation (%)	12.8	28.6	22.2	12.1	23.6	
	5% LSD Cultivar means (*****=ns)	*****	17.6	7.7	2.9	0.9	

Table 63. Trial 83500, 1983

Country: SOUTH AFRICA Latitude: 26°44'S Zone: 9 Group: C
Region: AFRICA Longitude: 27°05'E Elevation (m): 1,345

Site: POTCHEFSTROOM
Cooperator(s): MR. T.E.M. ODENDAAL

Date planted: November 18, 1983 Date harvested: February 03, 1984
Soil information: clay 25%, westleigh
Fertilizer used (kg/ha): N 25.0, P 17.0, K 8.0
Total moisture (mm): 270
Number of irrigations: 3 (total amount 75 mm)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
98	Hobbit	996.1	26.3	82.5	24.8	1.0	1.0
88	Lakota	931.3	25.8	69.5	31.8	1.0	1.0
87	Clay	926.6	22.0	69.0	25.3	1.0	1.0
36	Evans	854.6	23.5	67.5	22.3	1.0	1.0
107	Weber	808.6	24.8	74.8	29.5	1.0	1.0
71	Hodgson 78	776.5 (3)	22.3	78.0	31.3	1.0	1.0
86	Fayette	771.3	34.5	81.8	40.0	1.0	1.0
93	BSR 201	745.6	33.0	80.0	34.8	1.0	1.0
73	Century	733.7	26.8	80.3	35.0	1.0	1.0
85	Pixie	703.7	28.0	83.0	28.8	1.0	1.0
103	Mead	687.7	28.0	83.0	33.5	1.0	1.0
102	Lawrence	671.3	27.3	80.8	39.5	1.0	1.0
104	Platte	652.0	27.8	84.5	39.5	1.0	1.0
89	Williams 82	594.5	27.8	82.5	37.8	1.0	1.0
57	Corsoy 79	549.0	24.8	76.0	30.0	1.0	1.0
35	Crawford	475.1	27.3	83.8	46.5	1.0	1.0
	Grand mean	741.8	26.8	78.6	33.1	1.0	1.0
	Standard error of cultivar mean	173.8	2.7	2.2	0.5	0.0	0.0
	Coefficient of variation (%)	23.4	20.4	5.6	2.8	0.0	0.0
	5% LSD Cultivar means (*****=ns)	*****	*****	6.3	1.3	*****	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
98	Hobbit	154.0	13.8	5.0	13.5	2.3	
88	Lakota	187.5	13.0	2.3	12.1	4.0	
87	Clay	197.8	11.3	2.0	13.6	3.8	
36	Evans	183.8	12.3	2.0	11.4	4.0	
107	Weber	187.8	12.8	2.0	10.3	2.5	
71	Hodgson 78	201.0	11.3	4.8	14.3 (3)	3.3	
86	Fayette	181.3	9.5	4.0	13.2	2.8	
93	BSR 201	189.3	10.8	2.0	13.5	2.8	
73	Century	174.8	8.3	5.3	12.7	3.0	
85	Pixie	164.8	8.8	3.3	12.8	2.5	
103	Mead	177.3	11.3	4.0	11.1	3.8	
102	Lawrence	187.5	11.2	5.0	12.8	2.3	
104	Platte	200.3	8.8	4.0	12.3	2.5	
89	Williams 82	187.8	8.6	5.0	14.0	2.3	
57	Corsoy 79	185.8	11.9	3.3	12.6	2.8	
35	Crawford	158.8	10.3	6.3	11.5	2.5	
	Grand mean	182.4	10.8	3.8	12.6	2.9	
	Standard error of cultivar mean	10.5	1.3	0.2	1.3	1.0	
	Coefficient of variation (%)	11.5	23.6	8.3	10.2	33.3	
	5% LSD Cultivar means (*****=ns)	*****	*****	0.4	*****	*****	

Table 64. Trial 83108, 1983

Country: SRI LANKA
Region: ASIA

Latitude: 8°05'N
Longitude: 83°28'E

Zone: 1 Group: A
Elevation (m): 138

Site: MAHA ILLUPPALLAMA
Cooperator(s): MR. CECIL D. DHARMASENA, MR. V. ARULNANDHY

Date planted: October 19, 1983 Date harvested: January 10, 1984
Soil information: loam 56%, silt 10%, clay 34%, pH 6.9
Fertilizer used (kg/ha): N 20.0 P 26.1, K 33.3
Total moisture (mm): 918

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
97	F75-9207	2,918.8	28.5	93.3	53.2	1.0	1.8
19	Davis	2,590.6	29.0	90.0	30.2	1.0	1.0
96	EGSY 91-7	2,343.8	32.8	89.0	45.0	1.0	1.5
9	Jupiter	2,209.4	40.5	96.0	72.7	2.0	1.8
78	ISRA/IRAT 44A/73	2,206.3	38.0	101.3	66.1	2.0	2.0
99	IAC-6	2,171.9	39.3	83.3	63.9	1.8	1.0
90	AGS 8	2,150.0	32.5	89.8	72.2	2.3	1.3
101	ICA L-129	2,096.9	33.5	93.0	62.9	1.8	2.0
105	R-315	2,090.6	34.8	85.8	60.0	1.3	1.0
106	SH 1274	2,050.0	29.0	83.5	73.1	2.0	1.0
76	SIATSA 194	1,959.4	39.3	95.5	71.4	2.3	2.0
10	Improved Pelican	1,953.1	32.8	83.5	75.4	2.0	1.0
45	ICA L-109	1,937.5	39.8	93.0	62.7	1.5	2.0
75	Braxton	1,884.4	28.3	84.0	30.0	1.0	1.0
100	IAC-8	1,678.1	40.3	96.3	75.7	2.5	2.0
79	71-38	1,320.0	36.5	100.5	34.9	1.0	2.0
	Grand mean	2,097.5	34.7	91.1	59.3	1.6	1.5
	Standard error of cultivar mean	198.2	0.0	0.0	3.2	0.2	0.1
	Coefficient of variation (%)	18.9	0.0	0.0	10.7	27.9	17.3
	5% LSD Cultivar means (*****=ns)	564.6	0.0	0.0	9.0	0.7	0.4

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
97	F75-9207	142.0	20.2	10.2	15.8	3.3	
19	Davis	121.0	17.3	5.8	19.3	3.3	
96	EGSY 91-7	150.8	15.0	6.0	15.6	3.0	
9	Jupiter	139.3	16.8	10.4	18.7	3.8	
78	ISRA/IRAT 44A/73	143.0	17.0	8.7	16.4	3.5	
99	IAC-6	154.3	18.0	12.7	16.3	2.3	
90	AGS 8	176.8	24.6	11.6	15.1	3.0	
101	ICA L-129	146.5	20.9	9.3	14.9	3.3	
105	R-315	177.3	22.7	7.8	15.4	2.8	
106	SH 1274	174.0	24.3	9.0	15.2	2.0	
76	SIATSA 194	110.0	17.9	10.3	20.8	4.0	
10	Improved Pelican	145.0	18.9	10.7	13.1	2.0	
45	ICA L-109	176.0	18.6	11.0	11.2	2.5	
75	Braxton	146.5	16.8	5.4	19.1	2.0	
100	IAC-8	108.8	27.1	11.6	18.7	3.8	
79	71-38	89.3	20.8	7.3	13.0	4.0	
	Grand mean	143.8	19.8	9.2	16.2	3.0	
	Standard error of cultivar mean	10.8	2.1	1.1	0.5	0.2	
	Coefficient of variation (%)	15.0	21.5	24.8	5.9	13.6	
	5% LSD Cultivar means (*****=ns)	30.7	6.1	3.3	1.4	0.6	

Table 65. Trial 83134, 1983

Country: SUDAN
Region: AFRICA

Latitude: 14°24'N
Longitude: 33°29'E

Zone: 4 Group: A
Elevation (m): 400

Site: GEZIRA RESEARCH STATION, WAD MEDANI
Cooperator(s): DR. OSMAN A. A. AGEEB

Date planted: June 6, 1983 Date harvested: September 15, 1983
Soil information: pH 8.5 vertisol
Fertilizer used (kg/ha): N 129.0, P 18.3
Total moisture (mm): 258
Number of irrigations: 14 (amount not reported)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
75	Braxton	3,240.2	29.0	95.0	32.5	1.0	1.0
96	EGSY 91-7	3,202.7	34.5	105.0	46.3	1.3	1.8
100	IAC-8	2,875.6	42.0	109.0	53.0	1.0	1.0
19	Davis	2,848.5	30.5	93.3	35.5	1.0	1.0
76	SIATSA 194	2,765.1	46.0	104.0	85.8	3.0	1.0
106	SH 1274	2,523.4	33.0	104.0	66.0	3.0	1.0
9	Jupiter	2,358.8	49.0	122.0	60.5	1.0	1.0
99	IAC-6	2,356.7	52.5	115.5	61.5	1.0	1.0
105	R-315	2,338.0	33.0	88.3	54.3	2.0	2.5
101	ICA L-129	2,177.5	42.0	109.0	65.0	2.0	1.0
79	71-38	2,115.0	46.0	115.3	56.8	1.0	1.0
45	ICA L-109	2,067.1	53.0	115.0	61.5	1.0	1.0
97	F75-9207	2,065.0	42.0	122.3	59.3	1.0	1.0
78	ISRA/IRAT 44A/73	1,979.6	46.0	114.0	59.0	1.0	1.0
10	Improved Pelican	1,962.9	38.3	105.0	72.0	1.8	1.0
90	AGS 8	1,862.9	29.8	86.0	56.8	3.0	3.0
	Grand mean	2,421.2	40.4	106.4	57.8	1.6	1.3
	Standard error of cultivar mean	186.5	0.4	0.5	2.1	0.1	0.1
	Coefficient of variation (%)	15.4	1.7	0.9	7.2	11.7	22.3
	5% LSD Cultivar means (*****=ns)	531.2	1.0	1.3	5.9	0.3	0.4

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
75	Braxton	235.5	30.8	5.8	16.9		
96	EGSY 91-7	253.3	41.8	4.8	13.5		
100	IAC-8	226.3	38.3	6.0	14.0		
19	Davis	263.8	22.0	6.8	16.1		
76	SIATSA 194	238.0	37.5	15.8	15.6		
106	SH 1274	167.3	46.8	9.0	14.1		
9	Jupiter	240.3	24.8	8.8	13.1		
99	IAC-6	226.5	32.3	7.5	11.1		
105	R-315	258.5	26.3	7.5	12.5		
101	ICA L-129	269.5	36.0	7.5	12.7		
79	71-38	217.0	40.5	7.5	8.5		
45	ICA L-109	236.0	32.8	5.0	8.8		
97	F75-9207	194.5	35.0	8.5	9.1		
78	ISRA/IRAT 44A/73	238.3	37.5	6.0	8.5		
10	Improved Pelican	200.0	46.5	9.5	9.0		
90	AGS 8	206.0	38.8	8.5	11.8		
	Grand mean	229.4	35.5	7.8	12.2		
	Standard error of cultivar mean	16.1	4.0	0.5	0.4		
	Coefficient of variation (%)	14.0	22.4	13.9	5.7		
	5% LSD Cultivar means (*****=ns)	45.8	11.3	1.5	1.0		

Table 66. Trial 83405, 1983

Country: SUDAN
Region: AFRICA

Latitude: 11°N
Longitude: 29°E

Zone: 5 Group: B
Elevation (m): 501

Site: KADUGH, TELO
Cooperator(s): DR. MUKHTAR M. KANANI, MR. S. R. GINGRICH

Date planted: July 5, 1983
Date harvested: October 6, 1983
Soil information: vertisol
Total moisture (mm): 345

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
77	ICA L-124	379.2	46.0	101.0	30.5	2.0	1.5
92	BM-2	348.0	43.5	92.0	27.8	2.0	1.8
96	EGSY 91-7	345.9	48.0	91.5	27.0	2.0	1.8
80	HM-1	339.7	42.8	96.8	24.0	1.8	2.0
75	Braxton	333.4	38.5	97.5	21.3	2.0	2.0
19	Davis	310.5	42.3	96.3	20.3	1.8	1.8
106	SH 1274	308.4	45.0	95.8	25.0	1.8	1.8
81	Ecuador 1	308.4	49.5	99.0	27.3	2.3	2.0
91	AGS 66	302.1	41.0	92.0	20.5	1.8	2.0
10	Improved Pelican	293.8	48.5	92.8	27.5	2.0	2.0
9	Jupiter	289.6	55.5	100.0	32.5	1.8	1.8
105	R-315	279.2	45.0	96.3	23.5	2.5	2.0
82	PK-73-86	270.9	42.3	91.5	22.0	2.0	1.8
94	DB 1601	258.4	44.5	97.8	26.3	1.8	1.5
76	SIATSA 194	241.7	55.0	107.0	30.8	1.3	3.8
69	Essex	223.0	36.5	92.5	15.8	1.8	2.0
	Grand mean	302.0	45.2	96.2	25.1	1.9	2.0
	Standard error of cultivar mean	45.1	0.7	1.3	1.6	0.2	0.2
	Coefficient of variation (%)	29.8	3.2	2.8	12.5	22.8	22.8
	5% LSD Cultivar means (*****=ns)	*****	2.1	3.8	4.5	*****	0.6

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
77	ICA L-124	174.3	11.0	9.8	12.5	4.0	30.5
92	BM-2	147.0	10.3	7.0	11.3	3.5	42.0
96	EGSY 91-7	150.8	10.8	9.5	11.5	2.5	68.0
80	HM-1	178.5	10.0	7.8	11.8	4.0	18.5
75	Braxton	146.3	9.0	6.5	12.8	4.5	55.0
19	Davis	161.0	9.3	7.3	11.0	4.8	21.5
106	SH 1274	139.8	12.0	7.5	11.3	3.3	46.0
81	Ecuador 1	169.5	12.5	8.8	8.8	4.8	18.0
91	AGS 66	136.8	14.5	7.5	9.3	3.8	34.0
10	Improved Pelican	156.0	10.8	9.3	9.5	3.8	53.0
9	Jupiter	143.5	12.5	11.5	9.8	4.8	26.5
105	R-315	158.0	10.5	8.3	10.8	3.3	24.0
82	PK-73-86	156.5	13.5	6.5	10.3	4.3	33.5
94	DB 1601	156.8	11.0	7.0	11.0	4.8	26.5
76	SIATSA 194	166.3	12.5	13.3	11.8	3.8	22.0
69	Essex	140.8	8.5	6.3	11.0	2.5	45.0
	Grand mean	155.1	11.2	8.3	10.9	3.9	35.3
	Standard error of cultivar mean	13.4	1.5	0.4	0.7	0.4	5.9
	Coefficient of variation (%)	17.2	26.5	10.5	13.0	17.9	33.7
	5% LSD Cultivar means (*****=ns)	*****	*****	1.3	2.0	1.0	16.9

Table 67. Trial 83414, 1983

Country: SUDAN
Region: AFRICA

Latitude: 12°44'N
Longitude: 34°07'E

Zone: 4 Group: B
Elevation (m): 435

Site: KENANA RESEARCH STATION, AGADI
Cooperator(s): DR. HUSSEIN E. OSMAN, DR. GEORGE I. GHOBRIAL

Date planted: July 6, 1983 Date harvested: not reported
Fertilizer used (kg/ha): N 25.0, P 25.0
Total moisture (mm): 503

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
82	PK-73-86	1,012.3	31.0	84.0	39.8	2.5	1.0
94	DB 1601	971.9	31.0	84.0	38.3	2.0	1.0
106	SH 1274	931.4	34.0	80.0	46.0	1.8	1.0
19	Davis	926.0	34.0	90.0	31.5	2.0	1.0
92	BM-2	893.9	31.0	80.0	37.8	1.8	1.0
77	ICA L-124	880.6	34.0	90.0	41.0	2.5	1.0
80	HM-1	877.7	31.0	84.0	34.8	2.0	1.5
81	Ecuador 1	856.8	38.0	86.0	47.8	2.3	1.0
75	Braxton	855.6	29.0	82.0	34.8	1.0	1.0
76	SIATSA 194	835.2	40.0	90.0	55.8	2.5	1.0
105	R-315	823.9	36.0	80.0	39.0	1.3	1.0
91	AGS 66	768.9	29.0	80.0	32.0	1.5	1.8
69	Essex	650.1	29.0	80.0	27.5	1.0	1.5
9	Jupiter	634.3	44.0	86.0	50.5	3.8	1.0
96	EGSY 91-7	622.6	35.0	81.5	40.0	2.5	2.5
10	Improved Pelican	306.3	34.0	80.0	40.8	2.0	1.0
	Grand mean	803.0	33.8	83.6	39.8	2.0	1.2
	Standard error of cultivar mean	84.4	0.3	0.4	1.4	0.3	0.2
	Coefficient of variation (%)	21.0	1.5	0.9	7.0	32.9	28.3
	5% LSD Cultivar means (*****=ns)	240.3	0.7	1.1	4.0	1.0	0.5

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
82	PK-73-86	141.8	22.8	11.0	12.6	2.0	40.0
94	DB 1601	137.8	20.8	8.8	13.6	2.3	47.0
106	SH 1274	128.3	22.8	11.5	12.0	1.0	57.0
19	Davis	121.8	20.5	8.5	13.8	2.5	29.0
92	BM-2	110.3	19.8	10.0	12.8	2.5	59.0
77	ICA L-124	126.8	19.5	10.3	15.2	1.5	59.0
80	HM-1	142.0	16.8	10.0	14.5	3.5	31.0
81	Ecuador 1	136.3	17.8	13.0	13.6	3.5	39.0
75	Braxton	131.3	18.0	9.5	15.3	5.0	61.0
76	SIATSA 194	112.5	26.0	12.5	12.1	2.3	50.0
105	R-315	131.8	17.0	11.5	12.1	1.5	43.0
91	AGS 66	118.0	26.5	10.3	10.1	3.5	40.0
69	Essex	134.8	17.8	9.0	13.9	2.0	44.0
9	Jupiter	121.0	22.0	16.3	10.0	5.0	43.0
96	EGSY 91-7	104.8	19.3	12.0	12.1	1.8	63.0
10	Improved Pelican	133.5	12.3	13.5	8.5	4.0	42.0
	Grand mean	127.0	20.0	11.1	12.6	2.7	46.7
	Standard error of cultivar mean	8.9	1.2	0.6	0.5	0.5	8.0
	Coefficient of variation (%)	14.1	12.0	9.9	7.2	34.1	34.2
	5% LSD Cultivar means (*****=ns)	*****	3.4	1.6	1.3	1.3	*****

Table 68. Trial 83421, 1983

Country: SUDAN
Region: AFRICA

Latitude: 14°24'N
Longitude: 33°29'E

Zone: 4 Group: B
Elevation (m): 400

Site: GEZIRA RESEARCH STATION, WAD MEDANI
Cooperator(s): DR. OSMAN A. A. AGEEB

Date planted: June 7, 1983 Date harvested: September 17, 1983
Soil information: pH 8.5 vertisol, Suleimi series
Fertilizer used (kg/ha): N 86.0, P 18.7
Total moisture (mm): 258
Number of irrigations: 14 (amount not reported)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
76	SIATSA 194	3,106.9	40.8	104.0	93.8	4.0	1.0
95	Duocrop	2,946.4	31.0	93.0	62.8	2.0	1.0
106	SH 1274	2,888.1	31.0	101.0	67.5	3.0	1.0
19	Davis	2,758.9	31.0	93.0	33.8	1.0	1.0
96	EGSY 91-7	2,752.6	35.0	103.0	41.3	1.0	2.0
94	DB 1601	2,717.2	31.0	90.0	39.8	1.0	1.0
82	PK-73-86	2,698.5	31.5	102.5	33.5	1.0	1.0
92	BM-2	2,675.5	28.0	84.0	31.3	1.0	1.0
75	Braxton	2,642.2	28.0	93.0	31.3	1.0	1.0
105	R-315	2,525.5	31.0	90.0	61.0	2.0	1.0
91	AGS 66	2,377.6	28.0	79.0	25.3	1.0	1.0
69	Essex	2,142.1	29.5	84.0	24.3	1.0	1.0
77	ICA L-124	2,140.0	28.0	93.0	41.5	2.0	1.0
9	Jupiter	2,094.2	47.0	121.0	60.8	1.0	1.0
37	G 2120	2,027.5	54.0	106.0	81.8	3.0	2.0
81	Ecuador 1	1,596.1	40.0	121.0	52.0	1.0	1.0
	Grand mean	2,505.6	34.1	97.3	48.8	1.6	1.1
	Standard error of cultivar mean	152.7	0.3	0.4	1.5	0.0	0.0
	Coefficient of variation (%)	12.2	1.5	0.9	5.9	0.0	0.0
	5% LSD Cultivar means (*****=ns)	434.9	0.7	1.2	4.1	0.0	0.0

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
76	SIATSA 194	228.3	31.0	13.1	16.1		
95	Duocrop	270.0	19.0	8.5	17.6		
106	SH 1274	257.0	35.0	8.2	15.0		
19	Davis	258.8	23.0	4.3	16.0		
96	EGSY 91-7	228.0	34.5	5.0	13.2		
94	DB 1601	215.8	34.8	5.1	13.8		
82	PK-73-86	238.8	36.5	6.1	12.4		
92	BM-2	251.5	26.3	4.2	14.3		
75	Braxton	240.5	30.0	3.9	16.6		
105	R-315	270.8	28.8	7.9	14.1		
91	AGS 66	195.8	44.8	4.8	14.4		
69	Essex	266.0	25.3	4.5	12.6		
77	ICA L-124	278.5	29.0	5.2	15.8		
[illegible]	Jupiter	243.8	21.5	7.8	13.0		
37	G 2120	365.5	45.5	10.8	5.9		
81	Ecuador 1	249.3	24.5	5.9	14.1		
	Grand mean	253.6	30.6	6.6	14.1		
	Standard error of cultivar mean	13.8	2.9	0.4	0.4		
	Coefficient of variation (%)	10.9	18.7	13.0	5.6		
	5% LSD Cultivar means (*****=ns)	39.3	8.2	1.2	1.1		

Table 69. Trial 83132, 1983

Country: THAILAND
Region: ASIA

Latitude: 17°20'N
Longitude: 99°52'E

Zone: 4 Group: A
Elevation (m): 54

Site: SRISUMRONS FIELD CROP EXPERIMENT STATION
Cooperator(s): MR. SOMSAK SRISOMBUN, DR. ARWOOTH NALAMPANG

Date planted: August 24, 1983 Date harvested: November 23, 1983
Soil information: loam 46.8%, silt 50.4%, clay 2.8%, pH 6.5
Fertilizer used (kg/ha): N 25.0, P 26.0, K 25.0

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
75	Braxton	1,807.5	25.5	99.0	42.0	1.0	1.0
19	Davis	1,333.6	25.3	93.8	51.9	1.0	3.5
100	IAC-8	1,189.4	33.0	100.0	61.2	4.8	1.3 (3)
96	EGSY 91-7	1,147.7	28.8	90.0	61.4	3.5	3.0
45	ICA L-109	1,105.0	38.8	101.0	65.3	5.0	
10	Improved Pelican	1,015.5	30.3	91.8	77.9	4.3	1.0
106	SH 1274	1,005.6	26.8	87.5	72.5	5.0	1.0
76	SIATSA 194	890.5	32.0	92.0	71.0	5.0	1.3
9	Jupiter	880.1	37.0	101.0	65.8	3.5	
101	ICA L-129	709.3	30.5	93.8	49.7	3.3	1.0
78	ISRA/IRAT 44A/73	672.8	33.5	94.3	55.8	3.5	1.5
90	AGS 8	529.1	28.0	91.5	61.8	4.0	3.5
99	IAC-6	451.0	34.3	91.5	61.8	5.0	1.0
79	71-38	326.5	34.0	103.5	40.8	3.3	
97	F75-9207	157.8	28.5	106.0	46.7	2.0	
105	R-315	128.1	28.5	103.5	42.5	1.8	
	Grand mean	834.3	30.9	96.3	58.0	3.5	1.7
	Standard error of cultivar mean	59.5	0.3	0.9	4.6	0.4	1.2
	Coefficient of variation (%)	14.3	2.0	1.9	15.8	20.2	67.5
	5% LSD Cultivar means (*****=ns)	169.4	0.9	2.6	13.1	1.0	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
75	Braxton	151.0	27.9	10.0	12.7	2.0	94.0 (1)
19	Davis	157.5	34.9	8.3	10.7	3.3	83.0 (1)
100	IAC-8	152.5	24.6	22.0	11.8	2.0	94.0 (1)
96	EGSY 91-7	158.0	28.4	17.7	8.3	2.3	93.0 (1)
45	ICA L-109	157.0	44.8	15.3	6.8	2.3	93.0 (1)
10	Improved Pelican	151.5	45.3	16.9	7.4	2.3	96.0 (1)
106	SH 1274	147.8	34.0	17.3	7.7	2.5	65.0 (1)
76	SIATSA 194	160.5	31.8	23.4	10.0	2.8	84.0 (1)
9	Jupiter	158.3	21.9	17.1	10.4	4.0	98.0 (1)
101	ICA L-129	157.5	25.8	17.2	8.6	2.8	73.0 (1)
78	ISRA/IRAT 44A/73	149.3	27.9	21.1	9.2	2.5	80.0 (1)
90	AGS 8	139.8	23.1	19.9	7.1	3.0	90.0 (1)
99	IAC-6	150.3	20.4	27.8	6.2	2.3	57.0 (1)
79	71-38	132.8	21.5	12.2	6.5	2.8	85.0 (1)
97	F75-9207	145.5	14.6	18.1	6.7	3.5	96.0 (1)
105	R-315	148.3	12.8	17.6	6.6 (3)	5.0	89.0 (1)
	Grand mean	151.1	27.5	17.6	8.6	2.8	85.6
	Standard error of cultivar mean	6.6	2.7	1.4	2.1	0.3	11.8
	Coefficient of variation (%)	8.7	19.7	16.2	24.0	18.0	13.8
	5% LSD Cultivar means (*****=ns)	*****	7.7	4.1	*****	0.7	*****

Table 70. Trial 83168, 1983

Country: THAILAND
Region: ASIA

Latitude: 14°30'N
Longitude: 101°30'E

Zone: 4 Group: A
Elevation (m): 300

Site: SUWAN FARM
Cooperator(s): DR. PEERASAK SRINIVES, MR. ATTAPOL SUWANAWONGSE

Date planted: January 20, 1984 Date harvested: April 30, 1984
Soil information: pH 5.6, clay-loam
Fertilizer used (kg/ha): N 208.0, P 119.0
Total moisture (mm): 472
Number of irrigations: 6 (total amount 240 mm)
Substituted cultivars: SJ 4

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
10	Improved Pelican	1,938.0	35.8	98.8	61.2		1.0
19	Davis	1,949.5	34.8	93.8	32.8		1.0
2	UFV-1	1,729.0	36.5	98.0	45.3		1.0
79	71-38	1,244.0	35.0	92.3	27.0		1.0
97	F75-9207	1,192.0	32.5	91.5	28.0		1.0
78	ISRA/IRAT 44A/73	1,150.0	43.8	106.3	42.7		1.0
296	SJ 4	1,116.0	37.8	100.8	52.0		1.0
90	AGS 8	910.5	29.3	91.0	21.3		1.0
106	SH 1274	895.0	31.0	92.5	42.1		1.0
9	Jupiter	873.0	46.5	109.0	52.8		1.0
99	IAC-6	859.3	49.3	110.3	43.2		1.0
45	ICA L-109	780.5	46.3	105.0	53.0		1.0
75	Braxton	691.5	28.0	90.0	21.7		1.0
96	EGSY 91-7	534.0	35.3	94.5	32.5		1.0
76	SIATSA 194	468.5	41.0	111.0	75.7		1.0
101	ICA L-129	215.5	39.3	100.3	41.5		1.0
	Grand mean	1,037.3	37.6	99.0	42.0		1.0
	Standard error of cultivar mean	210.2	0.3	1.1	4.3		0.0
	Coefficient of variation (%)	40.5	1.8	2.3	20.3		0.0
	5% LSD Cultivar means (*****=ns)	598.7	1.0	3.3	12.1		*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
10	Improved Pelican	103.5	51.1	6.8	17.1	3.3	
19	Davis	100.8	54.0	3.4	20.2	1.8	
2	UFV-1	119.3	50.2	3.7	19.4	3.8	
79	71-38	93.8	79.5	1.9	12.2	1.5	
97	F75-9207	98.5	45.6	2.0	18.4	2.3	
78	ISRA/IRAT 44A/73	76.3	52.1	4.2	16.3	2.5	
296	SJ 4	104.5	51.8	5.1	16.5	2.8	
90	AGS 8	71.0	42.7	1.2	20.2	5.0	
106	SH 1274	62.0	68.5	1.7	23.4	3.8	
9	Jupiter	97.0	53.3	3.4	19.4	5.0	
99	IAC-6	76.0	61.7	0.5	15.6	3.5	
45	ICA L-109	107.5	50.9	4.9	13.1	4.0	
75	Braxton	84.8	25.9	2.5	23.0	4.3	
96	EGSY 91-7	59.0	43.3	3.6	17.8	2.5	
76	SIATSA 194	117.8	47.1	12.9	20.7	5.0	
101	ICA L-129	70.3	53.7	2.5	16.5	3.0	
	Grand mean	90.1	51.9	3.8	18.1	3.4	
	Standard error of cultivar mean	7.3	6.2	0.9	0.6	0.5	
	Coefficient of variation (%)	16.1	23.9	46.1	7.1	29.3	
	5% LSD Cultivar means (*****=ns)	20.7	17.7	2.5	1.8	1.4	

Table 71. Trial 83171, 1983

Country: THAILAND Latitude: 15°21'N Zone: 5 Group: A
Region: ASIA Longitude: 100°30'E Elevation (m): 87

Site: NAKORNSAWON FIELD CROP RESEARCH CENTER
Cooperator(s): MR. AMNUAY THONGDEE, MRS. KANNIKAR CHANBOONME

Date planted: September 19, 1983 Date harvested: December 12, 1983
Soil information: pH 7.8, Taklee series
Fertilizer used (kg/ha): N 3.0, P 4.0, K 5.0
Total moisture (mm): 1,100

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
75	Braxton	1,341.1	28.5	81.0	33.0	1.0	1.0
100	IAC-8	1,278.6	36.0	86.0	54.1	2.8	1.8
96	EGSY 91-7	1,147.9	33.3	82.0	41.4	2.0	1.8
76	SIATSA 194	1,113.8	36.5	95.0	63.1	2.3	1.8
19	Davis	1,113.8	28.0	82.0	26.8	1.0	1.5
45	ICA L-109	1,096.7	35.5	94.0	52.8	1.3	1.0
10	Improved Pelican	1,079.7	34.5	86.0	57.0	1.0	1.5
78	ISRA/IRAT 44A/73	1,068.3	36.8	87.3	49.5	1.3	1.5
106	SH 1274	994.4	29.5	84.8	51.4	1.8	1.5
99	IAC-6	960.3	37.5	88.5	44.0	1.0	1.3
9	Jupiter	903.5	37.8	105.0	54.6	1.3	1.0
79	71-38	903.5	35.5	92.5	31.1	1.3	1.0
2	UFV-1	875.1	33.3	94.0	30.8	1.0	1.0
101	ICA L-129	841.0	33.3	89.8	47.8	1.0	1.0
69	Essex	818.3	27.8	80.0	24.9	1.0	1.8
97	F75-9207	142.1	34.0	80.3	39.5	1.0	1.0
	Grand mean	979.9	33.6	88.0	43.8	1.4	1.3
	Standard error of cultivar mean	113.3	1.0	1.2	2.1	0.2	0.2
	Coefficient of variation (%)	23.1	5.8	2.8	9.5	28.7	31.2
	5% LSD Cultivar means (*****=ns)	322.6	2.8	3.5	5.9	0.6	0.6

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
75	Braxton	139.0	19.3		17.4	1.7	84.5
100	IAC-8	151.5	24.9		15.7	1.7	97.0
96	EGSY 91-7	151.3	16.4		13.8	1.0	91.0
76	SIATSA 194	142.0	21.3		14.9	1.8	88.0
19	Davis	150.0	19.3		15.1	1.1	97.0
45	ICA L-109	141.5	30.8		10.3	1.3	84.8
10	Improved Pelican	148.0	26.4		10.6	1.5	93.8
78	ISRA/IRAT 44A/73	148.0	27.7		13.0	1.6	91.0
106	SH 1274	139.8	22.1		11.7	1.1	79.0
99	IAC-6	145.8	23.3		11.8	1.8	97.0
9	Jupiter	138.3	25.0		13.0	1.3	81.5
79	71-38	136.8	28.8		9.8	1.8	72.5
2	UFV-1	140.0	22.9		12.5	2.0	81.5
101	ICA L-129	143.5	20.5		12.2	1.3	91.0
69	Essex	145.5	16.8		13.2	1.2	97.0
97	F75-9207	140.5	15.2		10.9	1.2	97.0
	Grand mean	143.8	22.5		12.9	1.5	89.0
	Standard error of cultivar mean	3.4	1.9		0.6	0.2	3.5
	Coefficient of variation (%)	4.8	16.6		9.1	25.6	7.9
	5% LSD Cultivar means (*****=ns)	9.8	5.3		1.7	0.5	10.0

Table 72. Trial 83901, 1983

Country: TURKEY Latitude: 38°35'N Zone: 10 Group: -
Region: MIDDLE EAST Longitude: 27°04'E Elevation (m): 10

Site: MENEMEN, IZMIR
Cooperator(s): DR. ZIYA KUTLU, A. SUAT CINSOY

Date planted: June 24, 1983 Date harvested: September 21, 1983
Soil information: loam 37%, silt 50%, clay 13%, pH 7.5
Fertilizer used (kg/ha): N 30.0, P 60.00
Substituted cultivars: Woodworth, Shawnee-II, Mitchell

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
74	Pella	3,670.0	28.3	98.3	78.1	1.0	1.0
24	Mitchell	3,517.5	34.5	107.0	91.4	1.0	1.0
67	Woodworth	3,407.5	32.0	92.3	73.6	1.0	1.0
89	Williams 82	3,380.0	31.0	100.5	77.3	1.0	1.0
84	Sparks	3,375.0	30.0	104.8	91.1	1.0	1.0
73	Century	3,315.0	28.3	93.8	73.6	1.0	1.0
86	Fayette	3,210.0	32.0	97.8	79.9	1.0	1.0
259	Shawnee-II	2,957.5	29.0	92.8	64.0	1.0	1.0
72	Amcor	2,935.0	29.0	95.5	85.5	1.0	1.0
88	Lakota	2,875.0	27.5	87.0	77.7	1.0	1.0
70	Hardin	2,825.0	28.3	89.8	67.0	1.0	1.0
71	Hodgson 78	2,777.5	22.0	88.3	60.2	1.0	1.0
57	Corsoy 79	2,672.5	29.0	89.8	66.0	1.0	1.0
87	Clay	2,580.0	22.5	85.5	53.0	1.0	1.0
60	Kent	2,465.0	34.5	110.0	89.2	1.0	1.0
85	Pixie	2,462.5	26.0	90.8	61.1	1.0	1.0
	Grand mean	3,026.6	29.0	95.2	74.3	1.0	1.0
	Standard error of cultivar mean	66.3	0.7	2.0	3.9	0.0	0.0
	Coefficient of variation (%)	4.4	4.9	4.2	10.4	0.0	0.0
	5% LSD Cultivar means (*****=ns)	188.9	2.0	5.7	11.0	*****	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
74	Pella	224.3	15.6	13.9			
24	Mitchell	187.5	19.6	18.3			
67	Woodworth	222.5	17.9	15.5			
89	Williams 82	271.3	14.4	18.3			
84	Sparks	218.0	16.2	17.5			
73	Century	229.5	17.8	13.3			
86	Fayette	207.0	18.7	16.6			
259	Shawnee-II	177.3	19.8	11.7			
72	Amcor	228.0	20.8	15.1			
88	Lakota	193.5	24.3	12.7			
70	Hardin	205.5	22.9	14.5			
71	Hodgson 78	190.3	20.9	13.5			
57	Corsoy 79	221.3	24.6	12.5			
87	Clay	152.5	25.0	12.0			
60	Kent	261.3	13.5	17.5			
85	Pixie	182.5	20.6	11.0			
	Grand mean	210.8	19.5	14.6			
	Standard error of cultivar mean	15.6	1.9	1.5			
	Coefficient of variation (%)	14.8	19.1	20.1			
	5% LSD Cultivar means (*****=ns)	44.3	5.3	4.2			

Table 73. Trial 83438, 1983

Country: UNITED STATES Latitude: 26°N Zone: 7 Group: B
Region: NORTH AMERICA Longitude: 97°W Elevation (m): 30

Site: WESLACO, TEXAS
Cooperator(s): DR. RICHARD A. CREELMAN

Date planted: August 23, 1983 Date harvested: November 30, 1983

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
95	Duocrop	3,208.8	35.0		55.4	1.0	1.0
76	SIATSA 194	3,098.3	46.0		69.7	1.5	1.0
94	DB 1601	3,092.8	34.3		40.0	1.0	1.0
81	Ecuador 1	3,045.8	42.0		53.7	1.8	1.0
2	UFV-1	2,935.4	41.0		39.7	1.0	1.0
90	AGS 8	2,766.9	35.0		74.4	2.0	2.5
77	ICA L-124	2,753.7	34.3		46.3	1.0	1.3
9	Jupiter	2,750.5	49.0		67.9	2.3	1.0
96	EGSY 91-7	2,747.6	37.3		47.4	1.8	2.0
106	SH 1274	2,728.3	33.5		60.2	1.5	1.3
92	BM-2	2,711.8	32.0		30.6	1.3	1.3
19	Davis	2,662.0 (3)	30.0		27.5	1.0	1.0
47	PK-73-94	2,479.8	33.5		31.6	1.3	1.5
37	G 2120	2,212.0	55.0		90.5	3.3	1.5
69	Essex	1,896.3	32.0		24.2	1.0	1.5
75	Braxton	1,833.6	32.0		25.7	1.0	1.3
	Grand mean	2,683.0	37.6		49.0	1.5	1.3
	Standard error of cultivar mean	602.4	0.6		3.2	0.2	0.2
	Coefficient of variation (%)	22.5	3.1		13.0	25.3	29.8
	5% LSD Cultivar means (*****=ns)	*****	1.7		9.0	0.5	0.6

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
95	Duocrop	120.3	42.5	8.9	16.9	1.3	95.3
76	SIATSA 194	90.5	69.3	16.5	17.1	2.3	90.0
94	DB 1601	91.0	55.5	6.4	16.5	1.0	98.0
81	Ecuador 1	94.3	47.8	14.8	17.6	2.0	86.0
2	UFV-1	130.3	34.5	14.2	14.5	1.5	97.0
90	AGS 8	119.0	41.5	13.1	14.1	3.3	72.0
77	ICA L-124	109.8	43.5	11.8	17.1	1.5	93.5
9	Jupiter	104.3	45.3	23.9	15.2	1.5	93.3
96	EGSY 91-7	99.3	60.5	9.2	15.2	3.0	65.5
106	SH 1274	78.5	76.3	8.7	14.6	1.5	94.8
92	BM-2	113.3	33.5	8.3	16.6	2.0	91.0
19	Davis	139.5	37.3	5.8	16.4 (3)	3.0 (3)	69.3 (3)
47	PK-73-94	79.8	70.8	6.5	15.7	1.8	90.0
37	G 2120	150.8	61.5	19.6	9.2	1.5	90.5
69	Essex	148.8	22.5	5.9	15.7	2.0	86.0
75	Braxton	88.0	34.3	7.7	19.9	2.3	82.8
	Grand mean	109.8	48.5	11.3	15.8	1.9	87.5
	Standard error of cultivar mean	7.6	6.8	1.0	2.8	1.0	13.1
	Coefficient of variation (%)	13.8	28.0	17.8	17.8	49.8	15.0
	5% LSD Cultivar means (*****=ns)	21.5	19.3	2.9	*****	*****	*****

Table 74. Trial 83516, 1983

Country: UNITED STATES
Region: NORTH AMERICA

Latitude: 40°07'N
Longitude: 88°13'W

Zone: 10 Group: C
Elevation (m): 226

Site: URBANA, ILLINOIS
Cooperator(s): INTSOY

Date planted: May 11, 1983 Date harvested: September 16, 1983
Soil information: loam 5.8%, silt 69%, clay 25.2%, pH 6.6
Total moisture (mm): 473

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
93	BSR 201	3,506.7	37.3	109.8	76.9	2.0	1.3
84	Sparks	3,404.1	47.5	128.5	109.2	3.0	1.0
104	Platte	3,310.9	39.3	111.5	78.7	1.3	1.5
57	Corsoy 79	3,119.3	37.5	107.5	85.5	2.8	1.3
88	Lakota	3,103.5	40.5	103.0	87.5	3.0	1.8
103	Mead	3,075.0	43.0	123.3	82.6	1.0	1.0
107	Weber	3,051.3	38.5	106.5	70.6	1.8	1.8
89	Williams 82	3,045.3	46.5	130.0	111.3	2.8	1.0
86	Fayette	2,896.4	48.3	129.0	107.8	2.0	1.3
85	Pixie	2,883.9	52.3	129.8	51.9	1.0	1.3
98	Hobbit	2,838.6	48.8	122.5	46.4	1.0 (3)	1.3
102	Lawrence	2,812.0	52.3	129.3	107.6	1.8	1.0
71	Hodgson 78	2,423.6	33.5	98.3	68.6	1.5	1.3
35	Crawford	2,122.1	55.5	136.0	130.5	2.3 (3)	1.3 (3)
87	Clay	1,833.3	25.5	90.3	50.6	1.3	2.0
36	Evans	1,831.2	26.8	92.0	54.0	1.0	2.5
	Grand mean	2,828.6	42.1	115.4	82.5	1.8	1.4
	Standard error of cultivar mean	164.1	0.7	1.4	2.7	0.9	0.6
	Coefficient of variation (%)	11.6	3.1	2.4	6.5	47.4	43.7
	5% LSD Cultivar means (*****=ns)	467.3	1.9	4.0	7.6	*****	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
93	BSR 201	113.0	60.4	5.3	15.0	2.0	85.0
84	Sparks	132.0	55.4	17.9	16.3	1.8	98.5
104	Platte	114.8	44.2	9.2	15.0	2.0	89.5
57	Corsoy 79	125.0	66.8	9.6	14.6	2.8	78.0
88	Lakota	124.8	48.6	6.4	15.9	2.8	76.0
103	Mead	103.0	56.6	10.6	16.3	2.0	90.5
107	Weber	114.0	47.2	7.4	12.8	2.3	82.0
89	Williams 82	125.3	43.9	16.6	17.5	1.8	95.5
86	Fayette	123.5	53.2	12.8	16.8	2.0	96.0
85	Pixie	128.0	38.1	7.7	15.5	1.8	93.5
98	Hobbit	137.8	33.3	8.0	17.5	2.0	91.5
102	Lawrence	130.8	37.3	21.2	16.3	2.5	94.5
71	Hodgson 78	112.0	47.1	4.9	15.5	2.3	78.5
35	Crawford	103.3	50.8	20.2	15.3	2.0	93.0
87	Clay	124.3	35.8	4.4	14.7	3.0	14.0 (3)
36	Evans	120.3	36.8	3.7	13.8	2.0	49.0
	Grand mean	120.7	47.2	10.4	15.5	2.2	82.6
	Standard error of cultivar mean	9.2	4.6	1.0	0.6	0.2	21.0
	Coefficient of variation (%)	15.3	19.5	20.1	7.6	21.2	25.5
	5% LSD Cultivar means (*****=ns)	*****	13.1	3.0	1.7	0.7	*****

Table 75. Trial 83122, 1983

Country: UPPER VOLTA Latitude: 10°N Zone: 1 Group: A
Region: AFRICA Longitude: 5°W Elevation (m): 300

Site: NIANGOLOKO
Cooperator(s): DIRECTOR, IRHO

Date planted: July 6, 1983 Date harvested: October 10, 1983
Soil information: loam 97.2%, silt 2.5%, clay 0.3%, pH 5 5, tropical ferugineux
Fertilizer used (kg/ha): N 21.0, P 15.8, K 17.4
Total moisture (mm): 582

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
100	IAC-8	941.9	37.5	92.0	54.3	2.3	1.0
99	IAC-6	928 5	40.5	91.5	55.5	2.8	1.0
76	SIATSA 194	899.3	36.0	91.5	63.8	3.3	1.3
97	F75-9207	822.7	30.0	91.3	36.0	1.8	1.3
78	ISRA/IRAT 44A/73	787.7	23.0	89.3	46.3	3.8	1 3
19	Davis	764.3	30.0	91.8	28.8	1.0	1.0
45	ICA L-109	738.5	43.0	93.0	54.3	2.3	1.0
9	Jupiter	735.2	42.5	92.3	50.5	2.0	1.0
101	ICA L-129	707.6	35.5	90.5	50.8	2.8	1.0
106	SH 1274	691.8	25.0	89.8	45.3	2.3	1.0
79	71-38	629.3	34.0	92.3	36.8	2.8	1.0
105	R-315	575.1	30.5	89.0	38.0	2.0	1.3
96	EGSY 91-7	570.1	30.0	89.5	34.0	2.5	2.5
10	Improved Pelican	496.8	32.0	89.5	32.8	2.3	1.3
90	AGS 8	455.1	30.5	89.0	44.5	3.0	1.8
75	Braxton	378.4	21.0	93.0	29.0	1.0	1.0
	Grand mean	695.1	32.6	90.9	45.0	2.3	1.2
	Standard error of cultivar mean	79.6	3.2	0.3	2.4	0.3	0.2
	Coefficient of variation (%)	22.9	19.4	0.6	10.5	26.8	28.2
	5% LSD Cultivar means (*****=ns)	226 8	9.0	0.8	6.7	0.9	0.5

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
100	IAC-8	162.3	31.8	11.8	15.8	2.8	20.0
99	IAC-6	155.3	28.5	13.1	11.6	2.0	47.5
76	SIATSA 194	146.3	32.5	15.5	16.7	2.5	25.0
97	F75-9207	126.5	30.0	8.4	11.7	2.0	42.5
78	ISRA/IRAT 44A/73	142.0	31.8	10.7	10.4	2.0	71.0
19	Davis	161.5	19.3	6.7	16.2	3.0	9.5
45	ICA L-109	162.0	34.5	11.2	7.9	2.3	56.0
9	Jupiter	114.0	30.3	11.9	14.6	2.5	17.5
101	ICA L-129	143.0	33.8	9.5	13.3	2.3	58.0
106	SH 1274	152.3	24.5	8.1	13.2	2.5	37.5
79	71-38	168.3	27.8	7.8	10.9	3.8	9.0
105	R-315	150.0	23.3	8.1	11.1	2.3	44.5
96	EGSY 91-7	166.3	20.3	8.5	12.3	2.0	65.0
10	Improved Pelican	148.3	22.8	9.6	10.6	2.0	34.0
90	AGS 8	123.0	25.3	8.6	10.8	2.0	66.0
75	Braxton	143.8	23.5	8.5	15.9	4.0	8.0
	Grand mean	147.8	27.5	9.9	12.7	2.5	38.2
	Standard error of cultivar mean	11.8	3.1	0.8	0.3	0.2	4.1
	Coefficient of variation (%)	15.9	22.9	15.3	5.0	18.9	21.4
	5% LSD Cultivar means (*****=ns)	33.5	9.0	2.2	0.9	0.7	11.6

Table 76. Trial 83127, 1983

Country: UPPER VOLTA
Region: AFRICA

Latitude: 12°16'N
Longitude: 2°09'W

Zone: 4 Group: A
Elevation (m): 300

Site: SARIA STATION
Cooperator(s): DIRECTOR, IRHO

Date planted: June 20, 1983 Date harvested: September 9, 1983
Soil information: loam 85%, silt 7%, clay 8%, pH 5.5, tropical ferugineux
Fertilizer used (kg/ha): N 21.0, P 15.8, K 17.4
Total moisture (mm): 563

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
75	Braxton	2,188.8	32.5	76.0	36.6		
79	71-38	2,165.9	42.0	105.5	55.0		
76	SIATSA 194	2,110.0	42.0	96.0	93.1		
99	IAC-6	2,089.2	46.0 (3)	98.8	79.4		
97	F75-9207	2,010.8	36.0	103.5	57.2		
105	R-315	1,821.2	33.0	77.8	58.7		
100	IAC-8	1,819.5	38.0	102.0	67.9		
101	ICA L-129	1,810.4	38.0	99.3	66.1		
10	Improved Pelican	1,751.2	36.0	81.3	71.6		
78	ISRA/IRAT 44A/73	1,724.9	43.0	100.3	50.7		
9	Jupiter	1,693.3	46.0	102.5	62.1		
106	SH 1274	1,642.0	30.0	84.5	68.3		
19	Davis	1,562.4	30.5	76.0	38.0		
90	AGS 8	1,433.2	32.5	76.0	59.6		
45	ICA L-109	1,168.6	46.0	104.0	69.9		
96	EGSY 91-7	1,000.6	32.0	79.5	48.4		
	Grand mean	1,749.5	37.6	91.4	61.4		
	Standard error of cultivar mean	400.7	5.6	2.1	6.2		
	Coefficient of variation (%)	45.8	14.9	4.5	20.1		
	5% LSD Cultivar means (*****=ns)	*****	*****	5.8	17.6		

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
75	Braxton	151.3	44.1	7.9	11.5	2.5	28.8
79	71-38	121.3	50.8	13.1	10.5	4.3	18.8
76	SIATSA 194	150.3	45.8	17.6	14.0	2.3	51.0
99	IAC-6	149.8	42.3	18.0	12.2	2.5	57.5
97	F75-9207	146.8	40.6	13.6	11.4	1.8	71.5
105	R-315	150.0	32.8	10.6	11.3	2.0	8.0
100	IAC-8	138.8	38.2	17.1	12.7	5.0	21.5
101	ICA L-129	154.0	34.2	14.5	12.5	2.0	52.8
10	Improved Pelican	171.0	30.4	17.9	8.3	3.0	45.3
78	ISRA/IRAT 44A/73	152.0	33.5	14.3	11.0	2.0	78.0
9	Jupiter	134.8	33.3	18.5	12.5	2.5	37.8
106	SH 1274	110.0	47.7	7.8	11.9	2.0	26.5
19	Davis	156.0	31.2	10.2	10.4	3.5	18.5
90	AGS 8	130.5	31.5	15.5	11.9	2.5	27.0
45	ICA L-109	137.8	25.5	15.9	7.9	2.8	56.0
96	EGSY 91-7	161.8	18.8	19.4	9.7	2.8	36.3
	Grand mean	144.7	36.3	14.5	11.2	2.7	39.7
	Standard error of cultivar mean	10.6	10.7	1.9	0.9	0.4	8.1
	Coefficient of variation (%)	14.7	58.9	26.7	15.6	26.1	40.6
	5% LSD Cultivar means (*****=ns)	30.3	*****	5.5	2.5	1.0	23.0

Table 77. Trial 83159, 1983

Country: VENEZUELA Latitude: 10°11'N Zone: 1 Group: A
Region: SOUTH AMERICA Longitude: 67°30'W Elevation (m): 430

Site: ESTACION EXPERIMENTAL DE CAGUA
Cooperator(s): DR. RAUL NINO, ING. F. POLAR

Date planted: December 26, 1983 Date harvested: February 4, 1984
Soil information: loam 56.3%, silt 27.4%, clay 16.3%, pH 8.0
Total moisture (mm): 500
Number of irrigations: 10 (total amount 500 mm)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
99	IAC-6	3,313.6	43.0	105.0	70.3	1.3	1.0
100	IAC-8	2,956.5	41.0	98.0	60.0	2.0	1.0
78	ISRA/IRAT 44A/73	2,826.8	34.0	98.0	50.3	1.3	1.0
101	ICA L-129	2,744.0	34.0	98.0	61.8	1.0	1.0
76	SIATSA 194	2,680.1	34.0	105.0	71.8	1.0	1.0
45	ICA L-109	2,649.5	41.0	105.0	59.0	1.0	1.0
9	Jupiter	2,551.5	41.0	98.0	61.0	1.5	1.0
95	Duocrop	2,520.6	34.0	98.0	55.3	1.3	1.0
106	SH 1274	2,328.1	29.0	98.0	70.8	1.3	1.0
19	Davis	2,183.5	32.0	105.0	30.3	1.0	1.0
10	Improved Pelican	2,172.6	34.0	98.0	69.5	1.0	1.0
79	71-38	1,766.1	34.0	105.0	28.0	1.0	1.0
90	AGS 8	1,718.9	34.0	98.0	81.5	1.3	3.3
97	F75-9207	1,567.8	32.0	98.0	32.0	1.0	1.3
75	Braxton	1,405.8	27.0	98.0	25.0	1.0	1.0
96	EGSY 91-7	1,071.6	32.0	98.0	46.3	1.0	4.8
	Grand mean	2,278.5	34.8	100.2	54.5	1.2	1.4
	Standard error of cultivar mean	227.3	0.0	0.0	4.3	0.2	0.1
	Coefficient of variation (%)	20.0	0.0	0.0	15.6	31.0	15.9
	5% LSD Cultivar means (*****=ns)	647.3	0.0	0.0	12.1	0.5	0.3

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
99	IAC-6	153.0		12.8	14.9	2.0	
100	IAC-8	134.3		10.0	16.4	2.5	
78	ISRA/IRAT 44A/73	117.8		8.8	12.5	2.0	
101	ICA L-129	136.3		9.5	13.5	2.5	
76	SIATSA 194	125.8		11.0	17.5	2.0	
45	ICA L-109	127.8		7.5	11.9	2.0	
9	Jupiter	134.3		10.5	17.4	1.8	
95	Duocrop	121.3		7.5	16.9	1.5	
106	SH 1274	142.0		9.0	16.3	1.0	
19	Davis	140.0		6.8	18.1	1.0	
10	Improved Pelican	143.0		8.8	14.1	1.5	
79	71-38	120.3		4.3	12.1	1.5	
90	AGS 8	129.8		12.0	15.4	1.5	
97	F75-9207	106.8		5.0	12.9	2.0	
75	Braxton	123.3		4.0	20.6	1.0	
96	EGSY 91-7	131.0		7.8	13.6	1.5	
	Grand mean	130.4		8.4	15.3	1.7	
	Standard error of cultivar mean	8.3		0.9	0.4	0.2	
	Coefficient of variation (%)	12.7		20.3	5.6	26.7	
	5% LSD Cultivar means (*****=ns)	23.5		2.4	1.2	0.7	

Table 78. Trial 83529, 1983

Country: YUGOSLAVIA
Region: EUROPE

Latitude: 45°20'N
Longitude: 19°31'E

Zone: 13 Group: C
Elevation (m): 86

Site: NOVI SAD
Cooperator(s): PROF. DR. BOGDAN BELIC

Date planted: April 26, 1984 Date harvested: August 29, 1984
Soil information: loam 48%, silt 22%, clay 30%, pH 7.1

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
104	Platte	2,150.8	46.0	159.0	126.3	2.8	0.0
88	Lakota	1,878.5	36.0	152.0	137.3	4.0	0.0
36	Evans	1,696.8	36.0	143.0	98.5	2.0	0.0
71	Hodgson 78	1,687.8	36.0	151.0	119.8	3.5	0.0
87	Clay	1,658.5	36.0	110.0	97.5	1.0	0.0
84	Sparks	1,608.3	38.0	167.0	141.3	5.0	0.0
98	Hobbit	1,600.5	63.0	162.0	70.8	3.8	0.0
93	BSR 201	1,550.8	36.0	159.0	103.0	5.0	0.0
107	Weber	1,388.8	46.0	158.0	149.3	5.0	0.0
57	Corsoy 79	1,362.8	47.0	158.0	139.8	4.0	0.0
103	Mead	1,320.3	72.0	167.0	113.0	4.0	0.0
86	Fayette	1,255.5	72.0	166.0	138.5	5.0	0.0
85	Pixie	1,119.0	71.0	167.0	74.3	1.0	0.0
35	Crawford	1,102.3	71.0	168.0	120.8	5.0	0.0
102	Lawrence	1,074.5	72.0	167.0	123.8	5.0	0.0
89	Williams 82	1,016.5	60.0	167.0	129.0	5.0	0.0
	Grand mean	1,467.0	52.4	157.6	117.7	3.8	0.0
	Standard error of cultivar mean	197.5	0.0	0.0	2.5	0.2	0.0
	Coefficient of variation (%)	26.9	0.0	0.0	4.3	12.4	*****
	5% LSD Cultivar means (*****=ns)	562.5	0.0	0.0	7.3	0.7	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
104	Platte	162.5	27.0	19.0	17.4	3.0	96.5
88	Lakota	197.8	34.8	14.8	17.9	2.5	95.8
36	Evans	139.5	39.8	9.5	18.4	3.8	94.3
71	Hodgson 78	187.5	35.8	13.5	18.8	1.3	98.3
87	Clay	144.3	36.0	11.0	18.2	2.8	95.5
84	Sparks	153.0	32.5	20.8	18.9	2.0	97.8
98	Hobbit	204.5	37.8	19.5	19.2	1.0	98.0
93	BSR 201	153.5	27.3	13.3	16.5	2.0	96.0
107	Weber	100.8	57.0	19.8	15.7	3.0	95.5
57	Corsoy 79	149.3	36.0	17.5	16.1	3.8	95.8
103	Mead	127.5	35.0	24.0	17.0	3.5	94.8
86	Fayette	175.3	31.3	22.5	17.5	3.0	95.3
85	Pixie	233.5	26.3	20.8	19.6	3.0	96.3
35	Crawford	170.8	25.5	18.8	17.0	4.3	93.0
102	Lawrence	162.0	31.5	30.0	19.6	3.5	96.3
89	Williams 82	162.8	24.5	24.5	20.2	2.3	96.3
	Grand mean	164.0	33.6	18.7	18.0	2.8	95.9
	Standard error of cultivar mean	18.1	3.8	1.7	0.2	0.2	0.8
	Coefficient of variation (%)	22.1	22.5	18.4	2.7	14.4	1.6
	5% LSD Cultivar means (*****=ns)	51.6	10.8	4.9	0.7	0.6	2.2

Table 79. Trial 83907, 1983

Country: YUGOSLAVIA Latitude: 44°08'N Zone: 13 Group: -
Region: EUROPE Longitude: 18°08'E Elevation (m): 90

Site: BRCKO AGRICULTURAL STATION
Cooperator(s): DR. H. JAHIC, DR. O. PIRIJA, DR. R. NUMIC, MR. N. PRZULJ, MR. A. PAUNOVIC, MR. S. IDRIZOVIC

Date planted: June 8, 1984 Date harvested: September 1984
Fertilizer used (kg/ha): 200 KG NPK PER/HECTARE, ANALYSIS NOT SPECIFIED
Total moisture (mm): 600
Number of irrigations: 1 (total amount 20 mm)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
73	Century		45.0		61.5	1.0	1.0
89	Williams 82		45.3		78.8	1.0	1.0
107	Weber	2,593.3	33.8	109.5	71.8	1.0	1.0
88	Lakota	2,296.5	34.0	105.3	71.8	1.0	1.0
71	Hodgson 78	2,083.0	30.3	108.8	67.8	1.0	1.0
36	Evans	2,010.1	26.0	98.8	42.3	1.0	1.0
70	Hardin	2,004.9	30.8	104.5	61.3	1.0	1.0
247	Dawson	1,827.8	28.3	95.3	58.0	1.0	1.0
201	Maple Arrow	1,786.2	24.8	96.5	55.8	1.3	2.0
242	Ozzie	1,697.6	26.3	97.5	40.3	1.0	1.0
38	McCall	1,692.4	28.8	93.0	56.8	1.0	1.0
240	Simpson	1,557.0	29.8	95.5	54.5	1.0	1.0
27	Swift	1,557.0	34.3	93.0	58.5	1.0	1.0
249	Maple Amber	1,557.0	26.3	96.8	59.5	1.3	2.0
87	Clay	1,452.9	26.3	94.0	56.0	1.0	1.0
248	Maple Presto	1,182.1	24.8	70.5	52.5	1.0	2.0
	Grand mean	1,807.0	30.9	97.1	59.2	1.0	1.2
	Standard error of cultivar mean	128.4	1.0	0.8	1.6	0.1	0.0
	Coefficient of variation (%)	14.2	6.2	1.5	5.5	16.6	0.0
	5% LSD Cultivar means (*****=ns)	367.2	2.7	2.1	4.6	*****	0.0

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
73	Century	206.8	29.5	9.8		1.0	
89	Williams 82	206.5	34.5	8.8		1.0	
107	Weber	256.0	22.8	8.8	16.5	1.0	83.3
88	Lakota	255.8	47.3	7.3	17.1	1.0	98.0
71	Hodgson 78	258.8	20.0	9.3	17.7	1.0	83.8
36	Evans	256.0	21.0	7.0	16.8	1.0	97.8
70	Hardin	257.0	23.0	9.5	19.3	1.0	95.5
247	Dawson	210.0	36.8	8.0	17.6	1.0	93.8
201	Maple Arrow	207.0	27.8	7.5	16.3	1.0	98.5
242	Ozzie	256.0	19.0	9.0	18.6	1.0	78.0
38	McCall	253.0	23.0	8.0	18.9	1.0	99.0
240	Simpson	262.0	22.3	7.3	18.9	1.0	92.5
27	Swift	190.0	42.5	8.0	20.1	1.0	99.3
249	Maple Amber	212.0	20.5	9.3	16.9	1.0	87.0
87	Clay	253.0	22.3	9.3	17.5	1.0	95.3
248	Maple Presto	255.3	19.0	8.5	16.1	1.0	84.0
	Grand mean	237.2	26.9	8.4	17.7	1.0	91.8
	Standard error of cultivar mean	5.5	1.1	0.3	0.2	0.0	0.9
	Coefficient of variation (%)	4.6	8.2	8.0	2.2	0.0	1.9
	5% LSD Cultivar means (*****=ns)	15.7	3.1	1.0	0.6	*****	2.4

Table 80. Trial 83169, 1983

Country: ZAIRE | Latitude: 6°45'S | Zone: 2 Group: A
Region: AFRICA | Longitude: 23°57'E | Elevation (m): 780

Site: INERA STATION, GANDAJIKA
Cooperator(s): DR. QUYEN H. NGUYEN, IR. MUSSANA, IR. MUSUNGAYI

Date planted: October 10, 1983 Date harvested: January 24, 1984
Soil information: pH 6.2
Total moisture (mm): 815

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
2	UFV-1	2,420.5	36.0	106.0	39.3	1.8	1.0
76	SIATSA 194	2,123.8	41.0	107.5	77.0	2.8	1.3
100	IAC-8	1,999.6	43.8	101.5	72.0	3.0	1.0
45	ICA L-109	1,865.0	51.8	115.0	72.0	2.5	1.0
9	Jupiter	1,857.0	51.0	108.5	60.8	2.8	1.0
79	71-38	1,840.8	37.5	105.3	34.0	2.5	1.5
99	IAC-6	1,803.3	52.5	98.3	79.0	3.0	1.0
101	ICA L-129	1,622.4	38.8	106.0	65.0	2.8	1.3
97	F75-9207	1,577.0	31.5	97.5	43.3	1.8	1.3
78	ISRA/IRAT 44A/73	1,508.2	34.3	103.8	55.3	2.0	1.0
19	Davis	1,490.3	28.5	95.8	27.8	1.0	1.0
10	Improved Pelican	1,126.5	34.5	101.5	56.8	1.8	1.0
106	SH 1274	1,023.5	26.3	88.0	56.3	2.3	1.0
96	EGSY 91-7	1,015.6	32.3	88.5	43.0	1.3	1.0
69	Essex	965.2	24.3	96.5	22.5	1.3	1.0
75	Braxton	188.0	24.3	92.8	28.8	1.0	1.0
	Grand mean	1,526.7	36.8	100.8	52.0	2.1	1.1
	Standard error of cultivar mean	171.9	2.0	3.5	2.5	0.4	0.1
	Coefficient of variation (%)	22.5	11.1	7.0	9.6	35.1	24.3
	5% LSD Cultivar means (*****=ns)	489.7	5.8	10.0	7.1	1.0	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
2	UFV-1	155.3	41.8	8.8	19.6	2.0	
76	SIATSA 194	174.5	43.8	18.3	21.4	2.0	
100	IAC-8	183.8	37.3	18.0	19.9	2.0	
45	ICA L-109	146.8	71.8	13.3	11.5	2.3	
9	Jupiter	100.0	48.0	15.5	18.4	2.0	
79	71-38	146.8	40.0	8.8	14.6	2.0	
99	IAC-6	174.8	63.8	19.0	14.5	2.0	
101	ICA L-129	172.5	37.3	13.8	19.0	2.0	
97	F75-9207	151.3	39.0	8.8	16.8	2.0	
78	ISRA/IRAT 44A/73	167.0	49.5	12.3	16.0	2.0	
19	Davis	168.5	27.0	6.5	20.3	2.0	
10	Improved Pelican	148.5	45.8	12.0	14.3	2.0	
106	SH 1274	141.3	36.8	10.0	17.9	2.3	
96	EGSY 91-7	137.5	25.5	10.0	18.4	2.0	
69	Essex	159.0	16.5	4.8	19.8	2.0	
75	Braxton	168.0	18.3	7.3	23.3	3.8	
	Grand mean	156.0	40.1	11.7	17.8	2.1	
	Standard error of cultivar mean	8.9	5.2	1.1	0.8	0.1	
	Coefficient of variation (%)	11.4	26.0	19.2	8.4	10.3	
	5% LSD Cultivar means (*****=ns)	25.4	14.9	3.2	2.1	0.3	

Table 81. Trial 83187, 1983

Country: ZAIRE
Region: AFRICA

Latitude: 6°45'S
Longitude: 23°57'E

Zone: 2 Group: A
Elevation (m): 780

Site: INERA STATION, GANDAJIKA
Cooperator(s): DR. QUYEN H. NGUYEN, IR. MUSUNGAYI, IR. MUSSANA

Date planted: March 1, 1984 Date harvested: May 31, 1984
Soil information: pH 6.2
Total moisture (mm): 206
Substituted cultivar: SJ 127

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
97	F75-9207	192.2	46.5	85.8	24.3	1.8	1.5
2	UFV-1	169.2	45.3	92.0	22.0	1.5	1.0
106	SH 1274	150.0	46.8	89.0	33.0	1.5	1.3
9033	SJ 127	113.5	47.8	85.8	32.0	1.5	2.0
99	IAC-6	106.2	52.5	110.0	38.3	2.3	1.0
78	ISRA/IRAT 44A/73	94.3	51.5	95.3	38.5	2.0	1.0
76	SIATSA 194	87.0	49.3	101.3	38.8	2.3	1.8
90	AGS 8	84.4	47.8	87.8	42.5	1.3	2.3
9	Jupiter	80.2	50.8	91.8	39.3	1.5	1.0
96	EGSY 91-7	78.6	43.5	85.0	31.5	2.0	2.8
10	Improved Pelican	74.0	44.0	87.8	28.5	1.5	1.5
101	ICA L-129	48.4	48.0	94.0	31.5	1.3	1.0
19	Davis	44.8	40.5	87.3	17.0	2.0	1.3
79	71-38	32.8	45.3	93.3	19.3	1.3	1.3
100	IAC-8	17.2	54.3	106.8	48.8	2.3	1.5
45	ICA L-109	6.3 (3)	47.8	103.5	36.0	1.8	1.3
	Grand mean	87.5	47.6	93.5	32.6	1.7	1.5
	Standard error of cultivar mean	91.0	1.5	3.1	3.7	0.3	0.3
	Coefficient of variation (%)	104.1	6.2	6.5	22.7	35.0	40.5
	5% LSD Cultivar means (*****=ns)	*****	4.2	8.7	10.5	*****	0.8

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
97	F75-9207	79.3	22.0	8.3	13.3	2.3	
2	UFV-1	101.3	20.3	6.0	11.5	2.3	
106	SH 1274	32.0	40.0	5.0	15.0	2.5	
9033	SJ 127	116.0	20.8	10.5	10.3	3.0	
99	IAC-6	61.5	17.3	15.5	12.5	3.3	
78	ISRA/IRAT 44A/73	92.0	31.3	10.3	11.3	3.0	
76	SIATSA 194	40.3	40.5	12.0	17.0	4.0	
90	AGS 8	73.0	26.8	8.5	11.8	2.8	
9	Jupiter	31.3	33.0	9.0	16.3	3.0	
96	EGSY 91-7	52.5	23.5	9.8	12.3	2.3	
10	Improved Pelican	54.5	21.5	9.0	12.5	3.8	
101	ICA L-129	61.3	17.8	7.5	14.5	3.8	
19	Davis	49.8	17.8	7.0	15.5	3.5	
79	71-38	68.0	19.5	6.3	12.3	4.3	
100	IAC-8	106.3	20.0	15.5	21.0	3.3	
45	ICA L-109	74.3	24.5	10.3	13.0 (3)	4.5	
	Grand mean	68.3	24.8	9.4	13.8	3.2	
	Standard error of cultivar mean	17.1	4.0	1.5	3.8	0.5	
	Coefficient of variation (%)	50.1	32.6	31.6	27.3	30.5	
	5% LSD Cultivar means (*****=ns)	48.7	11.5	4.2	*****	1.4	

Table 82. Trial 83431, 1983

Country: ZAÏRE
Region: AFRICA

Latitude: 5°27'S
Longitude: 14°54'E

Zone: 1 Group: B
Elevation (m): 450

Site: INERA, M'VUAZI
Cooperator(s): DR. QUYEN H. NGUYEN, IR. SEFU, IR. NZEU AND IR. NKETIWADIO

Date planted: November 21, 1983 Date harvested: March 5, 1984
Soil information: pH 5.8
Fertilizer used (kg/ha): N 25.0, P 25.0, K 25.0
Total moisture (mm): 1,477

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
2	UFV-1	1,700.3	35.0	113.5	38.0	2.3	1.0
91	AGS 66	1,623.2	36.0	105.0	47.8	1.0	1.3
95	Duocrop	1,477.4	36.0	107.3	84.3	1.0	1.3
94	DB 1601	1,446.1	36.0	107.0	45.0	2.0	1.0
96	EGSY 91-7	1,302.3	36.0	105.0	44.8	3.0	1.8
19	Davis	1,229.4	30.0	109.5	34.0	2.0	1.0
9	Jupiter	1,150.2	49.0	119.3	55.0	2.3	1.0
92	BM-2	1,066.0	35.0	107.5	55.0	3.0	1.0
81	Ecuador 1	981.4	42.0	117.3	62.5	1.5	1.0
82	PK-73-86	885.6	36.0	115.3	64.3	2.0	1.0
37	G 2120	827.3	57.0	115.3	84.3	4.5	1.0
69	Essex	733.5	30.0	109.8	33.0	1.0	1.0
76	SIATSA 194	714.7	42.0	116.0	57.3	3.8	1.0
75	Braxton	583.5	30.0	109.5	49.3	1.0	1.0
106	SH 1274	498.0	35.0	109.8	43.3	4.8	1.0
77	ICA L-124	418.8	36.0	115.3	54.3	4.8	1.0
	Grand mean	1,039.9	37.6	111.4	53.2	2.5	1.1
	Standard error of cultivar mean	229.8	0.0	2.0	0.5	0.6	0.2
	Coefficient of variation (%)	44.2	0.0	3.6	1.9	49.1	36.8
	5% LSD Cultivar means (*****=ns)	654.7	0.0	5.7	1.5	1.7	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
2	UFV-1	133.8	31.3	13.6	23.5	2.0	63.8
91	AGS 66	124.0	40.8	11.0	18.4	2.3	52.5
95	Duocrop	140.3	31.8	10.5	20.7	1.0	51.0
94	DB 1601	139.5	33.8	10.1	19.3	1.5	47.3
96	EGSY 91-7	134.0	34.5	12.4	17.9	2.0	42.0
19	Davis	143.3	29.8	8.5	23.2	2.3	46.8
9	Jupiter	114.5	55.8	11.9	24.0	2.0	40.3
92	BM-2	150.5	28.5	12.3	22.0	2.0	30.5
81	Ecuador 1	123.3	42.0	11.8	26.1	1.8	36.8
82	PK-73-86	131.8	40.5	10.8	23.4	1.8	45.3
37	G 2120	143.0	54.5	14.9	8.3	3.3	65.8
69	Essex	150.0	29.3	7.8	21.2	3.0	38.8
76	SIATSA 194	134.3	48.3	16.3	21.8	2.8	44.8
75	Braxton	141.5	22.3	10.7	26.5	2.8	40.5
106	SH 1274	105.3	45.8	12.8	21.9	2.0	32.0
77	ICA L-124	135.3	33.5	11.6	24.6	2.3	37.3
	Grand mean	134.0	37.6	11.7	21.4	2.2	44.7
	Standard error of cultivar mean	7.0	5.2	0.9	1.2	0.4	7.5
	Coefficient of variation (%)	10.5	27.6	14.6	10.8	32.2	33.3
	5% LSD Cultivar means (*****=ns)	20.0	14.8	2.4	3.3	1.0	*****

Table 83. Trial 83443, 1983

Country: ZAIRE
Region: AFRICA

Latitude: 6°45'S
Longitude: 23°57'E

Zone: 2 Group: B
Elevation (m): 780

Site: INERA STATION, GANDAJIKA
Cooperator(s): DR. QUYEN H. NGUYEN, IR. MUSUNGAYI, IR. MUSSANA

Date planted: February 21, 1984 Date harvested: May 7, 1984
Total moisture (mm): 211
Substituted cultivar: SJ 127

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
9033	SJ 127	438.5	33.3	79.5	36.3	1.5	2.8
106	SH 1274	368.2	22.3	70.3	30.0	1.5	1.3
2	UFV-1	333.8	32.0	80.5	25.3	1.0	1.0
96	EGSY 91-7	319.7	28.5	67.5	33.3	2.0	2.5
69	Essex	294.7	21.0	68.8	19.5	1.5	1.5
47	PK-73-94	278.6	21.8	70.8	21.8	1.3	1.8
90	AGS 8	270.8	32.8	77.8	47.3	1.5	3.3
77	ICA L-124	259.3	29.3	80.5	29.0	1.5	1.3
102	Lawrence	250.5	22.8	71.0	32.0	1.3	1.0
92	BM-2	244.8	25.8	71.3	28.8	1.5	1.3
76	SIATSA 194	243.2	35.5	80.3	51.3	1.3	1.5
75	Braxton	214.0	21.8	70.8	22.8	1.5	1.0
37	G 2120	206.7	42.8	83.5	57.8	1.3	1.5
81	Ecuador 1	170.3	34.0	81.3	34.0	1.8	1.3
9	Jupiter	158.3	43.0	88.3	38.5	1.8	1.0
95	Duocrop	141.1	30.3	79.3	31.5	2.0	1.3
	Grand mean	262.0	29.8	76.3	33.7	1.5	1.6
	Standard error of cultivar mean	48.2	1.1	1.8	2.4	0.3	0.2
	Coefficient of variation (%)	36.8	7.2	4.6	13.9	34.3	26.8
	5% LSD Cultivar means (*****=ns)	137.2	3.1	5.0	6.7	*****	0.6

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
9033	SJ 127	63.8		8.0	10.5	2.0	
106	SH 1274	69.8		8.0	14.3	2.5	
2	UFV-1	62.3		6.3	13.8	3.0	
96	EGSY 91-7	52.5		10.8	10.8	2.8	
69	Essex	97.0		7.8	15.0	2.3	
47	PK-73-94	60.0		7.3	13.8	2.8	
90	AGS 8	75.5		12.0	13.5	3.0	
77	ICA L-124	81.8		7.5	17.0	3.0	
102	Lawrence	45.3		7.5	18.8	2.8	
92	BM-2	78.8		9.5	13.8	3.0	
76	SIATSA 194	90.3		12.3	16.0	2.8	
75	Braxton	52.5		7.5	18.3	3.0	
37	G 2120	89.3		13.3	7.3	2.8	
81	Ecuador 1	78.3		8.5	14.3	3.3	
9	Jupiter	25.8		8.8	16.8	2.8	
95	Duocrop	73.3		7.8	15.8	3.3	
	Grand mean	68.5		8.9	14.3	2.8	
	Standard error of cultivar mean	12.5		0.9	0.9	0.2	
	Coefficient of variation (%)	36.4		19.7	12.1	16.8	
	5% LSD Cultivar means (*****=ns)	35.5		2.5	2.5	0.7	

Table 84. Trial 83178, 1983

Country: ZAMBIA
Region: AFRICA

Latitude: 16°01'S
Longitude: 27°46'E

Zone: 6 Group: A
Elevation (m): 1,067

Site: MAGOYE
Cooperator(s): DR. JAGMOHAN JOSHI

Date planted: December 6, 1983 Date harvested: March 3, 1984
Soil information: loamy loam
Fertilizer used (kg/ha): N 30.0, P 60.0, K 30.0 S 30.0
Total moisture (mm): 501
Substituted cultivar: Santa Rosa

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
99	IAC-6	1,851.6	71.0	127.5	102.3	3.5	1.0
258	Santa Rosa	1,702.0	48.0	103.0	48.0	2.3	1.0
100	IAC-8	1,682.0	48.3	129.0	74.3	2.5	1.0
9	Jupiter	1,650.3	66.0	130.0	78.3	3.3	1.0
76	SIATSA 194	1,604.9	57.0	119.5	72.0	2.5	1.0
45	ICA L-109	1,598.7	64.0	130.0	68.0	2.5	1.0
75	Braxton	1,508.6	27.0	91.3	32.0	1.0	1.3
79	71-38	1,484.9	59.0	128.0	53.8	2.0	1.3
2	UFV-1	1,482.0	50.5	121.8	45.5	2.0	1.0
78	ISRA/IRAT 44A/73	1,407.4	57.0	113.0	48.5	2.0	1.3
101	ICA L-129	1,371.5	51.0	117.8	60.3	2.3	1.0
96	EGSY 91-7	1,349.0	38.0	97.5	43.8	1.0	1.3
90	AGS 8	1,185.2	43.3	92.0	58.0	1.0	2.0
106	SH 1274	1,126.5	44.0	90.5	50.5	1.3	1.0
19	Davis	1,014.4	44.8	96.0	33.5	1.0	1.0
97	F75-9207	1,000.6	48.5	119.0	51.5	1.8	1.0
	Grand mean	1,438.7	51.1	112.9	57.5	2.0	1.1
	Standard error of cultivar mean	189.0	0.5	2.1	4.5	0.2	0.1
	Coefficient of variation (%)	26.3	1.9	3.8	15.6	22.3	22.0
	5% LSD Cultivar means (*****=ns)	*****	1.4	6.1	12.8	0.6	0.4

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
99	IAC-6	223.8	30.0	31.5	14.7	1.5	
258	Santa Rosa	181.5	27.8	11.8	14.4	1.3	
100	IAC-8	283.8	22.0	23.0	18.9	1.3	
9	Jupiter	201.3	23.0	28.8	18.2	1.3	
76	SIATSA 194	209.3	30.0	22.3	21.2	1.0	
45	ICA L-109	218.5	22.5	19.0	12.7	1.3	
75	Braxton	241.0	12.0	10.5	20.0	1.0	
79	71-38	207.3	30.8	12.5	14.7	1.8	
2	UFV-1	276.3	31.3	14.5	15.6	1.0	
78	ISRA/IRAT 44A/73	216.5	34.5	15.3	13.2	1.8	
101	ICA L-129	242.3	22.8	12.0	15.9	2.3	
96	EGSY 91-7	257.8	26.0	12.8	15.7	1.8	
90	AGS 8	269.3	14.0	14.5	14.9	1.8	
106	SH 1274	207.8	18.5	12.0	14.8	1.3	
19	Davis	210.0	17.3	9.0	16.9	2.0	
97	F75-9207	236.8	22.3	16.3	14.2	1.8	
	Grand mean	230.2	24.0	16.6	16.0	1.5	
	Standard error of cultivar mean	19.2	3.0	1.4	0.6	0.3	
	Coefficient of variation (%)	16.7	24.8	17.3	8.0	36.1	
	5% LSD Cultivar means (*****=ns)	54.6	8.5	4.1	1.8	0.8	

Table 85. Trial 83179, 1983

Country: ZAMBIA
Region: AFRICA

Latitude: 12°37'S
Longitude: 28°09'E

Zone: 6 Group: A
Elevation (m): 1,265

Site: COPPERBELT REGIONAL RESEARCH STATION
Cooperator(s): DR. JAGMOHAN JOSHI, MR. G. P. MWILA

Date planted: December 20, 1983 Date harvested: April 1984
Soil information: loam 75%, silt 10%, clay 15%
Fertilizer used (kg/ha): N 30.0, P 60.0, K 30.0
Total moisture (mm): 1,031
Substituted cultivar: Santa Rosa

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
75	Braxton	3,384.9	45.0	85.0	44.8	1.0	1.0
19	Davis	2,713.1	42.3	88.8	59.0	1.3	1.0
90	AGS 8	2,692.3	47.5	91.0	85.5	1.5	1.0
2	UFV-1	2,525.6	58.0	91.0	66.8	1.8	1.0
258	Santa Rosa	2,504.8	60.3	91.0	72.0	1.5	1.0
100	IAC-8	2,338.2	64.3	126.0	91.0	3.3	1.0
96	EGSY 91-7	2,317.3	46.0	86.3	59.3	1.0	1.0
106	SH 1274	2,286.1	41.8	86.3	71.0	1.0	1.0
9	Jupiter	2,260.1	60.3	126.0	94.0	2.5	1.0
79	71-38	2,228.8	54.5	89.0	77.0	1.3	1.0
97	F75-9207	2,223.6	60.0	89.0	68.5	2.0	1.0
101	ICA L-129	2,150.7	60.3	94.0	86.0	2.5	1.0
76	SIATSA 194	2,062.2	66.0	91.0	98.3	1.0	1.0
99	IAC-6	2,051.8	48.3	126.0	105.8	4.0	1.0
45	ICA L-109	2,010.1	62.5	131.0	109.3	4.0	1.0
78	ISRA/IRAT 44A/73	1,952.8	63.8	89.0	76.3	1.5	1.0
	Grand mean	2,356.4	55.0	98.8	79.0	1.9	1.0
	Standard error of cultivar mean	182.3	3.7	0.6	3.9	0.3	0.0
	Coefficient of variation (%)	15.5	13.6	1.2	9.9	31.3	0.0
	5% LSD Cultivar means (*****=ns)	519.3	10.7	1.7	11.2	0.9	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
75	Braxton	264.5	14.4	10.3		1.3	
19	Davis	295.3	9.9	17.0		1.5	
90	AGS 8	299.3	11.0	19.0		1.3	
2	UFV-1	304.5	9.8	25.3		1.5	
258	Santa Rosa	243.5	10.7	18.3		1.8	
100	IAC-8	254.3	9.4	34.5		1.3	
96	EGSY 91-7	258.8	9.0	16.8		1.5	
106	SH 1274	286.3	12.5	14.0		1.5	
9	Jupiter	234.5	8.6	41.0		1.8	
79	71-38	267.5	9.9	22.5		2.0	
97	F75-9207	274.8	10.6	24.3		1.3	
101	ICA L-129	277.5	9.9	24.3		2.0	
76	SIATSA 194	293.0	8.8	31.0		1.5	
99	IAC-6	241.5	11.6	30.3		1.5	
45	ICA L-109	268.5	7.9	30.3		1.3	
78	ISRA/IRAT 44A/73	262.8	9.9	24.0		1.3	
	Grand mean	270.4	10.2	23.9		1.5	
	Standard error of cultivar mean	13.1	1.8	1.8		0.3	
	Coefficient of variation (%)	9.7	35.3	15.2		39.9	
	5% LSD Cultivar means (*****=ns)	37.3	*****	5.2		*****	

Table 86. Trial 83180, 1983

Country: ZAMBIA
Region: AFRICA

Latitude: 10°13'S
Longitude: 31°08'E

Zone: 3 Group: A
Elevation (m): 1,384

Site: MISAMFU REGIONAL RESEARCH STATION
Cooperator(s): DR. JAGMOHAN JOSHI

Date planted: December 27, 1983 Date harvested: April 12, 1984
Soil information: loam 76%, silt 7%, clay 17%, pH 5.0
Fertilizer used (kg/ha): N 30.0, P 30.0, K 30.0
Total moisture (mm): 1,327
Substituted cultivar: Santa Rosa

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
2	UFV-1	1,859.1	51.0	116.0	42.9	1.0	1.0
19	Davis	1,856.5	43.0	102.0	36.2	1.0	1.0
79	71-38	1,816.9	54.0	120.0	53.3	1.0	1.0
78	ISRA/IRAT 44A/73	1,758.1	60.0	116.0	60.5	1.0	1.0
100	IAC-8	1,752.3	60.0	131.0	77.5	2.0	1.0
75	Braxton	1,732.5	44.0	98.0	50.7	1.0	1.0
101	ICA L-129	1,611.7	49.0	116.0	79.2	1.0	1.0
106	SH 1274	1,588.8	43.0	98.0	60.7	1.0	1.0
258	Santa Rosa	1,553.9	47.0	109.0	50.6	1.0	1.0
96	EGSY 91-7	1,551.3	44.0	98.0	46.4	1.0	1.0
90	AGS 8	1,521.6	47.0	102.0	63.0	1.0	3.0
97	F75-9207	1,482.0	49.0	105.0	62.0	1.0	1.0
76	SIATSA 194	1,421.1	54.0	120.0	81.4	1.0	1.0
9	Jupiter	1,337.3	64.0	124.0	75.1	2.0	1.3
45	ICA L-109	1,146.2	64.0	131.0	79.2	1.0	1.0
99	IAC-6	1,055.0	67.0	131.0	71.6	1.0	1.0
	Grand mean	1,565.3	52.5	113.6	61.9	1.1	1.1
	Standard error of cultivar mean	159.9	0.4	0.0	4.0	0.0	0.1
	Coefficient of variation (%)	20.4	1.4	0.0	13.0	0.0	11.0
	5% LSD Cultivar means (*****=ns)	455.3	1.0	0.0	11.5	0.0	0.2

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
2	UFV-1	153.5	17.0	13.1	16.0	1.0	
19	Davis	151.0	21.3	10.0	18.0	3.0	
79	71-38	149.8	16.3	12.7	14.3	2.0	
78	ISRA/IRAT 44A/73	152.8	21.3	17.9	13.3	1.0	
100	IAC-8	153.8	19.5	24.5	18.5	2.0	
75	Braxton	149.0	15.6	15.0	21.0	2.0	
101	ICA L-129	156.5	18.0	18.6	14.3	2.0	
106	SH 1274	146.3	22.6	10.9	13.3	2.0	
258	Santa Rosa	143.5	21.8	9.9	13.5	3.0	
96	EGSY 91-7	157.3	20.0	12.8	12.5	1.0	
90	AGS 8	148.3	15.8	18.8	14.5	2.0	
97	F75-9207	114.0	23.8	14.3	15.0	2.0	
76	SIATSA 194	149.3	12.3	26.8	21.0	1.0	
9	Jupiter	146.3	16.5	24.5	15.3	3.0	
45	ICA L-109	152.5	27.5	15.3	10.0	3.0	
99	IAC-6	125.3	20.0	22.3	13.0	3.0	
	Grand mean	146.8	19.3	16.7	15.2	2.1	
	Standard error of cultivar mean	10.4	1.7	1.6	0.6	0.0	
	Coefficient of variation (%)	14.2	17.4	18.8	8.1	0.0	
	5% LSD Cultivar means (*****=ns)	*****	4.8	4.5	1.8	0.0	

Table 87. Trial 83419, 1983

Country: ZIMBABWE
Region: AFRICA

Latitude: 17°40'S
Longitude: 31°14'E

Zone: 6 Group: B
Elevation (m): 1,300

Site: RATTRAY ARNOLD RESEARCH STATION
Cooperator(s): DR. J. R. TATTERSFIELD

Date planted: November 25, 1983 Date harvested: March 22, 1984
Soil information: loam 23%, silt 21%, clay 56%, pH 5.7
Fertilizer used (kg/ha): N 25.0, P 39.2, K 50.0
Total moisture (mm): 657
Number of irrigations: 2 (36 mm)
Substituted cultivars: Oribi, Sable, Duiker

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
1088	Duiker	3,693.7	53.0	122.0	90.0	2.0	1.0
75	Braxton	3,435.9	40.0	115.0	60.0	1.0	1.0
94	DB 1601	3,375.0	54.0	126.0	83.8	3.3	1.0
217	Oribi	3,352.6	43.0	116.0	68.8	1.0	1.0
108	Sable	3,289.6	46.5	126.0	100.0	1.0	1.0
19	Davis	3,248.4	54.0	129.0	73.8	3.3	1.0
69	Essex	3,182.3	38.0	112.0	52.5	1.0	1.0
106	SH 1274	3,067.7	43.0	126.0	121.3	5.0	1.0
92	BM-2	2,846.4	47.0	112.0	57.5	4.0	1.0
82	PK-73-86	2,832.4	57.0	126.0	92.5	5.0	1.0
91	AGS 66	2,732.4	42.3	112.0	67.5	4.8	1.0
105	R-315	2,697.0	51.0	123.0	85.0	3.5	1.0
96	EGSY 91-7	2,396.5	54.0	126.0	92.5	4.8	1.0
10	Improved Pelican	2,375.1	69.5	137.0	127.5	3.8	1.0
77	ICA L-124	2,282.5	54.0	128.0	92.5	5.0	1.0
9	Jupiter	1,500.8	89.0	162.3	157.5	5.0	1.0
	Grand mean	2,894.3	52.2	124.9	88.9	3.3	1.0
	Standard error of cultivar mean	148.6	0.8	0.5	3.9	0.4	0.0
	Coefficient of variation (%)	10.3	2.5	0.9	8.9	24.4	0.0
	5% LSD Cultivar means (*****=ns)	423.2	2.2	1.5	11.2	1.2	*****

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
1088	Duiker	160.0		15.8	20.9	2.0	
75	Braxton	160.0		7.0	24.7	3.0	
94	DB 1601	159.8		15.8	18.6	2.0	
217	Oribi	159.8		12.0	19.3	2.0	
108	Sable	160.0		17.0	20.6	2.0	
19	Davis	160.0		12.0	19.1	2.0	
69	Essex	160.0		2.0	15.7	2.0	
106	SH 1274	160.0		12.0	17.3	3.0	
92	BM-2	160.0		12.0	17.0	2.0	
82	PK-73-86	160.0		12.0	16.8	2.0	
91	AGS 66	160.0		12.0	13.4	2.5	
105	R-315	160.0		13.3	18.4	2.0	
96	EGSY 91-7	160.0		17.0	16.9	2.0	
10	Improved Pelican	160.0		12.0	12.7	1.0	
77	ICA L-124	160.0		12.0	20.2	2.8	
9	Jupiter	159.8		17.0	16.3	4.8	
	Grand mean	160.0		12.6	18.0	2.3	
	Standard error of cultivar mean	0.1		0.6	0.4	0.1	
	Coefficient of variation (%)	0.1		8.8	3.9	9.9	
	5% LSD Cultivar means (*****=ns)	*****		1.6	1.0	0.3	

Table 88. Trial 83428, 1983

Country: ZIMBABWE Latitude: 17°48'S Zone: 6 Group: B
Region: AFRICA Longitude: 31°03'E Elevation (m): 1,506

Site: HARARE RESEARCH STATION
Cooperator(s): MR. JACOB S. TICHAGWA, MISS O. Z. VENGE, MISS I. A. MUTAMBIRWA

Date planted: November 29, 1983 Date harvested: April 09, 1984
Soil information: loam 23%, silt 21%, clay 56%, pH 5.9
Fertilizer used (kg/ha): K 50.0
Total moisture (mm): 772
Number of irrigations: 4 (total amount 123 mm)
Substituted cultivars: Oribi, Duiker, Sable

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Plant ht. (cm)	Lodging	Shattering
108	Sable	4,430.9	55.0	135.0	118.0	2.8	1.0
1088	Duiker	4,146.2	58.0	135.0	102.3	2.8	1.0
217	Oribi	3,805.9	55.0	134.0	94.5	2.8	1.0
95	Duocrop	3,778.1	62.0	141.5	103.3	3.8	1.0
75	Braxton	3,757.3	51.0	124.0	90.0	3.3	1.0
69	Essex	3,722.5	48.0	125.5	71.3	2.3	1.0
105	R-315	3,340.5	58.0	134.0	98.0	3.8	1.0
77	ICA L-124	3,229.4	62.0	141.5	129.3	5.0	1.0
94	DB 1601	3,208.6	65.0	142.3	113.3	4.3	1.0
91	AGS 66	3,097.5	48.0	124.8	87.3	4.5	1.0
82	PK-73-86	3,090.5	62.0	139.5	101.3	4.3	1.0
92	BM-2	2,785.0	55.0	131.8	93.8	4.8	1.0
106	SH 1274	2,666.9	59.0	137.0	164.0	5.0	1.0
96	EGSY 91-7	2,659.9	59.3	131.0	109.3	5.0	2.8
19	Davis	2,576.6	65.0	138.0	109.3	4.5	1.0
9	Jupiter	638.9	99.0	162.0	163.5	5.0	1.0
	Grand mean	3,183.4	60.1	136.1	109.3	4.0	1.1
	Standard error of cultivar mean	217.0	0.4	1.0	2.8	0.3	0.1
	Coefficient of variation (%)	13.6	1.4	1.5	5.0	16.9	11.3
	5% LSD Cultivar means (*****=ns)	618.1	1.2	2.9	7.8	1.0	0.2

Entry number	Cultivar	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germination
108	Sable	160.0	39.3	15.4	22.4	2.0	
1088	Duiker	160.0	32.8	15.5	22.8	2.0	
217	Oribi	160.0	41.8	15.2	21.3	2.0	
95	Duocrop	160.0	41.5	12.8	17.6	2.8	
75	Braxton	160.0	26.8	14.7	21.7	3.0	
69	Essex	160.0	30.0	17.5	16.0	2.3	
105	R-315	160.0	34.3	16.1	17.7	2.0	
77	ICA L-124	160.0	60.8	11.9	18.8	3.0	
94	DB 1601	160.0	53.8	10.4	17.2	2.8	
91	AGS 66	160.0	46.0	14.5	13.9	3.0	
82	PK-73-86	159.8	55.3	12.5	17.8	2.5	
92	BM-2	159.5	43.0	14.0	17.6	3.0	
106	SH 1274	160.0	48.0	13.7	17.6	3.0	
96	EGSY 91-7	160.0	38.5	13.1	16.5	3.0	
19	Davis	160.0	40.5	12.5	17.3	2.8	
9	Jupiter	160.0	52.3	15.7	10.4	4.0	
	Grand mean	160.0	42.8	14.1	17.9	2.7	
	Standard error of cultivar mean	0.1	3.8	0.7	0.4	0.2	
	Coefficient of variation (%)	0.1	17.8	10.6	4.8	10.9	
	5% LSD Cultivar means (*****=ns)	0.3	10.8	2.1	1.2	0.4	

Agronomic Characteristics for Individual Sites, 1982

Table 89. Trial 82592, 1982

Country: BRAZIL Latitude: 24°17'S Zone: 7 Group: A
Region: SOUTH AMERICA Longitude: 53°50'W Elevation (m): 340

Site: PALOTINA, PARANA
Cooperator(s): DR. NELSON DA SILVA FONSECA, JR.

Date planted: November 16, 1983 Date harvested: April 3, 1984
Soil information: pH 6.0
Fertilizer used (kg/ha): P 20.9, K 16.7
Total moisture (mm): 756
Substituted cultivar: FT-2

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Nodule abund. 1	Nodule abund. 2	Nodule act. 1	Nodule act. 2	Plant ht. (cm)
9	Jupiter		75.0						108.5
43	Alamo		52.0						104.8
39	IGH 23		52.0						102.8
45	ICA L-109		75.0						109.0
46	Ecuador 2		54.0						115.0 (3)
64	ICA L-125		75.0						117.5
79	71-38		71.0						104.5
19	Davis	2,326.3	38.0 (1)	112.0					78.5
40	IGH 24	1,812.5 (1)	75.0						119.3
89	Williams 82	1,615.0 (3)	26.0 (1)	115.0					73.3
77	ICA L-124	1,523.8	40.0 (1)	112.0					81.3
295	FT-2	1,275.6	42.0 (1)	112.0					82.0
44	Foster	926.3	37.0 (1)	111.0					73.0
76	SIATSA 194	625.0	64.0 (1)	118.0					123.3
10	Improved Pelican	215.6	60.0 (1)	118.0					120.0
78	ISRA/IRAT 44A/73	100.0 (3)	54.0						109.7 (3)
	Grand mean	1,147.6	55.6	114.0					101.0
	Standard error of cultivar mean	741.3	16.0	3.0					18.1
	Coefficient of variation (%)	64.6	28.7	2.6					17.9
	5% LSD Cultivar means (*****=ns)	*****	*****	*****					*****

Entry number	Cultivar	Lodging	Shattering	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germ.
9	Jupiter								
43	Alamo								
39	IGH 23								
45	ICA L-109								
46	Ecuador 2								
64	ICA L-125								
79	71-38	2.0							
19	Davis	2.8					13.3	3.5	
40	IGH 24						15.2 (1)	2.0	
89	Williams 82	1.0					13.9 (3)	2.0	
77	ICA L-124	4.3					14.8	3.5	
295	FT-2	3.0					10.0	3.0	
44	Foster	2.7					10.0	4.0	
76	SIATSA 194	3.3					12.8	3.0	
10	Improved Pelican	4.0					8.0	4.3	
78	ISRA/IRAT 44A/73	4.0					7.2 (1)	4.0	
	Grand mean	3.2					11.7	3.4	
	Standard error of cultivar mean	1.1					2.7	0.9	
	Coefficient of variation (%)	34.9					23.1	27.2	
	5% LSD Cultivar means (*****=ns)	*****					*****	*****	

Table 90. Trial 82734, 1982

Country: BRAZIL
Region: SOUTH AMERICA

Latitude: 24°56'S
Longitude: 53°26'W

Zone: 7 Group: B
Elevation (m): 760

Site: CASCAVEL, PARANA
Cooperator(s): DR. NELSON DA SILVA FONSECA, JR.

Date planted: November 4, 1983 Date harvested: February 13, 1984
Soil information: loam 11%, silt 14%, clay 75%, pH 4.6
Fertilizer used (kg/ha): P 17.4, K 20.8
Total moisture (mm): 929
Substituted cultivar: FT-2

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Nodule abund. 1	Nodule abund. 2	Nodule act. 1	Nodule act. 2	Plant ht. (cm)
75	Braxton	3,995.0	53.0 (1)	134.0					60.0
295	FT-2	3,964.4	58.0 (1)	135.0					66.3
44	Foster	3,847.5	56.0 (1)	136.0					70.0
19	Davis	3,791.9	58.0 (1)	130.0					75.0
83	CEP 7717	3,325.6	61.0 (1)	127.0					77.5
77	ICA L-124	3,319.4	61.0 (1)	129.0					85.0
47	PK-73-94	3,231.9	62.0 (1)	149.0					78.8
69	Essex	3,228.8	48.0 (1)	117.0					41.3
80	HM-1	3,201.9	40.0 (1)	107.0					67.8
82	PK-73-86	2,976.9	67.0 (1)	154.0					68.8
81	Ecuador 1	2,443.8	76.0 (1)	158.0					96.3
43	Alamo	2,157.5	88.0 (1)	166.0					102.5
76	SIATSA 194	2,123.1	75.0 (1)	151.0					141.3
89	Williams 82	1,785.6	44.0 (1)	93.0					48.3
37	G 2120	1,740.6	82.0 (1)	138.0					106.3
9	Jupiter	1,032.5	92.0 (1)	167.0					93.8
	Grand mean	2,885.4	63.8	136.9					79.9
	Standard error of cultivar mean	142.2	15.2	20.5					3.0
	Coefficient of variation (%)	9.9	23.8	14.9					7.5
	5% LSD Cultivar means (*****=ns)	405.1	*****	*****					8.5

Entry number	Cultivar	Lodging	Shattering	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germ.
75	Braxton	1.0		144.5			22.2	3.0	
295	FT-2	2.0		124.5			15.5	1.5	
44	Foster	2.0		125.3			12.0	2.0	
19	Davis	1.5		138.3			17.8	1.8	
83	CEP 7717	2.3		141.0			13.5	1.8	
77	ICA L-124	2.3		125.8			21.2	1.5	
47	PK-73-94	2.0		124.3			14.9	1.8	
69	Essex	1.0		133.8			18.4	2.3	
80	HM-1	1.3		147.3			19.0	1.8	
82	PK-73-86	1.5		60.0			17.5	2.3	
81	Ecuador 1	2.0		126.3			19.2	2.5	
43	Alamo	2.3		129.8			15.7	3.5	
76	SIATSA 194	2.5		128.5			20.9	3.8	
89	Williams 82	1.0		157.0			17.4	2.0	
37	G 2120	2.3		101.8			7.0	3.3	
9	Jupiter	3.0		143.3			13.7	4.5	
	Grand mean	1.9		128.2			16.6	2.4	
	Standard error of cultivar mean	0.6		8.5			0.8	0.3	
	Coefficient of variation (%)	34.5		13.2			9.[illegible]	22.6	
	5% LSD Cultivar means (*****=ns)	*****		24.1			2.3	0.8	

Table 91. Trial 82560, 1982

Country: BURMA Latitude: 19°10'N Zone: 4 Group: A
Region: ASIA Longitude: 96°07'E Elevation (m): 102

Site: YEZIN
Cooperator(s): M. G. THEIN, SHIRLEY SMALLIE, KO SWE WIN

Date planted: August 31, 1982 Date harvested: November 22, 1982
Soil information: loam 78.36%, silt 14.64%, clay 7.04%, pH 6.5
Fertilizer used (kg/ha): N 25.0, P 25.0, K 25.0
Total moisture (mm): 503

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Nodule abund. 1	Nodule abund. 2	Nodule act. 1	Nodule act. 2	Plant ht. (cm)
46	Ecuador 2	2,476.9	31.8	90.8	3.8	1.3	68.8	87.5	46.0
89	Williams 82	2,367.4	26.5	78.0	3.5	3.0	57.5	71.3	60.0
9	Jupiter	2,360.9	37.5	88.3	3.5	2.5	66.3	91.3	66.5
39	IGH 23	2,187.3	37.5	93.0	4.0	2.5	56.3	92.5	70.6
64	ICA L-125	2,113.9	35.5	97.8	3.0	2.0	61.3	90.0	82.9
43	Alamo	2,066.7	36.0	88.0	4.5	3.3	50.0	90.0	42.1
10	Improved Pelican	2,065.0	30.5	87.0	4.3	2.3	61.3	97.5	84.7
2	UFV-1	2,043.7	30.3	87.0	3.5	2.3	77.5	85.0	43.5
76	SIATSA 194	1,956.9	32.5	87.0	2.5	1.3	76.3	90.0	71.0
19	Davis	1,952.1	26.3	80.3	3.8	2.3	72.5	83.8	31.3
13	Bossier	1,846.7	26.0	78.0	4.0	2.8	61.3	83.8	31.8
40	IGH 24	1,764.7	38.8	94.5	4.0	2.3	60.0	96.3	69.9
77	ICA L-124	1,717.0	27.3	84.8	4.3	2.5	76.3	92.5	52.0
78	ISRA/IRAT 44A/73	1,657.8	34.5	87.0	3.0	1.3	65.0	87.5	54.4
45	ICA L-109	1,656.8	36.3	88.3	2.8	2.5	67.5	90.0	59.3
79	71-38	1,192.7	33.8	96.0	3.5	4.0	65.0	86.3	41.5
	Grand mean	1,964.2	32.6	87.8	3.6	2.4	65.2	88.4	56.7
	Standard error of cultivar mean	248.9	0.6	1.5	0.4	0.5	10.6	5.1	4.5
	Coefficient of variation (%)	25.3	3.5	3.5	22.7	41.2	32.5	11.6	15.8
	5% LSD Cultivar means (*****=ns)	*****	1.6	4.4	1.2	1.4	*****	*****	12.7

Entry number	Cultivar	Lodging	Shattering	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germ.
46	Ecuador 2	1.0	1.0	128.0	36.8	12.0	15.0	2.0	91.3
89	Williams 82	1.3	1.0	217.8	27.0	8.2	15.1	2.0	93.5
9	Jupiter	3.0	1.0	173.3	48.0	13.4	14.3	2.0	94.8
39	IGH 23	3.0	1.3	181.0	38.5	20.6	14.2	2.0	87.8
64	ICA L-125	3.0	1.0	211.3	41.5	15.2	11.5	2.0	92.8
43	Alamo	1.3	1.3	178.0	35.8	11.5	12.6	2.0	91.3
10	Improved Pelican	3.5	1.3	187.3	37.3	11.7	12.4	2.0	93.5
2	UFV-1	1.0	1.0	176.3	31.5	11.4	11.8	2.0	88.5
76	SIATSA 194	2.8	1.3	198.5	36.0	19.0	17.9	2.0	88.0
19	Davis	1.0	1.0	192.0	26.5	5.9	14.5	2.0	80.0
13	Bossier	1.0	1.0	205.5	25.3	5.2	15.0	2.0	83.5
40	IGH 24	2.8	1.3	175.8	40.0	13.0	13.7	2.0	95.5
77	ICA L-124	2.0	1.3	202.8	24.0	11.7	15.9	2.0	92.0
78	ISRA/IRAT 44A/73	3.0	1.3	162.0	47.3	15.3	11.0	2.0	98.8
45	ICA L-109	2.8	1.3	182.5	57.5	11.2	9.7	2.0	74.8
79	71-38	1.5	1.3	179.8	43.5	9.0	10.0	2.0	60.0
	Grand mean	2.1	1.1	184.5	37.3	12.1	13.4	2.0	87.9
	Standard error of cultivar mean	0.4	0.2	12.4	5.7	1.5	0.7	0.0	4.1
	Coefficient of variation (%)	40.3	31.6	13.4	30.3	24.3	10.2	0.0	9.3
	5% LSD Cultivar means (*****=ns)	1.2	*****	35.2	16.1	4.2	2.0	*****	11.7

Table 92. Trial 82598, 1982

Country: CUBA
Region: MESO AMERICA

Latitude: 23°51'N
Longitude: 82°31'W

Zone: 7 Group: A
Elevation (m): 50

Site: ESTACION EXPERIMENTAL DE GRANOS
Cooperator(s): DR. FERNANDO FUNES, ING. ELIO MOSELEY MORE, ING. MANUEL IRANETA IRANETA, ING. LORENZO BARREIRO ARBEL

Date planted: September 6, 1983 Date harvested: November 28, 1983
Soil information: loam 7.6%, silt 13.4%. clay 79%, pH 6.4, latosolico hidratado
Fertilizer used (kg/ha): N 25.0, P 26.0, K 25.0
Total moisture (mm): 620
Number of irrigations: 5 (total amount 150 mm)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Nodule abund. 1	Nodule abund. 2	Nodule act. 1	Nodule act. 2	Plant ht. (cm)
9	Jupiter	4,809.6	39.0	94.0					88.9
2	UFV-1	3,956.7	41.3	90.8					60.8
19	Davis	3,742.1	37.5	84.3					42.0
76	SIATSA 194	3,637.4	40.0	91.5					94.8
79	71-38	3,636.9	38.3	91.3					57.4
46	Ecuador 2	3,511.9	34.3	96.0					76.5
77	ICA L-124	3,311.5	38.0	93.5					71.6
43	Alamo	3,244.3	37.5	92.0					72.0
39	IGH 23	3,190.1	35.3	95.5					95.8
44	Foster	3,039.1	39.5	79.5					42.8
40	IGH 24	2,968.3	48.0	96.3					100.8
89	Williams 82	2,957.9	27.5	82.3					68.9
64	ICA L-125	2,862.6	32.5	93.5					102.6
45	ICA L-109	2,694.9	37.5	91.8					85.6
78	ISRA/IRAT 44A/73	2,654.8	39.5	93.5					82.4
10	Improved Pelican	2,434.0	38.5	88.3					99.2
	Grand mean	3,290.8	37.8	90.9					77.6
	Standard error of cultivar mean	152.2	0.0	0.0					3.1
	Coefficient of variation (%)	9.3	0.0	0.0					7.9
	5% LSD Cultivar means (*****=ns)	433.5	0.0	0.0					8.7

Entry number	Cultivar	Lodging	Shattering	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germ.
9	Jupiter	3.0	1.0	136.0	31.0	16.9	22.0	1.0	
2	UFV-1	1.5	1.0	145.8	31.5	13.7	20.2	1.0	
19	Davis	1.0	1.0	143.8	24.0	7.8	21.4	1.8	
76	SIATSA 194	3.5	1.0	139.5	39.0	16.1	21.4	1.0	
79	71-38	3.3	1.0	152.0	43.3	15.6	17.5	1.0	
46	Ecuador 2	2.8	1.0	130.5	28.5	14.4	21.0	1.0	
77	ICA L-124	4.3	1.0	147.8	26.3	11.3	24.3	2.8	
43	Alamo	3.3	1.0	140.0	36.0	18.8	18.4	1.3	
39	IGH 23	4.0	1.0	131.8	34.8	13.9	21.3	1.0	
44	Foster	1.0	1.0	141.0	22.3	11.3	21.0	4.0	
40	IGH 24	3.8	1.0	137.3	33.8	15.7	20.5	1.0	
89	Williams 82	1.0	1.0	152.3	25.3	9.7	23.5	4.0	
64	ICA L-125	4.0	1.0	137.8	36.8	17.1	16.7	1.0	
45	ICA L-109	4.0	1.0	143.3	35.8	12.1	15.7	1.0	
78	ISRA/IRAT 44A/73	4.8	1.0	153.0	34.0	14.5	17.0	1.5	
10	Improved Pelican	4.0	1.0	152.3	31.0	17.0	16.5	1.0	
	Grand mean	3.1	1.0	142.7	32.1	14.1	19.9	1.6	
	Standard error of cultivar mean	0.3	0.0	6.6	3.4	1.6	1.0	0.3	
	Coefficient of variation (%)	18.9	0.0	9.2	21.4	22.7	10.1	43.4	
	5% LSD Cultivar means (*****=ns)	0.8	*****	*****	9.8	4.6	2.9	1.0	

Table 93. Trial 82844, 1982

Country: ITALY
Region: EUROPE

Latitude: 44°58°N
Longitude: 10°59'W

Zone: 13 Group: C
Elevation (m): 12

Site: QUISTELLO, MANTOVA
Cooperator(s): DR. C. CAVICCHIOLI, ENEA CASACCIA CRE-ROMA

Date planted: May 11, 1983 Date harvested: September 2, 1983
Soil information: loam 83%, silt 5,7%, clay 11.3%, pH 7.77
Fertilizer used (kg/ha): N 25.0, P 8.7, K 21.6
Total moisture (mm): 315
Number of irrigations: 2 (total amount 148 mm)

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Nodule abund. 1	Nodule abund. 2	Nodule act. 1	Nodule act. 2	Plant ht. (cm)
35	Crawford		59.0						
60	Kent		54.5						
69	Essex		85.0						
89	Williams 82	4,211.5	53.8	156.0					110.5
85	Pixie	4,072.0	53.0	160.3					67.4
84	Sparks	3,843.3	48.5	140.8					126.3
74	Pella	3,713.6	38.5	149.8					101.7
86	Fayette	3,581.3	52.3	157.8					116.5
73	Century	3,452.3 (3)	38.3	137.3					96.0 (3)
70	Hardin	3,049.0	36.5	125.0					101.5
88	Lakota	2,936.0	36.3	132.0					115.7
57	Corsoy 79	2,871.5	43.3	135.5					111.0
36	Evans	2,795.3	34.5	114.0					87.8
71	Hodgson 78	2,627.3	37.0	133.8					110.7
87	Clay	2,559.3	35.0	115.3					71.5
72	Amcor	2,510.3	39.8	136.8					111.6
	Grand mean	3,243.9	46.6	138.0					102.3
	Standard error of cultivar mean	859.1	1.5	15.2					19.2
	Coefficient of variation (%)	26.5	6.4	11.0					18.8
	5% LSD Cultivar means (*****=ns)	*****	4.3	*****					*****

Entry number	Cultivar	Lodging	Shattering	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germ.
35	Crawford								
60	Kent								
69	Essex								
89	Williams 82	1.5			46.5	24.3	27.9	1.0	
85	Pixie	1.8			40.7	17.6	24.9	1.5	
84	Sparks	3.0			43.3	29.8	24.6	1.3	
74	Pella	2.0			45.3	17.4	28.7	1.0	
86	Fayette	2.8			47.3	21.7	22.9	1.8	
73	Century	1.0			33.6 (3)	30.1 (3)	25.4 (3)	2.0	
70	Hardin	2.3			34.4	23.1	17.5	1.8	
88	Lakota	2.0			53.6	21.1	19.7	1.0	
57	Corsoy 79	2.5			54.6	18.0	18.0	1.0	
36	Evans	1.8			40.3	8.9	17.7	1.0	
71	Hodgson 78	2.8			30.7	17.2	22.1	1.5	
87	Clay	1.0			38.7	9.7	18.1	1.0	
72	Amcor	2.0			39.6	28.0	21.5	2.3	
	Grand mean	2.0			42.4	20.3	22.1	1.4	
	Standard error of cultivar mean	1.0			13.3	7.5	4.2	0.8	
	Coefficient of variation (%)	48.0			31.5	36.7	19.0	54.4	
	5% LSD Cultivar means (*****=ns)	*****			*****	*****	*****	*****	

Table 94. Trial 82553, 1982

Country: PERU
Region: SOUTH AMERICA

Latitude: 5°40'S
Longitude: 78°36'W

Zone: 1 Group: A
Elevation (m): 500

Site, HUARANGOPAMPA, BAGUA
Cooperator(s): ING. AMERICO CELADA BECERRA, ING. UBALDO ALCAYA MACEDA, ING. RODOLFO V. SACO

Date planted: October 3, 1982 Date harvested: January 3, 1983
Soil information: loam 13%, silt 37%, clay 50%, pH 7.9
Total moisture (mm): 203
Substituted cultivar: PR11-17-1-1

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Nodule abund. 1	Nodule abund. 2	Nodule act. 1	Nodule act. 2	Plant ht. (cm)
39	IGH 23	4,030.0	44.0	100.8	2.5	1.3	92.5	92.5	88.8
10	Improved Pelican	3,619.5	36.0	104.0	3.0	1.5	92.5	93.8	72.5
45	ICA L-109	3,515.3	44.0	116.0	2.0	1.8	98.8	97.5	79.0
77	ICA L-124	3,344.4	36.0	108.0	3.0	3.0	100.0	96.3	54.0
19	Davis	3,293.6	30.0	105.5	3.3	2.0	95.0	96.3	34.3
9	Jupiter	3,279.8	44.0	116.0	2.3	1.3	95.0	88.8	59.3
79	71-38	3,169.4	36.0	94.0	3.8	3.0	98.8	100.0	41.5
89	Williams 82	3,123.5	25.0	92.0	3.0	2.3	100.0	86.3	45.3
282	PR11-17-1-1	3,048.9	38.3	102.3	3.5	1.8	96.3	96.3	70.5
2	UFV-1	2,988.1	36.0	116.3	3.5	2.0	91.3	97.5	38.5
78	ISRA/IRAT 44A/73	2,963.1	36.0	110.0	1.3	1.0	93.8	92.5	55.5
40	IGH 24	2,956.8	44.0	94.0	2.5	2.0	93.8	93.8	66.3
43	Alamo	2,896.4	40.0	106.8	3.8	3.0	91.3	95.0	43.5
76	SIATSA 194	2,875.6	40.0	103.0	1.3	1.0	93.8	91.3	77.8
46	Ecuador 2	2,733.9	36.0	106.8	2.5	2.0	97.5	98.8	53.5
13	Bossier	2,429.7	25.0	103.0	3.8	2.8	97.5	90.0	33.8
	Grand mean	3,141.8	36.9	104.9	2.8	2.0	95.5	94.1	57.1
	Standard error of cultivar mean	199.0	0.2	2.2	0.3	0.2	2.3	2.6	3.4
	Coefficient of variation (%)	12.7	1.0	4.1	19.4	22.0	4.8	5.4	11.8
	5% LSD Cultivar means (*****=ns)	566.8	0.5	6.1	0.8	0.6	*****	7.3	9.6

Entry number	Cultivar	Lodging	Shattering	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germ.
39	IGH 23	2.5	1.0	206.0	42.3	14.3	19.5	2.0	
10	Improved Pelican	1.8	1.0	224.5	39.3	12.0	12.8	2.0	
45	ICA L-109	2.5	1.0	207.8	58.8	11.5	19.3	2.0	
77	ICA L-124	1.8	1.0	205.5	25.3	10.8	19.4	1.0	
19	Davis	1.0	1.0	237.0	20.8	7.0	19.0	2.0	
9	Jupiter	1.8	1.0	180.8	41.3	12.3	16.3	2.0	
79	71-38	1.0	1.0	183.3	51.3	6.0	11.9	3.0	
89	Williams 82	1.0	1.0	277.5	19.3	8.8	19.5	2.0	
282	PR11-17-1-1	2.0	1.0	139.5	32.3	10.5	19.0	2.0	
2	UFV-1	1.3	1.0	203.8	29.0	9.3	14.4	2.0	
78	ISRA/IRAT 44A/73	2.0	1.0	202.3	34.8	10.3	12.4	3.0	
40	IGH 24	1.8	1.0	206.5	56.5	10.0	14.4	3.0	
43	Alamo	1.5	1.0	186.8	30.0	8.8	13.9	2.0	
76	SIATSA 194	2.0	1.0	205.0	26.0	17.8	18.6	2.0	
46	Ecuador 2	1.3	1.0	196.0	34.5	13.3	13.9	2.0	
13	Bossier	1.0	1.0	216.0	23.8	6.0	16.6	4.0	
	Grand mean	1.6	1.0	204.9	35.3	10.5	16.3	2.3	
	Standard error of cultivar mean	0.2	0.0	14.5	4.4	1.0	0.2	0.0	
	Coefficient of variation (%)	14.9	0.0	14.1	24.8	19.2	1.9	0.0	
	5% LSD Cultivar means (*****=ns)	0.6	*****	41.2	12.5	2.9	0.5	0.0	

Table 95. Trial 82807, 1982

Country: TURKEY
Region: MIDDLE EAST

Latitude: 30°25'N
Longitude: 40°47'E

Zone: 7 Group: C
Elevation (m): 30

Site: ADAPAZARI
Cooperator(s): YASAR BILGIN, CEVDET NALCI

Date planted: April 12, 1982 Date harvested: September 6, 1982
Fertilizer used (kg/ha): N 32.0, P 17.6, K 83.0
Total moisture (mm): 262

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Nodule abund. 1	Nodule abund. 2	Nodule act. 1	Nodule act. 2	Plant ht. (cm)
86	Fayette	3,077.5	58.3	157.0	2.5	2.3	51.3	51.3	121.3
69	Essex	3,057.5	100.0	191.0	3.0	1.0 (3)	35.0	61.7 (3)	113.3 (3)
84	Sparks	3,037.5	54.5	157.0	2.3	1.3	38.8	62.5	129.5
35	Crawford	3,002.5	63.0	157.0	2.5	1.5	47.5	62.5	133.8
89	Williams 82	2,885.0	58.8	157.0	2.3	1.8	48.8	57.5	117.8
60	Kent	2,877.5	61.8	157.0	2.8	3.0	43.8	41.3	113.8
74	Pella	2,847.5	53.5	157.0	3.0	1.3	41.3	73.8	116.3
72	Amcor	2,835.0	55.0	144.0	2.0	1.0	43.8	61.3	122.5
57	Corsoy 79	2,775.0	55.0	137.5	2.5	2.5	48.8	40.0	101.3
73	Century	2,672.5	53.8	157.0	3.0	2.8	40.0	48.8	105.0
85	Pixie	2,667.5	60.5	157.0	2.3	1.8	50.0	61.3	77.5
88	Lakota	2,427.5	55.0	131.0	2.3	1.3	55.0	53.8	110.0
70	Hardin	2,390.0	53.8	131.0	3.0	2.3	37.5	53.8	86.3
71	Hodgson 78	2,307.5	52.5	131.0	1.8	2.0	48.8	52.5	93.8
36	Evans	2,287.5	50.0	131.0	2.8	2.8	43.8	35.0	73.8
87	Clay	1,642.5	50.0	131.0	2.8	2.5	46.3	40.0	65.0
	Grand mean	2,674.4	58.5	149.0	2.5	1.9	45.0	53.4	104.9
	Standard error of cultivar mean	143.2	1.0	2.4	.4	1.1	6.2	17.2	21.8
	Coefficient of variation (%)	10.7	3.3	3.3	29.7	57.1	27.7	32.1	20.7
	5% LSD Cultivar means (*****=ns)	407.9	2.7	6.9	*****	*****	*****	*****	*****

Entry number	Cultivar	Lodging	Shattering	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germ.
86	Fayette	1.5	1.0	219.5	30.0		21.2	4.8	95.3
69	Essex	1.0	1.0	277.0	36.3		17.5	5.0	95.3
84	Sparks	3.3	1.0	212.5	32.8		21.4	5.0	96.5
35	Crawford	2.0	1.0	194.8	34.5		20.1	5.0	96.3
89	Williams 82	1.8	1.0	228.3	31.0		21.1	5.0	95.8
60	Kent	1.0	1.0	215.0	36.0		22.1	4.8	97.3
74	Pella	1.3	1.0	200.8	33.8		23.9	5.0	93.3
72	Amcor	1.3 (3)	1.0 (3)	243.8	37.8		18.4	4.8	92.3
57	Corsoy 79	1.0	1.0	208.3	62.3		17.6	5.0	88.5
73	Century	2.0	1.0	206.8	35.0		20.3	4.0	95.0
85	Pixie	1.0	1.0	207.0	35.8		20.2	5.0	95.0
88	Lakota	1.0	1.0	232.8	56.8		15.3	4.0	86.5
70	Hardin	1.0	1.0	269.5	37.8		16.5	4.8	93.8
71	Hodgson 78	1.0	1.0	270.3	34.8		17.7	5.0	93.0
36	Evans	1.0	1.0	274.0	34.3		16.9	5.0	80.5
87	Clay	1.0	1.0	247.3	30.3		15.8	4.0	78.5
	Grand mean	1.4	1.0	231.7	37.4		19.1	4.8	92.0
	Standard error of cultivar mean	.9	0.0	19.3	4.5		.5	.1	2.6
	Coefficient of variation (%)	65.6	0.0	16.7	23.9		5.3	5.1	5.6
	5% LSD Cultivar means (*****=ns)	*****	0.0	55.0	12.7		1.4	.3	7.3

Table 96. Trial 82599, 1982

Country: ZAIRE
Region: AFRICA

Latitude: 6°45'S
Longitude: 23°57'E

Zone: 2 Group: A
Elevation (m): 780

Site: INERA STATION, GANDAJIKA
Cooperator(s): DR. QUYEN NGUYEN, IR. MUSSANA MUSSUMBU KEITENZOQU

Date planted: September 29, 1983 Date harvested: January 5, 1984
Soil information: pH 6.2
Total moisture (mm): 827

Entry number	Cultivar	Yield (kg/ha)	Days to flower	Days to maturity	Nodule abund. 1	Nodule abund. 2	Nodule act. 1	Nodule act. 2	Plant ht. (cm)
40	IGH 24	1,522.4	51.0	126.3	4.3	4.0	65.0	43.8	57.0
9	Jupiter	1,472.8	48.0	123.0	4.3	3.5	75.0	61.3	46.8
39	IGH 23	1,411.5	48.5	122.8	4.0	3.8	100.0	76.3	64.8
64	ICA L-125	1,327.8	31.3	121.8	3.8	3.0	100.0	92.5	77.0
45	ICA L-109	1,228.2	49.5	124.3	4.0	4.0	70.0	75.0	63.3
77	ICA L-124	1,161.9	33.3	106.5	4.0	4.0	86.3	87.5	36.8
2	UFV-1	1,119.0	35.0	113.8	4.3	3.5	60.0	57.5	24.0
43	Alamo	983.5	49.5	114.0	4.5	3.8	45.0	73.8	34.5
78	ISRA/IRAT 44A/73	951.0	42.5	109.5	3.8	3.5	100.0	95.0	47.3
79	71-38	814.3	32.5	109.5	4.0	4.0	87.5	67.5	19.0
76	SIATSA 194	776.8	40.5	116.8	3.3	3.0	97.5	90.0	78.3
46	Ecuador 2	711.0	38.8	114.0	3.5	3.8	85.0	76.3	39.5
19	Davis	541.4	29.5	104.5	4.3	3.5	60.0	75.0	19.8
10	Improved Pelican	355.1	33.5	102.3	4.0	4.0	98.8	63.8	51.0
89	Williams 82	273.8	26.8	91.3	4.0	3.8	61.3	65.0	32.8
44	Foster	238.8	26.5	100.5	4.0	3.8	57.5	56.3	15.5
	Grand mean	930.6	38.5	112.5	4.0	3.7	78.1	72.3	44.2
	Standard error of cultivar mean	133.9	1.3	3.4	0.2	0.2	14.2	9.1	3.0
	Coefficient of variation (%)	28.8	6.5	6.1	11.1	11.9	36.3	25.1	13.7
	5% LSD Cultivar means (*****=ns)	381.5	3.6	9.8	0.6	0.6	*****	25.8	8.6

Entry number	Cultivar	Lodging	Shattering	Plants harvested	Pods/ plant	Pod ht. (cm)	100 Seed wt. (g)	Quality of Seed	Percent Germ.
40	IGH 24	2.5	1.0	127.5	60.0	12.5	16.6	2.0	
9	Jupiter	2.0	1.0	65.3	52.5	8.5	21.5	2.0	
39	IGH 23	1.8	1.0	143.0	37.3	16.0	19.4	3.0	
64	ICA L-125	2.0	1.0	124.3	53.3	10.8	16.3	2.8	
45	ICA L-109	1.3	1.0	142.3	51.0	10.8	12.1	2.5	
77	ICA L-124	1.0	1.0	120.0	32.5	6.5	23.8	3.5	
2	UFV-1	1.0	1.0	122.3	31.5	5.3	18.9	3.0	
43	Alamo	1.0	1.0	90.3	40.0	8.5	17.6	2.8	
78	ISRA/IRAT 44A/73	1.0	1.3	138.5	37.8	12.5	16.8	3.5	
79	71-38	1.0	1.0	108.3	26.3	3.8	14.9	3.3	
76	SIATSA 194	2.3	1.0	135.3	61.8	14.0	22.1	3.5	
46	Ecuador 2	1.3	1.0	86.0	44.3	5.8	19.4	2.5	
19	Davis	1.0	1.0	159.8	23.8	3.5	21.1	3.8	
10	Improved Pelican	1.0	1.0	142.8	46.0	8.3	17.8	3.3	
89	Williams 82	1.5	1.0	148.3	23.3	3.5	19.6	4.0	
44	Foster	1.0	1.0	139.3	20.5	2.5	20.5	4.3	
	Grand mean	1.4	1.0	124.6	40.1	8.3	18.6	3.1	
	Standard error of cultivar mean	0.2	0.1	9.0	4.3	0.7	0.7	0.4	
	Coefficient of variation (%)	33.0	12.3	14.4	21.3	17.4	7.6	23.1	
	5% LSD Cultivar means (*****=ns)	0.7	*****	25.6	12.1	2.1	2.0	1.0	

Abbreviations and Acronyms used in this Report

AES	Agriculture Experiment Station
AVRDC	Asian Vegetable Research and Development Center (Taiwan, China)
BARI	Bangladesh Agricultural Research Institute (Bangladesh)
BPI	Botanique Philippines, Inc. (Philippines)
CENTA	Centro Nacional de Tecnología Agropecuaria (El Salvador)
CIAGON	Centro de Investigaciones Agrícolas del Golfo Norte (Mexico)
CIAM	Centre d'Introduction et d'Adaptation et Multiplication, Matérial Vegetal, Vivrier et Fruitier (Gabon)
CNRA	Centre National de la Recherche Agronomiques (Senegal)
CORGEPAI	Corporación Gestora del Proyecto Abapo-Izozog (Bolivia)
EMCIP	Egyptian Major Cereals Improvement Project (Egypt)
FAO	Food and Agriculture Organization
IAC	Instituto Agronómico, Campinas (Brazil)
IBTA	Instituto Boliviano de Tecnología Agropecuaria (Bolivia)
ICA	Instituto Colombiano Agropecuario (Colombia)
ICTA	Instituto de Ciencias y Tecnología Agrícola (Guatemala)
IDCI	Institut de Developpement des Cultures Industrielles (Algeria)
INERA	Institut National Pour l'Etude et la Recherche Agronomiques (Zaire)
INIA, Mexico	Instituto Nacional de Investigaciones Agrícolas (Mexico)
INIA, Portugal	Instituto Nacional de Investigacao Agraria (Portugal)
INIAP	Instituto Nacional de Investigaciones Apropecuarias (Ecuador)
INTA	Instituto Nacional de Tecnología Agropecuaria (Argentina)
INTSOY	International Soybean Program (USA)
IRA	Institut de la Recherche Agronomique (Cameroon)
IRAT	Institut de Recherches Agronomiques Tropicales et des Cultures Vivrières (France)
IRHO	Institut de Recherches pour les Huiles et Oléagineux (France)
IRRI	International Rice Research Institute (Philippines)
ISAR	Institut des Sciences Agronomiques du Rwanda (Rwanda)
ISRA	Institut Senegalais de la Recherches Agricoles (Senegal)
ISVEX	International Soybean Variety Evaluation Experiment
MAMISOA	Malagasy Mukarakara Soja Afovoany Andrefana (Madagascar)
NARC	National Agriculture Research Center (Pakistan)
OARDC	Ohio Agricultural Research and Development Center (USA)
OCEPAR	Organizacao das Cooperativas do Estado do Parana (Brazil)
ORD	Office of Rural Development (Korea)
PNUD	Programa de las Naciones Unidas para el Desarrollo
SIATSA	Servicios para la Investigación Agrícola Tropical, S.A. (Honduras)
SRCVO	Section de Recherche sur les Cultures Vivrières et Oléagineux (Mali)
UNDP	United Nations Development Programme
USAID	United States Agency for International Development (USA)
USDA	United States Department of Agriculture (USA)

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