

Characterization of Released Groundnut (*Arachis hypogaea* L.) Cultivars

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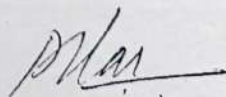
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FOREWORD

The Indian economy is primarily dependent on agricultural production. A continuous supply of reliable and good quality seed is thus a critical requirement. The requirement of appropriate and precise descriptions of varieties on morphological and physiological traits of a crop has also assumed critical importance for their precise identification for release and notification, particularly in the changing scenario towards protection of plant varieties. The Indian Parliament has already passed the Protection of Plant Varieties and Farmers' Rights Act in 2001, which will require precise description of varieties in terms of Distinctness (D), Uniformity (U) and Stability (S). Such descriptions of already notified varieties shall be helpful in deciding reference materials out of them for testing newly developed varieties.

The cultivated groundnut, which is one of the major oilseed crops in the country, has more than 100 improved varieties under cultivation. These varieties were initially characterized for a few traits at the time of release and notification. The authors of this Compendium have done a stupendous task in collecting 69 varieties from originating Centres, and characterizing them in details for various important morphological and physiological traits. Their initiative is indeed laudable. Obviously, the Compendium will be of immense use for groundnut breeders, seed certification agencies, extension workers and all others concerned with quality of groundnut seed.

It will also inspire the breeders to generate detailed information on indexing of new varieties. Naturally, the authors deserve congratulations for its timely completion and publication. At the same time, the task has not finished, for there is still a requirement of efforts in at least the remaining important varieties in cultivation and commerce, besides the need for continuity in variety testing research. Once, again, I congratulate the authors for this great effort.



(MANGALA RAI)

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INTRODUCTION

Groundnut (*Arachis hypogaea* L.) is cultivated in more than 100 countries spread across 40°N and 40°S latitudes in about 24 m ha with a total production of about 31 m ton and productivity of 1304 kg ha⁻¹. The nuts are used either for direct edible purposes mostly in the western countries or for extraction of oil as in India and most Asian countries. It was introduced into India in the eastern coastal areas of the erstwhile Madras Province in the middle of 19th century (Seshadri, 1962) and assumed agricultural importance in the late 19th and early 20th centuries. Groundnut is now the premier oilseed crop of India and shares about 35 % of the area and 40 % of the production of the oilseed crops. It is cultivated in India in an area of about 7.6 m ha producing roughly 7.8 m ton (nuts in shell) with a productivity of about 1000 kg per ha. India is the world's second largest producer of groundnut. Distribution of groundnut cultivation in India is schematically, represented in Map1.

Based on growth habit and branching pattern, cultivated groundnut has been classified into subspecies and varieties. According to the latest classification (Krapovickas and Gregory, 1994), the cultivated forms in India are grouped as follows.

Family : Fabaceae (*Leguminosae*)

Tribe : *Aeschynomeneae*

Sub-Tribe : *Stylosanthinae*

Genus : *Arachis*

Species : *hypogaea*

Subspecies	: <i>hypogaea</i>
Varieties	: <i>hypogaea</i> , Habit types: Virginia bunch (HYB), Virginia runner (HYR)
Subspecies	: <i>fastigiata</i>
Varieties	: <i>fastigiata</i> , Habit type: Valencia (FST), <i>Vulgaris</i> , Habit type: Spanish (VUL)

The available genetic resources of cultivated groundnut show a great deal of genotypic variation for yield and its related traits, which are of paramount importance and can be exploited for productivity enhancement. As a result of concerted research efforts under the erstwhile Directorate of Oilseeds Research (DOR) and subsequently by the All India Coordinated Research Project on Groundnut (AICRP-G) quite a large number of improved varieties have been released at the central as well as state level

for general cultivation. Since inception of the All India Coordinated Research Project on Oilseeds (AICORPO) in 1967 and subsequently separated as AICRP-G in 1987, as many as 95 varieties have been released till 2000. These cultivars were evolved through various breeding and selection process (Table 1). According to the habit group the released cultivars were categorized as 23 of HYB types, 16 of HYR types, 2 of FST types and 44 of VUL types which includes cultivars released at the state level.

Table 1. Number of groundnut cultivars released in India

Year	Botanical Group				Developed through				
	VUL	FST	HYB	HYR	Int.	Sel.	Hyn.	Mut.	Total
1961-70	5	—	3	—	—	5	2	1	8
1971-80	9	2	5	5	—	11	7	3	21
1981-90	19	—	5	6	1	10	17	2	30
1991-00	21	—	10	5	—	4	32	—	36
Total	54	2	23	16	1	30	58	6	95

Int. = introduction, Sel. = selection, Hyn. = hybridization, Mut.= mutation

It is evident that development of spanish types has received the major thrust due to its synchronous maturity and shorter duration. Although, development of cultivars for higher yield initially received more attention of breeders but some cultivars are coupled with tolerance for some of the biotic stress were also developed. To name some of them are J 11, Jyoti, Dh 3-30, TG 3, Girnar 1, TAG 24, Tirupati 2, ICGV 86590, ICGV 86325, ALR 1 and ALR 2. However, in the present day breeding programmes, breeding for stress resistance have been receiving much more thrust than the past.

The new cultivars, which have been released for cultivation so far, have not yet been extensively described for various agro-morphological traits. The International Union for the Protection of New Varieties of Plants (UPOV) has set a basic set of characters for testing the distinctness between cultivars. This set is in fact more or less an adaptation of the groundnut descriptors formulated by the International Plant Genetic Resources Institute (IPGRI) and the International Crops Research Institute Semi-arid Tropics (ICRISAT). In this compendium, the characterization of released cultivars has been based on the Descriptors for Groundnut by IPGRI/ICRISAT, which include most of the sets given by UPOV. The aim of this attempt is to facilitate the user agencies to identify the cultivars and also to assist the breeders in exploiting the quality attributes of these cultivars for further crop improvement programme. This volume is expected to be useful to the Seed Certification Agencies also in varietal identification.

and in maintaining its genetic purity in the seed production chains. It is likely that the quantitative characters described were based on the experiments in Junagadh, may vary at other contrasting locations but the chances of variation in the qualitative traits are low. It would be highly desirable that at the time of identification of cultivar decision should be based on as many as traits possible otherwise it may lead to confusion.

Characterization of groundnut cultivars

The commercial groundnut cultivars developed in India were evaluated under the agro-climatic environments of Junagadh in the state of Gujarat situated at 21.31°N latitude, 70.36°E longitude and an altitude of 61 m. The seeds of 56 released groundnut cultivars were assembled in the pre-rainy season of 1995 from various AICRPG Centres, Institution/Organization dealing with the crop. In 1996, sixteen more cultivars were assembled from different sources. Fifty-six cultivars were grown during kharif 1995, and 69 cultivars, including the entries of previous year in the kharif seasons of 1996 and 1997. The zone of adaptation and the states for which these cultivars have been released are presented in Annexure I. The cultivars were scored for various agro-morphological traits. The soil of Junagadh region is of medium-black (vertisol) type and suitable for groundnut cultivation. The rainfall generally was well distributed, the annual rainfall ranged from 505 mm to 856 mm during the period of study.

The cultivars were planted in a randomized blocks design with three replications. The cultivars of different habit forms were randomized within the block and planted at the onset of monsoon. Each cultivar was grown in plots of three rows, each row being of 4 m length. In 1995 and 1996, the crops were immediately irrigated after sowing since there was deficiency of moisture in the soil. Recommended agronomic practices were followed and the crop was irrigated whenever required. The crop was protected against insects by spraying insecticides. No spray of fungicide was given as the cultivars were scored for their reaction to major foliar diseases viz., early leaf spot, rust and late leaf spot.

The details of the experiment are as follows. It may be noted that plant spacing was increased in 1997 for better visualization of individual plants. The detailed meteorological data are given in Annexure-II.

No.	YEAR	HYB	HYR	VUL	FST	Sowing	Spacing (cm ²)	Rainfall	Rainy days
1.	1995	13	14	28	1	12/7/95	60X10	505	38
2.	1996	16	16	35	2	09/7/96	60X10	731	68
3.	1997	16	16	35	2	30/6/97	75X10	856	50

The collection was scored for different parameters at various phenophases as suggested in the Descriptors for Groundnut (1992) collectively published by the IBPGR/ICRISAT. A consolidated list of descriptors and descriptor states scored on the collection is given below.

The qualitative traits were mainly grouped under the categories: stem, inflorescence and flower, leaflet, peg, pod, seed and reaction to diseases. Organoleptic and nutritional quality traits measured were oil content (%) and protein content (%). The oleic and linoleic acid ratio were estimated in a few cultivars.

Qualitative traits

Descriptors		Descriptor states
A. Stem :		
*1	Branching pattern	Alternate, sequential with flowers on main axis (n), irregular with flowers on n, irregular without flowers on n (Fig. 1)
2	Hairiness	Glabrous, sub-glabrous: hairs in one or two rows, moderately hairy with three or four rows along the main stem
3	Pigmentation	Presence or absence of purple pigmentation
*4	Growth habit	Decumbent-1, decumbent-2, decumbent-3, erect (Fig. 2)
B. Inflorescence and flower:		
5	Type of inflorescence	Simple, compound (multiple pegs in a node)
#6	Standard petal colour	Colour of sides of standard petal of fresh fully opened flower (orange: 5 A 7, dark orange: 5 B A).
C. Leaflet		
#7	Colour	Light green (29 B C), green (28 D 8), dark green (28 B F)
*8	Shape	Oblong, lanceolate (Fig. 3)
*9	Tip	Obtuse, acute (Fig. 3)
10	Surface	Almost glabrous, almost glabrous above and hairs below, almost glabrous above and hairs and or bristles below
D. Peg		
11	Pigmentation	Presence or absence of purple pigmentation

Descriptors		Descriptor states
E. Pod		
*12	Beak	Absent, slight, moderate, prominent (Fig.4 a)
*13	Constriction	None, slight, moderate, deep (Fig.4 b)
*14	Reticulation	None, slight, moderate, prominent (Fig.4 c)
15	Size	Small, medium, bold
16	Shell thickness	Thin, moderate, thick
F. Seed		
17	Seed colour	One colour, variegated
18	Primary seed colour	Rose, salmon, light red, red, dark red,
19	Secondary seed colour	Blotched, flecks of colour, striped
G.Reaction to diseases		
20	Early leaf spot	Very low, low, intermediate, high, very high
21	Rust	Very low, low, intermediate, high, very high
22	Late leaf spot	Very low, low, intermediate, high, very high

* The illustrations have been given as figures

The distinctive numbers of colours as in Methuen Colour Chart are indicated in the parenthesis

Quality traits

Descriptors		Descriptor states
1	Oil content	Percentage of oil in undefatted kernel
2	Protein content	Percentage of protein in undefatted kernel
3	O/L ratio	Ratio of oleic/ linoleic fatty acids

Quantitative traits (Mean and range)

Descriptors		Descriptor states
1	Days to germination	Number of days to 50 % field emergence
2	Days to initial flowering	Number of days to initial flowering from the date of sowing
3	Days to 50 % flowering	Number of days for flowering in 50 % of plants from the date of sowing
4	Days to maturity	Number of days from the date of sowing to maturity
5	Main axis height (cm)	Mean of height of main axis of five plants at maturity
6	Length of n+1 branches (cm)	Mean length of n+1 measured from main axis to the tip of five plants
7	No. of nodes on n	Mean number of nodes present on the main axis of five plants

	Descriptors	Descriptor states
8	No. of aerial pegs	Mean number of aerial pegs present on all the branches of five plants
9	No. of n+1	Mean number of primary branches in five plants
10	No. of n+2	Mean number of secondary branches in five plants
11	No. of branches	Mean of total number of branches in five plants
12	Leaflet length (cm)	Length of fourth leaflet of main axis, mean of 10 leaflets from different plants
13	Leaflet width (cm)	Width of fourth leaflet of main axis, mean of 10 leaflets from different plants
14	Leaflet length/width	Length/width of mean values of leaflet length and leaflet width
15	Plant spread (cm)	Measured at the widest point, mean of three plants at 70 days after sowing
16	Immature pods/ plant	Mean number of immature pods present at the time of harvest in five plants
17	Mature pods/ plant	Mean number of mature pods present at the time of harvest in five plants
18	Pod bearing plants (%)	Percentage of plants bearing pods
19	Pod mass (g/plant)	Weight of dry and mature pods
20	Pod yield m ² (g)	The mature dry pods calculated per m ²
21	100 pod mass (g)	Weight of 100 pods selected at random
22	One seeded pods (%)	Percentage of one-seeded pods from a random sample of 100 pods
23	Two seeded pods (%)	Percentage of two-seeded pods from a random sample of 100 pods
24	Three seeded pods (%)	Percentage of three-seeded pods from a random sample of 100 pods
25	Pod length (mm)	Mean of 10 mature pods
26	Pod width (mm)	Mean of 10 mature pods at the widest point
27	Seed length (mm)	Mean of 10 mature seeds
28	Seed width (mm)	Mean of 10 mature seeds at the widest point
29	Shelling outturn (%)	(Mature dry seeds/total weight of pod sample) X 100
30	Sound mature seeds (%)	(Mature dry seeds/total weight of seeds) X 100
31	Hundred seed mass (g)	Weight of 100 marketable random seeds

The traits recorded on plot basis were, days to germination, initial flowering, 50 % flowering and maturity, percentage of pod bearing plants, pod yield (g m^{-2}). The traits leaflet length(cm), leaflet width(cm), leaflet length/width ratio, 100-pod mass (g), number of one seeded pods (%), number of two seeded pods (%), number of three seeded pods (%), pod length (mm), pod width (mm), seed length (mm), seed width (mm), shelling out-turn (%), sound mature seeds(%), hundred seed mass (g) were based on sampling in three replications.

The number of primary and secondary branches was recorded separately in *ssp. hypogaea* cultivars whereas the total number of branches was recorded in the cultivars belonging to the *ssp. fastigiata*.

Arrangement of information :

The cultivars have been arranged in the alphabetical order under one chapter each for each habit form, virginia bunch, virginia runner, spanish and valencia. One sheet has been given for each cultivar-the first page of the sheet shows the information on qualitative traits and the obverse page shows the information on quantitative traits.

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Virginia Bunch

Name of the cultivar : ALR 1

Passport information

Botanical status :	<i>A. hypogaea ssp. hypogaea var. hypogaea</i>		
Year of release :	1987	Botanical type :	Virginia bunch
Originating centre :	Agricultural Research Station, T.N.A.U., Aliyarnagar		
Pedigree :	Pol 2 X PPG 4		

Qualitative traits

Stem

Branching pattern :	Alternate	Hairiness:	Sub-glabrous
Stem pigmentation :	Absent	Growth habit :	Erect

Inflorescence and flower

Type of inflorescence :	Compound	Standard petal colour:	Orange
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Leaflet

Colour :	Green	Shape :	Oblong	Tip :	Obtuse
Surface :	Glabrous above and hairs below				

Peg

Peg pigmentation :	Present
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Pod

Beak :	Moderate	Constriction :	Slight	Reticulation :	Slight
Size :	Medium	Shell thickness :	Thick		

Seed

Seed colour :	One colour	Primary seed colour :	Red
Secondary seed colour :	—	Seed shape :	Fusiform

Resistance to diseases

Early leaf spot :	High
Rust :	High
Late leaf spot :	High

Quality traits

Oil content :	52.0 %	Protein content :	25.1 %
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Quantitative traits (Mean and Range of two years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	—	—	6	—	6	—	6.0	—
Days to initial flowering	—	—	26	—	25	—	25.5	—
Days to 50 % flowering	—	—	29	—	28	—	28.5	—
Days to maturity	—	—	118	116-120	127	126-128	123	118-128
Main axis height (cm)	—	—	23.0	19.7-26.3	31.2	27.0-33.6	27.1	19.7-33.6
Length of n+1	—	—	28.7	27.3-30.3	40.2	36.8-43.6	34.5	27.3-43.6
No. of nodes on n	—	—	18.0	17.7-18.3	15.7	13.0-20.0	16.9	13.0-20.0
No. of aerial pegs	—	—	19.5	10.5-22.3	14.0	12.2-15.8	16.8	10.5-22.3
No. of n+1	—	—	5.0	4.3-5.7	5.0	—	5.0	4.3-5.7
No. of n+2	—	—	13.3	9.7-17.0	10.9	8.4-15.2	12.1	8.4-17.0
Leaflet length (cm)	—	—	4.7	4.1-5.7	5.6	4.4-6.0	5.2	4.1-6.0
Leaflet width (cm)	—	—	1.8	1.6-1.9	2.2	1.7-2.4	2.0	1.6-2.4
Leaflet Length/Width	—	—	2.6	—	2.5	—	2.6	—
Plant spread (cm)	—	—	55.3	52.0-59.0	55.3	49.0-60.0	55.3	49.0-60.0
Immature pods/ plant	—	—	9.3	6.0-12.0	3.5	2.6-4.0	6.4	2.6-12.0
Mature pods/ plant	—	—	6.0	3.0-9.0	11.9	10.0-14.0	9.0	3.0-14.0
Pod bearing plants (%)	—	—	95.8	88.0-100	100	—	97.9	88.0-100
Pod mass(g/plant)	—	—	5.4	4.1-6.6	13.2	11.6-14.5	9.3	4.1-14.5
Pod yield /m ² (g)	—	—	144	127-169	499	348-611	322	127-611
100 pod mass (g)	—	—	63.3	59.0-66.0	95.7	91.0-104	79.5	59.0-104
One-seeded pods(%)	—	—	21.0	16.0-25.0	24.0	20.0-31.0	22.5	16.0-31.0
Two-seeded pods(%)	—	—	79.0	75.0-84.0	76.0	69.0-80.0	77.5	69.0-84.0
Three-seeded pods(%)	—	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	—	—	24.8	23.0-26.5	25.7	25.0-27.0	25.3	23.0-27.0
Pod width (mm)	—	—	12.4	12.0-13.2	12.0	11.0-13.0	12.2	11.0-13.2
Seed length (mm)	—	—	11.5	10.5-13.0	11.2	11.0-11.5	11.4	10.5-13.0
Seed width (mm)	—	—	7.5	7.0-8.0	7.0	—	7.3	7.0-8.0
Shelling outturn (%)	—	—	63.3	60.3-69.0	69.3	66.3-76.4	66.3	60.3-76.4
Sound mature seeds (%)	—	—	87.4	84.3-90.8	92.8	88.0-95.0	90.1	84.3-95.0
Hundred seed mass (g)	—	—	44.3	42.0-47.0	46.7	42.0-52.0	45.5	42.0-52.0

Prominent features of the cultivar:

1. Red coloured testa

Name of the cultivar : B 95

Passport information	
Botanical status :	<i>A. hypogaea</i> ssp. <i>hypogaea</i> var. <i>hypogaea</i>
Year of release :	1993
Originating centre :	Mahatma Phule Agricultural University, Rahuri
Pedigree :	M 13 X Shulamith

Qualitative traits	
Stem	
Branching pattern :	Alternate
Stem pigmentation :	Absent
Hairiness:	Sub-glabrous
Growth habit :	Erect
Inflorescence and flower	
Type of inflorescence :	Compound
Standard petal colour:	Dark Orange
Leaflet	
Colour :	Dark Green
Shape :	Lanceolate
Tip :	Acute
Surface :	Glabrous above and hairs below
Peg	
Peg pigmentation :	Absent
Pod	
Beak :	Absent
Constriction :	None
Size :	Medium
Shell thickness :	Thin
Seed	
Seed colour :	One colour
Primary seed colour :	Rose
Secondary seed colour :	—
Seed shape :	Fusiform
Resistance to diseases	
Early leaf spot :	Intermediate
Rust :	Intermediate
Late leaf spot :	Intermediate
Quality traits	
Oil content :	50.0 %
Protein content :	21.7 %

Quantitative traits (Mean and Range of two years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	—	—	7	—	6	—	6.5	—
Days to initial flowering	—	—	25	—	18	—	21.5	—
Days to 50 % flowering	—	—	28	—	21	—	24.5	—
Days to maturity	—	—	106	105-108	106	103-108	106	103-108
Main axis height (cm)	—	—	24.5	24.0-25.0	29.5	28.4-30.2	27.0	24.0-30.2
Length of n+1	—	—	30.7	29.3-32.0	36.8	34.2-38.4	33.8	29.3-38.4
No. of nodes on n	—	—	14.3	13.3-15.3	13.9	11.8-17.4	14.1	11.8-17.4
No. of aerial pegs	—	—	10.6	5.7-15.7	10.1	7.8-11.6	10.4	5.7-15.7
No. of n+1	—	—	5.3	5.0-5.7	4.5	4.4-4.6	4.9	4.4-5.7
No. of n+2	—	—	15.7	14.3-17.0	7.8	4.4-10.4	11.8	4.4-17.0
Leaflet length (cm)	—	—	5.5	4.6-6.2	6.8	4.6-7.4	6.2	4.6-7.4
Leaflet width (cm)	—	—	1.8	1.5-2.1	2.5	1.7-2.7	2.2	1.5-2.7
Leaflet Length/Width	—	—	3.1	—	2.7	—	2.9	—
Plant spread (cm)	—	—	48.0	41.0-52.0	58.3	57.0-60.0	53.2	41.0-60.0
Immature pods/ plant	—	—	3.0	2.0-4.0	1.9	1.6-2.6	2.5	1.6-4.0
Mature pods/ plant	—	—	2.0	—	6.0	4.2-8.0	4.0	2.0-8.0
Pod bearing plants (%)	—	—	98.9	97.0-100	99.3	98.0-100	99.1	97.0-100
Pod mass (g)/plant	—	—	5.6	4.3-6.6	7.1	6.8-7.7	6.4	4.3-7.7
Pod yield /m ² (g)	—	—	153	128-168	331	276-383	242	128-383
100 pod mass (g)	—	—	62.7	58.0-67.0	66.0	63.0-71.0	64.4	58.0-71.0
% One-seeded pods	—	—	22.0	15.0-30.0	18.0	12.0-25.0	20.0	12.0-30.0
% Two-seeded pods	—	—	78.0	70.0-85.0	82.0	75.0-88.0	80.0	70.0-88.0
% Three-seeded pods	—	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	—	—	19.8	19.5-20.0	21.2	21.0-22.0	20.5	19.5-22.0
Pod width (mm)	—	—	10.6	10.0-11.2	11.0	10.0-12.0	10.8	10.0-12.0
Seed length (mm)	—	—	10.2	9.5-11.0	11.0	10.5-11.5	10.6	9.5-11.5
Seed width (mm)	—	—	7.1	7.0-7.2	7.8	7.0-8.0	7.5	7.0-8.0
Shelling outturn (%)	—	—	70.3	68.7-72.4	68.4	61.9-73.0	69.4	61.9-73.0
Sound mature seeds (%)	—	—	87.6	84.5-90.5	93.4	91.0-96.0	90.5	84.5-96.0
Hundred seed mass (g)	—	—	31.0	29.0-35.0	40.0	36.0-43.0	35.5	29.0-43.0

Name of the cultivar : BAU 13

Passport information	
Botanical status :	<i>A. hypogaea</i> ssp. <i>hypogaea</i> var. <i>hypogaea</i>
Year of release :	1993
Botanical type :	Virginia bunch
Originating centre :	Birsa Agricultural University, Kanke
Pedigree :	BAU 6 X M 13

Qualitative traits	
Stem	
Branching pattern :	Alternate
Hairiness:	Sub-glabrous
Stem pigmentation :	Absent
Growth habit :	Erect
Inflorescence and flower	
Type of inflorescence:	Compound
Standard petal colour:	Dark orange
Leaflet	
Colour :	Green
Shape :	Lanceolate
Tip :	Acute
Surface :	Glabrous above and hairs below
Peg	
Peg pigmentation :	Present
Pod	
Beak :	Moderate
Constriction :	Moderate
Reticulation :	Prominent
Size :	Bold
Shell thickness :	Thick
Seed	
Seed colour :	One colour
Primary seed colour :	Red
Secondary seed colour :	—
Seed shape :	Spheroidal
Resistance to diseases	
Early leaf spot :	Intermediate
Rust :	Intermediate
Late leaf spot :	Intermediate
Quality traits	
Oil content :	50.1%
Protein content :	23.3 %

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	6	—	6	—	6.0	—
Days to initial flowering	27	—	27	—	24	—	26.0	—
Days to 50 % flowering	29	—	33	—	27	—	29.7	—
Days to maturity	123	—	117	115-120	127	126-127	122	115-127
Main axis height (cm)	28.5	27.0-29.8	27.9	26.0-29.0	31.5	28.8-33.6	29.3	26.0-33.6
Length of n+1	31.7	30.4-33.2	35.1	32.3-37.7	41.3	35.2-45.2	36.0	30.4-45.2
No. of nodes on n	14.2	12.0-16.0	16.9	15.7-18.0	17.1	13.8-19.6	16.1	12.0-19.6
No. of aerial pegs	8.2	5.8-9.8	13.4	7.3-21.0	15.2	10.8-22.2	12.3	5.8-22.2
No. of n+1	4.7	3.2-5.8	5.2	4.7-5.7	4.7	4.6-5.0	4.9	3.2-5.8
No. of n+2	12.1	10.2-13.6	12.8	7.0-16.3	11.7	8.8-13.6	12.2	7.0-16.3
Leaflet length (cm)	4.1	3.4-4.9	5.0	4.0-5.7	5.0	3.9-6.0	4.7	3.4-6.0
Leaflet width (cm)	1.5	1.3-1.8	2.2	1.8-2.7	2.2	1.8-2.5	2.0	1.3-2.7
Leaflet Length/Width	2.8	—	2.3	—	2.3	—	2.5	—
Plant spread (cm)	43.0	39.0-46.0	47.7	40.0-56.0	53.0	51.0-56.0	47.9	39.0-56.0
Immature pods/ plant	1.5	0.2-3.4	4.0	1.0-6.0	2.9	2.6-3.4	2.8	0.2-6.0
Mature pods/ plant	3.9	3.3-4.6	4.0	1.0-11.0	4.2	3.2-5.6	4.0	1.0-11.0
Pod bearing plants (%)	89.8	86.0-96.0	100	—	100	—	96.6	86.0-100
Pod mass (g)/plant	5.1	4.8-5.3	6.0	5.1-6.8	9.2	7.4-10.2	6.8	4.8-10.2
Pod yield /m ² (g)	233	206-247	182	157-216	282	259-307	232	157-307
100 pod mass (g)	110	—	120	106-134	137	130-144	122	106-144
% One-seeded pods	26.0	20.0-30.0	24.0	22.0-26	39.0	32.0-45.0	29.7	20.0-45.0
% Two-seeded pods	74.0	70.0-80.0	76.0	74.0-78.0	61.0	55.0-68.0	70.3	55.0-80.0
% Three-seeded pods	0	—	0	—	0	—	0.0	—
Pod length (mm)	28.7	26.0-30.0	27.7	27.4-28.0	29.3	29.0-30.0	28.6	26.0-30.0
Pod width (mm)	14.7	14.0-15.5	15.0	14.9-15.2	14.8	14.0-15.0	14.8	14.0-15.5
Seed length (mm)	15.8	15.0-17.0	16.7	16.4-17.0	13.0	11.5-16.0	15.2	11.5-17.0
Seed width (mm)	8.7	8.5-9.0	8.4	8.3-8.5	8.4	8.0-9.0	8.5	8.0-9.0
Shelling outturn (%)	59.4	54.0-62.7	68.2	64.2-72.4	66.3	66.1-66.7	64.6	54.0-72.4
Sound mature seeds (%)	87.3	84.0-91.0	85.4	82.1-89.0	94.6	90.0-98.0	89.1	82.1-98.0
Hundred seed mass (g)	56.0	53.0-58.0	55.3	52.0-60.0	54.0	50.0-60.0	55.1	50.0-60.0

Prominent features of the cultivar:

1. Large sized pods
2. Pods with moderate beak and constriction, and prominent reticulation
3. Red coloured testa

Name of the cultivar : BG 2

Passport information	
Botanical status :	<i>A.hypogaea</i> ssp. <i>hypogaea</i> var. <i>hypogaea</i>
Year of release :	1979
Originating centre :	Birsa Agricultural University , Kanke, Ranchi
Pedigree :	X-ray mutant of 41-C

Qualitative traits	
Stem	
Branching pattern :	Alternate
Hairiness:	Sub-glabrous
Stem pigmentation :	Absent
Growth habit :	Decumbent 3
Inflorescence and flower	
Type of inflorescence :	Compound
Standard petal colour:	Dark orange
Leaflet	
Colour :	Green
Shape :	Lanceolate
Tip :	Acute
Surface :	Glabrous above and hairs below
Peg	
Peg pigmentation :	Present
Pod	
Beak :	Slight
Constriction :	Slight
Reticulation :	Slight
Size :	Bold
Shell thickness :	Moderate
Seed	
Seed colour :	One colour
Primary seed colour :	Rose
Secondary seed colour :	—
Seed shape :	Fusiform
Resistance to diseases	
Early leaf spot :	Intermediate
Rust :	Intermediate
Late leaf spot :	Intermediate
Quality traits	
Oil content :	51.4 %
Protein content :	21.8 %

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	7	—	6	—	7	—	6.7	—
Days to initial flowering	26	—	27	—	23	—	25.3	—
Days to 50 % flowering	27	—	30	—	26	—	27.7	—
Days to maturity	126	—	119	118-120	130	128-133	125	118-133
Main axis height (cm)	30.7	26.6-38.6	30.2	27.3-33.3	32.5	27.6-36.4	31.1	26.6-38.6
Length of n+1	39.1	31.8-51.0	38.8	31.7-43.0	44.5	41.2-49.6	40.8	31.7-51.0
No. of nodes on n	14.7	8.8-17.6	17.3	14.7-19.3	17.7	15.8-21.4	16.6	8.8-21.4
No. of aerial pegs	15.0	—	10.2	8.7-12.7	10.0	8.4-11.4	11.7	8.4-15.0
No. of n+1	3.3	2.8-3.6	6.9	5.3-9.3	4.7	4.2-5.0	5.0	2.8-9.3
No. of n+2	14.1	12.0-17.6	15.4	9.3-24.0	11.2	8.0-16.4	13.6	8.0-24.0
Leaflet length (cm)	4.4	3.5-5.1	5.9	4.9-7.0	6.0	4.7-6.4	5.4	3.5-7.0
Leaflet width (cm)	1.7	1.2-2.1	2.4	1.8-2.9	2.3	1.8-2.6	2.1	1.2-2.9
Leaflet length/width	2.6	—	2.5	—	2.6	—	2.6	—
Plant spread (cm)	37.0	36.0-38.0	48.0	45.0-52.0	53.7	50.0-65.0	46.2	36.0-65.0
Immature pods/ plant	2.9	1.4-4.0	8.0	4.0-15.0	2.7	1.4-4.2	4.5	1.4-15.0
Mature pods/ plant	5.9	3.4-9.2	5.0	—	5.0	4.2-5.4	5.3	3.4-9.2
Pod bearing plants (%)	90.2	86.0-95.0	98.7	96.0-100	99.1	97.0-100	96.0	86.0-100
Pod mass (g/plant)	5.5	4.6-6.8	4.9	4.2-6.0	10.1	9.0-10.7	6.8	4.2-10.7
Pod yield /m ² (g)	375	325-400	201	194-210	429	324-484	335	194-484
100 pod mass (g)	125	—	87.3	72.0-98.0	99.3	89-111	104	72.0-125
One-seeded pods (%)	12.0	8.0-14.0	9.0	6.0-12.0	18.0	14.0-22.0	13.0	6.0-22.0
Two-seeded pods (%)	88.0	86.0-92.0	91.0	88.0-94.0	82.0	78.0-86.0	87.0	78.0-94.0
Three-seeded pods (%)	0.0	—	0.0	—	0	—	0.0	—
Pod length (mm)	26.7	26.0-27.0	25.2	24.0-26.5	24.7	23.0-26.0	25.5	23.0-27.0
Pod width (mm)	11.7	11.0-12.0	12.5	12.0-13.0	11.7	11.0-12.0	12.0	11.0-13.0
Seed length (mm)	13.7	12.5-15.0	13.7	13.5-14.0	12.0	11.7-13.0	13.1	11.7-15.0
Seed width (mm)	7.0	6.0-8.5	7.2	7.0-7.5	7.5	7.0-8.0	7.2	6.0-8.5
Shelling outturn (%)	64.7	60.3-68.0	62.4	60.9-65.3	68.9	67.4-71.2	65.3	60.3-71.2
Sound mature seeds (%)	87.6	86.4-89.4	86.5	84.9-88.2	95.3	92.0-98.0	89.8	84.9-98.0
Hundred seed mass (g)	46.3	43.0-50.0	46.3	42.0-51.0	47.0	43.0-50.0	46.5	43.0-51.0

Prominent features of the cultivar:

1. Large sized pods
2. Moderately thick shell

Name of the cultivar : GG 20

Passport information

Botanical status :	<i>A. hypogaea</i> ssp. <i>hypogaea</i> var. <i>hypogaea</i>		
Year of release :	1991	Botanical type :	Virginia bunch
Originating centre :	Gujarat Agricultural University, Junagadh		
Pedigree :	GAUG 10 X Robut 33-1		

Qualitative traits

Stem

Branching pattern :	Alternate	Hairiness:	Sub-glabrous
Stem pigmentation :	Absent	Growth habit :	Erect

Inflorescence and flower

Type of inflorescence :	Simple	Standard petal colour:	Orange
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Leaflet

Colour :	Green	Shape :	Lanceolate	Tip :	Acute
Surface :	Almost glabrous				

Peg

Peg pigmentation :	Absent
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Pod

Beak :	Moderate	Constriction :	Moderate	Reticulation :	Moderate
Size :	Bold	Shell thickness :	Thick		

Seed

Seed colour :	One colour	Primary seed colour :	Rose
Secondary seed colour :		Seed shape :	Spheroidal

Resistance to diseases

Early leaf spot :	Intermediate
Rust :	Intermediate
Late leaf spot :	Intermediate

Quality traits

Oil content :	54.9 %	Protein content :	25.1 %
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Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	5	—	7	—	6.0	—
Days to initial flowering	26	—	23	—	23	—	24.0	—
Days to 50 % flowering	28	—	27	—	27	—	27.3	—
Days to maturity	123	—	117	116-118	127	125-129	122	116-129
Main axis height (cm)	25.4	22.6-30.0	28.1	27.0-29.0	33.5	31.0-38.2	29.0	22.6-38.2
Length of n+1	29.9	25.0-38.4	37.1	31.7-42.3	48.9	43.4-52.8	38.6	25.0-52.8
No. of nodes on n	15.1	13.2-18.4	17.7	16.3-20.3	16.5	13.0-22.0	16.4	13.0-22.0
No. of aerial pegs	7.5	4.8-10.8	10.4	8.7-11.7	11.1	10.0-11.8	9.7	4.8-11.8
No. of branches	10.3	8.8-14.2	11.8	9.0-14.0	13.3	11.3-15.0	11.8	8.8-15.0
Leaflet length (cm)	4.1	3.5-4.6	5.5	4.8-6.1	5.3	4.7-5.8	5.0	3.5-6.1
Leaflet width (cm)	1.6	1.4-1.9	2.3	1.8-2.6	2.3	1.7-2.5	2.1	1.4-2.6
Leaflet length/width	2.3	—	2.4	—	2.3	—	2.3	—
Plant spread (cm)	41.0	39.0-42.0	41.6	34.0-54.0	60.0	55.0-65.0	47.5	34.0-65.0
Immature pods/ plant	2.1	1.6-2.6	13.3	9.0-20.0	4.7	1.6-8.4	6.7	1.6-20.0
Mature pods/ plant	3.6	2.8-4.8	3.0	1.0-5.0	8.4	4.2-12.6	5.0	1.0-12.6
Pod bearing plants (%)	90.5	90.0-92.0	96.5	93.0-100	99.1	97.0-100	95.4	90.0-100
Pod mass (g/plant)	5.1	4.3-6.5	6.5	4.7-7.8	14.2	13.7-14.7	8.6	4.3-14.7
Pod yield /m ² (g)	249	227-280	265	188-364	434	200-588	316	188-588
100 pod mass (g)	104	—	96.7	90.0-103	118	109-128	106	90.0-128
One-seeded pods (%)	15.0	10.0-22.0	16.0	14.0-20.0	22.0	19.0-26.0	17.7	10.0-26.0
Two-seeded pods (%)	85.0	78.0-90.0	84.0	80.0-86.0	78.0	74.0-81.0	82.3	74.0-90.0
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	26.7	25.5-28.0	27.7	27.4-28.0	27.3	27.0-28.0	27.2	25.5-28.0
Pod width (mm)	12.0	11.0-13.0	11.3	11.0-12.0	12.0	11.8-13.0	11.8	11.0-13.0
Seed length (mm)	14.0	13.0-15.0	12.4	11.1-15.0	15.0	14.0-16.0	13.8	11.1-16.0
Seed width (mm)	7.3	6.5-8.5	7.8	7.2-8.3	7.7	7.0-8.0	7.6	6.5-8.5
Shelling outturn (%)	66.4	64.5-68.3	76.3	75.7-76.9	68.2	64.7-71.1	70.3	64.5-76.9
Sound mature seeds (%)	90.4	83.7-94.4	90.7	90.4-91.0	93.8	91.0-97.0	91.6	83.7-97.0
Hundred seed mass (g)	48.0	44.0-52.0	51.7	48.0-54.0	53.7	52.0-57.0	51.1	44.0-57.0

Name of the cultivar : ICGS 5

Passport information

Botanical status : *A.hypogaea* ssp. *hypogaea* var. *hypogaea*
 Year of release : 1992 Botanical type : Virginia bunch
 Originating centre : International Crops Research Institute for the Semi-Arid Tropics, Patancheru
 Pedigree : (Robut 33-1 X NCAC 316) F 2

Qualitative traits

Stem

Branching pattern : Irregular without flower on n Hairiness: Glabrous
 Stem pigmentation : Absent Growth habit : Erect

Inflorescence and flower

Type of inflorescence : Compound Standard petal colour: Orange

Leaflet

Colour : Green Shape : Lanceolate Tip : Acute
 Surface : Almost glabrous

Peg

Peg pigmentation : Present

Pod

Beak : Moderate Constriction : Moderate Reticulation : Slight
 Size : Medium Shell thickness : Thin

Seed

Seed colour : One colour Primary seed colour : Salmon
 Secondary seed colour : — Seed shape : Fusiform

Resistance to diseases

Early leaf spot : Intermediate
 Rust : Intermediate
 Late leaf spot : Intermediate

Quality traits

Oil content : 50.0% Protein content : 22.1%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	6	—	7	—	6.3	—
Days to initial flowering	22	—	26	—	21	—	23.0	—
Days to 50 % flowering	25	—	30	—	24	—	26.3	—
Days to maturity	107	—	105	103-108	109	108-110	107	103-110
Main axis height (cm)	27.4	25.8-28.4	24.6	23.8-26.7	30.2	29.0-31.6	27.4	25.8-31.6
Length of n+1	31.9	31.4-32.2	30.3	27.0-36.7	34.1	31.0-36.4	32.1	27.0-36.7
No. of nodes on n	16.9	15.0-18.6	15.4	12.3-18.0	15.7	14.2-18.4	16.0	12.3-18.6
No. of aerial pegs	17.1	11.4-25.8	16.2	12.0-23.7	6.8	2.8-10.0	13.4	2.8-25.8
No. of branches	14.9	12.6-16.4	21.5	14.0-27.8	18.6	9.4-28.8	18.3	9.4-28.8
Leaflet length	3.2	3.0-3.5	4.7	4.1-5.0	5.1	4.2-5.6	4.3	3.0-5.6
Leaflet width (cm)	1.2	1.1-1.5	1.8	1.5-1.9	2.0	1.5-2.4	1.7	1.1-2.4
Leaflet length/width	2.6	—	2.6	—	2.5	—	2.6	—
Plant spread (cm)	52.0	49.0-55.0	54.3	53.0-56.0	58.7	57.0-60.0	55.0	49.0-60.0
Immature pods/ plant	3.5	1.8-5.0	10.3	4.0-15.0	6.2	5.6-7.0	6.7	1.8-15.0
Mature pods/ plant	9.4	8.0-10.6	15.7	6.0-21.0	8.5	7.4-9.6	11.2	6.0-21.0
Pod bearing plants (%)	99.5	99.0-100	97.0	94.0-100	100	—	98.8	94.0-100
Pod mass (g/plant)	5.1	4.5-5.8	5.9	4.8-7.3	8.5	7.7-9.9	6.5	4.5-9.9
Pod yield /m ² (g)	393	312-447	242	213-278	353	283-427	329	213-447
100 pod mass (g)	84.0	—	61.7	58.0-66.0	71.3	70.0-73.0	72.3	58.0-84.0
One-seeded pods (%)	5.0	0.0-15.0	14.0	7.0-22.0	18.0	12.0-22.0	12.3	0.0-22.0
Two-seeded pods (%)	95.0	85.0-100	86.0	78.0-93.0	82.0	78.0-88.0	87.7	78.0-100
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	24.8	24.0-26.0	24.5	23.0-25.5	22.7	21.0-24.0	24.0	21.0-26.0
Pod width (mm)	11.0	10.0-12.0	10.8	10.0-11.5	11.0	10.0-12.0	10.9	10.0-12.0
Seed length (mm)	12.3	12.0-13.0	12.7	12.0-13.0	12.0	11.0-13.0	12.3	11.0-13.0
Seed width (mm)	6.9	6.8-7.0	7.7	7.5-8.0	7.0	6.8-7.3	7.2	6.8-8.0
Shelling outturn (%)	70.1	63.1-73.8	71.9	71.2-72.4	71.9	69.9-73.2	71.3	63.1-73.8
Sound mature seeds (%)	91.2	87.3-94.3	78.7	77.0-79.7	91.4	84.0-95.0	87.1	77.0-95.0
Hundred seed mass (g)	34.7	34.0-35.0	42.7	41.0-44.0	37.3	34.0-40.0	38.2	34.0-44.0

Prominent features of the cultivar:

1. Profusely branched cultivar.
2. Small leaflets
3. Salmon coloured testa

Name of the cultivar : ICGS 76

Passport information

Botanical status : *A. hypogaea* ssp. *hypogaea* var. *hypogaea*
 Year of release : 1989
 Botanical type : Virginia bunch
 Originating centre : International Crops Research Institute for the Semi-Arid Tropics, Patancheru
 Pedigree : TMV 10 X Chico

Qualitative traits

Stem

Branching pattern : Alternate Hairiness : Almost glabrous
 Stem pigmentation : Absent Growth habit : Decumbent 3

Inflorescence and flower

Type of inflorescence : Compound Standard petal colour: Orange

Leaflet

Colour : Green Shape : Lanceolate Tip : Acute
 Surface : Almost glabrous above, hairs below

Peg

Peg pigmentation : Present

Pod

Beak : Moderate Constriction : Moderate Reticulation : Slight
 Size : Medium Shell thickness : Thin

Seed

Seed colour : One colour Primary seed colour : Salmon
 Secondary seed colour : — Seed shape : Spheroidal

Resistance to diseases

Early leaf spot : Intermediate
 Rust : Intermediate
 Late leaf spot : Low

Quality traits

Oil content : 49.7% Protein content : 26.3%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	6	—	6	—	6.0	—
Days to initial flowering	22	—	27	—	24	—	24.3	—
Days to 50 % flowering	25	—	30	—	28	—	27.7	—
Days to maturity	125	—	119	118-120	128	126-130	124	118-130
Main axis height (cm)	22.3	21.6-22.8	23.8	22.7-25.0	29.7	26.8-31.8	25.3	21.6-31.8
Length of n+1	28.5	27.8-29.4	31.8	28.3-35.0	41.7	40.2-42.8	34.0	27.8-42.8
No. of nodes on n	12.4	7.6-14.8	14.8	14.0-15.7	13.8	10.0-20.8	13.7	7.6-20.8
No. of aerial pegs	8.3	6.8-10.0	8.9	5.3-15.7	9.9	8.0-11.4	9.0	5.3-15.7
No. of n+1	2.9	2.2-3.4	4.6	4.3-4.7	4.5	4.2-4.8	4.0	2.2-4.8
No. of n+2	9.4	7.0-12.0	6.6	5.0-8.0	8.3	5.6-12.8	8.1	5.0-12.8
Leaflet length (cm)	4.1	3.5-4.7	4.7	3.9-5.3	4.9	4.0-5.2	4.6	3.5-5.3
Leaflet width (cm)	1.5	1.2-1.7	1.9	1.6-2.3	2.0	1.6-2.2	1.8	1.2-2.3
Leaflet length/width	2.8	—	2.5	—	2.5	—	2.6	—
Plant spread (cm)	35.0	34.0-36.0	55.3	52.0-58.0	60.3	59.0-62.0	50.2	34.0-62.0
Immature pods/ plant	1.0	0.0-1.6	8.7	4.0-13.0	5.4	3.2-8.0	5.0	0.0-13.0
Mature pods/ plant	3.5	2.8-4.6	1.3	0.0-3.0	4.7	3.0-6.4	3.2	0.0-6.4
Pod bearing plants (%)	88.7	81.0-93.0	98.2	95.0-100	98.0	97.0-100	95.0	81.0-100
Pod mass (g/plant)	6.6	5.9-7.2	6.6	5.6-7.1	11.4	9.0-13.9	8.2	5.6-13.9
Pod yield /m ² (g)	277	247-295	249	220-283	384	324-417	303	220-417
100 pod mass (g)	98.0	—	86.7	78.0-97.0	92.3	90.0-94.0	92.3	78.0-98.0
One-seeded pods (%)	6.0	4.0-8.0	11.0	7.0-16.0	17.0	12.0-19.0	11.3	4.0-19.0
Two-seeded pods (%)	94.0	92.0-96.0	89.0	84.0-93.0	83.0	81.0-88.0	88.7	81.0-96.0
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	27.0	26.5-27.5	23.7	22.0-25.0	24.7	24.0-25.0	25.1	22.0-27.5
Pod width (mm)	12.3	12.0-12.5	11.7	11.0-13.0	12.0	—	12.0	11.0-13.0
Seed length (mm)	14.2	13.5-14.6	12.2	11.2-13.0	12.0	11.0-13.5	12.8	11.0-14.6
Seed width (mm)	7.5	7.0-8.0	7.3	7.0-8.0	7.8	6.8-8.0	7.5	6.8-8.0
Shelling outturn (%)	71.6	66.7-75.6	73.2	71.0-74.4	71.5	69.9-74.4	72.1	66.7-75.6
Sound mature seeds (%)	92.7	91.5-94.2	90.7	89.5-91.8	89.9	80.0-95.0	91.1	80.0-95.0
Hundred seed mass (g)	42.3	38.0-47.0	44.0	42.0-46.0	46.3	44.0-50.0	44.2	38.0-50.0

Name of the cultivar : ICGV 86325

Passport information

Botanical status : *A. hypogaea* ssp. *hypogaea* var. *hypogaea*
Year of release : 1994 **Botanical type :** Virginia bunch
Originating centre : International Crops Research Institute for the Semi-Arid Tropics, Patancheru
Pedigree : ICGS 20 X G 201

Qualitative traits

Stem

Branching pattern : Irregular without flower on n **Hairiness:** Sub-glabrous
Stem pigmentation : Absent **Growth habit :** Decumbent 3

Inflorescence and flower

Type of inflorescence : Simple **Standard petal colour:** Orange

Leaflet

Colour : Green **Shape :** Lanceolate **Tip :** Acute
Surface : Almost glabrous

Peg

Peg pigmentation : Absent

Pod

Beak : Absent **Constriction :** Slight **Reticulation :** Slight
Size : Small **Shell thickness :** Thin

Seed

Seed colour : One colour **Primary seed colour :** Salmon
Secondary seed colour : — **Seed shape :** Spheroidal

Resistance to diseases

Early leaf spot : Intermediate
Rust : Intermediate
Late leaf spot : Low

Quality traits

Oil content : 49.8 **Protein content :** 27.3

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	7	—	6	—	7	—	6.7	—
Days to initial flowering	26	—	24	—	23	—	24.3	—
Days to 50 % flowering	28	—	27	—	27	—	27.3	—
Days to maturity	117	—	120	118-121	111	110-112	116	110-121
Main axis height (cm)	25.3	21.8-30.4	21.6	20.0-22.7	28.0	27.0-29.6	25.0	20.0-30.4
Length of n+1	32.7	29.2-38.0	31.1	27.0-35.0	42.6	40.2-44.0	35.5	27.0-44.0
No. of nodes on n	13.5	7.0-17.0	16.2	10.3-20.3	13.7	12.2-15.2	14.5	7.0-20.3
No. of aerial pegs	6.8	1.8-10.0	7.3	6.0-9.3	2.4	0.2-3.6	5.5	0.2-10.0
No. of n+1	3.7	3.4-3.8	4.6	4.0-5.3	4.5	4.2-4.8	4.3	3.4-5.3
No. of n+2	10.7	6.4-14.8	10.1	8.0-14.0	9.4	6.8-12.4	10.1	6.4-14.8
Leaflet length (cm)	4.1	3.5-4.6	5.2	4.6-5.7	5.1	4.6-5.4	4.8	3.5-5.7
Leaflet width (cm)	1.6	1.4-2.0	2.0	1.6-2.4	2.0	1.8-2.2	1.9	1.4-2.4
Leaflet length/width	2.5	—	2.6	—	2.5	—	2.5	—
Plant spread (cm)	47.0	44.0—48.0	53.0	50.0-58.0	60.3	58.0-62.0	53.4	44.0-62.0
Immature pods/ plant	1.1	0.4-2.0	14.7	7.0-19.0	2.3	1.0-3.6	6.0	0.4-19.0
Mature pods/ plant	5.2	3.6-7.6	9.7	9.0-10.0	9.2	6.8-11.2	8.0	3.6-11.2
Pod bearing plants (%)	74.2	65.0-82.0	99.0	97.0-100	92.6	91.0-94.0	88.6	65.0-100
Pod mass (g/plant)	12.1	10.1-16.0	8.1	7.3-9.4	12.3	10.8-13.7	10.8	7.3-16.0
Pod yield /m ² (g)	239	223-255	272	217-310	380	285-485	297	217-485
100 pod mass (g)	76.0	—	66.3	55.0-85.0	89.0	80.0-95.0	77.1	55.0-95.0
One-seeded pods (%)	14.0	9.0-18.0	34.0	15.0-47.0	17.0	14.0-20.0	21.7	9.0-47.0
Two-seeded pods (%)	86.0	82.0-91.0	66.0	53.0-85.0	83.0	80.0-86.0	78.3	53.0-91.0
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	20.8	17.8-22.5	21.5	20.0-23.0	21.0	20.0-22.0	21.1	17.8-23.0
Pod width (mm)	11.4	10.0-12.0	11.8	11.0-13.0	11.0	10.8-12.0	11.4	10.0-13.0
Seed length (mm)	11.4	11.0-12.3	11.0	10.8-12.3	12.0	11.7-12.5	11.5	10.8-12.5
Seed width (mm)	6.8	6.5-7.3	7.5	7.0-8.0	7.2	7.0-8.0	7.2	6.5-8.0
Shelling outturn (%)	67.8	62.7-72.4	73.3	71.7-76.4	72.3	71.6-72.8	71.1	62.7-76.4
Sound mature seeds (%)	87.7	80.8-91.5	90.5	89.8-91.6	90.2	81.0-97.0	89.5	80.8-97.0
Hundred seed mass (g)	34.7	34.0-35.0	36.7	35.0-39.0	42.3	39.0-44.0	37.9	34.0-44.0

Name of the cultivar : Kadiri 3

Passport information

Botanical status : *A.hypogaea ssp. hypogaea var. hypogaea*
 Year of release : 1978 Botanical type : Virginia bunch
 Originating centre : Agricultural Research Station, A.N.G.R.A.U. , Kadiri
 Pedigree : Selection from Robut 33-1

Qualitative traits

Stem

Branching pattern : Irregular without flowers on n Hairiness: Sub-glabrous
 Stem pigmentation : Absent Growth habit : Decumbent 3

Inflorescence and flower

Type of inflorescence : Compound Standard petal colour: Orange

Leaflet

Colour: Green Shape : Lanceolate Tip : Acute
 Surface : Almost glabrous

Peg

Peg pigmentation : Absent

Pod

Beak : Absent Constriction : Slight Reticulation : Slight
 Size : Medium Shell thickness : Moderate

Seed

Seed colour : One colour Primary seed colour : Rose
 Secondary seed colour : — Seed shape : Spheroidal

Resistance to diseases

Early leaf spot : Intermediate
 Rust : Low
 Late leaf spot : Low

Quality traits

Oil content : 49.6% Protein content : 28.0%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	7	—	6	—	9	—	7.3	—
Days to initial flowering	28	—	23	—	21	—	24.0	—
Days to 50 % flowering	30	—	28	—	24	—	27.3	—
Days to maturity	116	—	118	116-119	113	111-117	116	111-119
Main axis height (cm)	19.9	17.4-24.8	23.2	21.0-26.3	30.1	25.2-34.2	24.4	17.4-34.2
Length of n+1	29.8	23.0-37.2	29.6	26.7-33.7	41.6	37.0-45.6	33.7	23.0-45.6
No. of nodes on n	14.8	13.6-15.4	16.4	13.7-18.3	12.5	10.6-13.8	14.6	10.6-18.3
No. of aerial pegs	7.3	6.8-8.0	10.1	7.7-14.7	1.7	0.4-2.8	6.4	0.4-14.7
No. of n+1	3.5	3.0-4.0	4.6	4.3-4.7	4.4	3.7-4.8	4.2	3.0-4.8
No. of n+2	11.0	8.4-16.0	11.7	9.0-16.0	7.4	4.4-10.0	10.0	4.4-16.0
Leaflet length (cm)	3.4	3.0-3.6	4.6	4.4-5.7	5.6	4.2-6.2	4.5	3.0-6.2
Leaflet width (cm)	1.4	1.2-1.5	2.2	1.9-2.6	2.1	1.6-2.5	1.9	1.2-2.6
Leaflet length/width	2.5	—	2.1	—	2.7	—	2.4	—
Plant spread (cm)	40.0	36.0-43.0	51.7	51.0-52.0	61.7	55.0-68.0	51.1	36.0-68.0
Immature pods/ plant	0.9	0.6-1.4	13.7	13.0-15.0	3.5	2.6-4.8	6.0	0.6-15.0
Mature pods/ plant	6.5	5.8-7.4	8.0	6.0-10.0	6.9	5.4-8.4	7.1	5.4-10.0
Pod bearing plants (%)	72.0	33.0-94.0	100	—	91.6	91.0-92.0	87.9	33.0-100
Pod mass (g/plant)	7.3	6.7-7.9	6.5	6.1-7.0	16.3	15.8-17.3	10.0	6.1-17.3
Pod yield /m ² (g)	189	186-200	247	214-280	359	300-399	265	186-399
100 pod mass (g)	78.0	—	72.7	63.0-84.0	86.0	81.0-89.0	78.9	63.0-89.0
One-seeded pods (%)	18.0	16.0-20.0	26.0	23.0-31.0	18.0	12.0-27.0	20.7	12.0-31.0
Two-seeded pods (%)	82.0	80.0-84.0	74.0	69.0-77.0	82.0	73.0-88.0	79.3	69.0-88.0
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	22.8	20.0-23.5	21.8	21.0-23.0	21.3	21.0-22.0	22.0	20.0-23.5
Pod width (mm)	11.7	11.2-12.5	11.7	11.5-12.0	11.0	10.8-12.2	11.5	10.8-12.5
Seed length (mm)	12.1	11.5-12.8	12.2	12.0-12.5	12.0	11.5-13.0	12.1	11.5-13.0
Seed width (mm)	7.4	7.0-8.3	7.7	7.0-8.1	7.0	—	7.4	7.0-8.3
Shelling outturn (%)	69.4	65.8-73.1	66.4	63.1-68.6	71.4	67.4-73.9	69.1	63.1-73.9
Sound mature seeds (%)	86.9	83.3-93.2	89.3	87.6-90.8	88.8	82.0-93.0	88.3	82.0-93.2
Hundred seed mass (g)	38.3	35.0-42.0	37.3	36.0-39.0	41.7	40.0-43.0	39.1	35.0-43.0

Name of the cultivar : M 145

Passport information

Botanical status :	<i>A. hypogaea ssp. hypogaea var. hypogaea</i>	Botanical type :	Virginia bunch
Year of release :	1968		
Originating centre :	Punjab Agricultural University, Ludhiana		
Pedigree :	A 1-1 X D 3		

Qualitative traits

Stem

Branching pattern :	Alternate	Hairiness:	Almost glabrous
Stem pigmentation :	Absent	Growth habit :	Decumbent 3

Inflorescence and flower

Type of inflorescence :	Compound	Standard petal colour:	Orange
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Leaflet

Colour :	Green	Shape :	Lanceolate	Tip :	Acute
Surface :	Almost glabrous with hairs below				

Peg

Peg pigmentation :	Present
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Pod

Beak :	Moderate	Constriction :	Moderate	Reticulation :	Slight
Size :	Bold	Shell thickness :	Moderate		

Seed

Seed colour :	One colour	Primary seed colour :	Red
Secondary seed colour:	—	Seed shape :	Spheroidal

Resistance to diseases

Early leaf spot :	Intermediate
Rust :	Intermediate
Late leaf spot:	Intermediate

Quality traits

Oil content :	48.6 %	Protein content :	26.0%
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Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	5	—	6	—	5.7	—
Days to initial flowering	27	—	26	—	23	—	25.3	—
Days to 50 % flowering	29	—	30	—	26	—	28.3	—
Days to maturity	123	—	120	118-122	125	120-130	123	118-130
Main axis height (cm)	20.9	18.2-24.8	25.2	23.3-27.0	25.6	20.0-30.0	23.9	18.2-30.0
Length of n+1	30.5	23.8-41.0	34.0	—	35.7	28.2-45.4	33.4	23.8-45.4
No. of nodes on n	12.3	9.8-15.6	16.8	16.3-17.3	13.6	11.0-18.2	14.2	9.8-18.2
No. of aerial pegs	9.1	8.0-10.6	14.4	10.7-18.7	10.5	6.0-13.0	11.3	6.0-18.7
No. of n+1	4.4	4.2-4.6	5.3	—	4.7	4.4-4.8	4.8	4.2-5.3
No. of n+2	12.9	10.6-15.0	19.0	14.0-24.0	10.9	7.8-15.0	14.3	7.8-24.0
Leaflet length (cm)	3.5	3.0-4.1	5.2	4.3-6.4	4.8	4.0-5.2	4.5	3.0-6.4
Leaflet width (cm)	1.5	1.4-1.9	2.2	1.9-2.5	2.3	1.6-2.5	2.0	1.4-2.5
Leaflet length/width	2.3	—	2.4	—	2.1	—	2.3	—
Plant spread (cm)	34.0	30.0-38.0	48.0	46.0-50.0	61.0	59.0-62.0	47.7	30.0-62.0
Immature pods/ plant	1.9	0.0-3.6	13.0	11.0-15.0	3.3	2.4-3.8	6.1	0.0-15.0
Mature pods/ plant	5.9	5.0-7.0	14.3	13.0-16.0	9.5	5.6-14.0	9.9	5.0-16.0
Pod bearing plants (%)	95.0	94.0-96.0	99.3	98.0-100	100	—	98.1	94.0-100
Pod mass (g/plant)	5.1	4.5-5.7	4.4	4.2-4.8	12.0	10.6-13.2	7.2	4.2-13.2
Pod yield /m ² (g)	393	360-455	188	181-197	400	369-436	327	181-455
100 pod mass (g)	81.0	—	80.0	74.0-85.0	93.0	85.0-100	84.7	74.0-100
One seeded pods (%)	7.0	0.0-12.0	13.0	7.0-19.0	14.0	8.0-19.0	11.4	0.0-19.0
Two seeded pods (%)	63.0	57.0-72.0	53.0	34.0-66.0	50.0	45.0-60.0	55.3	34.0-72.0
Three seeded pods (%)	30.0	20.0-43.0	34.0	20.0-47.0	36.0	21.0-47.0	33.3	20.0-47.0
Pod length (mm)	24.0	23.0-26.0	28.0	26.7-29.5	25.7	24.0-27.0	25.9	23.0-29.5
Pod width (mm)	10.5	10.0-11.0	12.3	11.0-14.5	10.0	9.8-11.2	10.9	9.8-14.5
Seed length (mm)	12.1	10.8-13.0	13.0	12.0-14.0	12.0	11.0-13.0	12.4	10.8-14.0
Seed width (mm)	6.8	6.5-7.0	7.3	7.0-7.5	7.2	7.0-8.0	7.1	6.5-8.0
Shelling outturn (%)	65.7	54.3-72.2	66.3	60.0-70.1	72.4	68.5-74.5	68.1	54.3-74.5
Sound mature seeds (%)	90.6	89.6-91.2	88.5	86.3-90.0	90.4	84.0-95.0	89.8	84.0-95.0
Hundred seed mass (g)	32.3	31.0-34.0	39.0	38.0-41.0	41.0	39.0-43.0	37.4	31.0-43.0

Prominent features of the cultivar:

1. Three seeded pods are more
2. Red coloured testa (matty)

Name of the cultivar : M 522

Passport Information

Botanical status :	<i>A. hypogaea</i> ssp. <i>hypogaea</i> var. <i>hypogaea</i>		
Year of release :	1995	Botanical type :	Virginia bunch
Originating centre :	Punjab Agricultural University, Ludhiana		
Pedigree :	PG NO. 1 X F 334-AB 14		

Qualitative traits

Stem

Branching pattern :	Irregular without flower on n	Hairiness:	Almost glabrous
Stem pigmentation :	Absent	Growth habit :	Erect

Inflorescence and flower

Type of inflorescence :	Compound	Standard petal colour:	Orange
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Leaflet

Colour :	Green	Shape :	Lanceolate	Tip :	Acute
Surface :	Almost glabrous with hairs below				

Peg

Peg pigmentation :	Present
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Pod

Beak :	Slight	Constriction :	Moderate	Reticulation :	Moderate
Size :	Bold	Shell thickness :	Thick		

Seed

Seed colour :	One colour	Primary seed colour :	Salmon
Secondary seed colour:	—	Seed shape :	Spheroidal

Resistance to diseases

Early leaf spot :	Low
Rust :	Intermediate
Late leaf spot:	Low

Quality traits

Oil content :	50.9 %	Protein content :	26.0%
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Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	7	—	6	—	6	—	6.3	—
Days to initial flowering	30	—	27	—	24	—	27.0	—
Days to 50 % flowering	33	—	29	—	27	—	29.7	—
Days to maturity	123	—	120	118-122	124	119-130	122	118-130
Main axis height (cm)	22.4	15.6-28.0	21.4	18.0-24.7	24.7	21.2-28.4	22.8	15.6-28.4
Length of n+1	28.1	19.8-32.8	28.3	19.7-33.7	29.5	25.6-34.4	28.6	19.7-34.4
No. of nodes on n	12.5	8.4-16.6	16.1	15.3-16.7	11.8	10.6-13.2	13.5	8.4-16.7
No. of aerial pegs	6.0	5.8-6.3	8.9	5.7-12.3	3.9	1.8-7.4	6.3	1.8-12.3
No. of n+1	4.5	2.8-5.6	5.0	4.3-5.7	4.5	4.0-4.8	4.7	2.8-5.7
No. of n+2	10.5	6.6-14.0	11.1	5.7-14.3	9.9	8.0-11.8	10.5	5.7-14.3
Leaflet length (cm)	3.5	3.2-4.0	4.8	3.9-5.2	5.2	4.4-5.6	4.5	3.2-5.6
Leaflet width (cm)	1.4	1.3-1.5	2.0	1.7-2.2	2.2	1.8-2.3	1.9	1.3-2.3
Leaflet length/width	2.5	—	2.4	—	2.4	—	2.4	—
Plant spread (cm)	30.0	28.0-32.0	33.3	25.0-38.0	44.0	37.0-51.0	35.8	25.0-51.0
Immature pods/ plant	0.9	0.0-1.6	5.7	3.0-7.0	3.9	1.8-6.0	3.5	0.0-7.0
Mature pods/ plant	5.6	5.2-6.0	5.0	3.0-7.0	7.4	5.4-9.8	6.0	3.0-9.8
Pod bearing plants (%)	80.4	73.0-85.0	95.8	88.0-100	90.6	88.0-93.0	88.9	73.0-100
Pod mass (g/plant)	12.1	8.2-19.6	4.7	3.9-5.1	12.5	10.3-13.6	9.8	3.9-19.6
Pod yield /m ² (g)	305	300-310	174	135-210	247	189-285	242	135-310
100 pod mass (g)	124	—	95.0	90.0-102	104	99.0-109	108	90.0-124
One seeded pods (%)	16.0	11.0-20.0	24.0	19.0-27.0	26.0	23.0-29.0	22.0	11.0-29.0
Two seeded pods (%)	84.0	80.0-89.0	76.0	73.0-81.0	74.0	71.0-75.0	78.0	71.0-89.0
Three seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	26.8	25.2-28.0	24.9	24.5-25.1	23.7	23.0-24.0	25.1	23.0-28.0
Pod width (mm)	14.2	13.0-15.2	12.8	12.5-13.0	13.0	11.5-14.0	13.3	11.5-15.2
Seed length (mm)	15.6	13.8-16.9	13.8	13.4-14.0	14.0	13.0-14.8	14.5	13.0-16.9
Seed width (mm)	8.5	8.0-9.3	8.0	7.9-8.1	7.3	7.0-8.0	7.9	7.0-9.3
Shelling outturn (%)	64.5	62.9-66.7	65.5	63.8-67.7	68.1	67.2-69.7	66.0	62.9-69.7
Sound mature seeds (%)	82.5	77.9-85.9	90.0	88.7-91.2	91.6	88.0-95.0	88.0	77.9-95.0
Hundred seed mass (g)	48.3	48.0-49.0	47.3	47.0-48.0	49.3	45.0-53.0	48.3	45.0-53.0

Prominent features of the cultivar:

1. Thick shell

Name of the cultivar : RS 138

Passport Information

Botanical status :	<i>A.hypogaea ssp. hypogaea var. hypogaea</i>	Botanical type :	Virginia bunch
Year of release :	1989		
Originating centre :	Agricultural Research Station, R.A.U., Durgapura		
Pedigree :	Selection from Brazilian culture		

Qualitative traits

Stem

Branching pattern :	Alternate	Hairiness:	Sub-glabrous
Stem pigmentation :	Absent	Growth habit :	Erect

Inflorescence and flower

Type of inflorescence :	Simple	Standard petal colour:	Orange
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Leaflet

Colour :	Green	Shape :	Lanceolate	Tip :	Acute
Surface :	Almost glabrous above and hairs below				

Peg

Peg pigmentation :	Present
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Pod

Beak :	Slight	Constriction :	Moderate	Reticulation :	Slight
Size :	Medium	Shell thickness :	Moderate		

Seed

Seed colour :	One colour	Primary seed colour :	Red
Secondary seed colour:	—	Seed shape :	Spheroidal

Resistance to diseases

Early leaf spot :	High
Rust :	High
Late leaf spot:	Intermediate

Quality traits

Oil content :	50.2 %	Protein content :	24.3%
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Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	5	—	7	—	6.0	—
Days to initial flowering	28	—	26	—	22	—	25.3	—
Days to 50 % flowering	30	—	31	—	28	—	29.7	—
Days to maturity	124	—	120	118-122	128	125-130	124	118-130
Main axis height (cm)	23.3	19.2-27.8	27.1	25.3-29.0	27.1	23.8-28.8	25.8	19.2-29.0
Length of n+1	31.9	29.2-37.2	32.8	31.7-33.3	40.2	36.2-45.2	35.0	29.2-45.2
No. of nodes on n	13.3	11.6-15.8	19.3	17.0-22.0	15.3	11.8-20.0	16.0	11.6-22.0
No. of aerial pegs	8.1	4.4-11.2	11.0	6.3-17.7	10.9	9.6-11.6	10.0	4.4-17.7
No. of n+1	4.0	2.6-5.2	5.1	4.3-5.7	4.7	4.6-4.8	4.6	2.6-5.7
No. of n+2	12.9	9.6-14.6	13.8	8.0-21.3	13.9	8.0-23.4	13.5	8.0-23.4
Leaflet length (cm)	3.8	3.1-4.5	5.4	4.4-5.8	5.5	4.2-6.0	4.9	3.1-6.0
Leaflet width (cm)	1.6	1.1-2.0	2.4	2.3-2.7	2.2	1.8-2.5	2.1	1.1-2.7
Leaflet length/width	2.4	—	2.3	—	2.5	—	2.4	—
Plant spread (cm)	50.0	48.0-56.0	56.7	52.0-60.0	59.0	58.0-61.0	55.2	48.0-61.0
Immature pods/ plant	1.4	0.5-3.0	5.0	3.0-7.0	2.7	2.0-3.6	3.0	0.5-7.0
Mature pods/ plant	3.6	1.0-5.2	2.3	1.0-5.0	5.1	3.8-6.0	3.7	1.0-6.0
Pod bearing plants (%)	92.3	87.0-98.0	96.7	90.0-100	100	—	96.3	87.0-100
Pod mass (g/plant)	5.0	4.4-6.0	3.6	2.9-4.0	12.7	8.2-16.2	7.1	2.9-16.2
Pod yield /m ² (g)	322	290-350	126	106-162	434	376-537	294	106-537
100 pod mass (g)	94.0	—	95.3	80.0-108	92.7	82.0-99.0	94.0	80.0-108
One seeded pods (%)	6.0	3.0-9.0	12.0	10.0-13.0	20.0	18.0-21.0	12.7	3.0-21.0
Two seeded pods (%)	70.0	65.0-77.0	62.0	53.0-70.0	55.0	53.0-59.0	62.3	53.0-77.0
Three seeded pods (%)	24.0	20.0-26.0	26.0	18.0-34.0	25.0	23.0-27.0	25.0	18.0-34.0
Pod length (mm)	28.7	26.0-33.0	27.7	27.5-28.0	27.0	26.0-28.0	27.8	26.0-33.0
Pod width (mm)	11.2	10.5-11.5	12.5	12.0-13.0	11.0	10.8-12.1	11.6	10.5-13.0
Seed length (mm)	16.1	12.0-23.0	12.2	12.0-12.4	12.0	11.9-13.2	13.4	11.9-23.0
Seed width (mm)	6.5	—	7.4	7.2-7.5	7.5	7.0-8.0	7.1	6.5-8.0
Shelling outturn (%)	61.7	60.6-63.4	66.4	63.9-67.8	69.7	68.0-72.7	65.9	60.6-72.7
Sound mature seeds (%)	87.7	85.1-90.4	84.3	81.3-88.4	93.2	89.0-96.0	88.4	81.3-96.0
Hundred seed mass (g)	39.0	36.0-43.0	45.3	42.0-49.0	43.7	41.0-45.0	42.7	36.0-49.0

Prominent features of the cultivar:

1. Red coloured testa
2. Occurrence of three seeded pods

Name of the cultivar : RSB 87

Passport Information

Botanical status : *A. hypogaea ssp. hypogaea var. hypogaea*
Year of release : 1961 **Botanical type :** Virginia bunch
Originating centre : Agricultural Research Station, R.A.U., Durgapura
Pedigree : Selection from Brazilian collection

Qualitative traits

Stem

Branching pattern : Alternate **Hairiness:** Sub-glabrous
Stem pigmentation : Absent **Growth habit :** Erect

Inflorescence and flower

Type of inflorescence : Compound **Standard petal colour:** Orange

Leaflet

Colour : Dark green **Shape :** Lanceolate **Tip :** Acute
Surface : Almost glabrous above and hairs below

Peg

Peg pigmentation : Present

Pod

Beak : Slight **Constriction :** Moderate **Reticulation :** Slight
Size : Medium **Shell thickness :** Moderate

Seed

Seed colour : One colour **Primary seed colour :** Red
Secondary seed colour: — **Seed shape :** Fusiform

Resistance to diseases

Early leaf spot : High
Rust : High
Late leaf spot: Intermediate

Quality traits

Oil content : 48.6 % **Protein content :** 25.1%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	7	—	6	—	6	—	6.3	—
Days to initial flowering	28	—	30	—	23	—	27.0	—
Days to 50 % flowering	30	—	33	—	27	—	30.0	—
Days to maturity	124	—	116	115-117	129	127-130	123	115-130
Main axis height (cm)	24.0	18.8-26.8	22.6	17.0-25.7	31.9	23.4-36.6	26.2	17.0-36.6
Length of n+1	27.5	23.6-32.2	32.4	30.7-33.3	47.2	38.6-51.8	35.7	23.6-51.8
No. of nodes on n	14.9	12.8-17.2	19.1	17.7-20.0	16.0	12.6-21.4	16.7	12.6-21.4
No. of aerial pegs	6.5	5.6-8.4	10.1	8.8-11.8	11.8	11.0-13.4	9.5	5.6-13.4
No. of n+1	4.0	2.6-5.2	5.3	5.0-5.7	4.5	4.2-5.0	4.6	2.6-5.7
No. of n+2	12.9	9.6-14.6	15.2	14.0-16.5	12.5	6.1-21.2	13.5	6.1-21.2
Leaflet length (cm)	4.0	3.2-4.9	5.4	4.6-6.1	5.7	4.0-6.0	5.0	3.2-6.1
Leaflet width (cm)	1.5	1.0-1.8	2.3	1.9-2.6	2.3	1.7-2.6	2.0	1.0-2.6
Leaflet length/width	2.6	—	2.3	—	2.5	—	2.5	—
Plant spread (cm)	40.0	36.0-43.0	56.0	49.0-60.0	63.0	62.0-64.0	53.0	36.0-64.0
Immature pods/ plant	1.4	0.5-3.0	8.3	7.0-10.0	3.4	2.0-5.0	4.4	0.5-10.0
Mature pods/ plant	3.6	1.0-5.2	7.0	4.0-9.0	8.3	5.0-10.0	6.3	1.0-10.0
Pod bearing plants (%)	88.0	77.0-95.0	100	—	100	—	96.0	77.0-100
Pod mass (g/plant)	7.4	6.5-8.2	3.8	2.9-5.2	11.3	9.7-12.9	7.5	2.9-12.9
Pod yield /m ² (g)	341	263-392	140	87-212	417	292-507	300	87-507
100 pod mass (g)	101	—	76.3	65.0-84.0	91.0	86.0-96.0	89.4	65.0-101
One seeded pods (%)	9.0	4.0-18.0	17.0	11.0-21.0	16.0	12.0-20.0	14.0	4.0-21.0
Two seeded pods (%)	68.0	48.0-80.0	60.0	57.0-62.0	65.0	61.0-70.0	64.0	48.0-80.0
Three seeded pods (%)	23.0	14.0-34.0	23.0	19.0-32.0	19.0	14.0-25.0	22.0	14.0-34.0
Pod length (mm)	24.8	24.0-27.0	26.3	23.0-29.0	25.7	25.0-27.0	25.6	23.0-29.0
Pod width (mm)	12.0	11.0-13.0	11.8	11.5-12.0	11.0	—	11.6	11.0-13.0
Seed length (mm)	13.7	13.0-14.1	12.2	11.5-13.0	13.0	11.0-16.0	13.0	11.0-16.0
Seed width (mm)	5.3	5.0-7.8	7.5	7.0-8.0	7.0	6.5-7.5	6.6	5.0-8.0
Shelling outturn (%)	57.8	53.7-61.2	59.7	58.5-61.7	68.8	67.4-69.8	62.1	53.7-69.8
Sound mature seeds (%)	83.0	77.6-86.1	84.4	83.9-85.1	85.1	81.0-92.0	84.2	77.6-92.0
Hundred seed mass (g)	39.3	38.0-43.0	44.0	42.0-47.0	41.7	40.0-44.0	41.2	38.0-47.0

Prominent features of the cultivar:

1. Occurrence of three seeded pods
2. Red coloured testa

Name of the cultivar : T 28

Passport Information

Botanical status :	<i>A. hypogaea</i> ssp. <i>hypogaea</i> var. <i>hypogaea</i>		
Year of release :	1960	Botanical type :	Virginia bunch
Originating centre :	Groundnut Research Station., C.S.A.U.A. & T, Mainpuri		
Pedigree :	Selection from Bombay Collection		

Qualitative traits

Stem

Branching pattern :	Irregular with flowers on n	Hairiness:	Almost glabrous
Stem pigmentation :	Absent	Growth habit :	Decumbent 3

Inflorescence and flower

Type of inflorescence :	Compound	Standard petal colour:	Orange
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Leaflet

Colour :	Green	Shape :	Lanceolate	Tip :	Acute
Surface :	Almost glabrous				

Peg

Peg pigmentation :	Absent
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Pod

Beak :	Slight	Constriction :	Moderate	Reticulation :	Slight
Size :	Medium	Shell thickness :	Thick		

Seed

Seed colour :	One colour	Primary seed colour :	Rose
Secondary seed colour:	—	Seed shape :	Fusiform

Resistance to diseases

Early leaf spot :	High
Rust :	Intermediate
Late leaf spot:	High

Quality traits

Oil content :	50.3%	Protein content :	24.6%
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Quantitative traits (Mean and Range of two years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	—	—	6	—	6	—	6.0	—
Days to initial flowering	—	—	28	—	19	—	23.5	—
Days to 50 % flowering	—	—	31	—	24	—	27.5	—
Days to maturity	—	—	109	108-110	108	105-110	109	105-110
Main axis height (cm)	—	—	26.8	24.7-28.3	22.7	21.0-24.0	24.8	21.0-28.3
Length of n+1	—	—	36.0	30.3-46.7	38.0	35.6-41.8	37.0	30.3-46.7
No. of nodes on n	—	—	15.3	14.7-16.3	13.0	11.6-15.5	14.2	11.6-16.3
No. of aerial pegs	—	—	16.2	9.3-20.0	10.7	7.8-14.0	13.5	7.8-20.0
No. of n+1	—	—	6.8	4.7-9.3	5.6	4.4-7.8	6.2	4.4-9.3
No. of n+2	—	—	17.3	14.0-20.0	11.1	10.0-12.0	14.2	10.0-20.0
Leaflet length (cm)	—	—	4.7	4.1-5.1	5.4	4.2-6.2	5.1	4.1-6.2
Leaflet width (cm)	—	—	2.0	1.6-2.2	2.5	1.8-2.8	2.3	1.6-2.8
Leaflet length/width	—	—	2.4	—	2.2	—	2.3	—
Plant spread (cm)	—	—	53.0	51.0-56.0	71.0	65.0-75.0	62.0	51.0-75.0
Immature pods/ plant	—	—	5.0	3.0-7.0	5.5	3.3-7.0	5.3	3.0-7.0
Mature pods/ plant	—	—	5.0	1.0-9.0	4.3	2.4-7.5	4.7	1.0-9.0
Pod bearing plants (%)	—	—	93.2	90.0-95.0	100	—	96.6	90.0-100
Pod mass (g/plant)	—	—	3.0	2.5-3.4	5.6	5.0-6.3	4.3	2.5-6.3
Pod yield /m ² (g)	—	—	133	123-151	258	199-300	196	123-300
100 pod mass (g)	—	—	75.3	73.0-77.0	78.0	69.0-83.0	76.7	69.0-83.0
One seeded pods (%)	—	—	10.0	8.0-14.0	13.0	10.0-14.0	11.5	8.0-14.0
Two seeded pods (%)	—	—	74.0	70.0-79.0	69.0	67.0-70.0	71.5	67.0-79.0
Three seeded pods (%)	—	—	16.0	13.0-19.0	18.0	16.0-22.0	17.0	13.0-22.0
Pod length (mm)	—	—	23.7	23.0-24.0	25.7	25.0-26.0	24.7	23.0-26.0
Pod width (mm)	—	—	11.7	11.0-12.0	11.0	10.8-11.5	11.4	10.8-12.0
Seed length (mm)	—	—	12.3	12.0-13.0	12.0	11.5-12.5	12.2	11.5-13.0
Seed width (mm)	—	—	7.4	7.0-8.0	7.2	7.0-8.0	7.3	7.0-8.0
Shelling outturn (%)	—	—	66.2	64.5-61.7	70.0	65.8-76.2	68.1	64.5-76.2
Sound mature seeds (%)	—	—	85.9	85.7-86.3	86.4	84.0-89.0	86.2	84.0-89.0
Hundred seed mass (g)	—	—	37.3	35.0-40.0	41.0	40.0-42.0	39.2	35.0-42.0

Prominent features of the cultivar:

1. Occurrence of flowers on n

Name of the cultivar : T 64

Passport Information

Botanical status : *A. hypogaea* ssp. *hypogaea* var. *hypogaea*
 Year of release : 1966 Botanical type : Virginia bunch
 Originating centre : Agricultural Research Station, C.S.A.U.A. & T., Mainpuri
 Pedigree : —

Qualitative traits

Stem

Branching pattern : Irregular without flower on n Hairiness : Sub-glabrous
 Stem pigmentation : Absent Growth habit : Erect

Inflorescence and flower

Type of inflorescence : Compound Standard petal colour : Orange

Leaflet

Colour : Green Shape : Lanceolate Tip : Acute
 Surface : Almost glabrous

Peg

Peg pigmentation : Present

Pod

Beak : Slight Constriction : Moderate Reticulation : Prominent
 Size : Bold Shell thickness : Thick

Seed

Seed colour : One colour Primary seed colour : Rose
 Secondary seed colour : — Seed shape : Spheroidal

Resistance to diseases

Early leaf spot : Intermediate
 Rust : Intermediate
 Late leaf spot : Low

Quality traits

Oil content : 50.9% Protein content : 22.2%

Quantitative traits (Mean and Range of two years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	—	—	7	—	5	—	6.0	—
Days to initial flowering	—	—	26	—	19	—	22.5	—
Days to 50 % flowering	—	—	30	—	22	—	26.0	—
Days to maturity	—	—	118	114-122	127	125-130	123	114-130
Main axis height (cm)	—	—	23.7	23.3-24.0	26.9	21.6-31.4	25.3	21.6-31.4
Length of n+1	—	—	30.8	27.3-34.0	37.4	28.2-47.0	34.1	27.3-47.0
No. of nodes on n	—	—	16.8	16.3-17.3	12.6	10.0-15.8	14.7	10.0-17.3
No. of aerial pegs	—	—	10.7	5.7-15.3	11.6	7.6-17.0	11.2	5.7-17.0
No. of n+1	—	—	4.3	—	4.3	4.2-4.6	4.3	4.2-4.6
No. of n+2	—	—	9.3	7.3-11.3	7.6	5.2-9.6	8.5	5.2-11.3
Leaflet length (cm)	—	—	4.8	3.9-5.6	6.1	5.0-6.5	5.5	3.9-6.5
Leaflet width (cm)	—	—	2.0	1.6-2.4	2.8	1.8-2.6	2.4	1.6-2.6
Leaflet length/width	—	—	2.4	—	2.2	—	2.3	—
Plant spread (cm)	—	—	47.0	42.0-52.0	56.3	54.0-59.0	51.7	42.0-59.0
Immature pods/ plant	—	—	5.0	2.0-7.0	3.0	0.8-4.2	4.0	0.8-7.0
Mature pods/ plant	—	—	6.0	4.0-10.0	7.6	5.4-10.0	6.8	4.0-10.0
Pod bearing plants (%)	—	—	95.7	91.0-100	100	—	97.9	91.0-100
Pod mass (g/plant)	—	—	4.0	2.2-5.3	11.6	10.9-12.4	7.8	2.2-12.4
Pod yield /m ² (g)	—	—	196	110-267	472	400-521	334	110-521
100 pod mass (g)	—	—	108	106-109	96.3	75.0-114	102	75.0-114
One seeded pods (%)	—	—	25.0	12.0-33.0	31.0	19.0-50.0	28.0	12.0-50.0
Two seeded pods (%)	—	—	75.0	66.0-88.0	69.0	50.0-81.0	72.0	50.0-88.0
Three seeded pods (%)	—	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	—	—	27.4	26.0-30.0	28.7	28.0-30.0	28.1	26.0-30.0
Pod width (mm)	—	—	13.0	12.5-13.5	14.0	13.0-14.2	13.5	12.5-14.2
Seed length (mm)	—	—	14.2	12.3-17.0	15.0	12.0-17.0	14.6	12.0-17.0
Seed width (mm)	—	—	8.0	7.5-8.8	7.5	7.0-8.0	7.8	7.0-8.8
Shelling outturn (%)	—	—	66.1	62.7-70.0	70.5	69.0-72.9	68.3	62.7-72.9
Sound mature seeds (%)	—	—	86.1	80.9-89.1	94.1	90.0-98.0	90.1	80.9-98.0
Hundred seed mass (g)	—	—	55.7	54.0-57.0	49.7	48.0-51.0	52.5	48.0-57.0

Prominent features of the cultivar:

1. Large sized pods
2. Prominent reticulation of pods
3. Thick shell

Name of the cultivar : TMV 10

Passport Information

Botanical status : *A. hypogaea ssp. hypogaea var. hypogaea*
 Year of release : 1970 Botanical type : Virginia bunch
 Originating centre : Oilseeds Research Station., T.N.A.U., Tindivanam
 Pedigree : Natural mutant from Argentina

Qualitative traits

Stem

Branching pattern : Irregular without flower on n Hairiness: Sub- glabrous
 Stem pigmentation : Absent Growth habit : Decumbent 3

Inflorescence and flower

Type of inflorescence : Simple Standard petal colour: Orange

Leaflet

Colour : Dark green Shape : Lanceolate Tip : Acute
 Surface : Almost glabrous

Peg

Peg pigmentation : Present

Pod

Beak : Moderate Constriction : Slight Reticulation : Absent
 Size : Medium Shell thickness : Thin

Seed

Seed colour : Variegated Primary seed colour : Red with white flecks
 Secondary seed colour: — Seed shape : Spheroidal

Resistance to diseases

Early leaf spot : Intermediate
 Rust : Intermediate
 Late leaf spot: Low

Quality traits

Oil content : 53.8 % Protein content : 21.6%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	7	—	6	—	6	—	6.3	—
Days to initial flowering	25	—	24	—	18	—	22.3	—
Days to 50 % flowering	27	—	27	—	23	—	25.7	—
Days to maturity	125	—	118	118-120	129	126-132	124	118-132
Main axis height (cm)	29.2	28.6-30.4	27.7	23.0-32.3	36.8	32.0-41.2	31.2	23.0-41.2
Length of n+1	36.6	34.8-38.0	39.4	37.3-41.3	49.3	43.4-53.2	41.8	34.8-53.2
No. of nodes on n	12.5	7.0-15.4	21.0	18.0-22.0	15.3	11.8-18.8	16.3	7.0-22.0
No. of aerial pegs	5.5	3.8-8.6	14.2	9.3-18.7	10.4	9.0-12.2	10.0	3.8-18.7
No. of n+1	4.0	2.9-5.4	5.1	5.0-5.3	4.5	4.2-4.8	4.5	2.9-5.4
No. of n+2	12.3	6.4-16.2	18.0	15.7-22.0	10.6	7.6-15.2	13.6	6.4-22.0
Leaflet length (cm)	4.9	4.5-5.5	5.2	4.4-6.1	5.9	4.9-6.3	5.3	4.4-6.3
Leaflet width (cm)	1.9	1.5-2.5	2.3	1.9-2.6	2.3	1.8-2.4	2.2	1.5-2.6
Leaflet length/width	2.6	—	2.3	—	2.6	—	2.5	—
Plant spread (cm)	39.0	37.0-40.0	56.0	52.0-60.0	60.0	57.0-64.0	51.7	37.0-64.0
Immature pods/ plant	2.1	0.8-3.2	13.7	1.0-25.0	2.8	2.4-3.6	6.2	0.8-25.0
Mature pods/ plant	3.9	3.0-5.0	7.0	2.0-12.0	10.1	7.0-14.6	7.0	2.0-14.6
Pod bearing plants (%)	90.3	89.0-91.0	100	—	100	—	96.8	89.0-100
Pod mass (g/plant)	5.3	4.6-6.0	4.7	3.8-6.1	11.6	10.7-12.3	7.2	3.8-12.3
Pod yield /m ² (g)	322	300-346	162	136-196	436	380-487	307	136-487
100 pod mass (g)	94.0	—	94.7	85.0-111	105	98.0-120	98.0	85.0-120
One seeded pods (%)	2.0	4.0-12.0	7.0	4.0-10.0	15.0	6.0-22.0	8.0	4.0-22.0
Two seeded pods (%)	98.0	88.0-96.0	93.0	90.0-96.0	85.0	78.0-94.0	92.0	78.0-96.0
Three seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	23.5	22.5-24.2	22.0	21.0-23.0	23.0	22.0-24.0	22.8	21.0-24.2
Pod width (mm)	11.5	11.0-12.6	12.3	12.0-13.0	12.0	11.8-13.0	11.9	11.0-13.0
Seed length (mm)	12.6	12.0-13.6	12.0	11.5-12.5	13.0	12.0-13.9	12.5	11.5-13.9
Seed width (mm)	7.7	7.0-8.5	7.8	7.5-8.0	7.5	7.0-8.0	7.7	7.0-8.5
Shelling outturn (%)	59.2	58.0-61.0	66.2	62.2-69.3	73.1	72.4-73.5	66.2	58.0-73.5
Sound mature seeds (%)	92.3	89.1-94.1	88.9	87.7-90.7	88.9	86.0-92.0	90.0	86.0-94.1
Hundred seed mass (g)	46.7	43.0-55.0	54.7	50.0-57.0	49.3	48.0-51.0	50.2	43.0-57.0

Prominent features of the cultivar:

1. Variegated testa with white flecks
2. Seeds are medium bold in size
3. Thick main axis, dark green leaves

Virginia Runner

Name of the cultivar : Chandra

Passport information

Botanical status : *A. hypogaea* ssp. *hypogaea* var. *hypogaea*
 Year of release : 1977 Botanical type : Virginia runner
 Originating centre : Groundnut Research Station., C.S.A.U.A. & T, Mainpuri
 Pedigree : Selection from Ah 114

Qualitative traits

Stem

Branching pattern : Alternate and irregular Hairiness: Sub-glabrous
 Stem pigmentation : Absent Growth habit : Decumbent 2

Inflorescence and flower

Type of inflorescence : Compound Standard petal colour: Orange

Leaflet

Colour : Green Shape : Lanceolate Tip : Acute
 Surface : Glabrous above and hairs below

Peg

Peg pigmentation : Present

Pod

Beak : Slight Constriction : Moderate Reticulation : Moderate
 Size : Bold Shell thickness : Moderate

Seed

Seed colour : One colour Primary seed colour : Salmon
 Secondary seed colour : — Seed shape : Fusiform

Resistance to diseases

Early leaf spot : Intermediate
 Rust : Intermediate
 Late leaf spot : Intermediate

Quality traits

Oil content : 50.5 % Protein content : 24.5 %

Quantitative traits (Mean and Range of two years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	—	—	7	—	6	—	6.5	—
Days to initial flowering	—	—	27	—	23	—	25.0	—
Days to 50 % flowering	—	—	30	—	26	—	28.0	—
Days to maturity	—	—	120	118-122	126	125-128	123	118-128
Main axis height (cm)	—	—	30.7	26.6-38.6	28.9	23.8-33.6	29.8	23.8-38.6
Length of n+1	—	—	39.1	31.8-51.0	36.9	34.0-41.8	38.0	31.8-51.0
No. of nodes on n	—	—	14.7	8.8-17.6	14.7	13.2-16.6	14.7	8.8-17.6
No. of aerial pegs	—	—	15.0	—	13.5	12.2-14.2	14.3	12.2-15.0
No. of n+1	—	—	3.3	2.8-3.6	4.7	4.2-5.0	4.0	2.8-5.0
No. of n+2	—	—	14.1	12.0-17.6	7.5	4.6-10.8	10.8	4.6-17.6
Leaflet length (cm)	—	—	5.2	4.1-6.0	5.9	4.6-6.3	5.6	4.1-6.3
Leaflet width (cm)	—	—	2.3	2.0-2.6	2.2	1.7-2.4	2.3	2.0-2.6
Leaflet length/width	—	—	2.3	—	2.7	—	2.5	—
Plant spread (cm)	—	—	64.3	63.0-65.0	57.3	55.0-59.0	60.8	55.0-65.0
Immature pods/ plant	—	—	8.3	7.0-10.0	5.0	4.2-5.8	6.7	4.2-10.0
Mature pods/ plant	—	—	7.0	6.0-8.0	5.9	3.8-7.0	6.5	3.8-8.0
Pod bearing plants (%)	—	—	100	—	100	—	100	—
Pod mass (g/plant)	—	—	4.9	4.2-6.0	13.8	11.8-17.6	9.4	4.2-17.6
Pod yield /m ² (g)	—	—	209	192-238	472	418-527	340	192-527
100 pod mass (g)	—	—	102	97.0-107	122	115-125	112	97.0-125
One-seeded pods (%)	—	—	22.0	18.0-27.0	26.0	23.0-30.0	24.0	18.0-30.0
Two-seeded pods (%)	—	—	78.0	73.0-82.0	74.0	70.0-77.0	76.0	70.0-82.0
Three-seeded pods (%)	—	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	—	—	28.5	27.0-30.0	29.0	28.0-30.0	28.8	27.0-30.0
Pod width (mm)	—	—	13.6	13.0-14.2	13.0	12.3-13.8	13.3	12.3-14.2
Seed length (mm)	—	—	15.0	14.0-16.0	14.0	12.0-16.0	14.5	12.0-16.0
Seed width (mm)	—	—	8.0	7.5-8.5	7.7	7.0-8.0	7.9	7.0-8.5
Shelling outturn (%)	—	—	60.7	58.3-65.4	70.1	69.5-70.4	65.4	58.3-70.4
Sound mature seeds (%)	—	—	84.2	82.3-85.7	92.7	85.0-97.0	88.5	82.3-97.0
Hundred seed mass (g)	—	—	54.7	54.0-56.0	50.0	46.0-55.0	52.4	46.0-55.0

Prominent features of the cultivar:

1. Large sized pods
2. Salmon coloured testa

Name of the cultivar : Chitra (MA 10)

Passport information

Botanical status : *A. hypogaea* ssp. *hypogaea* var. *hypogaea*

Year of release : 1984

Botanical type : Virginia runner

Originating centre : Groundnut Research Station., C.S.A.U.A. & T, Mainpuri

Pedigree : Spanish 5B-1 X EC 1688

Qualitative traits

Stem

Branching pattern : Alternate and irregular

Hairiness : Sub-glabrous

Stem pigmentation : Absent

Growth habit :

Decumbent 3

Inflorescence and flower

Type of inflorescence : Compound

Standard petal colour: Orange

Leaflet

Colour : Dark green

Shape :

Lanceolate

Tip :

Acute

Surface : Glabrous above and hairs below

Peg

Peg pigmentation : Present

Pod

Beak : Slight

Constriction :

Moderate

Reticulation :

Moderate

Size : Medium

Shell thickness :

Moderate

Seed

Seed colour : Two colours

Primary seed colour : Rose with flecks

Secondary seed colour :

—

Seed shape :

Spheroidal

Resistance to diseases

Early leaf spot : High

Rust : High

Late leaf spot : High

Quality traits

Oil content : 45.1 %

Protein content :

20.5 %

Quantitative traits (Mean and Range of two years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	—	—	6	—	6	—	6.0	—
Days to initial flowering	—	—	28	—	25	—	26.5	—
Days to 50 % flowering	—	—	31	—	28	—	29.5	—
Days to maturity	—	—	116	100-126	126	120-128	121	100-128
Main axis height (cm)	—	—	24.7	21.0-29.0	27.3	24.2-31.6	26.0	21.0-31.6
Length of n+1	—	—	32.3	30.7-35.0	35.0	31.2-38.2	33.7	30.7-38.2
No. of nodes on n	—	—	16.2	14.7-18.7	14.0	11.4-15.4	15.1	11.4-18.7
No. of aerial pegs	—	—	9.2	7.3-10.7	15.9	12.6-20.0	12.6	7.3-20.0
No. of n+1	—	—	4.8	4.0-5.3	4.9	4.6-5.4	4.9	4.0-5.4
No. of n+2	—	—	11.9	10.0-14.3	11.7	9.0-15.0	11.8	9.0-15.0
Leaflet length (cm)	—	—	5.3	4.5-5.8	5.9	4.5-6.1	5.6	4.5-6.1
Leaflet width (cm)	—	—	2.3	2.0-2.6	2.1	1.6-2.5	2.2	1.6-2.6
Leaflet length/width	—	—	2.3	—	2.8	—	2.6	—
Plant spread (cm)	—	—	60.3	58.0-63.0	45.3	38.0-50.0	52.8	38.0-63.0
Immature pods/ plant	—	—	8.0	2.0-16.0	5.9	5.0-7.2	7.0	2.0-16.0
Mature pods/ plant	—	—	8.0	3.0-11.0	10.1	5.4-14.0	9.1	3.0-14.0
Pod bearing plants (%)	—	—	97.6	95.0-100	99.2	98.0-100	98.4	95.0-100
Pod mass (g/plant)	—	—	6.8	5.7-8.4	11.4	9.5-12.5	9.1	5.7-12.5
Pod yield /m ² (g)	—	—	292	270-321	396	250-509	344	250-509
100 pod mass (g)	—	—	85.3	83.0-90.0	91.7	90.0-95.0	88.5	83.0-95.0
One-seeded pods (%)	—	—	18.0	14.0-21.0	23.0	20.0-27.0	20.5	14.0-27.0
Two-seeded pods (%)	—	—	82.0	79.0-86.0	77.0	73.0-80.0	79.5	73.0-86.0
Three-seeded pods (%)	—	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	—	—	26.2	25.5-26.5	26.3	25.0-28.0	26.3	25.0-28.0
Pod width (mm)	—	—	12.2	12.0-12.5	12.0	11.8-12.7	12.1	11.8-12.7
Seed length (mm)	—	—	12.5	12.0-13.0	13.0	12.8-13.5	12.8	12.0-13.5
Seed width (mm)	—	—	7.2	7.0-7.5	7.0	6.8-7.8	7.1	6.8-7.8
Shelling outturn (%)	—	—	60.9	56.5-63.3	66.4	65.7-67.3	63.7	56.5-67.3
Sound mature seeds (%)	—	—	83.5	81.2-85.6	89.3	83.0-95.0	86.4	81.2-95.0
Hundred seed mass (g)	—	—	43.3	41.0-47.0	42.0	40.0-44.0	42.7	40.0-47.0

Prominent features of the cultivar:

1. Rose coloured testa with white flecks (variegated)

Name of the cultivar : CSMG 84-1

Passport information

Botanical status :	<i>A. hypogaea</i> ssp. <i>hypogaea</i> var. <i>hypogaea</i>	Botanical type :	Virginia runner
Year of release :	1992		
Originating centre :	Chandra Shekhar Azad University of Agriculture & Technology, Mainpuri		
Pedigree :	Selection from MA 10		

Qualitative traits

Stem

Branching pattern :	Alternate and irregular	Hairiness:	Sub-glabrous
Stem pigmentation :	Absent	Growth habit :	Decumbent 3

Inflorescence and flower

Type of inflorescence :	Compound	Standard petal colour:	Orange
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Leaflet

Colour :	Green	Shape :	Lanceolate	Tip :	Acute
Surface :	Glabrous above and hairs below				

Peg

Peg pigmentation :	Present
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Pod

Beak :	Absent	Constriction :	Moderate	Reticulation :	Moderate
Size :	Medium	Shell thickness :	Moderate		

Seed

Seed colour :	Two colours	Primary seed colour :	Rose with flecks
Secondary seed colour :	—	Seed shape :	Spheroidal

Resistance to diseases

Early leaf spot :	High
Rust :	High
Late leaf spot :	High

Quality traits

Oil content :	46.8 %	Protein content :	28.2 %
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Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	7	—	6	—	6.3	—
Days to initial flowering	28	—	28	—	24	—	26.7	—
Days to 50 % flowering	31	—	30	—	27	—	29.3	—
Days to maturity	125	—	119	119-122	128	127-129	124	119-129
Main axis height (cm)	20.7	17.6-23.6	23.2	16.7-28.7	27.4	22.8-29.8	23.8	16.7-29.8
Length of n+1	25.3	22.2-27.4	28.9	23.0-33.0	35.6	32.2-37.4	29.9	22.2-37.4
No. of nodes on n	11.3	5.2-16.8	15.3	14.7-16.0	13.7	11.2-15.2	13.4	5.2-16.8
No. of aerial pegs	7.7	6.8-8.6	11.8	8.0-18.7	11.5	10.2-12.8	10.3	6.8-18.7
No. of n+1	3.9	3.2-4.6	4.6	4.0-5.3	4.5	4.2-4.8	4.3	3.2-5.3
No. of n+2	8.9	5.8-13.0	12.6	7.3-19.7	10.1	7.6-14.0	10.5	5.8-19.7
Leaflet length (cm)	3.9	3.2-4.7	4.8	4.0-5.4	4.6	3.8-5.0	4.4	3.2-5.4
Leaflet width (cm)	1.8	1.5-2.3	2.1	1.6-2.7	1.9	1.5-2.0	1.9	1.5-2.7
Leaflet length/width	2.2	—	2.3	—	2.4	—	2.3	—
Plant spread (cm)	34.0	32.0-36.0	55.0	50.0-59.0	49.0	42.0-53.0	46.0	32.0-59.0
Immature pods/ plant	3.3	1.8-4.6	9.7	4.0-17.0	4.3	4.0-4.8	5.8	1.8-17.0
Mature pods/ plant	4.9	3.0-7.4	6.7	1.0-10.0	12.3	11.0-13.0	8.0	1.0-13.0
Pod bearing plants (%)	92.6	91.0-95.0	94.5	87.0-100	100	—	95.7	87.0-100
Pod mass (g/plant)	5.2	4.2-6.5	5.9	4.3-7.2	12.1	10.8-13.9	7.7	4.2-13.9
Pod yield /m ² (g)	404	375-422	193	171-237	504	434-604	367	171-604
100 pod mass (g)	86.0	—	89.7	82.0-97.0	93.7	90.0-97.0	89.8	82.0-97.0
One-seeded pods (%)	14.0	10.0-19.0	15.0	8.0-21.0	17.0	11.0-23.0	15.3	8.0-23.0
Two-seeded pods (%)	86.0	81.0-90.0	85.0	79.0-92.0	83.0	77.0-89.0	84.7	77.0-92.0
Three-seeded pods (%)	0.0	—	0	—	0	—	0.0	—
Pod length (mm)	25.8	25.5-26.0	26.3	25.0-28.0	27.0	25.0-28.0	26.4	25.0-28.0
Pod width (mm)	11.7	11.2-12.0	11.8	11.0-12.5	11.0	11.3-12.0	11.5	11.0-12.5
Seed length (mm)	12.3	11.0-13.0	12.7	12.0-13.0	13.0	12.7-13.7	12.7	11.0-13.7
Seed width (mm)	6.8	6.5-7.0	7.2	7.0-7.5	6.8	6.5-7.8	6.9	6.5-7.8
Shelling outturn (%)	61.9	57.6-65.3	63.6	62.2-64.6	65.1	64.4-66.0	63.5	57.6-66.0
Sound mature seeds (%)	79.5	75.5-84.3	85.8	84.3-87.4	88.5	84.0-95.0	84.6	75.5-95.0
Hundred seed mass (g)	36.7	35.0-40.0	35.7	35.0-37.0	42.7	41.0-44.0	38.4	35.0-44.0

Prominent features of the cultivar:

1. Rose coloured testa with white flecks (variegated)

Passport information

Botanical status :	<i>A hypogaea ssp. hypogaea var. hypogaea</i>		
Year of release :	1973	Botanical type :	Virginia runner
Originating centre :	Gujarat Agricultural University, Junagadh		
Pedigree :	G 224-3 X GO 343		

Qualitative traits

Stem

Branching pattern :	Alternate	Hairiness:	Sub-glabrous
Stem pigmentation :	Absent	Growth habit :	Decumbent 2

Inflorescence and flower

Type of inflorescence :	Compound	Standard petal colour:	Dark orange
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Leaflet

Colour :	Green	Shape :	Lanceolate	Tip :	Acute
Surface :	Almost glabrous				

Peg

Peg pigmentation :	Absent
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Pod

Beak :	Slight	Constriction :	Slight	Reticulation :	Slight
Size :	Medium	Shell thickness :	Moderate		

Seed

Seed colour :	One colour	Primary seed colour :	Rose
Secondary seed colour :	—	Seed shape :	Spheroidal

Resistance to diseases

Early leaf spot :	Intermediate
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Rust :	High
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Late leaf spot :	High
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Quality traits

Oil content :	51.0 %	Protein content :	20.1 %
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Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	6	—	6	—	6.0	—
Days to initial flowering	29.0	—	26	—	24	—	26.3	—
Days to 50 % flowering	31.0	—	30	—	27	—	29.3	—
Days to maturity	126	—	120	118-122	126	126-130	124	118-130
Main axis height (cm)	21.0	18.4-28.6	27.2	26.7-28.0	30.3	28.2-31.8	26.1	18.4-31.8
Length of n+1	35.3	31.8-40.4	39.4	36.0-43.0	44.3	33.4-53.8	39.7	31.8-53.8
No. of nodes on n	12.5	8.8-15.6	17.4	16.3-19.3	16.6	10.2-20.0	15.5	8.8-20.0
No. of aerial pegs	6.4	3.8-10.4	14.5	14.0-15.0	8.9	7.0-11.8	9.9	3.8-15.0
No. of n+1	5.3	4.6-6.0	5.0	—	4.6	4.0-5.0	5.0	4.6-6.0
No. of n+2	14.9	12.0-17.4	17.2	17.0-17.7	9.6	7.6-11.6	13.9	7.6-17.7
Leaflet length (cm)	3.8	3.4-4.2	4.8	3.8-5.5	6.1	4.8-6.3	4.9	3.4-6.3
Leaflet width (cm)	1.5	1.2-1.7	2.0	1.7-2.2	2.4	1.7-2.5	2.0	1.2-2.5
Leaflet length/width	2.6	—	2.4	—	2.5	—	2.5	—
Plant spread (cm)	38.0	37.0-39.0	67.0	65.0-71.0	65.7	60.0-70.0	56.9	37.0-71.0
Immature pods/ plant	2.7	1.8-3.4	9.0	6.0-13.0	2.7	1.6-3.8	4.8	1.6-13.0
Mature pods/ plant	3.5	2.8-4.4	8.3	4.0-12.0	10.8	6.4-15.0	7.5	2.8-15.0
Pod bearing plants (%)	87.0	83.0-92.0	90.1	73.0-100	98.1	94.0-100	91.7	73.0-100
Pod mass (g/plant)	5.4	4.7-6.4	5.4	3.8-7.1	13.1	11.3-15.6	8.0	3.8-15.6
Pod yield /m ² (g)	175	160-184	181	164-209	519	474-569	292	160-569
100 pod mass (g)	102	—	129	90.0-140	101	99.0-102	111	90.0-140
One-seeded pods (%)	8.0	6.0-10.0	19.0	15.0-23.0	15.0	4.0-26.0	14.0	4.0-26.0
Two-seeded pods (%)	92.0	90.0-94.0	81.0	77.0-85.0	85.0	74.0-96.0	86.0	74.0-96.0
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	24.8	23.0-26.0	26.4	26.0-27.0	26.7	26.0-27.0	26.0	23.0-27.0
Pod width (mm)	11.0	10.5-11.5	12.0	12.0-12.1	12.0	11.3-13.2	11.7	10.5-13.2
Seed length (mm)	11.7	10.5-13.2	12.8	12.4-13.0	14.0	12.0-16.0	12.8	10.5-16.0
Seed width (mm)	6.4	5.5-7.0	7.7	7.0-8.2	8.0	—	7.4	5.5-8.2
Shelling outturn (%)	64.2	61.8-68.1	63.8	61.6-65.3	72.6	71.9-73.5	66.9	61.6-73.5
Sound mature seeds (%)	89.3	88.1-91.8	84.1	81.6-88.9	89.0	79.0-95.0	87.5	79.0-95.0
Hundred seed mass (g)	48.7	44.0-52.0	56.3	54.0-59.0	47.3	45.0-51.0	50.8	44.0-59.0

Name of the cultivar : GG 11

Passport information

Botanical status : *A. hypogaea ssp. hypogaea var. hypogaea*
Year of release : 1984
Botanical type : Virginia runner
Originating centre : Gujarat Agricultural University, Junagadh
Pedigree : M 13 X GAUG 10

Qualitative traits

Stem

Branching pattern : Alternate **Hairiness:** Sub-glabrous
Stem pigmentation : Absent **Growth habit :** Decumbent 2

Inflorescence and flower

Type of inflorescence : Simple **Standard petal colour:** Orange

Leaflet

Colour : Green **Shape :** Lanceolate **Tip :** Acute
Surface : Almost glabrous

Peg

Peg pigmentation : Absent

Pod

Beak : Slight **Constriction :** Slight **Reticulation :** Slight
Size : Medium **Shell thickness :** Thick

Seed

Seed colour : One colour **Primary seed colour :** Rose
Secondary seed colour : — **Seed shape :** Fusiform

Resistance to diseases

Early leaf spot : Intermediate
Rust : High
Late leaf spot : Intermediate

Quality traits

Oil content : 52.9 % **Protein content :** 21.5 %

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	7	—	6	—	7	—	6.7	—
Days to initial flowering	29.0	—	26	—	23	—	26.0	—
Days to 50 % flowering	32.0	—	31	—	27	—	30.0	—
Days to maturity	122	—	119	117-121	130	127-132	125	117-132
Main axis height (cm)	20.0	17.2-23.0	25.3	22.0-29.7	28.9	27.6-31.0	24.7	17.2-31.0
Length of n+1	27.8	22.4-32.6	27.4	20.3-39.3	46.2	38.2-51.2	33.8	20.3-51.2
No. of nodes on n	13.7	11.4-16.2	18.7	16.7-19.7	15.3	12.2-20.4	15.9	11.4-20.4
No. of aerial pegs	6.8	5.2-8.2	13.2	10.0-16.7	10.8	9.4-12.4	10.3	5.2-16.7
No. of n+1	4.0	3.8-5.2	4.7	4.0-5.3	4.4	4.0-4.6	4.4	3.8-5.3
No. of n+2	14.3	13.2-16.0	15.2	14.3-16.7	9.5	8.0-11.6	13.0	8.0-16.7
Leaflet length (cm)	3.6	3.1-4.2	5.4	4.8-6.1	5.6	4.8-6.1	4.9	3.1-6.1
Leaflet width (cm)	1.3	1.1-1.7	2.4	2.2-2.7	2.2	1.8-2.4	2.0	1.1-2.7
Leaflet length/width	2.8	—	2.3	—	2.5	—	2.5	—
Plant spread (cm)	40.0	39.0-41.0	67.7	56.0-75.0	54.7	53.0-57.0	54.1	39.0-75.0
Immature pods/ plant	2.3	1.4-3.6	9.3	4.0-17.0	3.0	2.6-3.8	4.9	1.4-17.0
Mature pods/ plant	3.9	2.0-7.2	8.0	3.0-14.0	9.3	7.6-12.4	7.1	2.0-14.0
Pod bearing plants (%)	86.9	83.0-95.0	100	—	97.7	93.0-100	94.9	83.0-100
Pod mass (g/plant)	4.9	3.6-5.8	4.4	3.8-5.1	8.1	5.9-10.5	5.8	3.6-10.5
Pod yield /m ² (g)	179	145-206	165	146-177	353	296-443	232	145-443
100 pod mass (g)	76.0	—	80.0	69.0-92.0	90.3	81.0-99.0	82.1	69.0-99.0
One-seeded pods (%)	13.0	9.0-15.0	16.0	14.0-21.0	20.0	14.0-25.0	16.3	9.0-25.0
Two-seeded pods (%)	87.0	85.0-91.0	84.0	79.0-86.0	80.0	75.0-86.0	83.7	75.0-91.0
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	25.7	23.0-27.2	25.8	25.0-26.5	24.7	23.0-26.0	25.4	23.0-27.2
Pod width (mm)	11.8	11.0-12.5	12.0	11.5-12.5	12.0	11.0-13.0	11.9	11.0-13.0
Seed length (mm)	13.3	12.0-15.0	13.7	13.0-15.0	14.0	13.0-14.5	13.7	12.0-15.0
Seed width (mm)	7.5	7.0-8.0	7.7	7.2-8.0	7.3	7.0-8.0	7.5	7.0-8.0
Shelling outturn (%)	62.7	60.9-64.0	66.0	63.8-70.2	70.9	68.1-72.8	66.5	60.9-72.8
Sound mature seeds (%)	83.7	81.3-88.1	85.7	84.2-86.5	89.0	87.0-90.0	86.1	81.3-90.0
Hundred seed mass (g)	44.0	42.0-46.0	50.0	46.0-52.0	46.0	44.0-49.0	46.6	42.0-52.0

Passport information

Botanical status : *A. hypogaea* ssp. *hypogaea* var. *hypogaea* Botanical type : Virginia runner
 Year of release : 1991
 Originating centre : Gujarat Agricultural University, Junagadh
 Pedigree : Shulamith X GAUG 10

Qualitative traits

Stem

Branching pattern : Alternate Hairiness : Sub-glabrous
 Stem pigmentation : Absent Growth habit : Decumbent 2

Inflorescence and flower

Type of inflorescence : Compound Standard petal colour : Orange

Leaflet

Colour : Green Shape : Lanceolate Tip : Acute
 Surface : Almost glabrous

Peg

Peg pigmentation : Absent

Pod

Beak : Slight Constriction : Moderate Reticulation : Slight
 Size : Bold Shell thickness : Moderate

Seed

Seed colour : One colour Primary seed colour : Rose
 Secondary seed colour : — Seed shape : Spheroidal

Resistance to diseases

Early leaf spot : Low
 Rust : Intermediate
 Late leaf spot : Low

Quality traits

Oil content : 50.5 % Protein content : 19.9 %

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	6	—	7	—	6.3	—
Days to initial flowering	30	—	24	—	23	—	25.7	—
Days to 50 % flowering	33	—	26	—	28	—	29.0	—
Days to maturity	124	—	118	115-122	120	115-125	121	115-125
Main axis height (cm)	19.3	16.8-23.2	22.3	19.3-24.7	27.3	24.4-29.4	23.0	16.8-29.4
Length of n+1	30.0	24.6-35.6	31.9	29.7-33.3	47.1	43.4-52.0	36.3	24.6-52.0
No. of nodes on n	13.6	12.8-14.8	16.3	16.0-16.7	10.1	8.2-13.2	13.3	8.2-16.7
No. of aerial pegs	6.1	3.6-10.4	5.3	3.0-6.7	2.3	0.8-5.4	4.6	0.8-10.4
No. of n+1	4.4	3.2-5.2	4.4	4.0-5.0	4.4	4.0-4.8	4.4	3.2-5.2
No. of n+2	11.5	5.2-18.8	10.3	6.0-13.7	9.3	9.0-9.6	10.4	5.2-18.8
Leaflet length (cm)	3.5	3.2-3.8	5.0	4.2-6.6	5.8	4.6-6.2	4.8	3.2-6.6
Leaflet width (cm)	1.4	1.0-1.7	1.9	1.6-2.2	2.4	1.8-2.5	1.9	1.0-2.5
Leaflet length/width	2.4	—	2.6	—	2.4	—	2.5	—
Plant spread (cm)	44.0	39.0-48.0	67.0	63.0-70.0	60.3	58.0-64.0	57.1	39.0-70.0
Immature pods/ plant	2.1	0.8-4.6	10.3	9.0-12.0	4.9	4.4-5.4	5.8	0.8-12.0
Mature pods/ plant	6.5	5.4-7.8	9.7	2.0-14.0	8.2	4.6-12.0	8.1	2.0-14.0
Pod bearing plants (%)	93.6	91.0-98.0	100	—	91.2	85.0-97.0	94.9	85.0-100
Pod mass (g/plant)	4.6	4.0-5.0	4.3	3.4-6.2	16.1	15.4-16.8	8.3	3.4-16.8
Pod yield /m ² (g)	165	140-180	178	134-260	413	354-498	252	134-498
100 pod mass (g)	71.0	—	76.3	67.0-88.0	92.0	87.0-100	79.8	67.0-100
One-seeded pods (%)	13.0	10.0-14.0	20.0	17.0-23.0	21.0	15.0-30.0	18.0	10.0-30.0
Two-seeded pods (%)	87.0	86.0-90.0	80.0	77.0-83.0	79.0	70.0-85.0	82.0	70.0-90.0
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	24.5	23.5-26.0	22.2	21.0-23.0	23.3	23.0-24.0	23.3	21.0-26.0
Pod width (mm)	11.5	11.0-12.0	11.2	11.0-11.5	11.3	11.0-12.0	11.3	11.0-12.0
Seed length (mm)	12.5	11.5-13.0	13.0	12.5-13.5	12.0	11.5-13.0	12.5	11.5-13.5
Seed width (mm)	7.0	6.5-8.0	7.8	7.5-8.0	7.4	7.0-8.0	7.4	6.5-8.0
Shelling outturn (%)	66.2	64.6-67.6	66.0	62.2-71.6	72.4	70.1-74.2	68.2	62.2-74.2
Sound mature seeds (%)	90.9	83.3-95.2	87.9	84.3-90.8	92.0	85.0-97.0	90.3	83.3-97.0
Hundred seed mass (g)	37.7	36.0-40.0	36.0	35.0-37.0	39.0	37.0-42.0	37.6	35.0-42.0

Passport information

Botanical status :	<i>A. hypogaea</i> ssp. <i>hypogaea</i> var. <i>hypogaea</i>	Botanical type :	Virginia runner
Year of release :	1994		
Originating centre :	Gujarat Agricultural University, Junagadh		
Pedigree :	GAUG 10 X TMV 10		

Qualitative traits

Stem

Branching pattern :	Alternate	Hairiness:	Sub-glabrous
Stem pigmentation :	Absent	Growth habit :	Decumbent 2

Inflorescence and flower

Type of inflorescence :	Compound	Standard petal colour:	Orange
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Leaflet

Colour:	Green	Shape :	Lanceolate	Tip :	Acute
Surface :	Almost glabrous				

Peg

Peg pigmentation :	Present
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Pod

Beak :	Slight	Constriction :	Slight	Reticulation :	Slight
Size :	Medium	Shell thickness :	Moderate		

Seed

Seed colour :	One colour	Primary seed colour :	Rose
Secondary seed colour :	—	Seed shape :	Spheroidal

Resistance to diseases

Early leaf spot :	High
Rust :	High
Late leaf spot :	Intermediate

Quality traits

Oil content :	50.1 %	Protein content :	23.4 %
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Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	7	—	6	—	7	—	6.7	—
Days to initial flowering	26	—	26	—	23	—	25.0	—
Days to 50 % flowering	29	—	30	—	28	—	29.0	—
Days to maturity	131	—	133	120-138	128	128-132	131	120-138
Main axis height (cm)	20.9	17.8-24.8	24.1	23.3-25.7	28.0	25.2-31.6	24.3	17.8-31.6
Length of n+1	34.9	27.8-46.8	36.3	35.3-37.3	41.7	32.6-47.4	37.6	27.8-47.4
No. of nodes on n	14.7	13.6-16.6	15.4	14.0-17.0	14.5	12.5-17.0	14.9	12.5-17.0
No. of aerial pegs	8.9	6.8-12.4	17.4	14.0-22.3	13.7	8.4-19.2	13.3	6.8-22.3
No. of n+1	5.3	4.6-6.0	5.4	4.7-6.3	4.6	4.2-5.0	5.1	4.2-6.3
No. of n+2	14.9	12.0-17.4	16.3	13.0-19.0	12.1	10.0-13.2	14.4	10.0-19.0
Leaflet length (cm)	3.5	3.2-4.2	4.9	4.1-6.2	4.7	3.8-5.2	4.4	3.2-6.2
Leaflet width (cm)	1.4	1.1-1.7	2.1	1.8-2.5	2.3	1.7-2.5	1.9	1.1-2.5
Leaflet length/width	2.5	—	2.3	—	2.0	—	2.3	—
Plant spread (cm)	39.0	34.0-44.0	72.3	70.0-75.0	59.3	52.0-64.0	56.9	34.0-75.0
Immature pods/ plant	2.9	2.4-3.6	11.0	8.0-13.0	5.9	1.4-13.0	6.6	1.4-13.0
Mature pods/ plant	7.7	6.0-10.8	15.0	9.0-26.0	7.9	5.0-9.6	10.2	5.0-26.0
Pod bearing plants (%)	91.5	87.0-96.0	97.1	93.0-100	99.3	98.0-100	96.0	87.0-100
Pod mass (g/plant)	6.0	5.5-6.7	7.9	6.9-8.5	16.1	10.8-18.9	10.0	5.5-18.9
Pod yield /m ² (g)	284	267-300	264	351-384	580	487-650	376	267-650
100 pod mass (g)	100	—	104	96.0-116	113	100-124	106	96.0-124
One-seeded pods (%)	8.0	4.0-13.0	24.0	23.0-25.0	20.0	16.0-27.0	17.3	4.0-27.0
Two-seeded pods (%)	92.0	87.0-96.0	76.0	75.0-77.0	80.0	73.0-84.0	82.7	73.0-96.0
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	25.2	23.5-26.0	24.7	24.5-25.0	27.0	26.5-28.0	25.6	23.5-28.0
Pod width (mm)	12.5	12.0-13.5	11.5	11.0-12.0	12.0	12.3-13.0	12.0	11.0-13.5
Seed length (mm)	14.5	12.5-17.0	13.1	12.9-13.4	15.0	14.0-16.0	14.2	12.5-17.0
Seed width (mm)	7.7	7.0-8.0	7.6	7.0-8.1	7.2	7.0-8.0	7.5	7.0-8.1
Shelling outturn (%)	63.7	60.0-67.0	61.0	60.4-62.2	69.6	67.0-71.8	64.8	60.0-71.8
Sound mature seeds (%)	85.5	78.4-94.0	88.0	86.9-89.7	91.6	87.0-96.0	88.4	78.4-96.0
Hundred seed mass (g)	50.0	48.0-52.0	51.3	49.0-56.0	53.3	50.0-56.0	51.5	48.0-56.0

Name of the cultivar : Karad 4-11

Passport information

Botanical status : *A. hypogaea* ssp. *hypogaea* var. *hypogaea*
 Year of release : 1957 Botanical type : Virginia runner
 Originating centre : Agricultural Research Station, P.K.V.V. , Karad
 Pedigree : Selection from local cultivar

Qualitative traits

Stem

Branching pattern : Irregular without flowers on n Hairiness: Sub-glabrous
 Stem pigmentation : Absent Growth habit : Decumbent 2

Inflorescence and flower

Type of inflorescence : Compound Standard petal colour: Dark orange

Leaflet

Colour : Green Shape : Lanceolate Tip : Acute
 Surface : Almost glabrous

Peg

Peg pigmentation : Absent

Pod

Beak : Absent Constriction : Slight Reticulation : Slight
 Size : Medium Shell thickness : Thick

Seed

Seed colour : One colour Primary seed colour : Rose
 Secondary seed colour : — Seed shape : Spheroidal

Resistance to diseases

Early leaf spot : High
 Rust : Intermediate
 Late leaf spot : High

Quality traits

Oil content : 49.6% Protein content : 24.6%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	6	—	6	—	6.0	—
Days to initial flowering	27	—	26	—	30	—	27.7	—
Days to 50 % flowering	30	—	30	—	33	—	31.0	—
Days to maturity	124	—	119	118-120	129	127-130	124	118-130
Main axis height (cm)	25.0	22.6-27.0	25.1	24.0-26.7	32.7	30.4-34.6	27.6	22.6-34.6
Length of n+1	40.7	39.2-42.6	33.2	26.3-39.7	51.6	38.4-58.6	41.8	26.3-58.6
No. of nodes on n	13.9	12.4-15.2	17.9	16.3-19.0	15.7	12.8-21.4	15.8	12.4-21.4
No. of aerial pegs	8.6	6.5-11.8	11.9	4.7-19.0	11.7	10.2-12.8	10.7	4.7-19.0
No. of n+1	5.5	3.2-9.2	4.6	3.3-5.3	4.5	4.2-4.8	4.9	3.2-9.2
No. of n+2	12.2	2.1-19.0	18.2	12.0-27.7	12.2	9.6-16.8	14.2	2.1-27.7
Leaflet length (cm)	3.3	2.8-4.0	5.5	4.8-6.1	5.3	4.4-6.0	4.7	2.8-6.1
Leaflet width (cm)	1.4	1.0-1.5	2.3	2.1-2.6	2.2	1.7-2.5	2.0	1.0-2.6
Leaflet length/width	2.4	—	2.4	—	2.4	—	2.4	—
Plant spread (cm)	41.0	39.0-42.0	74.7	73.0-76.0	62.7	61.0-66.0	59.5	39.0-76.0
Immature pods/ plant	6.0	0.6-14.2	4.0	2.0-6.0	6.3	4.4-8.0	5.4	0.6-14.2
Mature pods/ plant	5.5	4.2-6.6	4.3	0.0-12.0	10.2	10.0-10.6	6.7	0.0-12.0
Pod bearing plants (%)	93.3	89.0-97.0	83.7	73.0-100	99.2	98.0-100	92.1	73.0-100
Pod mass (g/plant)	6.3	5.9-6.9	4.8	2.9-6.4	12.4	9.2-16.2	7.8	2.9-16.2
Pod yield /m ² (g)	519	490-550	140	135-144	473	452-501	377	135-550
100 pod mass (g)	92.0	—	74.0	70.0-80.0	80.0	79.0-81.0	82.0	70.0-92.0
One-seeded pods (%)	7.0	6.0-8.0	10.0	8.0-12.0	14.0	11.0-16.0	10.3	6.0-16.0
Two-seeded pods (%)	93.0	92.0-94.0	90.0	88.0-92.0	86.0	84.0-89.0	89.7	84.0-94.0
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	24.3	23.5-26.0	21.5	21.2-22.1	24.0	—	23.3	21.2-26.0
Pod width (mm)	11.3	11.0-12.0	11.0	10.6-11.5	11.0	10.8-12.2	11.1	10.6-12.2
Seed length (mm)	13.8	13.5-14.0	11.4	11.1-12.0	11.0	10.8-12.5	12.1	10.8-14.0
Seed width (mm)	7.8	7.5-8.0	7.4	7.2-7.6	7.0	6.8-8.6	7.4	6.8-8.6
Shelling outturn (%)	67.9	67.1-69.6	61.9	60.0-64.5	69.6	66.3-75.7	66.5	60.0-75.7
Sound mature seeds (%)	94.5	94.1-95.3	83.9	82.1-85.4	90.5	85.0-94.0	89.6	82.1-95.3
Hundred seed mass (g)	38.7	38.0-40.0	44.3	43.0-46.0	39.7	39.0-41.0	40.9	38.0-46.0

Name of the cultivar : Kaushal (G 201)

Passport information	
Botanical status :	<i>A.hypogaea ssp. hypogaea var. hypogaea</i>
Year of release :	1984
Botanical type :	Virginia runner
Originating centre :	Groundnut Research Station., C.S.A.U.A. & T, Mainpuri
Pedigree :	Selection from T 28

Qualitative traits	
Stem	
Branching pattern :	Irregular without flowers on n
Hairiness:	Almost glabrous
Stem pigmentation :	Absent
Growth habit :	Decumbent 3
Inflorescence and flower	
Type of inflorescence :	Compound
Standard petal colour:	Dark orange
Leaflet	
Colour :	Green
Shape :	Lanceolate
Tip :	Acute
Surface :	Almost glabrous above and hairs below
Peg	
Peg pigmentation :	Absent
Pod	
Beak :	Slight
Constriction :	Moderate
Reticulation :	Slight
Size :	Medium
Shell thickness :	Moderate
Seed	
Seed colour :	One colour
Primary seed colour :	Rose
Secondary seed colour :	—
Seed shape :	Spheroidal
Resistance to diseases	
Early leaf spot :	Intermediate
Rust :	Intermediate
Late leaf spot :	Intermediate
Quality traits	
Oil content :	52.8%
Protein content :	20.8%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	5	—	7	—	6.0	—
Days to initial flowering	29	—	27	—	22	—	26.0	—
Days to 50 % flowering	32	—	30	—	25	—	29.0	—
Days to maturity	124	—	121	118-126	127	126-128	124	118-128
Main axis height (cm)	21.3	15.8-29.6	21.3	19.8-23.3	24.9	20.8-27.0	22.5	15.8-29.6
Length of n+1	22.2	19.0-26.0	26.2	25.7-27.0	32.0	28.6-35.2	26.8	19.0-35.2
No. of nodes on n	13.5	10.6-17.4	17.1	15.7-18.0	12.9	9.0-19.8	14.5	9.0-19.8
No. of aerial pegs	8.5	4.6-12.4	10.9	6.0-18.7	13.9	11.2-17.2	11.1	4.6-18.7
No. of n+1	4.1	3.6-4.8	4.8	4.7-5.0	4.5	4.2-5.0	4.5	3.6-5.0
No. of n+2	13.6	12.0-15.8	15.2	12.7-17.7	8.9	6.4-11.0	12.6	6.4-17.7
Leaflet length (cm)	3.2	2.7-3.6	4.8	4.3-5.2	5.9	4.2-6.3	4.6	2.7-6.3
Leaflet width (cm)	1.3	1.1-1.6	2.2	1.9-2.5	2.4	1.7-2.5	2.0	1.1-2.5
Leaflet length/width	2.4	—	2.2	—	2.5	—	2.4	—
Plant spread (cm)	42.0	37.0-46.0	42.3	39.0-45.0	50.3	45.0-56.0	44.9	37.0-56.0
Immature pods/ plant	1.5	0.2-2.4	8.7	8.0-10.0	1.1	0.8-1.4	3.8	0.2-10.0
Mature pods/ plant	2.4	1.6-3.4	6.0	3.0-9.0	6.4	4.2-7.6	4.9	1.6-9.0
Pod bearing plants (%)	68.2	57.0-81.0	98.1	94.0-100	99.3	98.0-100	88.5	57.0-100
Pod mass (g/plant)	8.1	6.7-9.0	6.1	5.2-7.6	9.9	8.6-11.6	8.0	5.2-11.6
Pod yield /m ² (g)	261	223-300	193	173-216	399	377-434	284	173-434
100 pod mass (g)	79.0	—	95.3	83.0-105	109	98.0-127	94.4	79.0-127
One-seeded pods (%)	13.0	8.0-18.0	13.0	10.0-15.0	19.0	17.0-20.0	15.0	8.0-20.0
Two-seeded pods (%)	74.0	72.0-78.0	87.0	85.0-90.0	62.0	61.0-64.0	74.3	61.0-90.0
Three-seeded pods (%)	13.0	10.0-15.0	0.0	—	19.0	16.0-22.0	10.7	0.0-22.0
Pod length (mm)	24.0	21.5-26.5	23.3	21.5-26.0	24.0	21.0-26.0	23.8	21.0-26.5
Pod width (mm)	11.3	11.0-12.0	11.3	11.0-12.0	12.0	11.0-13.0	11.5	11.0-13.0
Seed length (mm)	11.7	11.0-12.3	11.9	11.2-13.0	12.3	11.8-13.0	12.0	11.0-13.0
Seed width (mm)	7.3	6.5-8.0	7.5	7.0-8.0	7.9	7.0-9.0	7.6	6.5-9.0
Shelling outturn (%)	58.7	55.7-64.4	68.9	66.7-70.1	70.7	67.6-73.0	66.1	55.7-73.0
Sound mature seeds (%)	88.1	85.1-90.5	86.2	83.7-88.6	92.2	85.0-97.0	88.8	83.7-97.0
Hundred seed mass (g)	39.7	38.0-42.0	45.0	41.0-47.0	45.0	44.0-46.0	43.2	38.0-47.0

Passport Information

Botanical status :	<i>A. hypogaea</i> ssp. <i>hypogaea</i> var. <i>hypogaea</i>		
Year of release :	1972	Botanical type :	Virginia runner
Originating centre :	Punjab Agricultural University, Ludhiana		
Pedigree :	Selection from NC 13		

Qualitative traits

Stem

Branching pattern :	Alternate	Hairiness:	Almost glabrous
Stem pigmentation :	Absent	Growth habit :	Decumbent 2

Inflorescence and flower

Type of inflorescence :	Compound	Standard petal colour:	Orange
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Leaflet

Colour :	Green	Shape :	Lanceolate	Tip :	Acute
Surface :	Almost glabrous				

Peg

Peg pigmentation :	Present
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Pod

Beak :	Slight	Constriction :	Moderate	Reticulation :	Moderate
Size :	Bold	Shell thickness :	Thick		

Seed

Seed colour :	One colour	Primary seed colour :	Salmon
Secondary seed colour:	—	Seed shape :	Spheroidal

Resistance to diseases

Early leaf spot :	High
Rust :	Intermediate
Late leaf spot:	Intermediate

Quality traits

Oil content :	50.2 %	Protein content :	25.6%
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Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	7	—	7	—	6	—	6.7	—
Days to initial flowering	26	—	27	—	24	—	25.7	—
Days to 50 % flowering	28	—	33	—	27	—	29.3	—
Days to maturity	125	—	120	118-122	128	124-130	124	118-130
Main axis height (cm)	23.9	20.2-29.8	22.4	21.3-23.3	24.3	21.4-26.0	23.5	20.2-29.8
Length of n+1	32.7	27.8-38.4	29.0	26.0-32.7	35.3	29.4-38.2	32.3	26.0-38.4
No. of nodes on n	12.8	11.0-14.6	16.4	14.7-18.0	17.9	10.5-27.2	15.7	10.5-27.2
No. of aerial pegs	13.1	7.2-23.0	12.9	5.7-26.7	8.6	7.6-10.4	11.5	5.7-26.7
No. of n+1	5.3	4.6-6.0	4.8	4.3-5.7	4.2	4.1-4.3	4.8	4.1-6.0
No. of n+2	11.2	9.8-12.2	13.9	6.0-27.0	8.6	7.3-10.8	11.2	6.0-27.0
Leaflet length (cm)	3.3	3.2-4.2	4.8	3.7-5.4	5.9	4.8-6.5	4.7	3.2-6.5
Leaflet width (cm)	1.5	1.1-1.7	1.8	1.7-2.1	2.5	1.8-2.7	1.9	1.1-2.7
Leaflet length/width	2.5	—	2.5	—	2.4	—	2.5	—
Plant spread (cm)	34.0	30.0-38.0	69.0	63.0-78.0	56.0	52.0-62.0	53.0	30.0-78.0
Immature pods/ plant	2.0	1.2-3.4	8.3	5.0-12.0	1.9	1.0-2.8	4.1	1.0-12.0
Mature pods/ plant	4.4	3.0-5.2	4.3	4.0-5.0	6.2	4.5-9.2	5.0	3.0-9.2
Pod bearing plants (%)	86.0	77.0-94.0	96.7	92.0-100	98.2	95.0-100	93.6	77.0-100
Pod mass (g/plant)	6.5	5.9-7.0	4.7	4.5-4.9	11.0	10.5-11.5	7.4	4.5-11.5
Pod yield /m ² (g)	337	307-352	178	166-193	414	366-500	310	166-500
100 pod mass (g)	112	—	99.0	94.0-103	107	100-111	106	94.0-112
One seeded pods (%)	17.0	15.0-20.0	25.0	20.0-28.0	21.0	19.0-23.0	21.0	15.0-28.0
Two seeded pods (%)	83.0	80.0-85.0	75.0	72.0-80.0	79.0	77.0-81.0	79.0	72.0-85.0
Three seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	29.3	26.5-33.0	25.4	24.0-26.0	27.3	27.0-28.0	27.3	24.0-33.0
Pod width (mm)	13.2	11.7-14.5	12.7	12.0-13.0	13.0	—	13.0	11.7-14.5
Seed length (mm)	15.4	15.0-16.0	12.7	11.0-14.5	15.0	14.5-16.3	14.4	11.0-16.3
Seed width (mm)	7.5	6.9-8.0	7.7	7.5-8.0	7.7	7.3-8.0	7.6	6.9-8.0
Shelling outturn (%)	63.9	62.9-64.4	64.3	63.8-65.1	69.0	65.8-71.2	65.7	62.9-71.2
Sound mature seeds (%)	91.7	86.1-95.9	88.1	86.4-90.0	88.1	82.0-93.0	89.3	82.0-95.9
Hundred seed mass (g)	50.3	45.0-54.0	49.3	48.0-50.0	53.3	52.0-56.0	51.0	45.0-56.0

Prominent features of the cultivar:

1. Large sized pods with thick shell
2. Salmon coloured testa

Passport Information

Botanical status : *A. hypogaea* ssp. *hypogaea* var. *hypogaea*
 Year of release : 1982 Botanical type : Virginia runner
 Originating centre : Punjab Agricultural University, Ludhiana
 Pedigree : C 501 X U 4-7-2

Qualitative traits

Stem

Branching pattern : Alternate Hairiness : Sub-glabrous
 Stem pigmentation : Absent Growth habit : Decumbent 3

Inflorescence and flower

Type of inflorescence : Compound Standard petal colour : Orange

Leaflet

Colour : Green Shape : Lanceolate Leaf tip : Acute
 Surface : Almost glabrous with hairs below

Peg

Peg pigmentation : Present

Pod

Beak : Slight Constriction : Moderate Reticulation : Slight
 Size : Medium Shell thickness : Moderate

Seed

Seed colour : One colour Primary seed colour : Rose
 Secondary seed colour : — Seed shape : Fusiform

Resistance to diseases

Early leaf spot : High
 Rust : Intermediate
 Late leaf spot : Intermediate

Quality traits

Oil content : 52.0 % Protein content : 26.4%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	7	—	6	—	6	—	6.3	—
Days to initial flowering	25	—	26	—	23	—	24.7	—
Days to 50 % flowering	27	—	30	—	26	—	27.7	—
Days to maturity	126	—	121	116-126	128	125-130	125	116-130
Main axis height (cm)	29.1	26.8-33.0	25.8	22.3-30.0	30.9	30.0-31.4	28.6	22.3-33.0
Length of n+1	37.1	33.8-43.6	31.4	28.7-36.3	43.3	42.0-44.2	37.3	28.7-44.2
No. of nodes on n	3.8	3.0-4.8	18.7	16.7-19.7	15.3	12.2-21.4	12.6	3.0-21.4
No. of aerial pegs	7.1	5.0-10.4	13.0	5.0-19.0	13.6	12.8-14.6	11.2	5.0-19.0
No. of n+1	3.8	3.0-4.8	5.1	4.7-5.3	4.9	4.8-5.0	4.6	3.0-5.3
No. of n+2	12.7	11.8-13.4	15.1	10.3-20.3	9.7	8.0-11.8	12.5	8.0-20.3
Leaflet length (cm)	3.9	3.0-5.0	5.1	3.9-6.1	6.3	5.0-6.6	5.1	3.0-6.6
Leaflet width (cm)	1.8	1.5-2.3	2.0	1.5-2.4	2.5	2.0-2.6	2.1	1.5-2.6
Leaflet length/width	2.2	—	2.5	—	2.5	—	2.4	—
Plant spread (cm)	28.0	32.0-36.0	43.3	37.0-53.0	60.3	56.0-65.0	43.9	32.0-65.0
Immature pods/ plant	1.9	1.4-2.6	4.7	3.0-7.0	4.2	2.0-8.0	3.6	1.4-8.0
Mature pods/ plant	4.1	3.6-4.8	3.0	1.0-6.0	6.0	3.6-7.6	4.4	1.0-7.6
Pod bearing plants (%)	94.0	93.0-96.0	100	—	100	—	98.0	93.0-100
Pod mass (g/plant)	7.1	6.3-8.0	4.4	3.6-5.3	9.8	8.9-11.0	7.1	3.6-11.0
Pod yield /m ² (g)	416	384-440	160	139-186	369	329-421	315	139-440
100 pod mass (g)	75.0	—	83.7	66.0-99.0	97.0	—	85.2	66.0-99.0
One seeded pods (%)	10.0	—	13.0	2.0-20.0	25.0	20.0-30.0	16.0	2.0-30.0
Two seeded pods (%)	57.0	12.0-85.0	70.0	60.0-84.0	57.0	54.0-64.0	61.3	12.0-85.0
Three seeded pods (%)	33.0	5.0-40.0	17.0	0.0-38.0	18.0	16.0-21.0	22.7	0.0-40.0
Pod length (mm)	29.5	26.0-34.0	26.7	26.0-27.0	26.7	26.0-27.0	27.6	26.0-34.0
Pod width (mm)	11.7	11.5-12.0	12.2	11.5-13.0	12.0	11.0-13.0	12.0	11.0-13.0
Seed length (mm)	13.5	13.0-14.0	12.4	12.0-13.2	12.0	11.5-13.5	12.6	11.5-14.0
Seed width (mm)	7.2	7.0-7.5	7.1	7.0-7.2	7.2	7.0-8.0	7.2	7.0-8.0
Shelling outturn (%)	66.1	63.1-70.0	66.0	64.6-67.2	70.8	70.1-71.0	67.6	63.1-71.0
Sound mature seeds (%)	84.4	83.7-85.4	86.0	84.2-88.6	89.8	81.0-95.0	86.7	81.0-95.0
Hundred seed mass (g)	41.0	39.0-43.0	40.7	38.0-48.0	46.0	45.0-47.0	42.6	38.0-48.0

Name of the cultivar : M 335

Passport Information

Botanical status : *A. hypogaea* ssp. *hypogaea* var. *hypogaea*
 Year of release : 1986 Botanical type : Virginia runner
 Originating centre : Punjab Agricultural University, Ludhiana
 Pedigree : M 13 X F 7

Qualitative traits

Stem

Branching pattern : Irregular without flower on n Hairiness: Almost glabrous
 Stem pigmentation : Absent Growth habit : Decumbent 3

Inflorescence and flower

Type of inflorescence : Compound Standard petal colour: Orange

Leaflet

Colour : Green Shape : Lanceolate Tip : Acute
 Surface : Almost glabrous with hairs below

Peg

Peg pigmentation : Present

Pod

Beak : Slight Constriction : Moderate Reticulation : Moderate
 Size : Bold Shell thickness : Thick

Seed

Seed colour : One colour Primary seed colour : Salmon
 Secondary seed colour: Seed shape : Fusiform

Resistance to diseases

Early leaf spot : Intermediate
 Rust : Intermediate
 Late leaf spot: Intermediate

Quality traits

Oil content : 48.6 % Protein content : 24.2%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	6	—	6	—	6.0	—
Days to initial flowering	26	—	26	—	25	—	25.7	—
Days to 50 % flowering	28	—	28	—	28	—	28.0	—
Days to maturity	124	—	120	118-122	126	125-128	123	118-128
Main axis height (cm)	28.7	22.4-38.0	24.1	20.3-27.0	24.9	23.2-26.8	25.9	20.3-38.0
Length of n+1	35.7	28.2-44.0	29.9	28.3-32.3	36.4	31.4-40.4	34.0	28.2-44.0
No. of nodes on n	13.5	12.0-14.8	16.1	15.0-16.7	12.8	11.2-14.8	14.1	11.2-16.7
No. of aerial pegs	9.3	6.0-15.8	19.1	9.7-26.7	12.8	10.8-14.8	13.7	6.0-26.7
No. of n+1	3.9	3.0-4.6	5.3	5.0-5.7	4.6	4.2-5.0	4.6	3.0-5.7
No. of n+2	12.6	10.0-16.0	10.7	10.3-11.0	8.1	7.4-9.2	10.5	7.4-16.0
Leaflet length (cm)	3.7	2.9-4.4	5.0	4.3-6.2	5.5	4.2-6.0	4.7	2.9-6.2
Leaflet width (cm)	1.4	0.9-1.7	2.1	1.8-2.4	1.8	1.5-2.0	1.8	0.9-2.4
Leaflet length/width	2.6	—	2.4	—	3.1	—	2.7	—
Plant spread (cm)	38.0	34.0-40.0	55.6	50.0-59.0	57.0	52.0-62.0	50.2	34.0-62.0
Immature pods/ plant	2.1	1.6-2.6	5.7	2.0-13.0	3.9	2.0-6.0	3.9	1.6-13.0
Mature pods/ plant	5.9	4.8-7.0	3.0	1.0-5.0	7.3	7.0-7.8	5.4	1.0-7.8
Pod bearing plants (%)	90.7	88.0-95.0	95.3	86.0-100	96.6	90.0-100	94.2	86.0-100
Pod mass (g/plant)	5.8	4.9-6.6	4.9	4.1-6.2	11.3	8.0-16.1	7.3	4.1-16.2
Pod yield /m ² (g)	455	440-470	186	176-205	328	208-467	323	176-470
100 pod mass (g)	120	—	109	100-115	116	102-127	115	100-127
One seeded pods (%)	11.0	6.0-8.0	15.0	14.0-16.0	34.0	32.0-35.0	20.0	6.0-35.0
Two seeded pods (%)	89.0	82.0-94.0	85.0	84.0-86.0	66.0	65.0-68.0	80.0	65.0-94.0
Three seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	27.3	26.0-30.0	29.4	28.9-30.0	26.3	25.0-27.0	27.7	25.0-30.0
Pod width (mm)	11.8	11.0-13.0	14.7	14.0-15.0	13.0	12.0-14.0	13.2	11.0-15.0
Seed length (mm)	13.8	13.0-15.3	13.8	12.1-15.0	15.0	14.0-16.0	14.2	12.1-16.0
Seed width (mm)	7.2	6.5-8.0	8.1	8.0-8.3	8.0	—	7.8	6.5-8.3
Shelling outturn (%)	67.1	62.1-69.9	63.0	60.0-64.6	68.7	64.4-71.6	66.3	60.0-71.6
Sound mature seeds (%)	89.0	84.5-93.2	86.5	84.2-88.4	92.6	89.0-96.0	89.4	84.2-96.0
Hundred seed mass (g)	53.7	51.0-56.0	52.7	51.0-54.0	57.3	54.0-61.0	50.6	51.0-61.0

Prominent features of the cultivar:

1. Pods with slight beak, moderate constriction and reticulation
2. Moderately thick shell

Name of the cultivar : M 37

Passport Information	
Botanical status :	<i>A. hypogaea</i> ssp. <i>hypogaea</i> var. <i>hypogaea</i>
Year of release :	1980
Originating centre :	Punjab Agricultural University, Ludhiana
Pedigree :	A1XC6-4-7-2

Qualitative traits	
Stem	
Branching pattern :	Irregular without flower on n
Stem pigmentation :	Absent
Growth habit :	Decumbent 3
Hairiness:	Almost glabrous
Inflorescence and flower	
Type of inflorescence :	Simple
Standard petal colour:	Dark orange
Leaflet	
Colour :	Green
Shape :	Lanceolate
Tip :	Acute
Surface :	Almost glabrous with hairs below
Peg	
Peg pigmentation :	Absent
Pod	
Beak :	Slight
Constriction :	Moderate
Size :	Medium
Shell thickness :	Moderate
Seed	
Seed colour :	One colour
Primary seed colour :	Rose
Secondary seed colour:	—
Seed shape :	Fusiform
Resistance to diseases	
Early leaf spot :	Intermediate
Rust :	Intermediate
Late leaf spot:	Intermediate
Quality traits	
Oil content :	50.9 %
Protein content :	23.5%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	6	—	6	—	6.0	—
Days to initial flowering	27	—	27	—	24	—	26.0	—
Days to 50 % flowering	29	—	30	—	28	—	29.0	—
Days to maturity	125	—	121	120-122	127	125-128	124	120-128
Main axis height (cm)	22.1	17.6-28.0	25.7	22.0-31.0	26.2	25.2-28.0	24.7	17.6-31.0
Length of n+1	31.1	29.4-33.4	34.8	31.0-41.7	38.4	35.8-40.5	34.8	29.4-41.7
No. of nodes on n	14.8	11.2-17.6	18.3	17.0-20.0	14.5	11.3-20.4	15.9	11.2-20.4
No. of aerial pegs	7.3	6.2-8.4	8.2	8.0-8.3	10.2	8.3-13.2	8.6	6.2-13.2
No. of n+1	3.9	3.2-5.0	4.4	4.3-4.7	4.7	4.5-4.8	4.3	3.2-5.0
No. of n+2	10.1	8.4-12.6	10.6	6.3-13.3	8.5	6.8-12.0	9.7	6.3-13.3
Leaflet length (cm)	4.1	3.5-4.5	4.4	4.0-5.3	5.7	4.4-6.0	4.7	3.5-6.0
Leaflet width (cm)	1.6	1.2-2.0	1.9	1.6-2.3	2.4	2.0-2.6	2.0	1.2-2.6
Leaflet length/width	2.6	—	2.3	—	2.4	—	2.4	—
Plant spread (cm)	30.0	28.0-32.0	44.0	38.0-52.0	59.0	57.0-60.0	44.3	28.0-60.0
Immature pods/ plant	1.2	0.0-1.8	7.0	4.0-10.0	2.8	1.8-4.0	3.7	0.0-10.0
Mature pods/ plant	2.7	2.0-3.8	7.0	6.0-9.0	6.0	5.0-7.5	5.2	2.0-9.0
Pod bearing plants (%)	89.6	83.0-94.0	98.3	97.0-100	99.1	97.0-100	95.7	83.0-100
Pod mass (g/plant)	4.4	3.6-5.0	4.2	3.7-4.7	8.9	8.3-9.5	5.8	3.6-9.5
Pod yield /m ² (g)	282	270-294	171	150-211	290	285-299	248	150-299
100 pod mass (g)	69.0	—	82.7	80.0-88.0	95.3	93.0-99.0	82.3	69.0-99.0
One seeded pods (%)	10.0	10.0-11.0	12.0	9.0-13.0	16.0	10.0-20.0	12.6	9.0-20.0
Two seeded pods (%)	88.0	85.0-90.0	82.0	80.0-84.0	84.0	80.0-90.0	84.7	80.0-90.0
Three seeded pods (%)	2.0	0.0-4.0	6.0	4.0-8.0	0.0	—	2.7	0.0-8.0
Pod length (mm)	26.2	25.5-27.0	25.5	25.0-26.0	25.7	25.0-26.0	25.8	25.0-27.0
Pod width (mm)	11.4	10.0-12.2	11.2	11.0-11.5	11.0	10.0-11.0	11.2	10.0-12.2
Seed length (mm)	14.4	12.8-17.0	12.8	12.5-13.0	13.5	13.0-14.0	13.6	12.5-17.0
Seed width (mm)	7.1	6.8-7.4	7.8	7.5-8.0	7.3	7.0-8.0	7.4	6.8-8.0
Shelling outturn (%)	63.3	61.6-65.2	67.7	65.5-70.5	71.3	68.8-72.7	67.4	61.6-72.7
Sound mature seeds (%)	84.7	82.9-86.7	88.3	87.0-90.5	93.0	92.0-95.0	88.7	82.9-95.0
Hundred seed mass (g)	39.0	38.0-41.0	50.0	49.0-51.0	44.3	43.0-46.0	44.4	38.0-51.0

Name of the cultivar : Punjab 1

Passport Information

Botanical status : *A. hypogaea* ssp. *hypogaea* var. *hypogaea* Botanical type : Virginia runner
 Year of release : 1953
 Originating centre : Punjab Agricultural University, Ludhiana
 Pedigree : Selection from Samrala Local

Qualitative traits

Stem

Branching pattern : Irregular without flowers on n Hairiness: Almost glabrous
 Stem pigmentation : Absent Growth habit : Decumbent 2

Inflorescence and flower

Type of inflorescence : Compound Standard petal colour: Orange

Leaflet

Colour : Green Shape : Lanceolate Tip : Acute
 Surface : Almost glabrous above and hairs below

Peg

Peg pigmentation : Absent

Pod

Beak : Slight Constriction : Slight Reticulation : Slight
 Size : Medium Shell thickness : Moderate

Seed

Seed colour : One colour Primary seed colour : Rose
 Secondary seed colour: — Seed shape : Spheroidal

Resistance to diseases

Early leaf spot : High
 Rust : Intermediate
 Late leaf spot: Intermediate

Quality traits

Oil content : 51.0 % Protein content : 24.3%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	7	—	6	—	8	—	7.0	—
Days to initial flowering	27	—	26	—	22	—	25.0	—
Days to 50 % flowering	29	—	29	—	25	—	27.7	—
Days to maturity	125	—	120	118-125	128	125-132	124	118-132
Main axis height (cm)	23.1	20.2-26.8	28.3	25.3-33.7	28.6	27.0-30.2	26.7	20.2-33.7
Length of n+1	31.3	27.2-39.4	38.2	34.3-43.7	44.9	39.2-49.2	38.1	27.2-49.2
No. of nodes on n	13.0	8.6-17.0	21.2	18.7-24.7	14.1	9.8-21.0	16.1	8.6-24.7
No. of aerial pegs	7.2	5.4-8.2	12.3	8.0-15.3	8.7	5.2-10.8	9.4	5.2-15.3
No. of n+1	3.8	3.0-4.6	5.0	4.7-5.3	4.5	4.4-4.6	4.4	3.0-5.3
No. of n+2	13.0	10.6-14.8	13.9	11.6-16.7	9.6	6.0-12.8	12.2	6.0-16.7
Leaflet length (cm)	3.7	2.6-4.7	5.1	4.5-6.1	4.7	3.6-5.5	4.5	2.6-6.1
Leaflet width (cm)	1.4	1.1-1.9	2.3	1.8-2.9	2.3	1.8-2.5	2.0	1.1-2.9
Leaflet length/width	2.5	—	2.2	—	2.0	—	2.2	—
Plant spread (cm)	40.0	35.0-45.0	67.3	63.0-72.0	63.3	54.0-74.0	56.9	35.0-74.0
Immature pods/ plant	2.0	1.2-3.4	9.3	5.0-14.0	2.7	2.2-3.6	4.7	1.2-14.0
Mature pods/ plant	3.0	0.8-5.6	6.7	4.0-11.0	6.1	4.8-8.0	5.3	0.8-11.0
Pod bearing plants (%)	86.6	77.0-93.0	98.9	97.0-100	97.8	96.0-100	94.4	77.0-100
Pod mass (g/plant)	5.2	3.3-7.9	5.4	3.9-6.6	9.9	8.3-10.0	6.8	3.3-10.0
Pod yield /m ² (g)	238	214-270	194	139-269	407	291-494	280	139-494
100 pod mass (g)	73.0	—	81.7	77.0-87.0	90.0	82.0-97.0	81.6	73.0-97.0
One seeded pods (%)	8.0	5.0-10.0	17.0	11.0-22.0	34.0	33.0-35.0	20.7	5.0-35.0
Two seeded pods (%)	88.0	82.0-92.0	83.0	78.0-89.0	66.0	35.0-67.0	78.0	35.0-92.0
Three seeded pods (%)	4.0	0.0-8.0	0.0	—	0.0	0.0	1.3	0.0-8.0
Pod length (mm)	27.3	26.0-28.0	25.3	25.0-26.0	24.3	22.0-26.0	25.6	22.0-28.0
Pod width (mm)	11.6	11.2-12.0	11.7	11.0-12.0	12.0	11.0-13.0	11.8	11.0-13.0
Seed length (mm)	13.4	13.0-14.0	13.7	13.2-14.0	13.0	12.8-14.3	13.4	12.8-14.3
Seed width (mm)	7.3	6.5-8.0	7.8	7.5-8.0	7.3	7.0-8.0	7.5	6.5-8.0
Shelling outturn (%)	65.8	65.7-65.9	63.9	61.7-67.8	73.0	70.3-75.6	67.6	61.7-75.6
Sound mature seeds (%)	84.5	76.1-94.0	85.7	84.7-87.0	95.7	94.0-97.0	88.6	76.1-97.0
Hundred seed mass (g)	38.7	36.0-41.0	42.7	40.0-46.0	44.7	42.0-47.0	42.0	36.0-47.0

Name of the cultivar : RS 1

Passport Information

Botanical status : *A. hypogaea ssp. hypogaea var. hypogaea*

Year of release : 1953

Botanical type : Virginia runner

Originating centre : Agricultural Research Station, R.A.U., Durgapura

Pedigree : Selection from Local Collection

Qualitative traits

Stem

Branching pattern : Alternate Hairiness: Sub-glabrous

Stem pigmentation : Present Growth habit : Decumbent 2

Inflorescence and flower

Type of inflorescence : Compound Standard petal colour: Dark orange

Leaflet

Colour : Green Shape : Lanceolate Tip : Acute

Surface : Almost glabrous above and hairs below

Peg

Peg pigmentation : Present

Pod

Beak : Absent Constriction : Slight Reticulation : Moderate

Size : Medium Shell thickness : Moderate

Seed

Seed colour : One colour Primary seed colour : Rose

Secondary seed colour: — Seed shape : Fusiform

Resistance to diseases

Early leaf spot : Intermediate

Rust : Intermediate

Late leaf spot: Intermediate

Quality traits

Oil content : 50.6 % Protein content : 21.7%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	6	—	6	—	6.0	—
Days to initial flowering	26	—	26	—	24	—	25.3	—
Days to 50 % flowering	28	—	31	—	27	—	28.7	—
Days to maturity	125	—	121	120-122	130	129-132	126	120-132
Main axis height (cm)	25.9	24.4-28.2	24.9	22.0-27.0	32.5	30.4-35.6	27.8	22.0-35.6
Length of n+1	34.9	30.4-41.8	34.8	33.7-36.7	47.4	39.2-55.4	39.0	30.4-55.4
No. of nodes on n	14.9	13.4-17.4	17.9	14.3-23.0	14.7	13.2-17.6	15.8	13.2-23.0
No. of aerial pegs	6.1	3.8-9.0	10.8	7.7-14.0	12.7	11.8-14.2	9.9	3.8-14.2
No. of n+1	4.6	4.2-5.2	5.1	4.3-6.0	5.3	4.4-6.6	5.0	4.2-6.6
No. of n+2	16.3	11.8-21.2	13.4	11.0-16.0	14.7	12.0-19.2	14.8	11.0-21.2
Leaflet length (cm)	3.9	3.3-4.5	4.8	3.7-5.7	5.7	4.8-6.0	4.8	3.3-6.0
Leaflet width (cm)	1.6	1.4-2.0	2.2	1.7-2.8	2.7	2.3-2.8	2.2	1.4-2.8
Leaflet length/width	2.5	—	2.2	—	2.1	—	2.3	—
Plant spread (cm)	43.0	46.0-48.0	49.0	40.0-55.0	61.0	58.0-62.0	51.0	40.0-62.0
Immature pods/ plant	2.7	1.2-5.0	8.0	7.0-9.0	4.5	3.6-6.0	5.1	1.2-9.0
Mature pods/ plant	5.2	4.6-5.8	3.3	2.0-5.0	5.3	3.8-7.0	4.6	2.0-7.0
Pod bearing plants (%)	89.5	85.0-93.0	100	—	96.3	94.0-100	95.3	85.0-100
Pod mass (g/plant)	5.0	4.2-6.5	4.2	3.6-5.0	11.1	9.8-12.1	6.8	3.6-12.1
Pod yield /m ² (g)	308	300-314	165	154-185	382	342-460	285	154-460
100 pod mass (g)	69.0	—	76.7	69.0-86.0	95.0	87.0-100	80.2	69.0-100
One seeded pods (%)	8.0	7.0-9.0	17.0	14.0-20.0	14.0	8.0-24.0	13.0	7.0-24.0
Two seeded pods (%)	85.0	83.0-88.0	77.0	72.0-80.0	86.0	76.0-92.0	82.7	72.0-92.0
Three seeded pods (%)	7.0	5.0-8.0	6.0	4.0-8.0	0.0	—	4.3	0.0-8.0
Pod length (mm)	26.8	25.5-27.8	24.2	23.0-25.0	25.8	25.0-27.0	25.6	23.0-27.8
Pod width (mm)	11.5	10.4-12.2	11.7	11.0-12.0	11.0	10.0-12.0	11.4	10.0-12.2
Seed length (mm)	14.2	14.0-14.5	13.7	13.0-14.5	13.0	12.0-14.0	13.6	12.0-14.5
Seed width (mm)	6.9	6.5-7.3	7.5	7.0-8.0	7.2	7.0-8.0	7.2	6.5-8.0
Shelling outturn (%)	60.8	59.3-62.5	65.4	62.3-69.8	69.6	64.4-72.4	65.3	59.3-72.4
Sound mature seeds (%)	86.5	85.0-88.9	86.3	83.7-89.6	91.1	89.0-93.0	88.0	83.7-93.0
Hundred seed mass (g)	36.7	35.0-38.0	35.7	34.0-39.0	44.0	43.0-45.0	38.8	35.0-45.0

Name of the cultivar : Somnath

Passport Information

Botanical status : *A. hypogaea* ssp. *hypogaea* var. *hypogaea*
 Year of release : 1990 Botanical type : Virginia runner
 Originating centre : Bhabha Atomic Research Centre, Trombay
 Pedigree : TG 18 A (Induced Mutant of TG 18 A X M 13)

Qualitative traits

Stem

Branching pattern : Irregular with flowers on n Hairiness: Almost glabrous
 Stem pigmentation : Absent Growth habit : Decumbent 3

Inflorescence and flower

Type of inflorescence : Compound Standard petal colour: Dark orange

Leaflet

Colour : Green Shape : Lanceolate Tip : Acute
 Surface : Almost glabrous

Peg

Peg pigmentation : Present

Pod

Beak : Moderate Constriction : Moderate Reticulation : Moderate
 Size : Medium Shell thickness : Moderate

Seed

Seed colour : One colour Primary seed colour : Rose
 Secondary seed colour: — Seed shape : Fusiform

Resistance to diseases

Early leaf spot : Intermediate
 Rust : Intermediate
 Late leaf spot: Low

Quality traits

Oil content : 52.5% Protein content : 23.8%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	5	—	6	—	5.7	—
Days to initial flowering	25	—	22	—	19	—	22.0	—
Days to 50 % flowering	28	—	25	—	22	—	25.0	—
Days to maturity	118	—	119	120-122	112	110-113	116	110-122
Main axis height (cm)	21.4	18.0-27.0	28.2	27.7-28.7	29.3	24.2-34.8	26.3	18.0-34.8
Length of n+1	27.9	25.6-32.0	39.1	33.3-43.3	43.8	42.2-46.8	36.9	25.6-46.8
No. of nodes on n	10.9	8.4-15.4	20.1	17.7-22.0	12.7	10.4-15.6	14.6	8.4-22.0
No. of aerial pegs	6.7	6.3-7.4	21.0	18.3-24.3	6.1	3.0-7.8	11.3	3.0-24.3
No. of n+1	3.3	3.2-3.4	4.4	4.3-4.7	3.9	3.6-4.0	3.9	3.2-4.7
No. of n+2	7.7	6.8-8.4	8.9	3.3-13.7	3.8	2.8-4.4	6.8	2.8-13.7
Leaflet length (cm)	3.5	3.0-4.3	5.2	4.3-5.6	5.1	4.0-5.5	4.6	3.0-5.6
Leaflet width (cm)	1.6	1.3-2.3	2.3	1.9-2.6	2.2	1.8-2.4	2.0	1.3-2.6
Leaflet length/width	2.2	—	2.3	—	2.3	—	2.3	—
Plant spread (cm)	41.0	36.0-45.0	51.0	49.0-52.0	50.3	47.0-58.0	47.4	36.0-58.0
Immature pods/ plant	1.6	0.6-2.6	6.7	4.0-10.0	4.6	3.4-6.4	4.3	0.6-10.0
Mature pods/ plant	3.2	2.2-5.2	8.7	6.0-13.0	5.3	3.6-7.4	5.7	2.2-13.0
Pod bearing plants (%)	82.2	76.0-86.0	99.2	98.0-100	93.5	89.0-100	91.6	76.0-100
Pod mass (g/plant)	4.5	3.6-5.3	5.9	4.6-7.3	16.1	14.3-17.0	8.8	3.6-17.0
Pod yield /m ² (g)	143	131-165	226	180-269	270	159-392	213	131-392
100 pod mass (g)	126	—	92.3	79.0-105	109	101-114	109	79.0-126
One seeded pods (%)	17.0	15.0-19.0	19.0	16.0-24.0	28.0	14.0-39.0	21.3	14.0-39.0
Two seeded pods (%)	83.0	81.0-85.0	81.0	76.0-84.0	72.0	61.0-86.0	78.7	61.0-86.0
Three seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	28.7	27.0-30.0	25.8	22.5-29.0	28.0	26.0-30.0	27.5	22.5-30.0
Pod width (mm)	12.3	12.0-13.0	11.7	10.0-13.0	12.0	11.0-13.0	12.0	10.0-13.0
Seed length (mm)	14.8	12.5-16.8	13.8	12.0-15.0	14.2	15.0-15.5	14.3	12.0-16.8
Seed width (mm)	6.9	5.8-8.0	7.8	7.5-8.0	8.0	7.5-8.6	7.6	5.8-8.6
Shelling outturn (%)	65.3	61.8-69.0	67.3	61.9-74.2	68.6	67.2-71.2	67.1	61.8-74.2
Sound mature seeds (%)	89.9	83.3-94.6	91.1	89.2-92.2	91.5	86.0-98.0	90.8	83.3-94.6
Hundred seed mass (g)	48.0	46.0-50.0	49.7	48.0-51.0	49.3	44.0-56.0	49.0	46.0-56.0

Prominent features of the cultivar:

1. Occurrence of flower on n
2. Humped pods

Name of the cultivar : UF 70-103

Passport Information

Botanical status : *A.hypogaea ssp. hypogaea var. hypogaea*
 Year of release : 1984
 Originating centre : Punjabrao Krishi Vidyapeeth, Akola
 Pedigree : Introduction from USA
 Botanical type : Virginia runner

Qualitative traits

Stem

Branching pattern : Irregular without flowers on n
 Stem pigmentation : Absent
 Hairiness : Almost glabrous
 Growth habit : Decumbent 3

Inflorescence and flower

Type of inflorescence : Compound
 Standard petal colour: Orange

Leaflet

Colour : Green
 Shape : Lanceolate
 Tip : Acute
 Surface : Almost glabrous

Peg

Peg pigmentation : Absent

Pod

Beak : Slight
 Constriction : Slight
 Reticulation : Slight
 Size : Medium
 Shell thickness : Moderate

Seed

Seed colour : One colour
 Primary seed colour : Rose
 Secondary seed colour: —
 Seed shape : Spheroidal

Resistance to diseases

Early leaf spot : Intermediate
 Rust : Low
 Late leaf spot: Low

Quality traits

Oil content : 52.1 %
 Protein content : 21.9%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	5	—	6	—	5.7	—
Days to initial flowering	27	—	27	—	24	—	26.0	—
Days to 50 % flowering	29	—	30	—	27	—	28.7	—
Days to maturity	120	—	121	120-122	118	111-126	120	111-126
Main axis height (cm)	24.3	21.6-29.2	27.8	25.7-30.0	32.3	30.0-33.6	28.1	21.6-33.6
Length of n+1	24.9	23.2-26.4	36.2	36.0-36.3	41.7	41.0-42.6	34.3	23.2-42.6
No. of nodes on n	12.7	9.0-16.6	17.5	16.2-20.0	13.7	12.6-14.8	14.6	9.0-20.0
No. of aerial pegs	4.8	2.6-6.8	12.6	10.3-16.3	2.9	1.0-6.0	6.8	1.0-16.3
No. of n+1	3.1	2.4-4.6	5.1	5.0-5.3	4.7	4.6-4.8	4.3	2.4-5.3
No. of n+2	12.5	8.0-17.8	9.5	8.8-10.0	11.5	11.0-12.0	11.2	8.0-17.8
Leaflet length (cm)	4.0	3.5-4.6	4.7	3.9-5.6	6.1	4.4-6.3	4.9	3.5-6.3
Leaflet width (cm)	1.3	1.1-1.5	1.9	1.4-2.4	2.1	1.6-2.5	1.8	1.1-2.5
Leaflet length/width	3.0	—	2.5	—	2.9	—	2.8	—
Plant spread (cm)	33.0	27.0-39.0	40.0	37.0-43.0	59.7	59.0-60.0	44.2	27.0-60.0
Immature pods/ plant	1.0	0.2-2.6	18.0	16.0-20.0	2.3	1.8-2.6	7.1	0.2-20.0
Mature pods/ plant	3.5	3.0-4.0	5.7	4.0-7.0	8.1	5.8-10.8	5.8	3.0-10.8
Pod bearing plants (%)	61.1	41.0-74.0	100	—	86.8	77.0-96.0	82.6	41.0-100
Pod mass (g/plant)	7.3	6.8-7.9	8.0	6.0-10.0	18.3	16.9-20.1	11.2	6.0-20.1
Pod yield /m ² (g)	157	124-212	269	238-321	314	208-375	247	124-375
100 pod mass (g)	78.0	—	81.7	81.0-83.0	89.7	89.0-90.0	83.1	78.0-90.0
One seeded pods (%)	11.0	7.0-18.0	14.0	9.0-18.0	20.0	14.0-25.0	15.0	7.0-25.0
Two seeded pods (%)	89.0	82.0-93.0	86.0	82.0-91.0	80.0	75.0-86.0	85.0	75.0-93.0
Three seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	26.7	25.5-28.5	25.7	23.0-29.0	25.7	24.0-27.0	26.0	23.0-29.0
Pod width (mm)	12.2	11.5-13.0	11.0	10.0-12.0	11.0	10.6-12.2	11.4	10.0-13.0
Seed length (mm)	14.0	13.5-14.5	13.2	12.2-14.0	13.0	12.0-14.0	13.4	12.0-14.5
Seed width (mm)	7.3	7.0-8.0	8.1	8.0-8.2	7.7	7.0-9.0	7.7	7.0-9.0
Shelling outturn (%)	65.0	64.0-66.7	66.9	64.2-68.7	72.8	71.1-74.4	68.2	64.0-74.4
Sound mature seeds (%)	84.8	78.8-92.3	88.4	86.5-90.7	90.9	85.0-94.0	88.0	78.8-94.0
Hundred seed mass (g)	40.3	39.0-41.0	38.7	34.0-42.0	44.3	43.0-44.0	41.1	34.0-44.0

Spanish

Name of the cultivar : AK 12-24

Passport information

Botanical status : *A. hypogaea ssp. fastigiata var. vulgaris*

Year of release : 1940

Botanical type : Spanish

Originating centre : Punjabrao Krishi Vidyapeeth, Akola

Pedigree : Selection from local

Qualitative traits

Stem

Branching pattern : Sequential with flower on n

Hairiness: Sub-glabrous

Stem pigmentation : Absent

Growth habit :

Decumbent 3

Inflorescence and flower

Type of inflorescence : Simple

Standard petal colour: Orange

Leaflet

Colour : Light green

Shape :

Lanceolate

Tip :

Acute

Surface : Almost glabrous

Peg

Peg pigmentation : Present

Pod

Beak : Slight

Constriction :

Slight

Reticulation :

Slight

Size : Small

Shell thickness :

Thin

Seed

Seed colour : One colour

Primary seed colour : Rose

Secondary seed colour : —

Seed shape :

Spheroidal

Resistance to diseases

Early leaf spot : Low

Rust : Low

Late leaf spot : Very low

Quality traits

Oil content : 50.0 %

Protein content :

24.2 %

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	7	—	5	—	6	—	6.0	—
Days to initial flowering	21	—	24	—	18	—	21.0	—
Days to 50 % flowering	23	—	26	—	22	—	23.7	—
Days to maturity	104	—	107	102-105	107	105-108	106	102-108
Main axis height (cm)	28.5	25.3-31.0	29.4	26.3-32.0	34.1	23.0-42.0	30.7	23.0-42.0
Length of n+1	32.0	28.5-35.4	30.6	29.0-43.7	43.1	39.8-49.4	35.2	28.5-49.4
No. of nodes on n	17.0	16.4-17.7	16.6	14.7-20.0	14.3	8.4-18.6	16.0	8.4-20.0
No. of aerial pegs	3.2	1.5-4.4	7.7	5.3-10.0	4.7	2.0-8.0	5.2	1.5-10.0
No. of branches	4.6	4.2-5.0	9.2	6.3-14.3	11.4	7.8-16.0	8.4	4.2-16.0
Leaflet length (cm)	4.2	3.5-5.2	5.7	5.0-6.4	5.7	5.0-6.0	5.2	3.5-6.4
Leaflet width (cm)	1.9	1.5-2.2	2.6	2.3-3.0	2.7	2.1-2.9	2.4	1.5-3.0
Leaflet length/width	2.2	—	2.2	—	2.1	—	2.2	—
Plant spread (cm)	50.0	—	53.0	51.0-56.0	72.3	70.0-75.0	58.4	50.0-75.0
Immature pods/ plant	2.1	1.3-4.0	6.7	3.0-10.0	5.3	3.2-9.2	4.7	1.3-10.0
Mature pods/ plant	7.7	5.2-14.0	14.7	12.0-15.0	9.6	9.2-10.0	10.7	5.2-15.0
Pod bearing plants (%)	98.7	96.0-100	95.7	92.0-100	99.2	98.0-100	97.9	92.0-100
Pod mass (g/plant)	3.9	3.7-4.2	4.8	3.9-5.6	6.5	5.7-7.4	5.1	3.7-7.4
Pod yield /m ² (g)	336	312-361	195	176-212	262	214-297	264	176-361
100 pod mass (g)	66.0	—	64.0	59.0-66.0	66.5	65.0-69.0	66.0	59.0-69.0
One-seeded pods (%)	0.0	—	9.0	7.0-11.0	15.0	9.0-19.0	8.0	0.0-19.0
Two-seeded pods (%)	100	—	91.0	89.0-93.0	85.0	81.0-91.0	92.0	81.0-100
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	19.0	17.0-24.0	22.0	21.5-22.5	22.0	21.0-24.0	21.0	17.0-24.0
Pod width (mm)	10.1	10.0-10.4	10.1	10.0-10.2	11.0	10.5-12.0	10.4	10.0-12.0
Seed length (mm)	11.5	10.0-12.5	10.0	9.8-10.3	11.2	11.0-11.5	10.9	10.0-12.5
Seed width (mm)	7.2	7.0-7.5	7.5	7.0-8.0	7.0	7.0-7.0	7.2	7.0-8.0
Shelling outturn (%)	71.1	65.7-72.3	71.6	69.7-73.8	68.7	64.6-76.1	70.5	64.6-76.1
Sound mature seeds (%)	90.5	80.9-95.7	86.8	84.8-89.9	86.7	83.0-92.0	88.0	80.9-95.7
Hundred seed mass (g)	36.3	34.0-39.0	38.3	36.0-41.0	39.3	35.0-47.0	38.0	34.0-47.0

Name of the cultivar : ALR 2

Passport information

Botanical status : *A. hypogaea ssp. fastigiata var. vulgaris*
 Year of release : 1997 Botanical type : Spanish
 Originating centre : Agricultural Research Station, T.N.A.U., Aliyarnagar
 Pedigree : Selection from ICGV 86011

Qualitative traits

Stem

Branching pattern : Irregular & flowers on n Hairiness: Sub-glabrous
 Stem pigmentation : Absent Growth habit : Erect

Inflorescence and flower

Type of inflorescence : Compound Standard petal colour: Dark orange

Leaflet

Colour : Dark Green Shape : Lanceolate Tip : Acute
 Surface : Glabrous above and hairs below

Peg

Peg pigmentation : Present

Pod

Beak : Absent Constriction : Moderate Reticulation : Prominent
 Size : Bold Shell thickness : Thick

Seed

Seed colour : One colour Primary seed colour : Salmon
 Secondary seed colour : — Seed shape : Spheroidal

Resistance to diseases

Early leaf spot : Intermediate
 Rust : Intermediate
 Late leaf spot : Low

Quality traits

Oil content : 52.8 % Protein content : 23.7 %

Quantitative traits (Mean and Range of two years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	—	—	6	—	6	—	6.0	—
Days to initial flowering	—	—	27	—	24	—	25.5	—
Days to 50 % flowering	—	—	33	—	27	—	30.0	—
Days to maturity	—	—	118	115-120	127	126-128	122	115-128
Main axis height (cm)	—	—	32.5	29.3-35.7	44.1	38.3-49.4	38.3	29.3-49.4
Length of n+1	—	—	39.0	32.0-46.0	50.0	43.0-57.0	44.5	32.0-57.0
No. of nodes on n	—	—	17.5	17.0-18.0	14.8	13.0-16.6	16.2	13.0-18.0
No. of aerial pegs	—	—	10.5	8.3-12.3	11.4	9.8-13.0	11.0	8.3-13.0
No. of branches	—	—	6.7	6.0-7.5	8.0	6.0-10.0	7.4	6.0-10.0
Leaflet length (cm)	—	—	5.2	4.5-6.5	6.1	5.0-6.4	5.7	4.5-6.5
Leaflet width (cm)	—	—	2.8	2.4-3.3	3.0	2.0-3.2	2.9	2.0-3.3
Leaflet Length/Width	—	—	1.9	—	2.0	—	2.0	—
Plant spread (cm)	—	—	50.0	48.0-52.0	66.3	54.0-75.0	58.2	48.0-75.0
Immature pods/ plant	—	—	5.3	5.0-6.0	6.4	—	5.9	5.0-6.0
Mature pods/ plant	—	—	14.7	12.0-18.0	8.7	8.4-9.0	11.7	8.4-18.0
Pod bearing plants (%)	—	—	100	—	100	—	100	—
Pod mass (g)/plant	—	—	2.6	2.0-3.2	10.8	9.2-12.7	6.7	2.0-12.7
Pod yield /m ² (g)	—	—	92	69-113	385	323-475	238	69-475
100 pod mass (g)	—	—	115	90.0-130	117	113-121	116	90.0-130
% One-seeded pods	—	—	24.0	18.0-30.0	26.0	21.0-30.0	25.0	18.0-30.0
% Two-seeded pods	—	—	76.0	74.0-78.0	74.0	70.0-79.0	75.0	70.0-79.0
% Three-seeded pods	—	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	—	—	27.7	27.4-28.0	28.7	28.0-30.0	28.2	27.4-30.0
Pod width (mm)	—	—	15.0	14.6-15.4	14.0	13.0-15.0	14.5	13.0-15.4
Seed length (mm)	—	—	16.7	16.4-17.0	16.0	14.0-17.0	16.4	14.0-17.0
Seed width (mm)	—	—	8.4	8.3-8.5	8.0	—	8.2	8.0-8.5
Shelling outturn (%)	—	—	61.3	57.5-67.4	73.2	67.2-76.6	67.3	57.5-76.6
Sound mature seeds (%)	—	—	85.4	84.9-86.2	93.1	90.0-96.0	89.3	84.9-96.0
Hundred seed mass (g)	—	—	49.0	46.0-53.0	49.3	44.0-55.0	49.2	44.0-55.0

Prominent features of the cultivar:

1. Thick dark green leaves bent towards adaxial surface
2. Less number of branches
3. Late maturing
4. Salmon coloured testa

Name of the cultivar : Co 1

Passport information

Botanical status : *A. hypogaea ssp. fastigiata var. vulgaris*

Year of release : 1979

Botanical type : Spanish

Originating centre : Tamil Nadu Agricultural University, Coimbatore

Pedigree : Ah 6279 X TMV 3

Qualitative traits

Stem

Branching pattern : Sequential with flower on n

Hairiness: Sub-glabrous

Stem pigmentation : Absent

Growth habit : Erect

Inflorescence and flower

Type of inflorescence : Simple

Standard petal colour: Orange

Leaflet

Colour : Light green

Shape :

Lanceolate

Tip :

Acute

Surface : Glabrous above and hairs below

Peg

Peg pigmentation : Present

Pod

Beak : Slight

Constriction :

Moderate

Size : Medium

Reticulation :

Slight

Seed

Seed colour : One colour

Primary seed colour : Salmon

Secondary seed colour : —

Seed shape :

Spheroidal

Resistance to diseases

Early leaf spot : Intermediate

Rust : Intermediate

Late leaf spot : Low

Quality traits

Oil content : 52.5 %

Protein content : 21.9 %

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	5	—	6	—	5.7	—
Days to initial flowering	23	—	22	—	18	—	21.0	—
Days to 50 % flowering	25	—	25	—	21	—	23.7	—
Days to maturity	103	—	101	100-103	105	101-110	103	100-110
Main axis height (cm)	38.7	36.5-41.0	37.1	29.7-45.0	36.6	32.6-41.4	37.5	29.7-45.0
Length of n+1	40.7	37.6-43.8	40.9	35.5-49.7	41.4	34.0-49.2	41.0	34.0-49.7
No. of nodes on n	21.9	19.2-24.6	19.7	16.7-22.0	14.0	11.8-16.0	18.5	11.8-24.6
No. of aerial pegs	6.0	3.8-8.0	6.3	4.7-8.3	7.3	5.8-8.2	6.5	3.8-8.3
No. of branches	6.3	5.4-7.6	5.1	4.0-8.2	9.5	8.0-10.0	7.0	4.0-10.0
Leaflet length (cm)	5.7	5.2-6.5	6.8	5.6-7.8	7.0	5.7-7.4	6.5	5.2-7.8
Leaflet width (cm)	2.4	2.0-2.7	2.9	2.4-3.5	3.0	2.4-3.3	2.8	2.0-3.5
Leaflet length/width	2.4	—	2.4	—	2.3	—	2.4	—
Plant spread (cm)	64.0	51.0-77.0	62.7	60.0-65.0	71.0	62.0-82.0	65.9	51.0-82.0
Immature pods/ plant	1.4	0.4-2.2	7.7	5.0-10.0	4.3	2.6-5.2	4.5	0.4-10.0
Mature pods/ plant	8.1	7.0-9.4	12.0	2.0-22.0	4.1	1.8-6.6	8.1	2.0-22.0
Pod bearing plants (%)	96.6	94.0-100	97.6	97.0-98.0	93.8	81.0-100	96.0	81.0-100
Pod mass (g/plant)	5.3	4.5-6.1	5.8	5.1-6.3	5.8	4.9-7.1	5.6	4.5-7.1
Pod yield /m ² (g)	329	303-364	237	224-252	216	142-257	261	142-364
100 pod mass (g)	87.0	—	62.3	42.0-81.0	71.0	66.0-76.0	73.4	42.0-87.0
One-seeded pods (%)	0.0	—	14.0	12.0-15.0	16.0	14.0-19.0	10.0	0.0-19.0
Two-seeded pods (%)	100	—	86.0	85.0-88.0	84.0	81.0-86.0	90.0	81.0-100
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	23.7	22.0-25.0	23.0	22.5-23.5	22.7	20.0-24.0	23.1	20.0-25.0
Pod width (mm)	11.8	11.0-12.5	11.2	11.0-11.5	11.0	10.8-11.5	11.3	10.8-12.5
Seed length (mm)	12.5	12.0-13.0	11.0	10.5-12.0	11.0	10.8-12.0	11.5	10.5-13.0
Seed width (mm)	7.0	6.5-7.5	7.2	6.5-8.0	7.5	7.0-8.0	7.2	6.5-8.0
Shelling outturn (%)	65.3	54.1-71.6	69.3	67.4-70.3	68.6	67.1-69.7	67.7	54.1-71.6
Sound mature seeds (%)	88.6	77.4-95.1	89.7	86.0-92.6	85.9	80.0-94.0	88.1	77.4-95.1
Hundred seed mass (g)	35.3	32.0-39.0	41.3	38.0-44.0	37.7	33.0-43.0	38.1	32.0-44.0

Prominent features of the cultivar:

1. Salmon coloured testa

Name of the cultivar : Dh 3-30

Passport information

Botanical status : *A. hypogaea ssp. fastigiata var. vulgaris*
 Year of release : 1975 Botanical type : Spanish
 Originating centre : University of Agricultural Sciences, Dharwad
 Pedigree : Spanish Improved X US 4

Qualitative traits

Stem

Branching pattern : Sequential with flower on n Hairiness: Almost glabrous
 Stem pigmentation : Absent Growth habit : Decumbent 3

Inflorescence and flower

Type of inflorescence : Simple Standard petal colour: Orange

Leaflet

Colour : Pale green Shape : Lanceolate Tip : Acute
 Surface : Almost glabrous

Peg

Peg pigmentation : Absent

Pod

Beak : Slight Constriction : Slight Reticulation : Slight
 Size : Small Shell thickness : Thin

Seed

Seed colour : One colour Primary seed colour : Rose
 Secondary seed colour : — Seed shape : Spheroidal

Resistance to diseases

Early leaf spot : Intermediate
 Rust : Intermediate
 Late leaf spot : Intermediate

Quality traits

Oil content : 47.7 % Protein content : 18.5 %

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	6	—	7	—	6.3	—
Days to initial flowering	27	—	30	—	21	—	25	—
Days to 50 % flowering	29	—	33	—	24	—	28	—
Days to maturity	107	—	106	103-108	107	103-110	107	103-110
Main axis height (cm)	27.9	26.4-29.2	32.6	31.3-35.0	31.4	23.8-39.2	20.6	23.8-39.2
Length of n+1	33.4	31.4-34.6	35.4	32.7-40.0	40.0	39.4-40.6	36.3	31.4-40.6
No. of nodes on n	15.8	13.2-17.2	17.9	16.7-19.0	14.0	11.4-16.9	15.9	11.4-19.0
No. of aerial pegs	7.2	5.3-10.2	11.9	9.0-17.0	7.3	5.0-8.6	8.8	5.0-17.0
No. of branches	6.4	5.3-7.0	12.2	9.0-16.0	14.0	13.4-14.8	10.9	5.3-16.0
Leaflet length (cm)	3.8	3.2-4.5	5.2	4.9-5.5	6.4	5.0-7.0	5.1	3.2-7.0
Leaflet width (cm)	1.6	1.2-2.0	2.2	1.7-2.6	2.8	2.2-3.0	2.2	1.2-3.0
Leaflet length/width	2.4	—	2.4	—	2.3	—	2.4	—
Plant spread (cm)	62.0	60.0-63.0	46.3	42.0-50.0	60.0	54.0-64.0	56.1	42.0-64.0
Immature pods/ plant	1.4	0.8-2.2	7.0	5.0-9.0	6.0	3.4-8.6	4.8	0.8-9.0
Mature pods/ plant	8.4	6.5-11.6	9.7	4.0-16.9	9.5	7.2-10.8	9.2	4.0-16.9
Pod bearing plants (%)	93.7	84.0-100	97.9	94.0-100	100	—	97.2	84.0-100
Pod mass (g/plant)	3.6	2.7-5.2	2.1	2.0-2.3	5.0	3.5-5.8	3.6	2.0-5.8
Pod yield /m ² (g)	311	252-413	84	68-99	222	177-253	206	68-413
100 pod mass (g)	65.0	—	52.0	46.0-55.0	50.7	48.0-55.0	55.9	46.0-65.0
One-seeded pods (%)	5.0	2.0-10.0	10.0	8.0-13.0	16.0	11.0-25.0	10.3	2.0-25.0
Two-seeded pods (%)	95.0	90.0-98.0	90.0	87.0-92.0	84.0	75.0-89.0	89.7	75.0-98.0
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	21.1	20.0-22.3	20.5	20.0-21.0	20.3	19.0-23.0	20.6	19.0-23.0
Pod width (mm)	10.3	10.0-11.0	10.3	10.0-11.0	11.0	10.3-11.7	10.5	10.0-11.7
Seed length (mm)	11.5	9.5-12.5	10.3	10.0-10.5	10.0	9.7-10.4	10.6	9.5-12.5
Seed width (mm)	6.8	6.5-7.0	6.9	6.3-7.3	6.8	6.3-7.9	6.8	6.3-7.9
Shelling outturn (%)	65.2	58.3-69.5	68.3	66.4-69.6	71.3	68.3-76.0	68.3	58.3-76.0
Sound mature seeds (%)	86.6	80.0-91.2	80.6	79.8-81.3	84.6	79.0-93.0	83.9	79.0-93.0
Hundred seed mass (g)	32.0	28.0-36.0	35.0	34.0-37.0	39.0	38.0-40.0	35.3	28.0-40.0

Name of the cultivar : Dh 8

Passport information

Botanical status : *A. hypogaea ssp. fastigiata var. vulgaris*

Year of release : 1984

Botanical type : Spanish

Originating centre : University of Agricultural Sciences, Dharwad

Pedigree : Selection from RS 144

Qualitative traits

Stem

Branching pattern : Sequential with flower on n

Hairiness : Sub-glabrous

Stem pigmentation : Absent

Growth habit : Erect

Inflorescence and flower

Type of inflorescence : Simple

Standard petal colour : Orange

Leaflet

Colour : Light green

Shape : Oblong

Tip : Obtuse

Surface : Almost glabrous

Peg

Peg pigmentation : Present

Pod

Beak : Absent

Constriction : Moderate

Size : Medium

Shell thickness : Moderate

Reticulation : Slight

Seed

Seed colour : One colour

Primary seed colour : Salmon

Secondary seed colour : —

Seed shape : Fusiform

Resistance to diseases

Early leaf spot : Intermediate

Rust : Low

Late leaf spot : Low

Quality traits

Oil content : 46.8 %

Protein content : 22.2 %

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	6	—	7	—	6.3	—
Days to initial flowering	21	—	22	—	17	—	20.0	—
Days to 50 % flowering	24	—	25	—	20	—	23.0	—
Days to maturity	105	—	104	103-105	105	102-108	105	102-108
Main axis height (cm)	37.4	34.8-40.2	32.3	29.7-34.0	32.2	29.0-34.2	34.0	29.0-40.2
Length of n+1	44.1	39.2-48.2	36.4	32.7-38.7	39.8	38.6-41.3	40.1	32.7-48.2
No. of nodes on n	21.5	21.0-22.4	20.8	19.3-23.3	14.3	11.4-16.8	18.9	11.4-23.3
No. of aerial pegs	7.9	5.0-11.2	11.3	9.0-13.7	5.3	2.5-6.8	8.2	2.5-13.7
No. of branches	4.6	1.8-6.4	14.6	9.3-23.0	10.7	7.8-13.6	10.0	1.8-23.0
Leaflet length (cm)	4.7	4.5-5.0	6.0	5.3-7.1	6.9	5.8-7.2	5.9	4.5-7.2
Leaflet width (cm)	2.3	2.0-2.6	2.9	2.6-3.1	3.0	2.2-3.0	2.7	2.0-3.1
Leaflet length/width	2.1	—	2.1	—	2.3	—	2.2	—
Plant spread (cm)	38.0	37.0-39.0	54.3	50.0-57.0	67.7	58.0-75.0	53.3	37.0-75.0
Immature pods/ plant	3.1	0.6-7.4	9.7	3.0-16.0	7.4	5.0-10.5	6.7	0.6-16.0
Mature pods/ plant	10.1	10.0-10.4	7.7	1.0-13.0	8.3	3.2-13.8	8.7	1.0-13.8
Pod bearing plants (%)	98.2	96.0-100	99.2	98.0-100	98.2	95.0-100	98.5	95.0-100
Pod mass (g/plant)	6.4	5.7-7.1	4.6	4.0-5.8	6.8	5.7-8.0	5.9	4.0-8.0
Pod yield /m ² (g)	480	455-520	187	171-209	262	224-283	310	171-520
100 pod mass (g)	91.0	—	62.7	59.0-68.0	73.0	72.0-74.0	75.6	59.0-91.0
One-seeded pods (%)	0.0	—	18.0	8.0-32.0	17.0	16.0-18.0	11.7	0.0-32.0
Two-seeded pods (%)	100	—	82.0	68.0-92.0	83.0	82.0-84.0	88.3	68.0-100
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	25.8	25.0-27.3	24.7	23.0-26.0	25.5	23.0-28.0	25.3	23.0-28.0
Pod width (mm)	11.6	11.0-12.0	11.2	10.5-12.0	12.0	11.2-12.2	11.6	10.5-12.2
Seed length (mm)	12.3	11.0-13.5	12.3	12.0-13.0	13.0	12.5-14.2	12.5	11.0-14.2
Seed width (mm)	7.7	7.0-8.5	7.5	7.0-8.0	7.2	7.0-8.0	7.5	7.0-8.5
Shelling outturn (%)	66.7	54.9-73.7	65.6	62.3-69.7	66.4	64.9-68.5	66.2	54.9-73.7
Sound mature seeds (%)	93.2	90.0-95.7	81.8	79.5-84.2	90.3	90.0-91.0	88.4	79.5-95.7
Hundred seed mass (g)	36.0	34.0-37.0	41.0	39.0-44.0	35.0	34.0-36.0	37.3	34.0-44.0

Prominent features of the cultivar:

1. Salmon coloured testa

Name of the cultivar : GG 2

Passort information

Botanical status :	<i>A. hypogaea ssp. fastigiata var. vulgaris</i>		
Year of release :	1983	Botanical type :	Spanish
Originating centre :	Gujarat Agricultural University, Junagadh		
Pedigree :	J 11 X EC 16659		

Qualitative traits

Stem

Branching pattern :	Sequential with flower on n	Hairiness:	Sub-glabrous
Stem pigmentation :	Absent	Growth habit :	Decumbent 3

Inflorescence and flower

Type of inflorescence :	Compound	Standard petal colour:	Orange
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Leaflet

Colour :	Green	Shape :	Lanceolate	Tip :	Acute
Surface :	Almost glabrous				

Peg

Peg pigmentation :	Present
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Pod

Beak :	Slight	Constriction :	Slight	Reticulation :	Slight
Size :	Medium	Shell thickness :	Moderate		

Seed

Seed colour :	One colour	Primary seed colour :	Rose
Secondary seed colour :	—	Seed shape :	Spheroidal

Resistance to diseases

Early leaf spot :	Low
Rust :	Low
Late leaf spot :	Very low

Quality traits

Oil content :	49.0 %	Protein content :	24.1%
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Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	6	—	6	—	6.0	—
Days to initial flowering	21	—	22	—	16	—	19.7	—
Days to 50 % flowering	23	—	23	—	19	—	21.7	—
Days to maturity	105	—	103	100-105	105	103-108	104	100-108
Main axis height (cm)	24.6	24.4-24.8	33.2	31.0-34.7	33.8	31.6-35.4	30.5	24.4-35.4
Length of n+1	27.8	26.4-29.0	35.2	29.7-39.7	37.0	34.0-40.3	33.3	26.4-40.3
No. of nodes on n	13.8	12.0-14.8	18.0	17.0-20.0	14.7	12.8-17.0	15.5	12.0-20.0
No. of aerial pegs	7.1	4.4-12.0	6.8	5.3-8.3	10.5	8.4-11.8	8.1	4.4-12.0
No. of branches	4.6	4.4-4.8	9.0	3.3-19.0	8.9	6.8-11.3	7.5	3.3-19.0
Leaflet length (cm)	4.5	3.9-5.5	5.5	5.0-6.1	6.1	4.9-6.5	5.4	3.9-6.5
Leaflet width (cm)	2.0	1.9-2.5	2.6	1.6-3.2	2.6	2.0-2.8	2.4	1.6-3.2
Leaflet length/width	2.3	—	2.1	—	2.3	—	2.2	—
Plant spread (cm)	54.0	53.0-55.0	51.7	50.0-54.0	63.3	53.0-77.0	56.3	50.0-77.0
Immature pods/ plant	1.5	0.6-2.0	7.0	4.0-9.0	4.8	2.5-6.2	4.4	0.6-9.0
Mature pods/ plant	8.4	5.8-11.1	25.7	20.0-34.0	11.8	9.5-16.0	15.3	5.8-34.0
Pod bearing plants (%)	98.0	94.0-100	98.5	96.0-100	99.3	98.0-100	98.6	94.0-100
Pod mass (g/plant)	4.6	4.0-5.6	6.0	5.7-6.4	7.9	7.4-8.2	6.2	4.0-8.2
Pod yield /m ² (g)	387	300-446	257	230-301	373	320-400	339	230-446
100 pod mass (g)	88.0	—	62.7	61.0-64.0	71.0	70.0-72.0	73.9	61.0-88.0
One-seeded pods (%)	1.0	0.0-3.0	9.0	5.0-12.0	13.0	12.0-15.0	7.7	0.0-15.0
Two-seeded pods (%)	99.0	97.0-100	91.0	88.0-95.0	87.0	85.0-88.0	92.3	85.0-100
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	24.7	22.0-29.0	20.2	19.5-21.0	20.7	19.0-22.0	21.9	19.0-29.0
Pod width (mm)	11.0	10.0-12.0	10.2	10.0-10.5	10.3	10.0-11.0	10.5	10.0-12.0
Seed length (mm)	12.0	10.5-14.5	10.1	10.0-10.3	10.3	10.0-11.0	10.8	10.0-14.5
Seed width (mm)	11.5	10.5-11.8	7.5	7.0-8.0	7.0	6.8-7.3	8.7	6.8-11.8
Shelling outturn (%)	71.4	69.5-73.1	75.0	72.1-77.8	74.2	72.9-76.4	73.5	69.5-77.8
Sound mature seeds (%)	91.3	85.4-94.7	89.3	87.4-90.8	89.5	80.0-96.0	90.0	80.0-96.0
Hundred seed mass (g)	31.0	29.0-33.0	35.3	34.0-37.0	36.3	35.0-38.0	34.2	29.0-38.0

Prominent features of the cultivar:

1. Comparatively thicker and greener leaves
2. Humped pods

Name of the cultivar : GG 3

Passport information

Botanical status : *A. hypogaea* ssp. *fastigiata* var. *vulgaris*
 Year of release : 1994 Botanical type : Spanish
 Originating centre : Gujarat Agricultural University, Junagadh
 Pedigree : GAUG 1 X JL 24

Qualitative traits

Stem

Branching pattern : Irregular with flower on n Hairiness: Sub-glabrous
 Stem pigmentation : Absent Growth habit : Erect

Inflorescence and flower

Type of inflorescence : Simple Standard petal colour: Orange

Leaflet

Colour : Light green Shape : Oblong Tip : Obtuse
 Surface : Almost glabrous

Peg

Peg pigmentation : Present

Pod

Beak : Slight Constriction : Slight Reticulation : Moderate
 Size : Medium Shell thickness : Thin

Seed

Seed colour : One colour Primary seed colour : Salmon
 Secondary seed colour : — Seed shape : Spheroidal

Resistance to diseases

Early leaf spot : Intermediate
 Rust : Intermediate
 Late leaf spot : Very low

Quality traits

Oil content : 49.0 % Protein content : 20.9 %

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	6	—	6	—	6.0	—
Days to initial flowering	21	—	23	—	19	—	21.0	—
Days to 50 % flowering	23	—	25	—	25	—	24.3	—
Days to maturity	103	—	102	100-105	103	102-105	102	100-105
Main axis height (cm)	29.3	26.6-31.8	35.2	32.7-39.3	35.3	32.0-37.8	33.3	26.6-39.3
Length of n+1	32.7	29.4-35.4	41.4	36.0-50.3	43.2	39.6-45.3	39.1	29.4-50.3
No. of nodes on n	18.8	17.0-22.0	19.2	18.2-20.0	15.9	13.2-18.8	18.0	13.2-22.0
No. of aerial pegs	5.5	3.4-6.0	5.6	4.3-8.0	4.9	3.0-6.4	5.3	3.0-8.0
No. of branches	4.3	3.4-4.8	5.6	4.3-9.0	6.2	3.7-9.7	5.4	3.4-9.7
Leaflet length (cm)	4.5	3.8-5.7	6.7	5.8-7.3	7.9	6.4-8.1	6.4	3.8-8.1
Leaflet width (cm)	2.0	1.4-2.5	2.9	2.5-3.1	3.0	2.5-3.2	2.6	1.4-3.2
Leaflet length/width	2.3	—	2.3	—	2.6	—	2.4	—
Plant spread (cm)	51.0	42.0-59.0	59.0	58.0-60.0	66.3	60.0-75.0	58.8	42.0-75.0
Immature pods/ plant	1.3	0.4-2.4	4.7	1.0-9.0	4.9	3.8-6.0	3.6	0.4-9.0
Mature pods/ plant	6.7	0.7-10.4	19.0	3.0-29.0	8.6	5.4-12.0	11.4	0.7-29.0
Pod bearing plants (%)	98.6	96.0-100	99.0	97.0-100	100	—	99.2	96.0-100
Pod mass (g/plant)	7.7	6.6-8.6	10.1	8.9-11.0	7.5	6.2-8.5	8.4	6.2-11.0
Pod yield /m ² (g)	569	544-603	389	360-445	296	199-348	418	199-603
100 pod mass (g)	98.0	—	86.6	83.0-91.0	77.7	74.0-84.0	87.4	74.0-98.0
One-seeded pods (%)	0.0	—	9.0	8.0-10.0	18.0	16.0-20.0	9.0	0.0-20.0
Two-seeded pods (%)	100	—	91.0	90.0-92.0	82.0	80.0-84.0	91.0	80.0-100
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	22.2	22.0-22.5	22.7	22.0-24.0	24.0	21.0-27.0	23.0	21.0-27.0
Pod width (mm)	10.8	10.5-11.0	11.4	11.0-12.0	10.0	10.0-11.0	10.7	10.0-12.0
Seed length (mm)	10.4	10.0-10.6	11.8	11.0-12.5	12.0	12.0-13.0	11.4	10.0-13.0
Seed width (mm)	7.4	7.0-7.8	7.9	7.5-8.1	7.3	7.0-8.0	7.5	7.0-8.1
Shelling outturn (%)	77.6	76.5-78.6	75.5	72.5-78.3	72.4	70.7-75.0	75.2	70.7-78.6
Sound mature seeds (%)	92.1	90.9-93.3	87.6	86.3-88.9	85.9	83.0-92.0	88.5	83.0-93.3
Hundred seed mass (g)	40.0	—	40.3	39.0-42.0	38.3	38.0-39.0	39.5	38.0-42.0

Prominent features of the cultivar:

1. Salmon coloured testa

Name of the cultivar : GG 4

Passport information

Botanical status : *A. hypogaea ssp. fastigiata var. vulgaris*
 Year of release : 1993 Botanical type : Spanish
 Originating centre : Gujarat Agricultural University, Junagadh
 Pedigree : CGC 3 X Chico

Qualitative traits

Stem

Branching pattern : Sequential with flower on n Hairiness: Sub-glabrous
 Stem pigmentation : Absent Growth habit : Erect

Inflorescence and flower

Type of inflorescence : Simple Standard petal colour: Orange

Leaflet

Colour : Light green Shape : Lanceolate Tip : Acute
 Surface : Almost glabrous

Peg

Peg pigmentation : Present

Pod

Beak : Moderate Constriction : Moderate Reticulation : Moderate
 Size : Medium Shell thickness : Thin

Seed

Seed colour : One colour Primary seed colour : Salmon
 Secondary seed colour : — Seed shape : Fusiform

Resistance to diseases

Early leaf spot : Low
 Rust : Low
 Late leaf spot : Very low

Quality traits

Oil content : 53.6% Protein content : 22.4%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	6	—	6	—	6.0	—
Days to initial flowering	19	—	23	—	16	—	19.3	—
Days to 50 % flowering	21	—	25	—	19	—	21.7	—
Days to maturity	106	—	105	100-110	105	103-107	105	100-110
Main axis height (cm)	27.7	24.2-30.0	27.1	22.0-35.0	29.6	26.8-31.7	28.1	22.0-35.0
Length of n+1	33.8	28.0-40.2	32.2	27.0-41.7	37.4	33.8-41.7	34.5	27.0-41.7
No. of nodes on n	18.9	16.8-20.8	15.4	14.3-17.0	13.6	12.6-15.2	16.0	12.6-20.8
No. of aerial pegs	8.7	5.6-12.6	14.9	12.3-17.0	7.5	5.0-10.4	10.4	5.0-17.0
No. of branches	4.5	4.2-5.0	8.2	3.7-11.8	7.0	4.8-8.7	6.6	3.7-11.8
Leaflet length (cm)	4.1	3.2-5.6	5.9	4.9-6.9	6.9	5.6-7.5	5.6	3.2-7.5
Leaflet width (cm)	1.9	1.4-2.5	2.5	2.3-2.9	2.7	2.0-2.8	2.4	1.4-2.9
Leaflet length/width	2.2	—	2.4	—	2.6	—	2.4	—
Plant spread (cm)	39.0	37.0-40.0	51.6	40.0-55.0	61.0	59.0-64.0	50.5	37.0-64.0
Immature pods/ plant	1.3	0.8-1.8	8.3	4.0-12.0	3.8	2.2-4.8	4.5	0.8-12.0
Mature pods/ plant	10.6	7.2-14.0	23.0	15.0-32.0	6.1	5.4-7.3	13.2	5.4-32.0
Pod bearing plants (%)	98.6	96.0-100	98.9	97.0-100	100	—	99.2	96.0-100
Pod mass (g/plant)	6.8	5.7-8.4	6.4	6.1-6.7	8.0	7.2-8.9	7.1	5.7-8.9
Pod yield /m ² (g)	487	445-515	246	200-293	286	208-330	340	200-515
100 pod mass (g)	91.0	—	67.0	57.0-80.0	75.7	71.0-79.0	77.9	57.0-91.0
One-seeded pods (%)	0.0	—	18.0	12.0-25.0	20.0	16.0-25.0	12.7	0.0-25.0
Two-seeded pods (%)	100	—	82.0	75.0-88.0	80.0	75.0-85.0	87.3	75.0-100
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	24.5	24.0-25.0	22.5	22.0-23.5	23.8	23.0-25.0	23.6	22.0-25.0
Pod width (mm)	11.4	11.0-11.8	10.8	10.5-11.0	12.0	11.0-12.5	11.4	10.5-12.5
Seed length (mm)	12.0	11.0-13.0	11.7	11.0-12.0	12.0	11.0-13.0	11.9	11.0-13.0
Seed width (mm)	7.2	7.0-7.5	7.7	7.5-8.0	7.1	6.8-7.3	7.3	6.8-8.0
Shelling outturn (%)	74.8	70.6-76.9	74.7	73.7-76.7	72.3	70.4-74.7	73.9	70.4-76.9
Sound mature seeds(%)	94.4	91.8-95.8	89.6	88.1-90.9	86.7	80.0-92.0	90.2	80.0-95.8
Hundred seed mass (g)	36.3	34.0-40.0	35.7	33.0-39.0	39.7	35.0-43.0	37.2	33.0-43.0

Prominent features of the cultivar:

1. Salmon coloured testa

Name of the cultivar : GERNAR 1

Passport information

Botanical status : *A. hypogaea ssp. fastigiata var. vulgaris*
 Year of release : 1988 Botanical type : Spanish
 Originating centre : National Research Centre for Groundnut, Junagadh
 Pedigree : X 14-4-B-19-B X NCAC 17090

Qualitative traits

Stem

Branching pattern : Sequential with flower on n Hairiness : Moderately hairy
 Stem pigmentation : Absent Growth habit : Decumbent 3

Inflorescence and flower

Type of inflorescence : Compound Standard petal colour : Dark orange

Leaflet

Colour : Light green Shape : Lanceolate Tip : Acute
 Surface : Almost glabrous

Peg

Peg pigmentation : Present

Pod

Beak : Moderate Constriction : Moderate Reticulation : Moderate
 Size : Medium Shell thickness : Thin

Seed

Seed colour : One colour Primary seed colour : Rose
 Secondary seed colour : — Seed shape : Spheroidal

Resistance to diseases

Early leaf spot : Low
 Rust : High
 Late leaf spot : Very low

Quality traits

Oil content : 53.9 % Protein content : 21.3%

Quantitative traits (Mean and Range of two years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	—	—	6	—	5	—	5.7	—
Days to initial flowering	—	—	22	—	20	—	21.0	—
Days to 50 % flowering	—	—	25	—	23	—	24.0	—
Days to maturity	—	—	101	100-102	107	105-108	104	100-108
Main axis height (cm)	—	—	24.7	19.0-33.0	26.9	23.4-29.2	25.8	19.0-33.0
Length of n+1	—	—	33.9	22.3-45.0	39.3	36.2-42.6	36.6	22.3-45.0
No. of nodes on n	—	—	16.4	14.3-19.0	11.9	10.4-13.6	14.2	10.4-19.0
No. of aerial pegs	—	—	6.4	4.0-8.0	5.8	4.0-7.2	6.1	4.0-8.0
No. of branches	—	—	5.7	3.3-9.7	8.8	5.4-13.6	7.3	3.3-13.6
Leaflet length (cm)	—	—	5.8	4.8-6.7	6.2	4.6-6.8	6.0	4.6-6.8
Leaflet width (cm)	—	—	2.7	2.1-3.2	3.2	2.2-3.5	3.0	2.1-3.5
Leaflet length/width	—	—	2.1	—	1.9	—	2.0	—
Plant spread (cm)	—	—	46.3	43.0-50.0	74.7	64.0-82.0	60.5	43.0-82.0
Immature pods/ plant	—	—	4.3	0.0-8.0	5.9	1.8-9.6	5.1	0.0-9.6
Mature pods/ plant	—	—	15.0	1.0-26.0	11.5	10.0-14.2	13.3	1.0-26.0
Pod bearing plants (%)	—	—	97.9	96.0-100	100	—	99.0	96.0-100
Pod mass (g/plant)	—	—	8.3	5.8-10.7	9.8	9.1-11.0	9.1	5.8-11.0
Pod yield /m ² (g)	—	—	297	283-318	370	320-429	333	283-429
100 pod mass (g)	—	—	71.7	67.0-76.0	73.7	71.0-76.0	72.7	67.0-76.0
One-seeded pods (%)	—	—	10.0	9.0-11.0	17.0	15.0-18.0	13.5	9.0-18.0
Two-seeded pods (%)	—	—	76.0	70.0-81.0	55.0	50.0-63.0	65.5	50.0-81.0
Three-seeded pods (%)	—	—	14.0	10.0-20.0	28.0	20.0-35.0	21.0	10.0-35.0
Pod length (mm)	—	—	23.0	21.0-25.0	28.0	27.0-29.0	25.5	21.0-29.0
Pod width (mm)	—	—	10.6	9.2-12.0	11.0	10.0-12.0	10.8	9.2-12.0
Seed length (mm)	—	—	11.5	11.0-12.0	12.0	11.0-13.0	11.8	11.0-13.0
Seed width (mm)	—	—	7.3	7.0-7.5	7.0	—	7.2	7.0-7.5
Shelling outturn (%)	—	—	71.8	70.7-72.4	68.8	67.1-70.3	70.3	67.1-72.4
Sound mature seeds (%)	—	—	87.1	85.5-88.6	85.7	82.0-88.0	86.4	82.0-88.6
Hundred seed mass (g)	—	—	38.0	36.0-40.0	39.0	34.0-42.0	38.5	34.0-42.0

Prominent features of the cultivar:

1. Moderately hairy stem
2. Moderate beak, constriction and reticulation of pods
3. Three seeded

Name of the cultivar : ICGS 1

Passport information

Botanical status :	<i>A. hypogaea</i> ssp. <i>fastigiata</i> var. <i>vulgaris</i>		
Year of release :	1990	Botanical type :	Spanish
Originating centre :	International Crops Research Institute for the Semi-Arid Tropics, Patancheru		
Pedigree :	Selection from Robut 33-1		

Qualitative traits

Stem

Branching pattern :	Irregular with flower on n	Hairiness:	Sub-glabrous
Stem pigmentation :	Absent	Growth habit :	Decumbent 3

Inflorescence and flower

Type of inflorescence :	Compound	Standard petal colour:	Orange
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Leaflet

Colour :	Light green	Shape :	Lanceolate	Tip :	Acute
Surface :	Glabrous above & hairs below				

Peg

Peg pigmentation :	Absent
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Pod

Beak :	Absent	Constriction :	Slight	Reticulation :	Slight
Size :	Medium	Shell thickness :	Thin		

Seed

Seed colour :	One colour	Primary seed colour :	Rose		
Secondary seed colour :	—	Seed shape :	Spheroidal		

Resistance to diseases

Early leaf spot :	Intermediate
Rust :	Low
Late leaf spot :	Low

Quality traits

Oil content :	52.8%	Protein content :	23.7%		
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Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	5	—	7	—	6.0	—
Days to initial flowering	23	—	24	—	21	—	22.7	—
Days to 50 % flowering	25	—	27	—	24	—	25.3	—
Days to maturity	106	—	103	100-108	107	106-108	105	100-108
Main axis height (cm)	22.6	21.8-23.2	26.9	22.0-30.3	28.1	24.8-32.2	25.9	21.8-32.2
Length of n+1	29.9	28.2-32.0	35.4	27.7-46.0	38.3	29.6-43.6	34.5	27.7-46.0
No. of nodes on n	14.7	12.2-17.0	15.2	10.3-19.0	11.3	9.2-13.2	13.7	9.2-19.0
No. of aerial pegs	10.7	7.4-14.8	17.0	13.7-23.0	9.9	7.0-12.8	12.5	7.0-23.0
No. of branches	6.3	5.2-7.8	7.2	4.7-9.0	10.2	5.2-14.2	7.9	4.7-14.2
Leaflet length (cm)	3.5	3.0-4.3	4.9	4.0-5.8	5.7	4.5-6.2	4.7	3.0-6.2
Leaflet width (cm)	1.5	1.3-1.8	2.1	1.7-2.5	2.2	1.7-2.4	1.9	1.3-2.5
Leaflet length/width	2.3	—	2.3	—	2.6	—	2.4	—
Plant spread (cm)	47.0	46.0-48.0	55.0	51.0-58.0	52.0	50.0-54.0	51.3	46.0-58.0
Immature pods/ plant	2.1	0.8-3.6	8.7	7.0-12.0	7.9	5.4-10.6	6.2	0.8-12.0
Mature pods/ plant	8.9	7.0-10.2	18.7	15.0-25.0	7.1	4.2-8.6	11.6	4.2-25.0
Pod bearing plants (%)	98.8	96.0-100	99.1	97.0-100	100	—	99.3	96.0-100
Pod mass (g/plant)	7.0	6.0-8.2	6.4	5.8-7.2	9.5	8.8-10.3	7.6	5.8-10.3
Pod yield /m ² (g)	402	380-424	268	234-308	377	274-445	349	234-445
100 pod mass (g)	84.0	—	79.3	79.0-80.0	82.0	79.0-86.0	81.8	79.0-86.0
One-seeded pods (%)	4.0	0.0-12.0	20.0	13.0-27.0	18.0	14.0-20.0	14.0	0.0-27.0
Two-seeded pods (%)	96.0	88.0-100	80.0	73.0-87.0	82.0	80.0-86.0	86.0	73.0-100
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	22.3	22.0-23.0	21.7	21.2-22.0	23.0	21.0-25.0	22.3	21.0-25.0
Pod width (mm)	11.8	11.0-12.5	11.5	11.0-12.0	12.0	11.0-13.0	11.8	11.0-13.0
Seed length (mm)	12.7	12.0-13.4	11.0	10.0-12.0	11.0	10.5-11.5	11.6	10.0-13.4
Seed width (mm)	8.2	7.5-9.0	7.3	7.0-7.5	7.3	7.0-8.0	7.6	7.0-9.0
Shelling outturn (%)	69.9	68.4-71.4	71.5	68.4-74.7	70.3	67.9-72.2	70.6	67.9-74.7
Sound mature seeds (%)	93.8	90.7-95.7	87.5	86.4-88.5	90.1	85.0-95.0	90.5	85.0-95.7
Hundred seed mass (g)	36.3	34.0-39.0	38.3	35.0-41.0	39.0	36.0-42.0	37.9	34.0-42.0

Prominent features of the cultivar:

1. Plants like virginia types
2. Leaves are smaller in size

Name of the cultivar : ICGS 11

Passport information

Botanical status :	<i>A. hypogaea ssp. fastigiata var. vulgaris</i>		
Year of release :	1986	Botanical type :	Spanish
Originating centre :	International Crops Research Institute for the Semi-Arid Tropics, Patancheru		
Pedigree :	Selection from Robut 33-1		

Qualitative traits

Stem

Branching pattern :	Sequential with flower on n	Hairiness:	Sub-glabrous
Stem pigmentation :	Absent	Growth habit :	Erect

Inflorescence and flower

Type of inflorescence :	Compound	Standard petal colour:	Orange
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Leaflet

Colour :	Green	Shape :	Lanceolate	Tip :	Acute
Surface :	Almost glabrous				

Peg

Peg pigmentation :	Present
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Pod

Beak :	Absent	Constriction :	Moderate	Reticulation :	Slight
Size :	Medium	Shell thickness :	Thick		

Seed

Seed colour :	One colour	Primary seed colour :	Rose
Secondary seed colour :	—	Seed shape :	Spheroidal

Resistance to diseases

Early leaf spot :	Intermediate
Rust :	Low
Late leaf spot :	Low

Quality traits

Oil content :	52.9%	Protein content :	20.8%
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Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	6	—	6	—	6.0	—
Days to initial flowering	28	—	26	—	22	—	25.3	—
Days to 50 % flowering	30	—	28	—	25	—	27.7	—
Days to maturity	105	—	105	102-108	105	103-107	105	102-108
Main axis height (cm)	21.5	19.4-23.2	26.9	23.7-29.3	25.7	25.0-26.2	24.7	19.4-29.3
Length of n+1	27.1	22.8-30.2	36.8	33.0-43.3	41.1	39.0-42.6	35.0	22.8-43.3
No. of nodes on n	15.9	12.8-20.8	15.7	14.7-17.3	14.5	11.8-17.0	15.4	11.8-20.8
No. of aerial pegs	7.7	5.2-10.8	10.3	6.0-13.7	8.7	8.0-10.0	8.9	5.2-13.7
No. of branches	6.5	6.0-7.0	6.8	3.5-10.0	8.2	5.0-12.8	7.2	3.5-12.8
Leaflet length (cm)	3.8	3.2-4.5	5.5	4.9-6.3	5.6	4.8-5.8	5.0	3.2-6.3
Leaflet width (cm)	1.4	1.1-1.7	2.3	1.9-2.8	2.0	1.6-2.2	1.9	1.1-2.8
Leaflet length/width	2.8	—	2.4	—	2.8	—	2.7	—
Plant spread (cm)	42.0	38.0-45.0	65.3	60.0-70.0	56.7	54.0-60.0	54.7	38.0-70.0
Immature pods/ plant	8.9	7.8-9.4	10.3	3.0-20.0	10.4	9.2-12.0	9.9	3.0-20.0
Mature pods/ plant	1.7	1.6-1.8	18.0	15.0-21.0	5.1	2.2-6.8	8.3	1.6-21.0
Pod bearing plants (%)	96.4	94.0-100	97.4	95.0-100	100	—	97.9	94.0-100
Pod mass (g/plant)	3.3	3.1-3.7	7.1	6.0-7.8	8.4	6.8-9.3	6.3	3.1-9.3
Pod yield /m ² (g)	180	120-264	296	273-319	365	269-461	280	120-461
100 pod mass (g)	68.0	—	73.3	71.0-78.0	77.0	74.0-82.0	72.8	71.0-82.0
One-seeded pods (%)	9.0	1.0-26.0	29.0	23.0-33.0	20.0	10.0-34.0	19.3	1.0-34.0
Two-seeded pods (%)	91.0	74.0-99.0	71.0	67.0-77.0	80.0	66.0-90.0	80.7	66.0-99.0
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	22.0	21.0-23.5	21.1	20.0-22.0	23.0	20.0-27.0	22.0	20.0-27.0
Pod width (mm)	11.5	11.4-11.6	11.3	11.0-12.0	11.0	10.0-13.0	11.3	10.0-13.0
Seed length (mm)	11.3	10.0-12.0	11.8	11.5-12.0	12.0	11.0-12.0	11.7	10.0-12.0
Seed width (mm)	7.4	7.0-8.0	7.1	7.0-7.2	7.7	7.0-8.0	7.4	7.0-8.0
Shelling outturn (%)	67.7	64.7-74.0	72.3	70.4-74.4	71.0	70.7-71.6	70.3	64.7-74.4
Sound mature seeds (%)	92.6	90.9-94.3	84.6	80.0-87.2	90.6	85.0-94.0	89.3	80.0-94.3
Hundred seed mass (g)	37.0	34.0-40.0	41.0	38.0-46.0	38.0	35.0-40.0	38.7	34.0-46.0

Prominent features of the cultivar:

1. Plants like virginia types
2. Leaves are smaller in size

Name of the cultivar : ICGS 21

Passport information

Botanical status : *A. hypogaea ssp. fastigiata var. vulgaris*

Botanical type : Spanish

Year of release :

Originating centre : International Crops Research Institute for the Semi-Arid Tropics, Patancheru

Pedigree :

Qualitative traits

Stem

Branching pattern : Sequential with flower on n

Hairiness: Almost glabrous

Stem pigmentation : Absent

Growth habit : Erect

Inflorescence and flower

Type of inflorescence : Compound

Standard petal colour: Orange

Leaflet

Colour : Green

Shape :

Lanceolate

Tip :

Acute

Surface : Almost glabrous

Peg

Peg pigmentation : Present

Pod

Beak : Moderate

Constriction :

Slight

Reticulation :

Slight

Size : Medium

Shell thickness :

Moderate

Seed

Seed colour : One colour

Primary seed colour : Rose

Secondary seed colour :

—

Seed shape :

Fusiform

Resistance to diseases

Early leaf spot : Intermediate

Rust : Low

Late leaf spot : Low

Quality traits

Oil content : 53.1%

Protein content :

19.5%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	7	—	6	—	6.3	—
Days to initial flowering	21	—	25	—	22	—	22.7	—
Days to 50 % flowering	24	—	27	—	26	—	25.7	—
Days to maturity	107	—	106	103-110	108	106-110	107	103-110
Main axis height (cm)	21.7	19.2-26.4	29.0	26.3-32.0	32.0	30.6-34.6	27.6	19.2-34.6
Length of n+1	29.6	27.0-34.4	37.3	28.7-49.0	41.9	38.8-45.0	36.3	27.0-49.0
No. of nodes on n	15.6	15.0-16.8	15.7	14.0-16.7	13.4	11.2-16.0	14.9	11.2-16.8
No. of aerial pegs	11.7	8.6-16.0	14.7	11.7-16.7	11.2	9.4-13.0	12.5	8.6-16.7
No. of branches	7.0	6.8-7.4	11.2	7.3-18.7	9.1	5.8-11.8	10.2	5.8-18.7
Leaflet length (cm)	3.6	—	5.1	4.5-5.6	6.0	4.5-6.6	4.9	3.6-6.6
Leaflet width (cm)	1.4	—	2.2	1.9-2.4	2.1	1.7-2.4	1.9	1.4-2.4
Leaflet length/width	2.6	—	2.3	—	2.9	—	2.6	—
Plant spread (cm)	47.0	42.0-52.0	62.7	59.0-67.0	53.7	52.0-56.0	54.5	42.0-67.0
Immature pods/ plant	1.6	0.6-2.6	6.3	2.0-12.0	5.2	3.6-7.0	4.4	0.6-12.0
Mature pods/ plant	7.2	3.4-11.0	13.7	7.0-18.0	9.1	7.6-11.0	10.0	3.4-18.0
Pod bearing plants (%)	62.1	42.0-100	95.4	93.0-97.0	99.4	98.0-100	85.6	42.0-100
Pod mass (g/plant)	3.8	3.2-4.3	5.7	5.3-6.2	8.1	6.7-8.9	5.9	3.2-8.9
Pod yield /m ² (g)	75	64-84	231	227-226	384	286-446	230	64-446
100 pod mass (g)	67.0	—	72.0	66.0-80.0	81.7	79.0-85.0	73.6	66.0-85.0
One-seeded pods (%)	28.0	20.0-35.0	25.0	21.0-28.0	14.0	10.0-20.0	22.3	10.0-35.0
Two-seeded pods (%)	72.0	65.0-80.0	75.0	72.0-79.0	86.0	80.0-90.0	77.7	65.0-90.0
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	25.7	25.0-26.0	24.0	23.5-24.5	24.3	21.0-26.0	24.7	21.0-26.0
Pod width (mm)	11.4	11.0-11.6	12.0	11.0-13.0	12.0	11.8-13.0	11.8	11.0-13.0
Seed length (mm)	11.9	10.0-13.0	12.2	11.5-13.0	13.0	12.8-13.8	12.4	10.0-13.8
Seed width (mm)	7.3	7.0-7.6	7.8	7.5-8.0	7.2	7.0-8.0	7.4	7.0-8.0
Shelling outturn (%)	64.0	61.2-68.3	68.3	65.2-71.3	69.4	65.9-72.8	67.2	61.2-72.8
Sound mature seeds (%)	84.4	82.5-85.4	87.7	83.7-90.0	88.9	83.0-95.0	87.0	82.5-95.0
Hundred seed mass (g)	38.0	37.0-39.0	42.7	41.0-45.0	37.7	37.0-38.0	39.5	37.0-45.0

Prominent features of the cultivar:

1. Plants like virginia types
2. Leaves are smaller in size

Name of the cultivar : ICGS 44

Passport information

Botanical status : *A. hypogaea ssp. fastigiata var. vulgaris*
Year of release : 1988 **Botanical type :** Spanish
Originating centre : International Crops Research Institute for the Semi-Arid Tropics, Patancheru
Pedigree : Selection from Robut 33-1

Qualitative traits

Stem

Branching pattern : Sequential with flower on n **Hairiness:** Sub-glabrous
Stem pigmentation : Absent **Growth habit :** Decumbent 3

Inflorescence and flower

Type of inflorescence : Compound **Standard petal colour:** Orange

Leaflet

Colour : Green **Shape :** Lanceolate **Tip :** Acute
Surface : Almost glabrous above and hairs below

Peg

Peg pigmentation : Absent

Pod

Beak : Absent **Constriction :** Moderate **Reticulation :** Slight
Size : Medium **Shell thickness :** Thin

Seed

Seed colour : One colour **Primary seed colour :** Rose
Secondary seed colour : — **Seed shape :** Fusiform

Resistance to diseases

Early leaf spot : Intermediate
Rust : Low
Late leaf spot : Low

Quality traits

Oil content : 48.6% **Protein content :** 23.6%

Quantitative traits (Mean and Range of two years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	—	—	6	—	6	—	6.0	—
Days to initial flowering	—	—	33	—	23	—	28.0	—
Days to 50 % flowering	—	—	35	—	25	—	30.0	—
Days to maturity	—	—	106	103-109	108	107-110	107	103-110
Main axis height (cm)	—	—	22.4	19.3-24.7	27.1	24.0-31.2	24.8	19.3-31.2
Length of n+1	—	—	31.2	24.0-38.7	39.3	34.8-42.7	35.3	24.0-42.7
No. of nodes on n	—	—	15.0	11.0-18.3	14.1	12.2-17.2	14.6	11.0-18.3
No. of aerial pegs	—	—	12.9	10.0-18.0	5.7	3.8-7.0	9.3	3.8-18.0
No. of branches	—	—	6.7	3.0-9.7	7.6	4.8-12.0	7.2	3.0-12.0
Leaflet length (cm)	—	—	4.9	4.1-6.3	5.0	4.2-5.6	5.0	4.1-6.3
Leaflet width (cm)	—	—	2.1	1.6-2.6	2.0	1.5-2.2	2.1	1.5-2.6
Leaflet length/width	—	—	2.3	—	2.5	—	2.4	—
Plant spread (cm)	—	—	52.7	51.0-54.0	59.7	58.0-61.0	56.2	51.0-61.0
Immature pods/ plant	—	—	4.3	2.0-6.0	6.0	4.4-7.8	5.2	2.0-7.8
Mature pods/ plant	—	—	14.7	3.0-28.0	7.5	6.8-8.0	11.1	3.0-28.0
Pod bearing plants (%)	—	—	98.0	94.0-100	99.2	98.0-100	98.6	94.0-100
Pod mass (g/plant)	—	—	6.5	6.0-7.3	9.7	8.9-11.1	8.1	6.0-11.1
Pod yield /m ² (g)	—	—	220	194-268	387	272-457	303	194-457
100 pod mass (g)	—	—	62.0	47.0-70.0	85.7	83.0-87.0	73.9	47.0-87.0
One-seeded pods (%)	—	—	23.0	22.0-25.0	16.0	15.0-18.0	19.5	15.0-25.0
Two-seeded pods (%)	—	—	77.0	75.0-78.0	84.0	82.0-85.0	80.5	75.0-85.0
Three-seeded pods (%)	—	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	—	—	21.5	21.0-22.0	22.4	20.0-24.0	22.0	20.0-24.0
Pod width (mm)	—	—	11.6	11.0-12.2	12.0	11.0-12.3	11.8	11.0-12.3
Seed length (mm)	—	—	11.7	11.0-12.0	12.0	11.6-12.5	11.9	11.0-12.5
Seed width (mm)	—	—	7.4	7.0-8.0	7.7	6.8-8.6	7.6	7.0-8.6
Shelling outturn (%)	—	—	72.1	71.1-73.9	71.3	69.2-73.6	71.7	69.2-73.9
Sound mature seeds (%)	—	—	86.6	84.3-88.0	90.8	81.0-96.0	88.7	81.0-96.0
Hundred seed mass (g)	—	—	41.7	41.0-42.0	40.0	38.0-41.0	40.9	38.0-42.0

Prominent features of the cultivar:

1. Plants like virginia types
2. Leaves are smaller in size

Name of the cultivar : ICGV 86590

Passport information

Botanical status : *A. hypogaea* ssp. *fastigiata* var. *vulgaris*
 Year of release : 1991 Botanical type : Spanish
 Originating centre : International Crops Research Institute for the Semi-Arid Tropics, Patancheru
 Pedigree : 14-4-B-19-B X PI 259747

Qualitative traits

Stem

Branching pattern : Sequential with flower on n Hairiness: Almost glabrous
 Stem pigmentation : Absent Growth habit : Erect

Inflorescence and flower

Type of inflorescence : Compound Standard petal colour: Orange

Leaflet

Colour : Green Shape : Lanceolate Tip : Acute
 Surface : Almost glabrous above, hairs below

Peg

Peg pigmentation : Absent

Pod

Beak : Moderate Constriction : Moderate Reticulation : Moderate
 Size : Medium Shell thickness : Thin

Seed

Seed colour : One colour Primary seed colour : Salmon
 Secondary seed colour : — Seed shape : Fusiform

Resistance to diseases

Early leaf spot : High
 Rust : High
 Late leaf spot : Intermediate

Quality traits

Oil content : 53.6% Protein content : 21.1%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	7	—	5	—	6	—	6.0	—
Days to initial flowering	23	—	24	—	23	—	23.3	—
Days to 50 % flowering	26	—	27	—	27	—	26.7	—
Days to maturity	109	—	109	108-110	106	105-108	108	105-110
Main axis height (cm)	36.6	32.4-40.6	32.9	31.3-34.7	32.3	26.4-36.6	33.9	26.4-40.6
Length of n+1	41.9	37.0-47.6	42.1	36.0-52.3	44.6	40.0-49.8	42.9	36.0-52.3
No. of nodes on n	17.4	16.0-18.2	17.8	14.7-21.0	12.4	—	15.9	12.4-21.0
No. of aerial pegs	10.7	8.4-14.6	15.3	3.7-23.0	5.7	4.0-7.0	10.6	3.7-23.0
No. of branches	6.3	5.6-7.0	14.0	10.7-20.0	8.6	6.4-10.8	9.6	5.6-20.0
Leaflet length (cm)	4.0	3.5-4.6	4.8	4.2-5.7	5.7	4.5-6.0	4.8	3.5-6.0
Leaflet width (cm)	1.6	1.4-1.8	2.3	1.9-2.5	2.4	1.8-2.8	2.1	1.4-2.8
Leaflet length/width	2.5	—	2.1	—	2.4	—	2.3	—
Plant spread (cm)	68.0	61.0-74.0	44.3	40.0-50.0	56.3	53.0-60.0	56.2	40.0-74.0
Immature pods/ plant	2.3	1.2-3.0	12.0	9.0-16.0	6.7	5.6-9.0	7.0	1.2-16.0
Mature pods/ plant	9.1	8.6-10.0	12.3	9.0-19.0	4.7	3.2-6.4	8.7	3.2-19.0
Pod bearing plants (%)	98.4	98.0-100	98.5	98.0-100	100	—	99.0	98.0-100
Pod mass (g/plant)	7.2	6.8-8.1	6.2	5.3-7.4	7.8	6.1-9.8	7.1	5.3-9.8
Pod yield /m ² (g)	338	312-359	284	265-298	323	286-390	315	265-390
100 pod mass (g)	114	—	92.7	86.0-97.0	95.7	82.0-109	101	82.0-114
One-seeded pods (%)	0.0	—	8.0	5.0-13.0	17.0	13.0-21.0	8.3	0.0-21.0
Two-seeded pods (%)	10.0	5.0-15.0	34.0	29.0-44.0	38.0	31.0-42.0	27.3	5.0-44.0
Three-seeded pods (%)	90.0	85.0-95.0	58.0	43.0-65.0	45.0	39.0-51.0	64.4	39.0-95.0
Pod length (mm)	33.0	24.0-38.0	31.5	30.0-34.0	32.7	32.0-33.0	32.4	24.0-38.0
Pod width (mm)	12.7	12.0-14.0	11.7	11.0-12.0	11.0	10.8-12.3	11.8	10.8-14.0
Seed length (mm)	14.2	12.0-17.0	12.7	11.5-15.0	13.0	12.7-13.5	13.3	11.5-17.0
Seed width (mm)	7.6	7.4-8.0	7.4	7.1-8.0	7.3	7.0-8.0	7.4	7.0-8.0
Shelling outturn (%)	60.6	59.3-62.3	63.4	61.5-65.3	69.8	68.3-71.0	64.6	59.3-71.0
Sound mature seeds (%)	89.5	83.1-92.9	89.9	88.7-90.5	89.8	85.0-95.0	89.7	83.1-95.0
Hundred seed mass (g)	35.3	31.0-38.0	37.7	36.0-39.0	35.3	35.0-36.0	36.1	31.0-39.0

Prominent features of the cultivar:

1. Plants like virginia types
2. Leaves are smaller in size
3. Moderate beak, constriction and reticulation
4. Three seeded pods are more
5. Salmon coloured testa

Name of the cultivar : J 11

Passport information

Botanical status :	<i>A. hypogaea ssp. fastigiata var. vulgaris</i>		
Year of release :	1964	Botanical type :	Spanish
Originating centre :	Gujarat Agricultural University, Junagadh		
Pedigree :	Ah 4218 X Ah 4354		

Qualitative traits

Stem

Branching pattern :	Sequential with flower on n	Hairiness:	Sub-glabrous
Stem pigmentation :	Absent	Growth habit :	Erect

Inflorescence and flower

Type of inflorescence :	Compound	Standard petal colour:	Orange
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Leaflet

Colour :	Light green	Shape :	Lanceolate	Tip :	Acute
Surface :	Almost glabrous above, hairs below				

Peg

Peg pigmentation :	Absent
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Pod

Beak :	Slight	Constriction :	Moderate	Reticulation :	Slight
Size :	Medium	Shell thickness :	Thin		

Seed

Seed colour :	One colour	Primary seed colour :	Salmon
Secondary seed colour :	—	Seed shape :	Spheroidal

Resistance to diseases

Early leaf spot :	Low
Rust :	Low
Late leaf spot :	Very low

Quality traits

Oil content :	49.7%	Protein content :	21.4%
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Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	6	—	6	—	6.0	—
Days to initial flowering	22	—	22	—	21	—	21.7	—
Days to 50 % flowering	24	—	25	—	24	—	24.3	—
Days to maturity	104	—	106	105-108	106	105-108	106	104-108
Main axis height (cm)	31.9	26.6-38.6	36.4	33.7-42.0	31.1	21.2-38.8	33.1	21.2-42.0
Length of n+1	35.2	29.4-45.8	39.7	26.3-51.7	37.7	27.4-43.8	37.5	26.3-51.7
No. of nodes on n	16.8	14.2-18.8	18.4	17.3-20.0	13.7	13.4-13.8	16.3	13.4-20.0
No. of aerial pegs	8.1	7.0-9.4	8.4	6.0-10.7	4.5	3.6-5.4	7.0	3.6-10.7
No. of branches	5.0	4.8-5.2	6.1	3.3-9.4	7.8	4.2-11.2	6.3	3.3-11.2
Leaflet length (cm)	5.3	4.5-5.9	5.9	5.3-6.3	6.1	5.0-6.2	5.8	4.5-6.3
Leaflet width (cm)	2.1	1.9-2.5	3.0	2.6-3.5	2.7	2.1-2.9	2.6	1.9-2.9
Leaflet length/width	2.5	—	2.0	—	2.3	—	2.3	—
Plant spread (cm)	56.0	40.0-62.0	59.0	52.0-63.0	57.3	54.0-60.0	57.4	40.0-63.0
Immature pods/ plant	1.1	0.8-1.6	5.3	4.0-7.0	5.2	3.8-7.5	3.9	0.8-7.5
Mature pods/ plant	8.9	7.6-11.2	21.7	12.0-36.0	10.3	9.0-12.5	13.6	7.6-36.0
Pod bearing plants (%)	94.3	86.0-100	100	—	98.4	95.0-100	97.6	86.0-100
Pod mass (g/plant)	7.1	6.2-7.7	6.0	5.8-6.3	6.4	5.3-7.7	6.5	5.3-7.7
Pod yield /m ² (g)	492	464-526	267	246-296	253	220-300	337	220-526
100 pod mass (g)	73.0	—	65.3	62.0-67.0	66.7	61.0-71.0	68.3	61.0-73.0
One-seeded pods (%)	0.0	—	8.0	4.0-10.0	17.0	12.0-20.0	8.3	0.0-20.0
Two-seeded pods (%)	100	—	92.0	90.0-96.0	83.0	80.0-88.0	91.7	80.0-100
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	24.6	22.8-28.0	21.0	20.0-23.0	21.3	21.0-22.0	22.3	20.0-28.0
Pod width (mm)	10.2	9.0-11.0	9.3	8.0-10.0	10.0	9.6-10.5	9.8	8.0-11.0
Seed length (mm)	10.7	10.0-12.0	10.1	10.0-10.2	11.0	—	10.6	10.0-12.0
Seed width (mm)	6.9	6.8-7.0	7.2	7.0-7.5	7.2	7.0-8.0	7.1	6.8-8.0
Shelling outturn (%)	75.5	75.3-75.7	76.2	74.6-77.6	73.0	70.6-74.6	74.9	70.6-77.6
Sound mature seeds (%)	92.4	90.9-95.3	90.6	89.7-92.2	88.1	76.0-96.0	90.4	76.0-96.0
Hundred seed mass (g)	32.3	30.0-35.0	35.0	32.0-37.0	37.7	36.0-39.0	35.0	30.0-39.0

Name of the cultivar : JL 24 (Phule pragati)

Passport information

Botanical status :	<i>A. hypogaea ssp. fastigiata var. vulgaris</i>		
Year of release :	1978	Botanical type :	Spanish
Originating centre :	Agricultural Research Station, M.P.K.V., Jalgaon		
Pedigree :	Selection from EC 94943		

Qualitative traits

Stem

Branching pattern :	Sequential with flower on n	Hairiness:	Sub-glabrous
Stem pigmentation :	Absent	Growth habit :	Decumbent 3

Inflorescence and flower

Type of inflorescence :	Simple	Standard petal colour:	Orange
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Leaflet

Colour :	Light green	Shape :	Oblong	Tip :	Obtuse
Surface :	Almost glabrous				

Peg

Peg pigmentation :	Absent
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Pod

Beak :	Slight	Constriction :	Moderate	Reticulation :	Absent
Size :	Medium	Shell thickness :	Thin		

Seed

Seed colour :	One colour	Primary seed colour :	Salmon
Secondary seed colour :	—	Seed shape :	Spheroidal

Resistance to diseases

Early leaf spot :	Low
Rust :	Low
Late leaf spot :	Very low

Quality traits

Oil content :	48.5%	Protein content :	23.3%
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Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	6	—	6	—	6.0	—
Days to initial flowering	26	—	24	—	21	—	23.7	—
Days to 50 % flowering	28	—	27	—	24	—	26.3	—
Days to maturity	106	—	104	103-106	108	105-110	106	103-110
Main axis height (cm)	30.8	27.0-32.8	30.2	28.7-31.0	30.7	24.2-34.8	30.6	24.2-34.8
Length of n+1	30.9	24.8-35.2	37.1	33.3-44.0	33.5	29.0-39.8	33.8	24.8-44.0
No. of nodes on n	16.9	14.2-18.7	16.6	16.0-17.3	14.8	12.2-17.0	16.1	12.2-18.7
No. of aerial pegs	4.9	3.2-7.0	4.1	2.3-6.7	3.2	1.6-4.8	4.1	1.6-7.0
No. of branches	5.0	4.8-5.3	8.4	5.3-10.7	6.3	3.8-10.0	6.6	3.8-10.7
Leaflet length (cm)	4.6	3.8-5.0	5.6	4.8-6.4	7.2	6.0-7.5	5.8	3.8-7.5
Leaflet width (cm)	2.0	1.7-2.4	2.7	2.0-3.2	3.1	2.5-3.1	2.6	1.7-3.2
Leaflet length/width	2.2	—	2.1	—	2.3	—	2.2	—
Plant spread (cm)	66.0	60.0-72.0	44.7	41.0-50.0	55.0	56.0-63.0	55.2	41.0-72.0
Immature pods/ plant	1.0	—	6.7	6.0-8.0	4.3	3.8-4.8	4.0	1.0-8.0
Mature pods/ plant	6.7	5.6-7.6	18.0	14.0-25.0	5.7	4.0-8.4	10.1	4.0-25.0
Pod bearing plants (%)	96.7	95.0-98.0	99.0	98.0-100	100	—	98.6	95.0-100
Pod mass (g/plant)	6.3	5.9-6.9	8.0	7.3-8.8	8.0	7.3-8.7	7.4	5.9-8.7
Pod yield /m ² (g)	451	374-509	315	290-328	295	260-364	354	260-509
100 pod mass (g)	109	—	94.3	91.0-97.0	92.0	91.0-93.0	98.4	91.0-109
One-seeded pods (%)	0.0	—	10.0	6.0-13.0	16.0	15.0-17.0	8.7	0.0-17.0
Two-seeded pods (%)	100	—	90.0	87.0-94.0	84.0	83.0-85.0	91.3	83.0-100
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	28.7	28.0-29.0	26.2	25.2-27.0	27.0	26.0-28.0	27.3	25.2-29.0
Pod width (mm)	11.4	10.0-12.8	11.2	11.0-11.3	11.0	10.8-11.4	11.2	10.0-12.8
Seed length (mm)	14.3	13.0-16.0	12.7	12.0-13.0	12.0	11.8-13.0	13.0	11.8-16.0
Seed width (mm)	7.8	7.0-9.0	8.0	7.2-8.5	7.2	7.0-8.0	7.7	7.0-9.0
Shelling outturn (%)	67.0	58.7-72.4	68.6	68.2-69.2	71.5	67.4-76.4	69.0	58.7-76.4
Sound mature seeds (%)	94.7	94.3-95.3	91.5	90.4-92.7	91.4	86.0-97.0	92.5	86.0-97.0
Hundred seed mass (g)	43.7	41.0-46.0	46.7	45.0-48.0	41.3	40.0-42.0	43.9	40.0-48.0

Prominent features of the cultivar:

1. Larger leaflet size
2. Moderate constriction and smooth surface of pods
3. Salmon coloured testa

Name of the cultivar : K 134 (Vemana)

Passport information

Botanical status :	<i>A. hypogaea ssp. fastigiata var. vulgaris</i>		
Year of release :	1993	Botanical type :	Spanish
Originating centre :	Agricultural Research Station, A.N.G.R.A.U., Kadiri		
Pedigree :	Kadiri 3 X JL 24		

Qualitative traits

Stem

Branching pattern :	Sequential with flower on n	Hairiness::	Sub-glabrous
Stem pigmentation :	Absent	Growth habit :	Erect

Inflorescence and flower

Type of inflorescence :	Simple	Standard petal colour:	Dark orange
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Leaflet

Colour :	Green	Shape :	Lanceolate	Tip :	Acute
Surface :	Almost glabrous				

Peg

Peg pigmentation : Present

Pod

Beak :	Slight	Constriction :	Moderate	Reticulation :	Slight
Size :	Medium	Shell thickness :	Thin		

Seed

Seed colour :	One colour	Primary seed colour :	Rose
Secondary seed colour :	—	Seed shape :	Fusiform

Resistance to diseases

Early leaf spot :	Intermediate
Rust :	Intermediate
Late leaf spot :	Low

Quality traits

Oil content :	51.4%	Protein content :	22.7%
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Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	6	—	6	—	6.0	—
Days to initial flowering	28	—	24	—	21	—	24.3	—
Days to 50 % flowering	30	—	27	—	24	—	27.0	—
Days to maturity	105	—	104	103-106	108	105-110	106	103-110
Main axis height (cm)	29.2	27.8-31.0	28.7	25.0-30.7	27.5	24.0-31.6	28.5	24.0-31.6
Length of n+1	27.9	20.6-33.4	35.8	31.3-42.0	39.5	35.4-44.6	34.4	20.6-44.6
No. of nodes on n	19.1	17.8-21.8	17.7	16.0-19.3	13.1	12.8-13.4	16.6	12.8-21.8
No. of aerial pegs	4.1	3.0-5.2	16.1	13.0-17.7	6.3	5.0-8.2	8.8	3.0-17.7
No. of branches	4.7	3.6-5.8	7.8	5.0-9.3	7.5	6.0-8.8	6.7	3.6-9.3
Leaflet length (cm)	4.8	4.0-5.4	5.9	5.4-6.4	6.1	5.4-6.4	5.6	4.0-6.4
Leaflet width (cm)	2.1	1.5-2.5	2.7	2.2-3.2	2.6	2.0-2.7	2.5	1.5-3.2
Leaflet length/width	2.3	—	2.2	—	2.3	—	2.3	—
Plant spread (cm)	55.0	50.0-59.0	49.7	46.0-53.0	65.7	64.0-68.0	56.8	46.0-68.0
Immature pods/ plant	1.7	0.6-2.4	15.0	4.0-22.0	5.0	4.0-6.4	7.2	0.6-22.0
Mature pods/ plant	7.3	5.2-8.6	19.7	14.0-24.0	6.6	4.4-10.0	11.2	4.4-24.0
Pod bearing plants (%)	95.0	90.0-100	98.8	96.0-100	100	—	97.9	90.0-100
Pod mass (g/plant)	6.3	5.4-7.3	7.5	6.8-8.9	8.7	7.5-10.5	7.5	5.4-10.5
Pod yield /m ² (g)	435	415-452	213	185-250	322	172-451	323	185-452
100 pod mass (g)	105	—	94.3	91.0-97.0	92.0	91.0-93.0	97.1	91.0-105
One-seeded pods (%)	7.0	0.0-20.0	17.0	11.0-23.0	19.0	13.0-25.0	14.3	0.0-25.0
Two-seeded pods (%)	93.0	80.0-100	83.0	77.0-89.0	81.0	75.0-87.0	85.7	75.0-100
Three-seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	24.7	24.0-25.0	21.2	21.0-21.5	21.3	20.0-23.0	22.4	20.0-25.0
Pod width (mm)	11.1	10.0-12.4	11.3	10.0-13.0	11.0	10.5-11.7	11.1	10.0-13.0
Seed length (mm)	12.8	12.0-13.3	11.0	10.0-12.0	11.0	10.8-12.0	11.6	10.0-13.3
Seed width (mm)	7.5	7.0-8.0	7.6	7.0-8.2	7.3	7.0-8.0	7.5	7.0-8.2
Shelling outturn (%)	72.4	67.1-75.2	72.4	71.4-73.2	69.6	64.3-73.3	71.5	64.3-75.2
Sound mature seeds (%)	93.2	91.5-94.4	87.5	86.6-88.3	81.3	73.0-86.0	87.3	73.0-94.4
Hundred seed mass (g)	40.0	38.0-42.0	40.3	38.0-43.0	37.0	35.0-39.0	39.1	35.0-43.0

Name of the cultivar : MH 1

Passport Information

Botanical status :	<i>A. hypogaea ssp. fastigiata var. vulgaris</i>		
Year of Release :	1975	Botanical Type :	Spanish
Originating centre :	Haryana Agricultural University, Hissar		
Pedigree :	Selection from Faizapur 1-5		

Qualitative traits

Stem

Branching pattern :	Sequential with flower on n	Hairiness:	Moderately hairy
Stem pigmentation :	Absent	Growth habit :	Erect

Inflorescence and flower

Type of inflorescence :	Simple	Standard petal colour:	Orange
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Leaflet

Colour :	Light green	Shape :	Lanceolate	Tip :	Acute
Surface :	Almost glabrous with hairs below				

Peg

Peg pigmentation :	Present
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Pod

Beak :	Slight	Constriction :	Moderate	Reticulation :	Slight
Size :	Medium	Shell thickness :	Thin		

Seed

Seed colour :	One colour	Primary seed colour :	Salmon
Secondary seed colour:	—	Seed shape :	Spheroidal

Resistance to diseases

Early leaf spot :	Low
Rust :	Low
Late leaf spot:	Very low

Quality traits

Oil content :	51.5 %	Protein content :	25.3%
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Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	5	—	6	—	5.7	—
Days to initial flowering	24	—	24	—	18	—	22.0	—
Days to 50 % flowering	27	—	26	—	22	—	25.0	—
Days to maturity	104	—	104	100-108	106	105-108	105	100-108
Main axis height (cm)	27.7	27.4-27.8	33.0	29.7-36.0	33.1	30.0-37.0	31.3	27.4-37.0
Length of n+1	32.5	29.2-35.4	35.9	30.3-39.7	42.5	38.8-46.2	37.0	29.2-46.2
No. of nodes on n	17.0	13.0-19.6	20.9	19.7-23.3	13.0	11.2-15.6	17.0	11.2-23.3
No. of aerial pegs	5.3	3.0-6.6	13.7	10.7-17.7	4.5	4.2-5.2	7.8	3.0-17.7
No. of branches	5.1	4.8-5.4	10.5	3.3-16.7	7.4	5.6-8.6	7.7	3.3-16.7
Leaflet length (cm)	4.5	3.8-5.3	5.9	4.5-6.9	5.8	5.2-6.8	5.3	3.8-6.9
Leaflet width (cm)	2.2	1.8-2.4	2.6	2.1-3.0	2.8	2.0-3.0	2.5	1.8-3.0
Leaflet length/width	2.1	—	2.3	—	2.2	—	2.2	—
Plant spread (cm)	69.0	64.0-74.0	46.0	43.0-50.0	54.0	52.0-56.0	56.3	43.0-74.0
Immature pods/ plant	1.5	0.8-2.2	8.3	6.0-10.0	5.1	4.0-7.4	5.0	0.8-10.0
Mature pods/ plant	7.7	7.0-8.4	11.7	7.0-20.0	6.0	5.7-6.4	8.5	5.7-20.0
Pod bearing plants (%)	93.1	82.0-100	97.6	96.0-100	98.8	96.0-100	96.5	82.0-100
Pod mass (g/plant)	4.7	3.7-6.1	4.0	3.4-4.9	6.1	5.8-6.3	4.9	3.4-6.3
Pod yield /m ² (g)	176	150-190	155	127-186	297	282-305	209	127-305
100 pod mass (g)	96.0	—	60.3	58.0-67.0	74.0	69.0-81.0	76.8	58.0-96.0
One seeded pods (%)	0.0	—	16.0	11.0-22.0	16.0	12.0-18.0	10.7	0.0-22.0
Two seeded pods (%)	100	—	84.0	78.0-89.0	84.0	82.0-88.0	89.3	78.0-89.0
Three seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	23.0	20.0-25.0	22.0	20.0-25.0	23.8	22.0-25.0	22.9	20.0-25.0
Pod width (mm)	10.5	9.5-11.0	10.3	10.0-11.0	11.0	10.8-12.0	10.6	9.5-12.0
Seed length (mm)	11.1	10.8-11.5	11.2	10.5-12.0	11.0	10.0-12.0	11.1	10.0-12.0
Seed width (mm)	6.8	6.0-7.5	7.6	7.3-8.0	6.8	6.5-7.3	7.1	6.0-8.0
Shelling outturn (%)	70.2	65.5-72.9	71.8	70.1-75.0	69.8	68.1-72.2	70.6	65.5-75.0
Sound mature seeds (%)	93.7	89.5-95.9	88.2	86.8-90.7	91.0	86.0-95.0	91.0	86.0-95.9
Hundred seed mass (g)	32.0	29.0-36.0	32.7	31.0-34.0	37.3	36.0-40.0	34.0	29.0-40.0

Name of the cultivar : RG 141

Passport Information

Botanical status : *A.hypogaea ssp. fastigiata var. vulgaris*
 Year of release : 1989 Botanical type : Spanish
 Originating centre : Agricultural Research Station, R.A.U. , Durgapura
 Pedigree : Robut 33-1 X NCAC 2821

Qualitative traits

Stem

Branching pattern : Sequential with flower on n Hairiness: Sub-glabrous
 Stem pigmentation : Absent Growth habit : Erect

Inflorescence and flower

Type of inflorescence : Simple Standard petal colour: Dark orange

Leaflet

Colour : Green Shape : Lanceolate Tip : Acute
 Surface : Almost glabrous

Peg

Peg pigmentation : Present

Pod

Beak : Absent Constriction : Slight Reticulation : Slight
 Size : Small Shell thickness : Moderate

Seed

Seed colour : One colour Primary seed colour : Salmon
 Secondary seed colour: — Seed shape : Spheroidal

Resistance to diseases

Early leaf spot : Low
 Rust : Low
 Late leaf spot: Low

Quality traits

Oil content : 50.5 % Protein content : 24.6%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	7	—	6	—	6	—	6.3	—
Days to initial flowering	20	—	23	—	22	—	21.7	—
Days to 50 % flowering	23	—	26	—	25	—	24.7	—
Days to maturity	104	—	102	100-104	108	107-109	105	100-109
Main axis height (cm)	27.5	25.0-32.2	30.0	29.3-30.7	26.5	23.2-28.2	28.0	23.2-32.2
Length of n+1	36.9	31.6-44.0	36.8	33.7-41.0	35.7	34.8-37.0	36.5	31.6-44.0
No. of nodes on n	17.0	13.4-19.6	20.0	16.7-24.3	12.5	11.0-14.0	16.5	11.0-24.3
No. of aerial pegs	5.8	3.8-7.2	9.6	8.7-10.3	6.4	5.4-7.6	7.3	3.8-10.3
No. of branches	5.1	4.4-5.4	11.1	7.3-14.8	8.6	7.8-10.2	8.3	4.4-14.8
Leaflet length (cm)	4.2	3.5-4.9	5.5	4.2-6.3	6.5	5.0-7.2	5.4	3.5-7.2
Leaflet width (cm)	1.9	1.4-2.1	2.4	2.1-2.6	2.8	2.2-3.1	2.4	1.4-3.1
Leaflet length/width	2.2	—	2.3	—	2.3	—	2.3	—
Plant spread (cm)	61.0	55.0-67.0	61.0	58.0-64.0	58.0	52.0-60.0	60.0	52.0-67.0
Immature pods/ plant	1.1	0.2-2.2	12.3	7.0-15.0	5.4	4.6-6.8	6.3	0.2-15.0
Mature pods/ plant	10.6	9.4-11.2	20.3	15.0-30.0	6.9	2.4-10.4	12.6	2.4-30.0
Pod bearing plants (%)	92.5	83.0-100	100	—	100	—	97.5	83.0-100
Pod mass (g/plant)	6.8	6.4-7.5	5.2	2.9-7.3	6.9	5.9-8.7	6.3	2.9-8.7
Pod yield /m ² (g)	459	446-472	166	131-183	303	246-391	309	131-472
100 pod mass (g)	73.0	—	57.3	54.0-60.0	65.0	61.0-68.0	65.1	54.0-73.0
One seeded pods (%)	0.0	—	13.0	9.0-17.0	22.0	15.0-31.0	11.7	0.0-31.0
Two seeded pods (%)	100	—	87.0	83.0-91.0	78.0	69.0-85.0	88.3	69.0-100
Three seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	20.2	20.0-20.5	20.2	19.5-21.0	21.2	21.0-22.0	20.5	19.5-22.0
Pod width (mm)	10.6	10.0-11.0	9.8	8.5-11.0	11.0	10.0-11.7	10.5	8.5-11.7
Seed length (mm)	11.0	10.0-12.5	10.1	10.0-10.2	10.0	9.8-11.0	10.4	9.8-12.5
Seed width (mm)	7.8	7.5-8.0	7.5	7.0-8.0	7.2	7.0-8.0	7.5	7.0-8.0
Shelling outturn (%)	69.9	65.3-75.3	70.4	70.0-70.7	71.3	70.7-72.1	70.5	65.3-75.3
Sound mature seeds (%)	92.7	91.8-93.2	90.2	89.5-90.7	90.6	84.0-94.0	91.2	84.0-94.0
Hundred seed mass (g)	37.0	32.0-36.0	30.7	30.0-32.0	39.7	36.0-43.0	35.8	30.0-43.0

Prominent features of the cultivar:

1. Thick main stem.

Passport Information

Botanical status : *A. hypogaea ssp. fastigiata var. vulgaris*
 Year of release : 1965 Botanical type : Spanish
 Originating centre : Gujarat Agricultural University, Junagadh
 Pedigree : Ah 4213 X Ah 4354

Qualitative traits

Stem

Branching pattern : Sequential with flower on n Hairiness : Sub-glabrous
 Stem pigmentation : Absent Growth habit : Erect

Inflorescence and flower

Type of inflorescence : Simple Standard petal colour: Orange

Leaflet

Colour : Light green Shape : Lanceolate Tip : Acute
 Surface : Almost glabrous above and hairs below

Peg

Peg pigmentation : Present

Pod

Beak : Slight Constriction : Slight Reticulation : Slight
 Size : Medium Shell thickness : Thin

Seed

Seed colour : One colour Primary seed colour : Salmon
 Secondary seed colour : — Seed shape : Spheroidal

Resistance to diseases

Early leaf spot : Low
 Rust : Low
 Late leaf spot: Very low

Quality traits

Oil content : 47.1 % Protein content : 23.2%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	7	—	6	—	6	—	6.3	—
Days to initial flowering	23	—	23	—	18	—	21.3	—
Days to 50 % flowering	28	—	25	—	22	—	25.0	—
Days to maturity	104	—	103	100-110	106	105-107	105	100-107
Main axis height (cm)	35.0	29.2-41.0	35.1	31.0-39.0	29.4	22.7-38.0	33.2	22.7-41.0
Length of n+1	39.7	25.0-52.8	41.6	36.0-50.3	36.5	22.5-45.4	39.3	22.5-52.8
No. of nodes on n	16.6	15.6-17.8	19.8	17.3-21.0	12.6	7.3-15.4	16.3	7.3-21.0
No. of aerial pegs	4.1	1.2-6.8	10.2	7.7-13.7	5.6	2.8-8.0	6.6	1.2-13.7
No. of branches	4.9	4.6-5.0	9.1	3.3-15.3	9.4	6.4-13.0	7.8	3.3-15.3
Leaflet length (cm)	5.0	4.0-5.6	6.1	5.1-6.6	6.5	5.0-7.1	5.9	4.0-7.1
Leaflet width (cm)	2.2	1.8-2.7	2.8	1.8-3.3	2.9	2.5-3.2	2.6	1.8-3.3
Leaflet length/width	2.2	—	2.2	—	2.2	—	2.2	—
Plant spread (cm)	62.0	53.0-70.0	50.0	48.0-53.0	53.0	48.0-56.0	55.0	48.0-70.0
Immature pods/ plant	1.3	0.6-2.0	3.7	1.0-6.0	5.5	3.8-7.8	3.5	0.6-7.8
Mature pods/ plant	9.9	9.2-10.8	25.3	21.0-31.0	7.2	6.4-8.0	14.1	6.4-31.0
Pod bearing plants (%)	97.6	95.0-100	98.5	98.0-100	92.3	85.0-100	96.1	85.0-100
Pod mass (g/plant)	7.3	6.9-8.0	6.8	6.5-7.0	6.3	5.5-7.0	6.8	5.5-8.0
Pod yield /m ² (g)	456	417-507	293	289-297	283	249-323	344	249-507
100 pod mass (g)	79.0	—	63.3	60.0-65.0	68.7	61.0-75.0	70.3	60.0-79.0
One seeded pods (%)	0.0	—	12.0	7.0-16.0	14.0	12.0-15.0	8.7	0.0-16.0
Two seeded pods (%)	100	—	88.0	84.0-93.0	86.0	85.0-88.0	91.3	84.0-100
Three seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	21.5	21.0-22.0	22.3	21.0-25.0	21.0	20.0-22.0	21.6	20.0-25.0
Pod width (mm)	10.0	9.5-10.5	9.8	9.5-10.0	10.0	9.8-11.2	9.9	9.5-11.2
Seed length (mm)	11.0	10.0-12.0	10.8	10.5-11.0	10.0	—	10.6	10.0-12.0
Seed width (mm)	8.0	7.5-8.5	7.6	7.2-8.0	7.0	6.8-8.2	7.5	6.8-8.5
Shelling outturn (%)	72.7	68.4-75.9	72.4	70.7-74.3	73.1	71.7-73.8	72.7	68.4-75.9
Sound mature seeds (%)	87.5	81.7-91.9	90.8	90.5-91.4	85.2	73.0-92.0	87.8	73.0-92.0
Hundred seed mass (g)	35.0	34.0-36.0	34.7	32.0-38.0	40.7	34.0-45.0	36.8	34.0-45.0

Name of the cultivar : SG 84

Passport Information

Botanical status : *A. hypogaea ssp. fastigiata var. vulgaris*
 Year of release : 1986 Botanical type : Spanish
 Originating centre : Punjab Agricultural University, Ludhiana
 Pedigree : Selection from ICGS 1

Qualitative traits

Stem

Branching pattern : Sequential with flower on n Hairiness: Almost glabrous
 Stem pigmentation : Absent Growth habit : Decumbent 3

Inflorescence and flower

Type of inflorescence : Compound Standard petal colour: Orange

Leaflet

Colour : Green Shape : Lanceolate Tip : Acute
 Surface : Almost glabrous above and hairs below

Peg

Peg pigmentation : Absent

Pod

Beak : Absent Constriction : Moderate Reticulation : Slight
 Size : Medium Shell thickness : Moderate

Seed

Seed colour : One colour Primary seed colour : Rose
 Secondary seed colour: — Seed shape : Fusiform

Resistance to diseases

Early leaf spot : Intermediate
 Rust : Intermediate
 Late leaf spot: Low

Quality traits

Oil content : 50.7 % Protein content : 25.3%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	6	—	6	—	6.0	—
Days to initial flowering	24	—	25	—	19	—	22.7	—
Days to 50 % flowering	26	—	27	—	22	—	25.0	—
Days to maturity	104	—	100	—	106	105-108	103	100-108
Main axis height (cm)	23.7	22.6-26.0	20.0	19.0-21.0	26.1	24.2-27.6	23.3	19.0-27.6
Length of n+1	28.7	26.6-30.6	25.8	24.7-27.0	37.4	35.2-40.8	30.6	24.7-40.8
No. of nodes on n	15.1	13.4-17.6	12.8	12.3-13.3	11.7	9.6-14.2	13.2	9.6-17.6
No. of aerial pegs	10.3	5.8-14.8	21.7	19.7-22.7	10.5	6.8-16.4	14.2	5.8-22.7
No. of branches	7.5	7.2-7.8	7.2	5.0-9.3	9.9	8.4-11.6	8.2	5.0-11.6
Leaflet length (cm)	4.1	3.5-4.8	5.2	4.2-5.9	5.5	4.0-6.1	4.9	3.5-6.1
Leaflet width (cm)	1.4	1.0-1.6	2.1	1.8-2.3	2.4	1.6-2.7	2.0	1.0-2.7
Leaflet length/width	2.9	—	2.5	—	2.3	—	2.6	—
Plant spread (cm)	48.0	40.0-55.0	53.0	43.0-56.0	59.0	57.0-62.0	53.3	40.0-62.0
Immature pods/ plant	1.2	1.0-1.6	8.3	6.0-11.0	7.8	6.4-10.4	5.8	1.0-11.0
Mature pods/ plant	8.5	7.8-9.4	18.0	16.0-20.0	7.4	7.0-8.0	11.3	7.0-20.0
Pod bearing plants (%)	97.0	94.0-99.0	100	—	98.6	96.0-100	98.5	94.0-100
Pod mass (g/plant)	6.3	6.1-6.6	6.8	6.1-8.0	8.8	6.4-10.8	7.3	6.1-10.8
Pod yield /m ² (g)	514	426-587	223	204-240	316	289-345	351	204-587
100 pod mass (g)	93.0	—	74.3	73.0-76.0	78.0	76.0-79.0	81.8	73.0-93.0
One seeded pods (%)	0.0	—	18.0	10.0-24.0	28.0	23.0-34.0	15.3	0.0-34.0
Two seeded pods (%)	100	—	82.0	76.0-90.0	72.0	66.0-77.0	84.7	66.0-100
Three seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	23.9	23.8-24.0	22.5	21.0-24.5	21.7	21.0-23.0	22.7	21.0-24.5
Pod width (mm)	12.0	11.5-12.5	11.9	11.5-12.2	11.0	10.8-12.5	11.6	10.8-12.5
Seed length (mm)	12.7	12.0-13.5	11.5	11.0-12.0	11.0	10.5-12.0	11.7	10.5-13.5
Seed width (mm)	7.0	6.5-7.5	7.8	7.5-8.0	7.1	7.0-7.5	7.3	6.5-8.0
Shelling outturn (%)	71.6	70.0-72.9	69.5	66.2-73.7	65.6	62.4-70.9	68.9	62.4-73.7
Sound mature seeds (%)	93.4	92.5-94.3	91.9	90.5-92.9	91.2	88.0-95.0	92.2	88.0-95.0
Hundred seed mass (g)	39.7	39.0-41.0	43.7	40.0-46.0	38.3	37.0-39.0	40.6	37.0-46.0

Prominent features of the cultivar:

1. Pod beak absent, moderate constriction and medium size pods

Name of the cultivar : Spanish Improved

Passport Information

Botanical status : *A. hypogaea ssp. fastigiata var. vulgaris*
 Year of release : 1905 Botanical type : Spanish
 Originating centre : University of Agricultural Sciences, Dharwad
 Pedigree : Selection from Spanish Peanut

Qualitative traits

Stem

Branching pattern : Sequential with flower on n Hairiness: Moderately hairy
 Stem pigmentation : Absent Growth habit : Decumbent 3

Inflorescence and flower

Type of inflorescence : Compound Standard petal colour: Orange

Leaflet

Colour : Light green Shape : Lanceolate Tip : Acute
 Surface : Almost glabrous above and hairs below

Peg

Peg pigmentation : Absent

Pod

Beak : Slight Constriction : Moderate Reticulation : Moderate
 Size : Medium Shell thickness : Thin

Seed

Seed colour : One colour Primary seed colour : Salmon
 Secondary seed colour: — Seed shape : Spheroidal

Resistance to diseases

Early leaf spot : Intermediate
 Rust : Low
 Late leaf spot: Low

Quality traits

Oil content : 50.3 % Protein content : 24.9%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	5	—	6	—	5.7	—
Days to initial flowering	22	—	24	—	18	—	21.3	—
Days to 50 % flowering	24	—	26	—	21	—	23.7	—
Days to maturity	106	—	105	103-106	107	105-108	106	103-108
Main axis height (cm)	34.2	29.8-39.0	37.1	34.3-40.7	31.7	27.4-36.4	34.3	27.4-40.7
Length of n+1	37.3	33.0-42.0	36.7	31.7-41.0	40.4	31.4-47.2	38.1	31.4-47.2
No. of nodes on n	16.0	14.0-17.2	19.8	17.3-22.3	12.9	7.6-15.8	16.2	7.6-22.3
No. of aerial pegs	7.1	6.4-7.6	12.0	8.7-17.3	5.6	4.4-7.0	8.2	4.4-17.3
No. of branches	4.4	4.0-5.0	10.3	8.7-13.5	10.1	9.0-11.2	8.3	4.0-13.5
Leaflet length (cm)	4.3	3.8-5.0	6.1	5.1-6.8	7.0	6.0-7.5	5.8	3.8-7.5
Leaflet width (cm)	2.0	1.5-2.5	3.0	2.7-3.4	3.2	2.5-3.5	2.7	1.5-3.5
Leaflet length/width	2.1	—	2.2	—	2.2	—	2.2	—
Plant spread (cm)	73.0	67.0-78.0	50.3	49.0-52.0	61.0	60.0-62.0	61.4	49.0-78.0
Immature pods/ plant	1.3	0.2-2.8	8.0	4.0-11.0	4.6	3.9-5.6	4.6	0.2-11.0
Mature pods/ plant	7.9	6.4-8.8	12.3	11.0-13.0	6.1	5.8-6.6	8.8	5.8-13.0
Pod bearing plants (%)	99.0	98.0-100	97.7	96.0-100	100	—	98.9	96.0-100
Pod mass (g/plant)	4.3	3.6-5.4	5.2	4.5-5.8	7.2	6.8-7.6	5.6	3.6-7.6
Pod yield /m ² (g)	392	340-483	217	190-242	217	137-263	275	137-483
100 pod mass (g)	83.0	—	67.0	63.0-71.0	68.3	65.0-74.0	72.8	63.0-83.0
One seeded pods (%)	0.0	—	13.0	9.0-15.0	16.0	10.0-20.0	9.7	0.0-20.0
Two seeded pods (%)	100	—	87.0	85.0-91.0	84.0	80.0-90.0	90.3	80.0-100
Three seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	25.0	23.5-27.5	23.0	21.5-25.5	23.7	23.0-25.0	23.9	21.5-27.5
Pod width (mm)	11.7	11.0-12.0	11.1	11.0-11.2	11.0	10.8-12.0	11.3	10.8-12.0
Seed length (mm)	12.5	11.0-14.0	11.3	10.0-12.0	12.0	11.5-13.2	11.9	10.0-14.0
Seed width (mm)	7.1	6.8-7.5	7.2	7.0-7.5	7.2	7.0-8.0	7.2	6.8-8.0
Shelling outturn (%)	68.8	67.1-69.9	70.1	68.3-71.6	68.0	64.6-71.8	69.0	64.6-71.8
Sound mature seeds (%)	90.8	84.2-91.0	87.3	85.4-88.4	87.0	85.0-90.0	88.4	84.2-91.0
Hundred seed mass (g)	36.0	35.0-37.0	33.7	31.0-36.0	40.3	39.0-42.0	36.7	31.0-42.0

Name of the cultivar : TAG 24

Passport Information

Botanical status :	<i>A. hypogaea ssp. fastigiata var. vulgaris</i>		
Year of release :	1991	Botanical type :	Spanish
Originating centre :	Bhabha Atomic Research Centre, Trombay		
Pedigree :	Selection from TGS 2		

Qualitative traits

Stem

Branching pattern :	Sequential with flower on n	Hairiness:	Sub-glabrous
Stem pigmentation :	Present	Growth habit :	Erect

Inflorescence and flower

Type of inflorescence :	Compound	Standard petal colour:	Dark orange
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Leaflet

Colour :	Green	Shape :	Lanceolate	Tip :	Acute
Surface :	Almost glabrous				

Peg

Peg pigmentation :	Present
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Pod

Beak :	Slight	Constriction :	Moderate	Reticulation :	Slight
Size :	Medium	Shell thickness :	Thin		

Seed

Seed colour :	One colour	Primary seed colour :	Salmon
Secondary seed colour:	—	Seed shape :	Spheroidal

Resistance to diseases

Early leaf spot :	Low
Rust :	Intermediate
Late leaf spot:	Very low

Quality traits

Oil content :	53.3%	Protein content :	21.2%
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Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	7	—	7	—	6	—	6.7	—
Days to initial flowering	23	—	22	—	16	—	20.3	—
Days to 50 % flowering	26	—	25	—	20	—	23.7	—
Days to maturity	103	—	101	100-102	103	102-105	102	100-105
Main axis height (cm)	12.0	11.0-13.8	16.7	15.0-18.3	21.3	17.0-29.2	16.7	11.0-29.2
Length of n+1	14.4	13.4-15.2	22.7	16.7-28.7	26.5	21.0-34.8	21.2	13.4-34.8
No. of nodes on n	11.9	9.4-14.4	12.0	9.7-14.3	12.5	10.0-14.6	12.1	9.4-14.6
No. of aerial pegs	3.1	1.4-5.8	4.7	4.0-5.3	2.5	0.0-4.4	3.4	0.0-5.8
No. of branches	4.0	3.4-5.0	6.8	6.3-7.4	4.2	4.0-4.4	5.0	3.4-7.4
Leaflet length (cm)	3.2	2.9-3.6	4.6	3.7-5.4	4.1	3.5-4.3	4.0	2.9-5.4
Leaflet width (cm)	1.4	1.1-1.6	2.0	1.6-2.4	1.9	1.5-2.0	1.8	1.1-2.4
Leaflet length/width	2.3	—	2.3	—	2.2	—	2.3	—
Plant spread (cm)	41.0	37.0-45.0	43.0	36.0-50.0	47.0	46.0-48.0	43.7	36.0-50.0
Immature pods/ plant	1.1	0.2-2.2	8.3	8.0-9.0	3.1	1.0-6.0	4.2	0.2-9.0
Mature pods/ plant	10.6	9.4-11.2	14.7	13.0-16.0	3.6	3.3-4.0	9.6	3.3-16.0
Pod bearing plants (%)	96.3	94.0-100	99.1	97.0-100	88.7	71.0-100	94.7	71.0-100
Pod mass (g/plant)	3.5	3.0-4.0	6.2	5.1-7.4	4.6	3.0-6.0	4.8	3.0-7.4
Pod yield /m ² (g)	261	240-272	239	224-268	184	119-286	228	119-286
100 pod mass (g)	86.0	—	75.3	69.0-79.0	81.0	79.0-84.0	80.8	69.0-86.0
One seeded pods (%)	0.0	—	21.0	12.0-32.0	20.0	18.0-22.0	13.7	0.0-32.0
Two seeded pods (%)	100	—	79.0	68.0-88.0	80.0	78.0-82.0	86.3	68.0-100
Three seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	24.5	23.5-26.5	22.8	21.5-24.0	24.5	22.0-26.0	23.9	21.5-26.5
Pod width (mm)	11.6	11.0-12.0	11.0	10.5-11.5	12.0	11.5-12.7	11.5	10.5-12.7
Seed length (mm)	12.1	12.0-12.5	11.4	11.0-12.0	12.0	11.0-13.0	11.8	11.0-13.0
Seed width (mm)	7.3	7.0-7.5	7.4	7.2-7.5	7.3	7.0-8.0	7.3	7.0-8.0
Shelling outturn (%)	68.3	67.4-70.2	73.5	72.5-75.3	70.4	66.3-72.6	70.7	66.3-75.3
Sound mature seeds (%)	93.0	91.5-93.9	87.0	85.5-89.9	88.4	80.0-93.0	89.5	80.0-93.9
Hundred seed mass (g)	41.3	37.0-44.0	41.7	40.0-44.0	44.7	43.0-46.0	42.6	37.0-46.0

Name of the cultivar : TG 17

Passport Information

Botanical status : *A. hypogaea ssp. fastigiata var. vulgaris*
 Year of release : 1982 Botanical type : Spanish
 Originating centre : Bhabha Atomic Research Centre, Trombay
 Pedigree : Dark Green Mutant X TG 1

Qualitative traits

Stem

Branching pattern : Sequential with flower on n Hairiness: Sub-glabrous
 Stem pigmentation : Absent Growth habit : Erect

Inflorescence and flower

Type of inflorescence : Compound Standard petal colour: Orange

Leaflet

Colour : Green Shape : Lanceolate Tip : Acute
 Surface : Almost glabrous above and hairs below

Peg

Peg pigmentation : Present

Pod

Beak : Moderate Constriction : Moderate Reticulation : Moderate
 Size : Medium Shell thickness : Thick

Seed

Seed colour : One colour Primary seed colour : Rose
 Secondary seed colour: — Seed shape : Fusiform

Resistance to diseases

Early leaf spot : Intermediate
 Rust : Intermediate
 Late leaf spot: Low

Quality traits

Oil content : 52.1 % Protein content : 22.8%

Quantitative traits (Mean and Range of two years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	—	—	7	—	7	—	7.0	—
Days to initial flowering	—	—	24	—	15	—	19.5	—
Days to 50 % flowering	—	—	26	—	18	—	22.0	—
Days to maturity	—	—	108	105-110	108	105-110	108	105-110
Main axis height (cm)	—	—	25.9	20.0-29.0	30.5	23.2-37.4	28.2	20.0-37.4
Length of n+1	—	—	31.9	27.0-41.3	38.9	35.6-44.4	35.4	27.0-44.4
No. of nodes on n	—	—	16.2	16.0-16.7	15.6	11.6-19.0	15.9	11.6-19.0
No. of aerial pegs	—	—	10.7	7.0-14.5	8.2	3.6-10.8	9.5	3.6-14.5
No. of branches	—	—	5.6	4.3-7.0	8.3	4.0-15.6	7.0	4.0-15.6
Leaflet length (cm)	—	—	5.8	5.3-6.3	5.3	4.5-6.0	5.6	4.5-6.3
Leaflet width (cm)	—	—	2.7	2.3-3.3	2.5	2.0-3.0	2.6	2.0-3.3
Leaflet length/width	—	—	2.1	—	2.2	—	2.2	—
Plant spread (cm)	—	—	42.0	40.0-45.0	54.0	53.0-56.0	48.0	40.0-56.0
Immature pods/ plant	—	—	7.3	6.0-9.0	6.7	3.2-10.0	7.0	3.2-10.0
Mature pods/ plant	—	—	11.0	6.0-15.0	3.1	2.4-3.6	7.1	2.4-15.0
Pod bearing plants (%)	—	—	100	—	99.3	98.0-100	99.7	98.0-100
Pod mass (g/plant)	—	—	6.5	5.3-8.3	8.0	6.1-9.3	7.3	5.3-9.3
Pod yield /m ² (g)	—	—	202	139-275	381	338-423	291	139-423
100 pod mass (g)	—	—	79.7	73.0-85.0	93.7	90.0-96.0	86.7	73.0-96.0
One seeded pods (%)	—	—	13.0	9.0-17.0	23.0	16.0-27.0	18.0	9.0-27.0
Two seeded pods (%)	—	—	87.0	83.0-91.0	77.0	73.0-84.0	82.0	73.0-91.0
Three seeded pods (%)	—	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	—	—	25.2	24.0-26.0	24.0	22.0-26.0	24.6	22.0-26.0
Pod width (mm)	—	—	12.0	11.5-12.5	12.0	11.8-13.3	12.0	11.5-13.3
Seed length (mm)	—	—	13.0	12.8-13.5	13.0	12.5-13.8	13.0	12.5-13.8
Seed width (mm)	—	—	8.0	7.3-8.5	7.2	7.0-8.0	7.6	7.0-8.5
Shelling outturn (%)	—	—	69.3	68.2-71.1	67.7	65.2-69.9	68.5	65.2-71.1
Sound mature seeds (%)	—	—	91.4	86.8-96.7	92.0	83.0-97.0	91.7	83.0-97.0
Hundred seed mass (g)	—	—	40.7	38.0-43.0	43.3	38.0-46.0	42.0	38.0-46.0

Name of the cultivar : TG 22

Passport Information

Botanical status : *A. hypogaea ssp. fastigiata var. vulgaris*

Year of release : 1992

Botanical type : Spanish

Originating centre : Bhabha Atomic Research Centre, Trombay

Pedigree : Robut 33-1 X TG 17

Qualitative traits

Stem

Branching pattern : Sequential with flower on n

Hairiness: Almost glabrous

Stem pigmentation : Absent

Growth habit : Erect

Inflorescence and flower

Type of inflorescence : Compound

Standard petal colour: Dark orange

Leaflet

Colour : Green

Shape :

Lanceolate

Tip :

Acute

Surface : Almost glabrous above and hairs below

Peg

Peg pigmentation : Absent

Pod

Beak : Moderate

Constriction :

Moderate

Reticulation :

Moderate

Size : Bold

Shell thickness :

Thick

Seed

Seed colour : One colour

Primary seed colour : Rose

Secondary seed colour:

—

Seed shape :

Fusiform

Resistance to diseases

Early leaf spot : Intermediate

Rust : Low

Late leaf spot: Low

Quality traits

Oil content : 51.3 %

Protein content :

23.8%

Quantitative traits (Mean and Range of two years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	—	—	7	—	7	—	7.0	—
Days to initial flowering	—	—	24	—	18	—	21.0	—
Days to 50 % flowering	—	—	27	—	22	—	24.5	—
Days to maturity	—	—	102	100-106	108	105-110	105	100-110
Main axis height (cm)	—	—	19.4	16.0-22.7	18.0	17.2-19.0	18.7	16.0-22.7
Length of n+1	—	—	26.1	19.3-34.3	28.5	25.4-31.0	27.3	19.3-34.3
No. of nodes on n	—	—	13.0	9.3-16.3	11.4	9.6-13.8	12.2	9.3-16.3
No. of aerial pegs	—	—	22.9	17.7-30.7	4.5	4.0-5.0	13.7	4.0-30.0
No. of branches	—	—	10.1	7.7-12.0	7.0	4.8-9.4	8.6	4.8-12.0
Leaflet length (cm)	—	—	4.9	5.0-6.1	5.7	4.5-6.5	5.3	4.5-6.5
Leaflet width (cm)	—	—	2.1	1.6-3.2	2.5	2.0-2.8	2.3	1.9-3.2
Leaflet length/width	—	—	2.3	—	2.3	—	2.3	—
Plant spread (cm)	—	—	47.0	44.0-50.0	52.0	50.0-54.0	49.5	44.0-54.0
Immature pods/ plant	—	—	5.3	3.0-8.0	6.0	2.6-10.0	5.7	2.6-10.0
Mature pods/ plant	—	—	16.7	9.0-21.0	9.6	6.5-13.0	13.2	6.5-21.0
Pod bearing plants (%)	—	—	99.1	97.0-100	99.0	97.0-100	99.1	97.0-100
Pod mass (g/plant)	—	—	7.0	6.3-8.3	9.0	8.6-9.3	8.0	6.3-9.3
Pod yield /m ² (g)	—	—	257	244-274	248	121-327	253	121-327
100 pod mass (g)	—	—	79.7	73.0-85.0	93.7	90.0-96.0	86.7	73.0-96.0
One seeded pods (%)	—	—	23.0	20.0-27.0	25.0	20.0-30.0	24.0	20.0-30.0
Two seeded pods (%)	—	—	77.0	73.0-80.0	75.0	70.0-80.0	76.0	70.0-80.0
Three seeded pods (%)	—	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	—	—	23.7	23.0-24.0	25.0	24.0-26.0	24.4	23.0-26.0
Pod width (mm)	—	—	11.5	11.0-12.5	12.0	11.0-13.0	11.8	11.0-13.0
Seed length (mm)	—	—	13.0	12.0-14.0	13.0	11.0-14.0	13.0	11.0-14.0
Seed width (mm)	—	—	8.0	7.2-8.5	7.5	7.0-8.0	7.8	7.0-8.5
Shelling outturn (%)	—	—	69.1	67.1-71.6	71.9	68.8-76.0	70.5	67.1-76.0
Sound mature seeds (%)	—	—	86.2	80.0-89.8	89.4	84.0-95.0	87.8	80.0-95.0
Hundred seed mass (g)	—	—	44.7	43.0-46.0	46.0	43.0-51.0	45.4	43.0-51.0

Name of the cultivar : TG 26

Passport Information

Botanical status :	<i>A. hypogaea ssp. fastigiata var. vulgaris</i>		
Year of release :	1995	Botanical type :	Spanish
Originating centre :	Bhabha Atomic Research Centre, Trombay		
Pedigree :	BARCG 1 X TG 23		

Qualitative traits

Stem

Branching pattern :	Sequential with flower on n	Hairiness:	Sub- glabrous
Stem pigmentation :	Absent	Growth habit :	Erect

Inflorescence and flower

Type of inflorescence :	Compound	Standard petal colour:	Dark orange
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Leaflet

Colour :	Green	Shape :	Lanceolate	Tip :	Acute
Surface :	Almost glabrous above and hairs below				

Peg

Peg pigmentation :	Absent
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Pod

Beak :	Slight	Constriction :	Slight	Reticulation :	Absent
Size :	Medium	Shell thickness :	Thin		

Seed

Seed colour :	One colour	Primary seed colour :	Rose
Secondary seed colour:	-	Seed shape :	Spheroidal

Resistance to diseases

Early leaf spot :	Low
Rust :	Intermediate
Late leaf spot:	Low

Quality traits

Oil content :	48.2 %	Protein content :	24.3%
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Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	7	—	7	—	8	—	7.3	—
Days to initial flowering	22	—	22	—	17	—	20.3	—
Days to 50 % flowering	25	—	26	—	20	—	23.7	—
Days to maturity	106	—	103	100-105	106	105-108	105	100-108
Main axis height (cm)	17.5	14.8-21.6	14.2	12.3-19.0	13.3	10.4-17.6	15.0	10.4-21.6
Length of n+1	17.7	16.6-18.3	19.7	12.0-30.0	20.4	15.6-25.5	19.3	12.0-30.0
No. of nodes on n	10.5	5.2-13.8	12.1	11.0-12.7	9.2	6.2-13.6	10.6	5.2-13.8
No. of aerial pegs	5.8	2.2-11.6	7.7	6.3-10.0	3.2	0.4-6.5	5.6	0.4-11.6
No. of branches	4.7	3.8-6.0	7.2	5.0-10.6	6.5	4.0-10.0	6.1	3.8-10.6
Leaflet length (cm)	3.8	3.2-4.4	5.1	4.4-5.7	4.6	3.0-5.0	4.5	3.0-5.7
Leaflet width (cm)	1.7	1.5-2.0	2.3	1.9-2.5	2.0	1.5-2.2	2.0	1.5-2.2
Leaflet length/width	2.2	—	2.2	—	2.3	—	2.2	—
Plant spread (cm)	32.0	31.0-33.0	36.0	33.0-40.0	54.0	49.0-59.0	40.7	31.0-59.0
Immature pods/ plant	2.3	1.0-3.2	12.0	4.0-22.0	4.0	2.0-6.3	6.1	1.0-22.0
Mature pods/ plant	10.6	9.2-13.0	14.7	11.0-17.0	10.0	8.0-13.5	11.8	8.0-17.0
Pod bearing plants (%)	97.4	95.0-100	97.1	96.0-98.0	98.5	98.0-100	97.7	95.0-100
Pod mass (g/plant)	4.7	4.0-5.9	6.5	5.3-7.9	7.1	5.5-8.2	6.1	4.0-8.2
Pod yield /m ² (g)	294	259-329	234	182-282	304	218-368	277	182-368
100 pod mass (g)	83.0	—	65.3	60.0-69.0	67.7	63.0-75.0	72.0	60.0-83.0
One seeded pods (%)	8.0	7.0-8.0	9.0	6.0-14.0	16.0	10.0-26.0	11.0	6.0-26.0
Two seeded pods (%)	92.0	92.0-93.0	91.0	86.0-94.0	84.0	74.0-90.0	89.0	74.0-94.0
Three seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	22.0	21.0-22.5	20.8	20.0-21.5	22.0	20.0-25.0	21.6	20.0-25.0
Pod width (mm)	10.5	10.0-11.0	10.3	10.0-11.0	11.0	10.0-12.0	10.6	10.0-12.0
Seed length (mm)	11.4	11.0-11.8	11.1	11.0-11.2	10.0	9.3-11.4	10.8	9.3-11.8
Seed width (mm)	7.5	7.0-7.8	7.8	7.5-8.0	7.0	6.8-7.5	7.4	6.8-8.0
Shelling outturn (%)	69.3	62.4-74.4	71.2	68.3-73.1	70.7	69.3-72.3	70.4	62.4-74.4
Sound mature seeds (%)	93.0	91.5-95.1	87.7	82.9-90.9	85.2	83.0-90.0	88.6	82.9-95.1
Hundred seed mass (g)	39.0	38.0-40.0	39.3	38.0-42.0	39.0	37.0-41.0	39.1	37.0-42.0

Prominent features of the cultivar:

1. Smooth pods

Name of the cultivar : TG 3

Passport Information

Botanical status :	<i>A. hypogaea ssp. Fastigiata var. vulgaris</i>		
Year of release :	1985	Botanical type :	Spanish
Originating centre :	Bhabha Atomic Research Centre, Trombay		
Pedigree :	Mutant of Spanish Improved		

Qualitative traits

Stem

Branching pattern :	Sequential with flower on n	Hairiness:	Sub- glabrous
Stem pigmentation :	Absent	Growth habit :	Erect

Inflorescence and flower

Type of inflorescence :	Compound	Standard petal colour:	Orange
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Leaflet

Colour :	Light green	Shape :	Lanceolate	Tip :	Acute
Surface :	Almost glabrous				

Peg

Peg pigmentation :	Present
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Pod

Beak :	Slight	Constriction :	Moderate	Reticulation :	Slight
Size :	Medium	Shell thickness :	Thick		

Seed

Seed colour :	One colour	Primary seed colour :	Rose
Secondary seed colour:	—	Seed shape :	Spheroidal

Resistance to diseases

Early leaf spot :	Intermediate
Rust :	Intermediate
Late leaf spot:	Low

Quality traits

Oil content :	51.0 %	Protein content :	22.0%
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Quantitative traits (Mean and Range of two years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	—	—	6	—	6	—	6.0	—
Days to initial flowering	—	—	24	—	18	—	21.0	—
Days to 50 % flowering	—	—	27	—	22	—	24.5	—
Days to maturity	—	—	107	105-108	106	105-108	107	105-108
Main axis height (cm)	—	—	32.3	23.0-39.3	36.9	33.8-41.2	34.6	23.0-41.2
Length of n+1	—	—	40.1	34.3-44.0	38.7	36.0-41.4	39.4	34.3-44.0
No. of nodes on n	—	—	19.0	18.0-20.0	16.1	13.8-18.0	17.6	13.8-20.0
No. of aerial pegs	—	—	16.3	9.7-21.0	5.1	2.4-8.6	10.7	2.4-21.0
No. of branches	—	—	14.7	8.8-16.0	8.6	5.4-11.6	11.7	5.4-16.0
Leaflet length (cm)	—	—	5.6	5.2-6.0	6.0	5.3-6.6	5.8	5.2-6.6
Leaflet width (cm)	—	—	2.8	2.4-3.2	2.9	2.0-3.0	2.9	2.0-3.2
Leaflet length/width	—	—	2.0	—	2.1	—	2.1	—
Plant spread (cm)	—	—	46.0	43.0-50.0	61.0	56.0-67.0	53.5	43.0-67.0
Immature pods/ plant	—	—	9.7	6.0-16.0	4.9	3.8-6.0	7.3	3.8-16.0
Mature pods/ plant	—	—	7.0	2.0-10.0	5.1	1.8-7.0	6.1	1.8-10.0
Pod bearing plants (%)	—	—	98.2	95.0-100	100	—	99.1	95.0-100
Pod mass (g/plant)	—	—	3.9	3.3-4.7	6.5	5.6-7.2	5.2	3.3-7.2
Pod yield /m ² (g)	—	—	134	95-170	265	246-290	200	95-290
100 pod mass (g)	—	—	65.0	57.0-75.0	74.7	71.0-78.0	69.9	57.0-78.0
One seeded pods (%)	—	—	27.0	15.0-37.0	20.0	14.0-30.0	23.5	14.0-37.0
Two seeded pods (%)	—	—	73.0	63.0-85.0	80.0	70.0-86.0	76.5	63.0-86.0
Three seeded pods (%)	—	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	—	—	23.5	22.0-24.5	25.2	23.0-27.0	24.4	22.0-27.0
Pod width (mm)	—	—	10.8	10.5-11.0	11.0	10.7-12.0	10.9	10.5-12.0
Seed length (mm)	—	—	11.7	11.0-12.0	12.0	11.7-13.0	11.9	11.0-13.0
Seed width (mm)	—	—	7.3	7.0-7.5	6.8	6.7-7.0	7.1	6.7-7.5
Shelling outturn (%)	—	—	64.3	62.7-65.3	71.3	69.5-72.3	67.8	62.7-72.3
Sound mature seeds (%)	—	—	88.9	85.7-91.9	86.9	82.0-93.0	87.9	82.0-93.0
Hundred seed mass (g)	—	—	34.7	31.0-37.0	37.7	35.0-41.0	36.2	31.0-41.0

Name of the cultivar : Tirupati 1

Passport Information

Botanical status : *A.hypogaea ssp. Fastigiata var. vulgaris*

Year of release : 1989

Botanical type : Spanish

Originating centre : Regional Agricultural Research Station, A.N.G.R.A.U., Tirupati

Pedigree : Selection from EC 106983/3-1

Qualitative traits

Stem

Branching pattern : Irregular with flowers on n

Hairiness: Almost glabrous

Stem pigmentation : Absent

Growth habit : Erect

Inflorescence and flower

Type of inflorescence : Simple

Standard petal colour: Orange

Leaflet

Colour : Light green

Shape :

Lanceolate

Tip :

Acute

Surface : Almost glabrous above and hairs below

Peg

Peg pigmentation : Present

Pod

Beak : Slight

Constriction :

Slight

Reticulation :

Slight

Size : Medium

Shell thickness :

Thin

Seed

Seed colour : One colour

Primary seed colour : Salmon

Secondary seed colour:

—

Seed shape :

Spheroidal

Resistance to diseases

Early leaf spot : Intermediate

Rust : Low

Late leaf spot: Low

Quality traits

Oil content : 49.3 %

Protein content :

24.2%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	5	—	7	—	6.0	—
Days to initial flowering	25	—	22	—	21	—	22.7	—
Days to 50 % flowering	27	—	25	—	24	—	25.3	—
Days to maturity	105	—	103	102-104	107	105-108	105	102-108
Main axis height (cm)	33.5	29.6-35.8	26.2	15.7-33.0	35.7	32.6-38.6	31.8	15.7-38.6
Length of n+1	32.3	29.4-37.2	27.2	23.7-43.7	40.9	37.0-43.8	33.5	23.7-43.8
No. of nodes on n	19.3	18.0-21.6	18.3	17.7-18.7	15.3	11.6-19.6	17.6	11.6-21.6
No. of aerial pegs	4.2	3.2-6.0	13.0	5.0-18.0	5.9	2.6-10.2	7.7	2.6-18.0
No. of branches	4.4	4.0-4.8	9.5	6.7-12.3	9.7	6.6-12.0	7.9	4.0-12.3
Leaflet length (cm)	4.4	3.4-4.9	5.7	4.9-6.3	6.4	4.8-7.1	5.5	3.4-7.1
Leaflet width (cm)	1.9	1.5-2.2	2.4	2.3-2.6	2.8	2.5-3.0	2.4	1.5-3.0
Leaflet length/width	2.4	—	2.4	—	2.3	—	2.4	—
Plant spread (cm)	51.0	48.0-54.0	54.0	52.0-56.0	54.7	52.0-58.0	53.2	48.0-58.0
Immature pods/ plant	2.1	0.8-3.4	12.0	8.0-16.0	3.5	2.0-4.6	5.9	0.8-16.0
Mature pods/ plant	7.7	6.8-8.6	19.3	14.0-28.0	9.3	6.0-14.8	12.1	6.0-28.0
Pod bearing plants (%)	96.6	94.0-100	99.2	98.0-100	100	—	98.6	94.0-100
Pod mass (g/plant)	4.8	4.5-5.2	5.1	4.5-6.0	5.7	5.4-6.0	5.2	4.5-6.0
Pod yield /m ² (g)	291	280-297	225	192-264	235	196-274	250	192-297
100 pod mass (g)	75.0	—	61.7	58.0-65.0	60.7	56.0-68.0	65.8	56.0-75.0
One seeded pods (%)	0.0	—	14.0	11.0-19.0	14.0	12.0-24.0	10.0	0.0-24.0
Two seeded pods (%)	100	—	86.0	81.0-89.0	86.0	76.0-88.0	90.0	76.0-100
Three seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	21.8	21.0-22.5	21.4	21.2-21.5	21.7	20.0-23.0	21.6	20.0-23.0
Pod width (mm)	10.8	10.5-11.5	10.7	10.0-12.0	10.0	9.8-11.0	10.5	10.0-12.0
Seed length (mm)	11.0	10.0-12.0	11.3	10.0-12.5	11.0	10.5-12.0	11.1	10.0-12.5
Seed width (mm)	7.8	7.5-8.0	8.0	7.3-8.5	7.2	7.0-8.0	7.7	7.0-8.5
Shelling outturn (%)	74.1	68.9-77.5	74.9	72.3-77.6	73.0	69.0-75.0	74.0	68.9-77.6
Sound mature seeds (%)	93.3	91.2-95.2	87.2	85.1-88.9	90.1	88.0-92.0	90.2	85.1-95.2
Hundred seed mass (g)	38.3	36.0-39.0	34.7	33.0-37.0	47.3	45.0-51.0	40.1	38.0-51.0

Name of the cultivar : Tirupati 2

Passport Information

Botanical status : *A.hypogaea ssp. Fastigiata var. vulgaris*
 Year of release : 1991 Botanical type : Spanish
 Originating centre : Regional Agricultural Research Station, A.N.G.R.A.U., Tirupati
 Pedigree : GAUG 1 X NCAC FLA 14

Qualitative traits

Stem

Branching pattern : Irregular with flowers on n Hairiness: Moderately hairy
 Stem pigmentation : Absent Growth habit : Erect

Inflorescence and flower

Type of inflorescence : Simple Standard petal colour: Orange

Leaflet

Colour : Light green Shape : Lanceolate Tip : Acute
 Surface : Almost glabrous

Peg

Peg pigmentation : Present

Pod

Beak : Absent Constriction : Slight Reticulation : Slight
 Size : Small Shell thickness : Thin

Seed

Seed colour : One colour Primary seed colour : Salmon
 Secondary seed colour: — Seed shape : Spheroidal

Resistance to diseases

Early leaf spot : Low
 Rust : Intermediate
 Late leaf spot: Low

Quality traits

Oil content : 50.2 % Protein content : 25.0%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	6	—	6	—	6.0	—
Days to initial flowering	26	—	24	—	18	—	22.7	—
Days to 50 % flowering	28	—	26	—	21	—	25.0	—
Days to maturity	106	—	103	100-108	106	105-107	105	100-108
Main axis height (cm)	27.5	22.8-32.8	36.3	31.0-44.0	26.7	26.3-27.2	30.2	22.8-44.0
Length of n+1	30.9	23.8-37.8	40.0	30.0-50.0	33.1	21.8-40.0	34.7	21.8-50.0
No. of nodes on n	20.3	16.2-23.6	18.3	16.0-21.0	13.5	10.6-17.8	17.4	10.6-23.6
No. of aerial pegs	4.7	3.6-6.2	8.6	4.0-15.0	4.7	2.4-8.0	6.0	2.4-15.0
No. of branches	18.8	5.2-26.0	9.2	4.0-14.3	7.1	5.8-8.5	11.7	4.0-26.0
Leaflet length (cm)	4.6	4.0-5.6	5.9	5.0-6.4	5.8	4.5-6.5	5.4	4.0-6.5
Leaflet width (cm)	1.8	1.1-2.2	2.5	1.9-2.9	2.6	1.7-2.9	2.3	1.1-2.9
Leaflet length/width	2.6	—	2.4	—	2.2	—	2.4	—
Plant spread (cm)	53.0	48.0-58.0	62.0	60.0-64.0	55.0	51.0-59.0	56.7	48.0-64.0
Immature pods/ plant	1.4	1.0-1.8	8.0	6.0-9.0	4.0	2.7-5.8	4.5	1.0-9.0
Mature pods/ plant	10.8	7.0-14.0	16.0	14.0-20.0	4.8	1.1-10.0	10.5	1.1-20.0
Pod bearing plants (%)	97.8	96.0-100	99.0	97.0-100	100	—	98.9	96.0-100
Pod mass (g/plant)	4.6	4.2-4.8	4.1	2.7-5.1	6.1	6.0-6.2	4.9	2.7-6.2
Pod yield /m ² (g)	317	268-386	162	131-184	231	204-271	237	131-386
100 pod mass (g)	77.0	—	59.0	56.0-61.0	68.0	65.0-70.0	68.0	56.0-77.0
One seeded pods (%)	0.0	—	12.0	5.0-21.0	14.0	12.0-15.0	8.7	0.0-21.0
Two seeded pods (%)	100	—	88.0	79.0-95.0	86.0	85.0-88.0	91.3	79.0-100
Three seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	20.8	20.0-22.0	19.8	19.0-21.5	20.3	20.0-21.0	20.3	19.0-22.0
Pod width (mm)	10.5	10.0-11.0	10.8	10.4-11.5	10.0	9.7-10.3	10.4	9.7-11.5
Seed length (mm)	12.0	10.5-13.5	10.0	9.0-11.0	10.0	9.7-10.5	10.7	9.0-13.5
Seed width (mm)	7.7	7.5-8.0	7.3	7.0-7.5	7.3	7.0-8.0	7.4	7.0-8.0
Shelling outturn (%)	74.5	70.4-77.8	75.7	71.7-78.7	70.1	68.6-71.0	73.4	68.6-78.7
Sound mature seeds (%)	90.3	86.2-94.6	86.7	85.4-88.4	90.3	86.0-96.0	89.1	85.4-96.0
Hundred seed mass (g)	32.0	30.0-34.0	35.3	33.0-38.0	40.3	37.0-43.0	35.9	33.0-43.0

Name of the cultivar : TKG 19 A

Passport Information	
Botanical status :	<i>A. hypogaea</i> ssp. <i>Fastigiata</i> var. <i>vulgaris</i>
Year of release :	1993
Originating centre :	Konkan Krishi Vidyapeeth, Dapoli
Pedigree :	TG 17 X TG 1

Qualitative traits	
Stem	
Branching pattern :	Sequential with flower on n
Stem pigmentation :	Absent
Growth habit :	Erect
Hairiness:	Sub- glabrous
Inflorescence and flower	
Type of inflorescence :	Compound
Standard petal colour:	Deep orange
Leaflet	
Colour :	Green
Shape :	Oblong
Tip :	Obtuse
Surface :	Almost glabrous above and hairs below
Peg	
Peg pigmentation :	Present
Pod	
Beak :	Moderate
Constriction :	Moderate
Size :	Bold
Shell thickness :	Thick
Reticulation :	Prominent
Seed	
Seed colour :	One colour
Primary seed colour :	Rose
Secondary seed colour:	—
Seed shape :	Fusiform
Resistance to diseases	
Early leaf spot :	Intermediate
Rust :	Intermediate
Late leaf spot:	Low
Quality traits	
Oil content :	52.5 %
Protein content :	23.2%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	7	—	6	—	6.3	—
Days to initial flowering	23	—	22	—	16	—	20.3	—
Days to 50 % flowering	25	—	25	—	20	—	23.3	—
Days to maturity	108	—	107	106-108	107	106-108	107	106-108
Main axis height (cm)	26.5	25.0-29.4	27.9	22.7-33.7	32.7	30.0-35.2	29.0	22.7-35.2
Length of $n+1$	32.5	28.4-38.6	31.4	24.0-39.0	38.3	35.6-41.6	34.1	24.0-41.6
No. of nodes on n	16.1	14.4-17.0	17.1	15.0-18.7	14.8	11.6-19.0	16.0	11.6-19.0
No. of aerial pegs	20.2	19.4-21.4	13.8	11.0-15.3	8.4	4.4-12.4	14.1	4.4-21.4
No. of branches	4.5	3.0-5.4	8.4	4.7-11.0	4.8	3.8-6.0	5.9	3.0-11.0
Leaflet length (cm)	4.3	3.7-5.0	5.8	4.8-6.6	6.1	5.3-6.6	5.4	3.7-6.6
Leaflet width (cm)	1.7	1.4-2.1	3.0	1.9-3.7	2.8	2.3-3.0	2.5	1.4-3.7
Leaflet length/width	2.5	—	1.9	—	2.2	—	2.2	—
Plant spread (cm)	54.0	48.0-59.0	49.0	46.0-51.0	61.3	53.0-69.0	54.8	46.0-69.0
Immature pods/ plant	1.7	0.8-3.0	7.3	4.0-12.0	7.0	5.6-9.8	5.3	0.8-12.0
Mature pods/ plant	6.3	3.4-9.0	12.7	11.0-14.0	3.1	2.2-5.0	7.4	2.2-14.0
Pod bearing plants (%)	99.3	98.0-100	97.6	95.0-100	100	—	99.0	95.0-100
Pod mass (g/plant)	5.2	4.5-6.3	5.2	4.9-5.6	7.5	6.0-8.7	6.0	4.5-8.7
Pod yield /m ² (g)	446	395-520	223	191-241	253	199-308	307	191-520
100 pod mass (g)	113	—	105	97.0-115	91.3	82.0-108	103	82.0-115
One seeded pods (%)	10.0	6.0-14.0	32.0	11.0-60.0	43.0	29.0-59.0	28.3	6.0-60.0
Two seeded pods (%)	90.0	86.0-94.0	68.0	40.0-89.0	57.0	41.0-71.0	71.7	40.0-94.0
Three seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	32.2	28.0-36.5	28.8	25.0-31.5	27.2	25.0-29.0	29.4	25.0-36.5
Pod width (mm)	13.5	13.0-14.5	13.3	13.0-14.0	13.0	12.5-13.8	13.3	12.5-14.5
Seed length (mm)	16.7	16.0-17.2	14.0	13.0-15.0	14.0	13.5-15.0	14.9	13.0-17.2
Seed width (mm)	7.2	7.0-7.6	8.0	7.8-8.5	7.3	7.0-8.0	7.5	7.0-8.5
Shelling outturn (%)	61.8	60.9-63.3	61.8	59.1-63.3	65.9	64.5-66.5	63.2	59.1-66.5
Sound mature seeds (%)	93.5	92.1-95.7	85.0	81.6-88.2	93.5	92.0-96.0	90.7	81.6-96.0
Hundred seed mass (g)	44.7	39.0-52.0	49.0	48.0-50.0	48.0	47.0-50.0	47.2	39.0-50.0

Prominent features of the cultivar:

1. Large size pods
2. Moderate beak, constriction and prominent reticulation on pods

Name of the cultivar : TMV 12

Passport Information

Botanical status :	<i>A. hypogaea ssp. fastigiata var. vulgaris</i>		
Year of release :	1978	Botanical type :	Spanish
Originating centre :	Oilseeds Research Station., T.N.A.U., Tindivanam		
Pedigree :	Pure Line selection from Ugandan culture		

Qualitative traits

Stem

Branching pattern :	Sequential with flower on n	Hairiness:	Moderately hairy
Stem pigmentation :	Absent	Growth habit :	Erect

Inflorescence and flower

Type of inflorescence :	Simple	Standard petal colour:	Orange
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Leaflet

Colour :	Light green	Shape :	Lanceolate	Tip :	Acute
Surface :	Almost glabrous above and hairs below				

Peg

Peg pigmentation :	Present
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Pod

Beak :	Slight	Constriction :	Slight	Reticulation :	Slight
Size :	Medium	Shell thickness :	Thin		

Seed

Seed colour :	One colour	Primary seed colour :	Rose
Secondary seed colour:	—	Seed shape :	Spheroidal

Resistance to diseases

Early leaf spot :	Intermediate
Rust :	Intermediate
Late leaf spot:	Intermediate

Quality traits

Oil content :	47.8 %	Protein content :	27.3%
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Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	6	—	6	—	6.0	—
Days to initial flowering	28.0	—	24	—	24	—	25.3	—
Days to 50 % flowering	30.0	—	27	—	28	—	28.3	—
Days to maturity	126	—	119	115-122	132	131-133	125	115-133
Main axis height (cm)	26.7	24.4-30.2	29.0	22.7-40.7	29.4	28.0-31.0	28.4	22.7-40.7
Length of n+1	37.9	31.2-42.6	37.4	32.0-43.7	49.9	43.0-55.2	41.7	31.2-55.2
No. of nodes on n	14.3	8.2-19.1	19.4	15.3-25.0	14.2	10.2-19.4	16.0	8.2-25.0
No. of aerial pegs	11.0	6.1-18.2	14.1	10.3-21.3	13.3	11.2-17.2	12.8	6.1-21.3
No. of branches	10.3	4.8-13.2	11.2	6.0-14.0	11.4	5.9-13.6	10.9	4.8-14.0
Leaflet length (cm)	3.5	2.7-4.2	5.9	5.1-7.1	5.3	4.3-6.0	4.9	2.7-7.1
Leaflet width (cm)	1.7	1.4-2.1	2.6	2.3-3.0	2.2	1.8-2.5	2.2	1.4-3.0
Leaflet length/width	2.0	—	2.3	—	2.4	—	2.2	—
Plant spread (cm)	48.0	41.0-55.0	47.0	43.0-55.0	43.0	42.0-50.0	46.0	41.0-55.0
Immature pods/ plant	2.1	1.0-3.6	5.7	3.0-7.0	6.4	5.0-8.0	4.7	1.0-8.0
Mature pods/ plant	5.9	3.8-8.4	8.7	5.0-14.0	10.7	8.0-13.6	8.4	3.8-14.0
Pod bearing plants (%)	96.8	94.0-100	94.7	89.0-100	100	—	97.2	89.0-100
Pod mass (g/plant)	4.6	4.1-5.2	3.8	2.7-5.6	6.3	5.8-8.2	4.9	2.7-13.6
Pod yield /m ² (g)	335	330-340	101	74-128	354	300-394	263	74-394
100 pod mass (g)	90.0	—	62.3	53.0-73.0	75.7	68.0-84.0	76.0	53.0-90.0
One seeded pods (%)	10.0	7.0-12.0	13.0	8.0-17.0	17.0	6.0-30.0	13.3	6.0-30.0
Two seeded pods (%)	90.0	88.0-93.0	87.0	83.0-92.0	83.0	70.0-94.0	86.7	70.0-94.0
Three seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	26.0	23.0-31.0	22.7	20.0-26.0	23.0	22.8-23.7	23.9	20.0-31.0
Pod width (mm)	11.5	10.5-12.5	11.5	11.0-12.0	11.0	10.6-11.8	11.3	10.5-12.5
Seed length (mm)	12.4	11.0-14.8	11.7	10.0-14.0	12.0	11.0-13.0	12.0	10.0-14.8
Seed width (mm)	7.0	6.0-8.0	7.3	7.0-7.5	7.2	7.0-8.0	7.2	6.0-8.0
Shelling outturn (%)	63.6	59.7-65.6	61.3	58.5-63.9	65.1	64.3-65.8	63.3	58.5-65.8
Sound mature seeds (%)	85.4	78.0-92.5	85.8	83.9-88.9	87.3	82.0-95.0	86.1	78.0-95.0
Hundred seed mass (g)	35.0	34.0-36.0	39.0	36.0-42.0	39.7	37.0-45.0	37.9	34.0-42.0

Name of the cultivar : TMV 2

Passport Information	
Botanical status :	<i>A. hypogaea ssp. fastigiata var. vulgaris</i>
Year of release :	1940
Botanical type :	Spanish
Originating centre :	Oilseeds Research Station., T.N.A.U., Tindivanam
Pedigree :	Mass selection from Gudhiatham bunch

Qualitative traits	
Stem	
Branching pattern :	Sequential with flower on n
Stem pigmentation :	Absent
Growth habit :	Erect
Inflorescence and flower	
Type of inflorescence :	Simple
Standard petal colour:	Orange
Leaflet	
Colour :	Green
Shape :	Lanceolate
Tip :	Acute
Surface :	Almost glabrous above and hairs below
Peg	
Peg pigmentation :	Present
Pod	
Beak :	Slight
Constriction :	Slight
Size :	Small
Shell thickness :	Thin
Reticulation :	Slight
Seed	
Seed colour :	One colour
Primary seed colour :	Salmon
Secondary seed colour:	—
Seed shape :	Spheroidal
Resistance to diseases	
Early leaf spot :	Low
Rust :	Intermediate
Late leaf spot:	Low
Quality traits	
Oil content :	51.3 %
Protein content :	24.1%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	7	—	6	—	6.3	—
Days to initial flowering	26	—	23	—	19	—	22.7	—
Days to 50 % flowering	28	—	27	—	22	—	25.7	—
Days to maturity	106	—	104	103-105	106	104-108	105	103-108
Main axis height (cm)	31.3	25.0-35.0	34.9	31.3-41.7	36.5	33.6-38.8	34.2	25.0-41.7
Length of n+1	33.9	28.8-42.0	38.1	30.3-51.0	43.9	39.8-47.6	38.6	28.8-51.0
No. of nodes on n	29.8	16.0-37.4	21.6	18.7-24.3	14.8	12.0-18.2	22.1	12.0-37.4
No. of aerial pegs	5.2	1.8-7.8	8.7	6.0-10.3	5.9	1.4-11.4	6.6	1.4-11.4
No. of branches	4.7	3.8-5.2	6.6	4.0-11.0	6.8	4.6-10.4	6.0	3.8-11.0
Leaflet length (cm)	4.8	4.2-5.7	5.5	4.5-6.6	6.2	4.8-7.0	5.5	4.2-7.0
Leaflet width (cm)	2.1	1.8-2.5	2.4	1.9-2.5	2.8	2.3-3.1	2.4	1.8-3.1
Leaflet length/width	2.3	—	2.3	—	2.2	—	2.3	—
Plant spread (cm)	49.0	34.0-63.0	48.0	46.0-50.0	52.0	49.0-55.0	49.7	34.0-63.0
Immature pods/ plant	1.5	0.2-3.2	5.7	0.0-10.0	4.1	2.6-5.2	3.8	0.0-10.0
Mature pods/ plant	8.3	5.8-9.6	18.7	13.0-22.0	9.4	7.6-12.0	12.1	5.8-22.0
Pod bearing plants (%)	97.0	94.0-100	98.1	97.0-100	99.3	98.0-100	98.1	94.0-100
Pod mass (g/plant)	7.7	6.8-8.3	5.9	4.8-7.9	7.7	7.4-8.2	7.1	4.8-8.3
Pod yield /m ² (g)	436	385-498	205	152-275	384	282-460	342	152-498
100 pod mass (g)	74.0	—	61.3	55.0-69.0	72.3	66.0-79.0	69.2	55.0-79.0
One seeded pods (%)	0.0	—	9.0	8.0-10.0	17.0	15.0-19.0	8.7	0.0-19.0
Two seeded pods (%)	100	—	91.0	90.0-92.0	83.0	81.0-85.0	91.3	81.0-100
Three seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	21.7	21.0-22.5	19.7	18.0-21.0	21.0	20.0-22.0	20.8	18.0-22.5
Pod width (mm)	10.5	10.0-11.0	10.1	10.0-10.2	11.0	10.5-11.5	10.5	10.0-11.5
Seed length (mm)	11.1	10.0-12.0	10.3	10.0-11.0	11.0	10.0-12.0	10.8	10.0-12.0
Seed width (mm)	7.1	7.0-7.4	7.5	7.0-8.0	7.0	6.8-7.5	7.2	6.8-8.0
Shelling outturn (%)	73.3	71.6-74.3	69.7	64.2-76.2	68.2	63.9-70.9	70.4	63.9-76.2
Sound mature seeds (%)	91.7	88.7-94.2	87.1	84.4-89.4	91.7	85.0-96.0	90.2	84.4-96.0
Hundred seed mass (g)	32.0	28.0-34.0	32.3	30.0-37.0	36.0	34.0-38.0	33.4	28.0-38.0

Name of the cultivar : TMV 7

Passport Information

Botanical status :	<i>A.hypogaea ssp. fastigiata var. vulgaris</i>		
Year of release :	1967	Botanical type :	Spanish
Originating centre :	Oilseeds Research Station., T.N.A.U., Tindivanam		
Pedigree :	Selection from Tenesse White		

Qualitative traits

Stem

Branching pattern :	Irregular with flowers on n	Hairiness:	Sub-glabrous
Stem pigmentation :	Absent	Growth habit :	Erect

Inflorescence and flower

Type of inflorescence :	Simple	Standard petal colour:	Orange
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Leaflet

Colour :	Pale green	Shape :	Lanceolate	Tip :	Acute
Surface :	Almost glabrous above and hairs below				

Peg

Peg pigmentation :	Present
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Pod

Beak :	Slight	Constriction :	Slight	Reticulation :	Slight
Size :	Medium	Shell thickness :	Thin		

Seed

Seed colour :	One colour	Primary seed colour :	Salmon
Secondary seed colour:	—	Seed shape :	Spheroidal

Resistance to diseases

Early leaf spot :	Low
Rust :	Low
Late leaf spot:	Very low

Quality traits

Oil content :	48.2 %	Protein content :	23.4%
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Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	6	—	6	—	6	—	6.0	—
Days to initial flowering	29	—	24	—	19	—	24.0	—
Days to 50 % flowering	30	—	26	—	23	—	26.3	—
Days to maturity	108	—	107	106-108	107	106-108	107	106-108
Main axis height (cm)	31.7	28.4-33.8	40.2	36.0-44.3	40.3	35.0-43.6	37.4	28.4-44.3
Length of n+1	34.7	29.4-37.8	35.0	34.0-36.0	49.6	46.0-53.4	39.8	29.4-53.4
No. of nodes on n	14.9	10.4-19.2	20.5	20.0-21.0	15.5	11.2-19.8	17.0	10.4-21.0
No. of aerial pegs	3.8	3.0-4.4	15.2	11.7-18.7	4.7	1.6-6.8	7.9	1.6-18.7
No. of branches	5.0	—	10.5	9.0-12.0	9.3	7.0-12.2	8.3	5.0-12.2
Leaflet length (cm)	5.8	5.3-6.3	6.2	5.7-7.5	6.3	5.2-7.1	6.1	5.2-7.5
Leaflet width (cm)	2.2	2.0-2.5	2.9	2.6-3.1	2.9	2.2-3.2	2.7	2.0-3.2
Leaflet length/width	2.6	—	2.1	—	2.2	—	2.3	—
Plant spread (cm)	60.0	55.0-63.0	44.0	40.0-48.0	60.0	58.0-62.0	54.7	40.0-63.0
Immature pods/ plant	1.0	0.6-1.2	11.0	9.0-13.0	3.7	2.0-6.6	5.2	0.6-13.0
Mature pods/ plant	6.3	5.8-7.4	8.0	—	7.5	6.4-9.0	7.3	5.8-9.0
Pod bearing plants (%)	94.0	84.0-100	99.0	97.0-100	98.6	96.0-100	97.2	84.0-100
Pod mass (g/plant)	3.1	2.3-4.4	4.1	2.7-5.1	7.1	6.5-7.4	4.8	2.3-7.4
Pod yield /m ² (g)	193	172-213	162	131-184	301	284-326	219	131-326
100 pod mass (g)	78.0	—	61.7	58.0-65.0	75.0	74.0-77.0	71.6	58.0-78.0
One seeded pods (%)	9.0	0.0-26.0	13.0	7.0-20.0	8.0	8.0-9.0	10.0	0.0-26.0
Two seeded pods (%)	91.0	74.0-100	87.0	80.0-93.0	92.0	91.0-92.0	90.0	74.0-100
Three seeded pods (%)	0.0	—	0.0	—	0.0	—	0.0	—
Pod length (mm)	22.5	20.4-24.0	20.5	19.5-21.0	20.7	20.0-21.0	21.2	19.5-24.0
Pod width (mm)	10.5	10.0-10.8	10.7	10.0-11.0	11.0	10.0-12.0	10.7	10.0-12.0
Seed length (mm)	11.7	11.0-12.0	10.3	10.0-11.0	11.0	10.5-11.7	11.0	10.0-12.0
Seed width (mm)	7.3	7.0-7.5	7.3	7.0-7.5	7.0	6.8-7.5	7.2	6.8-7.5
Seedling outturn (%)	71.5	70.0-73.1	71.6	70.7-72.3	68.0	64.9-71.4	70.4	64.9-73.1
Sound mature seeds (%)	87.7	83.7-93.3	85.4	83.3-87.8	89.5	88.0-91.0	87.5	83.3-93.3
Hundred seed mass (g)	33.7	32.0-37.0	36.7	34.0-39.0	36.3	34.0-40.0	35.6	32.0-40.0

Valencia

Name of the cultivar : Gangapuri

Passport information	
Botanical status :	<i>A. hypogaea</i> ssp. <i>fastigiata</i> var. <i>fastigiata</i>
Year of release :	—
Originating centre :	—
Pedigree :	Selection
Botanical type :	Valencia

Qualitative traits	
Stem	
Branching pattern :	Sequential with flower on n
Stem pigmentation :	Absent
Growth habit :	Decumbent 3
Hairiness:	Sub-glabrous
Inflorescence and flower	
Type of inflorescence :	Simple
Standard petal colour:	Dark orange
Leaflet	
Colour :	Light green
Shape :	Oblong
Tip :	Obtuse
Surface :	Almost glabrous
Peg	
Peg pigmentation :	Present
Pod	
Beak :	Slight
Constriction :	Slight
Size :	Medium
Shell thickness :	Thick
Reticulation :	Absent
Seed	
Seed colour :	One colour
Primary seed colour :	Red
Secondary seed colour :	—
Seed shape :	Spheroidal
Resistance to diseases	
Early leaf spot :	Intermediate
Rust :	Intermediate
Late leaf spot :	Low
Quality traits	
Oil content :	50.0 %
Protein content :	24.8 %

Quantitative traits (Mean and Range of two years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	—	—	6	—	6	—	6.0	—
Days to initial flowering	—	—	22	—	22	—	22	—
Days to 50 % flowering	—	—	26	—	25	—	25.5	—
Days to maturity	—	—	101	100-103	109	103-119	105	100-119
Main axis height (cm)	—	—	42.7	32.3-53.0	28.1	23.0-35.4	35.4	23.0-53.0
Length of n+1	—	—	38.3	31.7-45.0	38.4	36.0-40.8	38.4	31.7-45.0
No. of nodes on n	—	—	21.3	20.7-22.0	11.9	8.6-17.0	16.6	8.6-22.0
No. of aerial pegs	—	—	3.5	3.3-3.7	5.1	1.4-7.6	4.3	1.4-7.6
No. of branches	—	—	9.2	6.6-10.6	6.9	5.4-8.4	8.1	5.4-10.6
Leaflet length (cm)	—	—	6.3	5.5-7.1	6.0	4.5-6.1	6.2	4.5-7.1
Leaflet width (cm)	—	—	2.9	2.3-3.3	2.4	1.9-2.7	2.7	1.9-3.3
Leaflet length/width	—	—	2.2	—	2.5	—	2.4	—
Plant spread (cm)	—	—	60.7	58.0-64.0	58.7	57.0-60.0	59.7	57.0-64.0
Immature pods/ plant	—	—	4.0	2.0-6.0	1.2	1.0-2.6	2.6	1.0-6.0
Mature pods/ plant	—	—	9.0	7.0-12.0	4.6	3.1-6.2	6.8	3.1-12.0
Pod bearing plants (%)	—	—	97.6	97.0-98.0	100	—	98.8	97.0-100
Pod mass (g/plant)	—	—	3.5	3.0-4.2	6.1	5.4-7.4	4.8	3.0-7.4
Pod yield /m ² (g)	—	—	142	134-158	250	161-342	196	134-342
100 pod mass (g)	—	—	103	90.0-113	101	99.0-102	102	90.0-113
One-seeded pods (%)	—	—	14.0	4.0-25.0	11.0	7.0-16.0	12.5	4.0-25.0
Two-seeded pods (%)	—	—	58.0	51.0-65.0	27.0	24.0-30.6	42.5	24.0-65.0
Three-seeded pods (%)	—	—	28.0	10.0-45.0	62.0	60.0-65.0	45.0	10.0-65.0
Pod length (mm)	—	—	27.2	25.5-30.0	28.3	26.0-32.0	27.8	25.0-32.0
Pod width (mm)	—	—	12.0	—	12.0	—	12.0	—
Seed length (mm)	—	—	11.1	11.0-11.2	11.0	10.4-12.0	11.1	10.4-12.0
Seed width (mm)	—	—	7.2	7.0-7.5	7.4	7.0-8.0	7.3	7.0-8.0
Shelling outturn (%)	—	—	64.2	62.2-65.3	66.8	65.8-68.2	65.5	62.2-68.2
Sound mature seeds (%)	—	—	89.1	87.0-90.4	89.3	86.0-96.0	89.2	86.0-96.0
Hundred seed mass (g)	—	—	37.7	34.0-40.0	37.0	36.0-38.0	37.4	34.0-40.0

Prominent features of the cultivar:

1. Smooth pods
2. Three seeded pods are more
3. Thick shell
4. Red coloured testa

Name of the cultivar : MH 2

Passport Information	
Botanical status :	<i>A. hypogaea ssp. fastigiata var. fastigiata</i>
Year of release :	1978
Originating centre :	Haryana Agricultural University, Hissar
Pedigree :	Selection from Gujarat Dwarf Mutant
	Botanical type : Valencia

Qualitative traits	
Stem	
Branching pattern :	Sequential with flower on n
Stem pigmentation :	Absent
Growth habit :	Erect
Hairiness:	Moderately hairy
Inflorescence and flower	
Type of inflorescence :	Simple
Standard petal colour:	Orange
Leaflet	
Colour :	Green
Shape :	Lanceolate
Tip :	Acute
Surface :	Almost glabrous
Peg	
Peg pigmentation :	Present
Pod	
Beak :	Slight
Constriction :	Moderate
Size :	Medium
Shell thickness :	Thick
Seed	
Seed colour :	One colour
Primary seed colour :	Red
Secondary seed colour:	—
Seed shape :	Spheroidal
Resistance to diseases	
Early leaf spot :	Intermediate
Rust :	Intermediate
Late leaf spot:	Low
Quality traits	
Oil content :	48.2 %
Protein content :	22.5%

Quantitative traits (Mean and Range of three years)

Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	7	—	6	—	7	—	6.7	—
Days to initial flowering	21	—	22	—	18	—	20.3	—
Days to 50 % flowering	24	—	25	—	22	—	23.7	—
Days to maturity	106	—	100	—	109	107-111	105	100-111
Main axis height (cm)	6.2	4.8-7.8	5.5	5.3-5.7	5.8	5.0-6.6	5.8	4.8-7.8
Length of n+1	7.9	6.2-8.8	5.7	3.3-7.3	7.1	6.0-8.8	6.9	3.3-8.8
No. of nodes on n	9.5	8.0-11.4	8.2	7.0-9.3	4.3	2.8-5.8	7.3	2.8-11.4
No. of aerial pegs	5.1	2.2-10.0	14.3	12.0-16.7	3.4	1.6-6.2	7.6	1.6-16.7
No. of branches	4.6	4.0-5.0	5.3	5.0-5.7	5.2	4.0-6.6	5.0	4.0-6.6
Leaflet length (cm)	2.6	2.2-2.8	3.8	3.1-4.6	4.8	4.0-5.1	3.7	2.2-5.1
Leaflet width (cm)	1.2	1.0-1.4	2.0	1.5-2.6	2.3	2.0-2.4	1.8	1.0-2.6
Leaflet length/width	2.2	—	1.9	—	2.1	—	2.1	—
Plant spread (cm)	16.0	14.0-18.0	16.0	14.0-17.0	25.0	14.0-29.0	19.0	14.0-29.0
Immature pods/ plant	1.8	0.4-3.8	5.0	3.0-6.0	2.2	0.8-3.0	3.0	0.4-6.0
Mature pods/ plant	5.4	3.0-7.2	9.0	5.0-12.0	4.3	3.0-6.0	6.2	3.0-12.0
Pod bearing plants (%)	93.0	90.0-95.0	93.7	90.0-98.0	91.8	81.0-100	92.8	81.0-100
Pod mass (g/plant)	3.0	1.8-4.8	2.5	1.9-3.0	4.0	3.2-4.7	3.2	1.8-4.8
Pod yield /m ² (g)	116	90-142	89	80-97	133	110-157	113	80-157
100 pod mass (g)	84.0	—	57.7	50.0-67.0	72.7	67.0-77.0	71.5	50.0-84.0
One seeded pods (%)	0.0	—	24.0	18.0-31.0	14.0	9.0-21.0	12.7	0.0-31.0
Two seeded pods (%)	74.0	54.0-93.0	57.0	45.0-63.0	51.0	49.0-53.0	60.7	45.0-93.0
Three seeded pods (%)	26.0	7.0-46.0	19.0	14.0-24.0	35.0	30.0-38.0	26.7	7.0-46.0
Pod length (mm)	26.3	23.0-32.0	24.0	21.0-26.0	27.3	27.0-28.0	25.9	21.0-32.0
Pod width (mm)	11.0	—	10.8	10.0-12.0	11.0	—	10.9	10.0-12.0
Seed length (mm)	13.3	12.0-16.0	11.8	11.5-12.0	11.0	10.0-12.0	12.0	10.0-16.0
Seed width (mm)	7.6	6.8-8.0	7.3	7.0-7.5	6.8	6.5-7.3	7.2	6.5-8.0
Shelling outturn (%)	67.4	65.3-71.4	71.4	70.1-73.2	68.3	67.2-70.1	69.0	65.3-73.2
Sound mature seeds (%)	94.1	91.7-95.9	84.1	81.8-85.4	90.6	84.0-94.0	89.6	81.8-95.9
Hundred seed mass (g)	28.3	26.0-30.0	26.7	24.0-29.0	27.7	24.0-30.0	27.5	24.0-30.0

Prominent features of the cultivar:

1. Dwarf stature of plant
2. Greener leaves
3. Three seeded pods
4. Red coloured testa
5. Thick shell
6. Moderate constriction of pods

Name of the cultivar : MH 4

Passport Information

Botanical status : *A. hypogaea ssp. fastigiata var. vulgaris*

Year of Release : 1990

Botanical Type : Valencia

Originating Centre : Haryana Agricultural University, Hissar

Pedigree : Selection from MH2

Qualitative traits

Stem

Branching pattern : Sequential with flower on n **Hairiness:** Almost glabrous

Stem pigmentation : Absent **Growth habit :** Erect

Inflorescence and flower

Type of inflorescence : Compound **Standard petal colour:** Orange

Leaflet

Colour : Green **Shape :** Lanceolate **Tip :** Acute

Surface : Almost glabrous

Peg

Peg pigmentation : Present

Pod

Beak : Slight **Constriction :** Moderate **Reticulation :** Slight

Size : Medium **Shell thickness :** Thick

Seed

Seed colour : One colour **Primary seed colour :** Red

Secondary seed colour: — **Seed shape :** Fusiform

Resistance to diseases

Early leaf spot : Low

Rust : Low

Late leaf spot: Very low

Quality traits

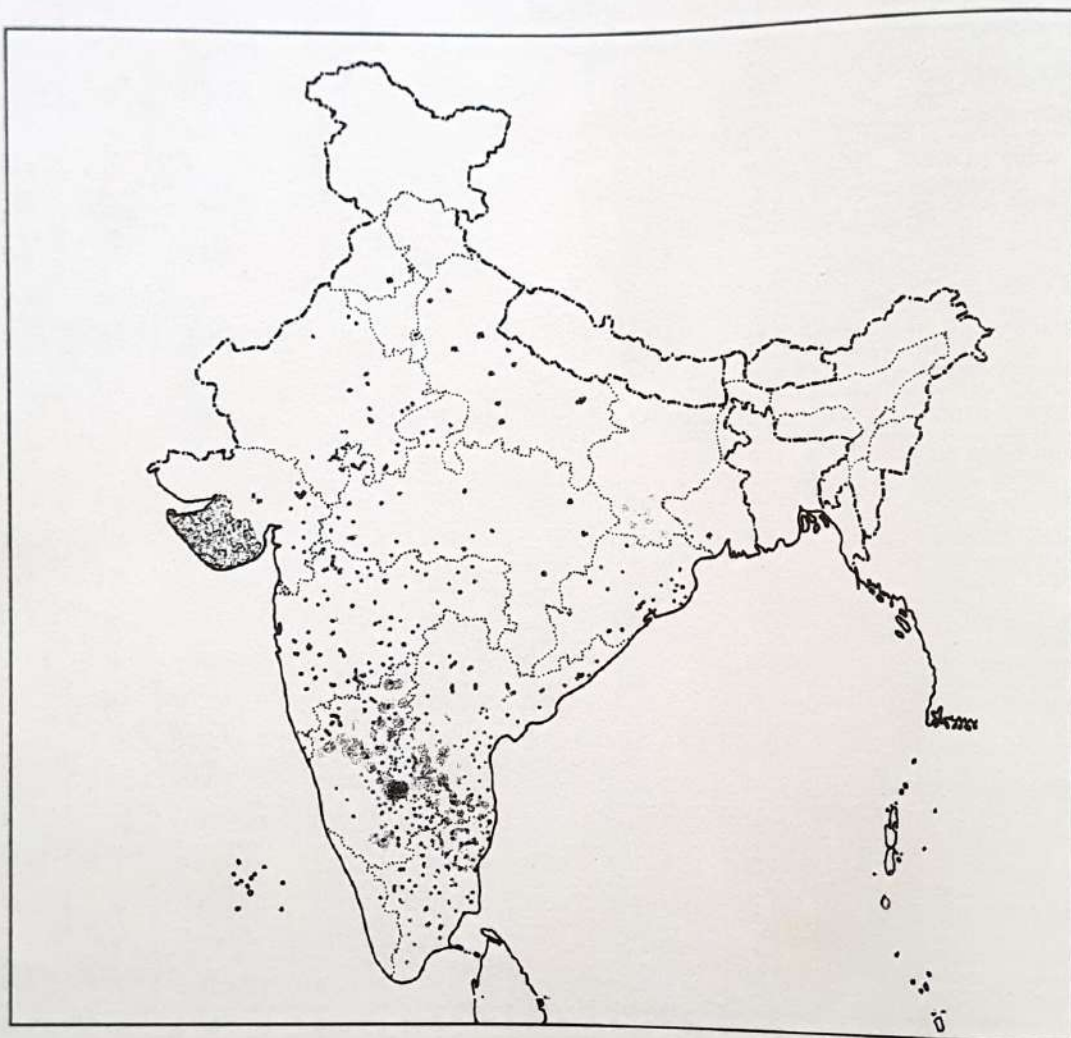
Oil content : 48.5 % **Protein content :** 24.8%

Quantitative traits (Mean and Range of three years)

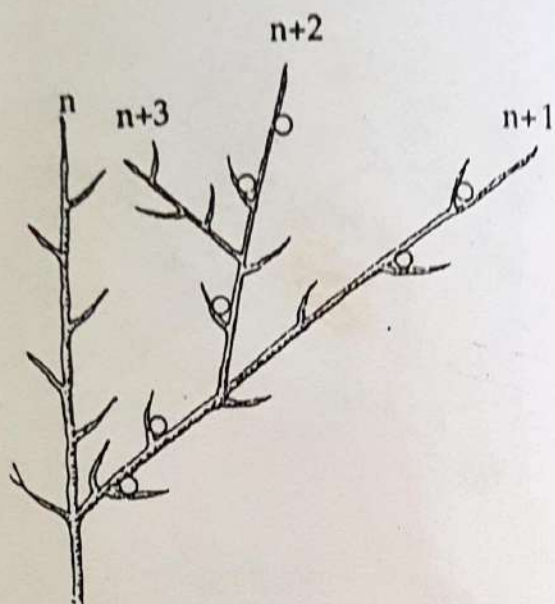
Trait	1995		1996		1997		Pooled	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Days to germination	7	—	6	—	7	—	6.7	—
Days to initial flowering	22	—	23	—	18	—	21.0	—
Days to 50 % flowering	25	—	26	—	21	—	24.0	—
Days to maturity	103	—	100	98-104	103	100-105	102	98-105
Main axis height (cm)	6.7	5.2-8.6	8.9	6.7-10.3	7.5	7.2-7.8	7.7	5.2-10.3
Length of n+1	7.8	6.4-10.0	10.2	6.4-16.3	9.2	8.2-9.8	9.1	6.4-16.3
No. of nodes on n	10.6	7.4-13.8	8.6	6.0-10.7	5.3	3.4-7.2	8.2	3.4-13.8
No. of aerial pegs	5.2	3.2-7.4	6.5	3.3-11.0	4.2	3.2-5.0	5.3	3.2-11.0
No. of branches	4.5	3.8-5.0	5.1	3.0-8.3	5.8	5.0-7.2	5.1	3.0-8.3
Leaflet length (cm)	3.5	3.0-4.2	3.1	2.6-3.4	4.9	3.5-5.3	3.8	2.6-5.3
Leaflet width (cm)	1.6	1.2-2.0	1.6	1.3-1.8	2.2	1.5-2.8	1.8	1.2-2.8
Leaflet length/width	2.2	—	1.9	—	2.2	—	2.1	—
Plant spread (cm)	13.0	12.0-14.0	18.0	16.0-20.0	28.0	24.0-31.0	19.7	12.0-31.0
Immature pods/ plant	0.7	0.0-1.4	2.0	—	2.5	1.6-3.5	1.7	0.0-3.5
Mature pods/ plant	6.8	5.2-8.4	8.3	6.0-11.0	3.7	1.2-5.0	6.3	1.2-11.0
Pod bearing plants (%)	96.7	94.0-100	91.5	88.0-97.0	84.8	71.0-100	91.0	71.0-100
Pod mass (g/plant)	4.0	3.9-4.2	1.7	1.3-2.4	4.1	2.8-5.1	3.3	1.3-5.1
Pod yield /m ² (g)	317	298-334	56	38-80	129	94-197	167	38-334
100 pod mass (g)	73.0	—	58.0	50.0-66.0	68.3	58.0-78.0	66.4	50.0-78.0
One seeded pods (%)	8.0	7.0-10.0	19.0	12.0-30.0	22.0	15.0-28.0	16.3	7.0-30.0
Two seeded pods (%)	69.0	58.0-79.0	66.0	60.0-70.0	50.0	45.0-57.0	61.7	45.0-79.0
Three seeded pods (%)	23.0	14.0-32.0	15.0	10.0-20.0	28.0	27.0-30.0	22.0	10.0-32.0
Pod length (mm)	23.6	22.3-24.4	21.5	21.0-22.0	23.7	23.0-24.0	22.9	21.0-24.4
Pod width (mm)	11.3	10.0-12.0	11.3	11.2-11.5	11.0	10.8-12.0	11.2	10.0-12.0
Seed length (mm)	11.5	11.0-12.0	10.1	10.0-10.2	11.0	10.5-11.5	10.9	10.0-12.0
Seed width (mm)	7.0	6.0-8.0	7.2	7.1-7.4	6.8	6.7-7.0	7.0	6.0-8.0
Shelling outturn (%)	67.3	58.9-73.2	69.1	68.2-70.1	72.8	69.2-76.8	69.7	58.9-76.8
Sound mature seeds (%)	92.1	86.7-95.3	84.9	84.3-86.1	87.9	83.0-94.0	88.3	83.0-95.3
Hundred seed mass (g)	29.7	27.0-33.0	23.7	21.0-26.0	22.7	21.0-25.0	25.4	21.0-33.0

Prominent features of the cultivar:

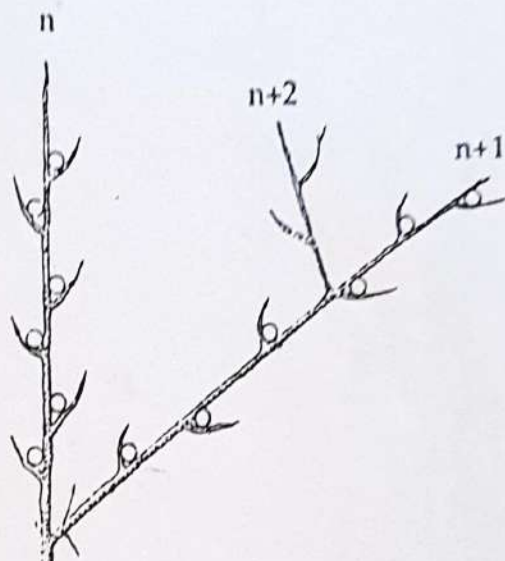
1. Dwarf stature of plant
2. Greener leaves
3. Three seeded pods
4. Red coloured testa
5. Thick shell
6. Moderate constriction of pods



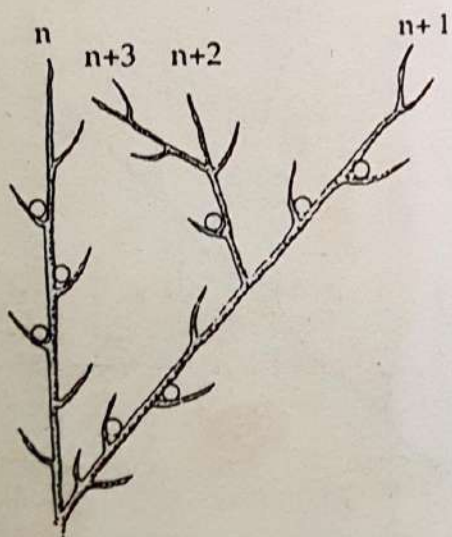
Schematic representation of groundnut growing areas in India
(The dots give an approximate idea about the distribution of groundnut)



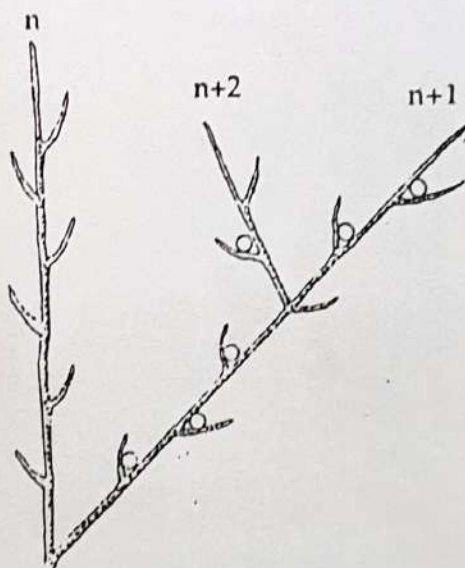
1 Alternate



2 Sequential



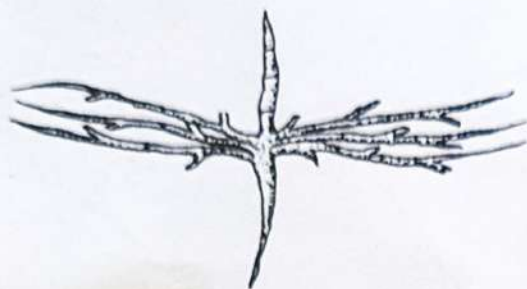
3 Irregular with flowers
on main stem



4 Irregular without flowers
on main stem

0 = Reproductive branch

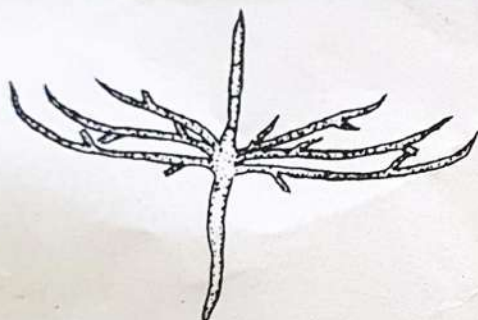
Fig. 1. Branching pattern



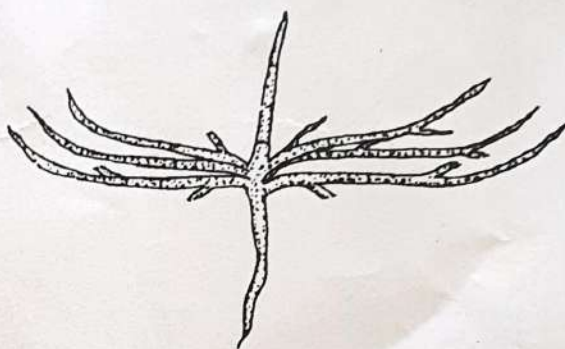
1 Procumbent-1



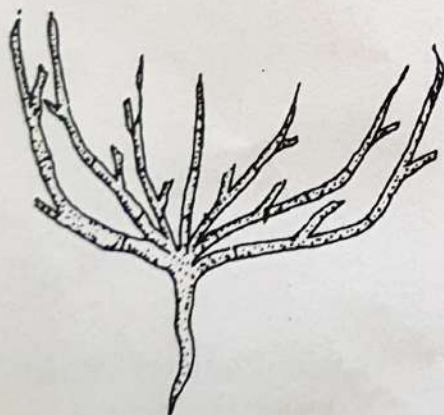
2 Procumbent-2



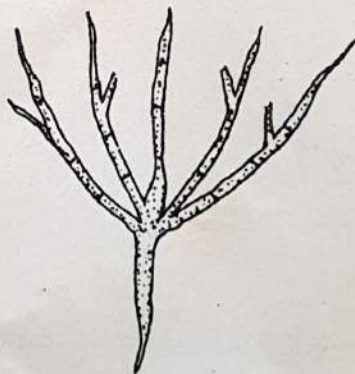
3 Decumbent-1



4 Decumbent-2



5 Decumbent-3



6 Erect

Fig. 2. Growth habit



Oblong shape
Obtuse tip



Lanceolate shape,
Acute tip

Fig.3. Leaflet shape and tip

a. Beak



Absent



Slight



Moderate



Prominent

b. Constriction



None



Slight



Moderate



Prominent

c. Reticulation



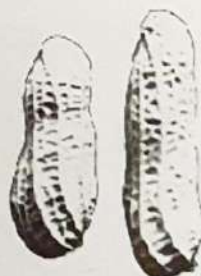
None



Slight



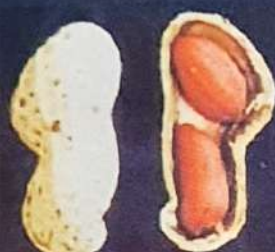
Moderate



Prominent

Fig.4. Pod Traits

SEED CHARACTERISTICS OF GROUNDNUT CULTIVARS



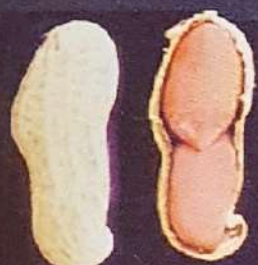
ALR 1



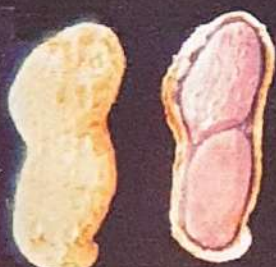
B 95



BAU 13



BG 2



GG 20



ICGS 5



ICGS 76



ICGV 86325



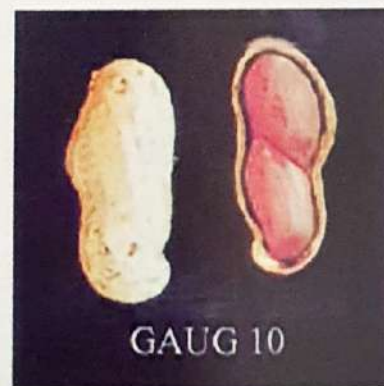
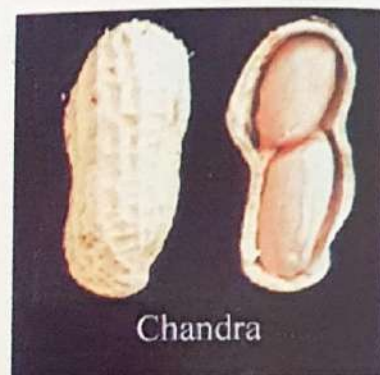
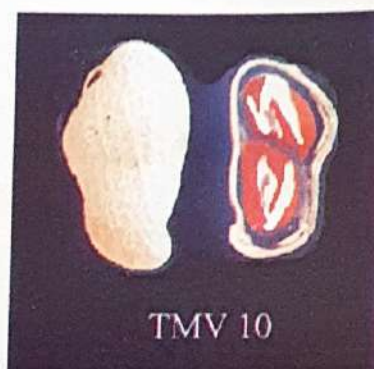
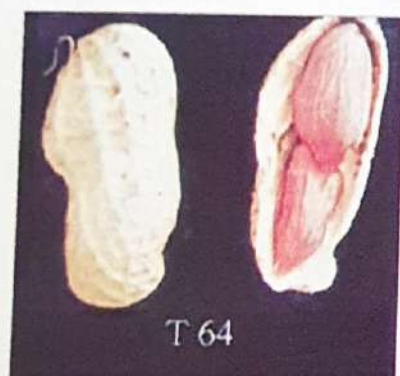
Kadiri 3



M 145

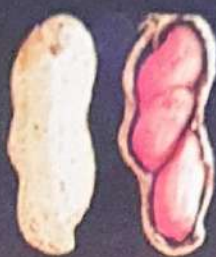


M 522





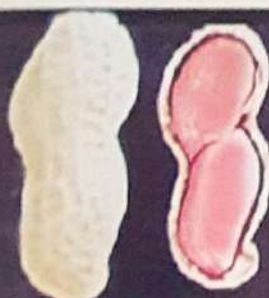
Karad 4-11



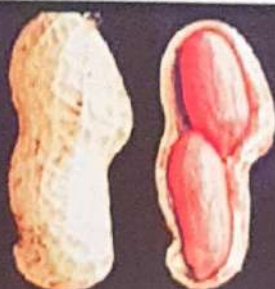
Kaushal



M 13



M 197



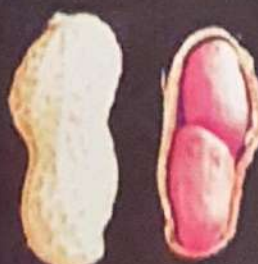
M 335



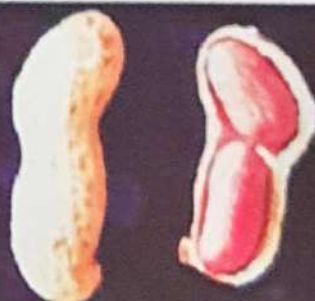
M 37



Punjab 1



RS 1



Somnath



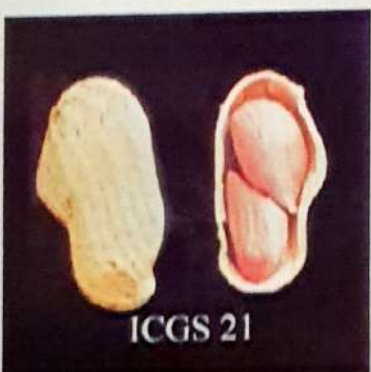
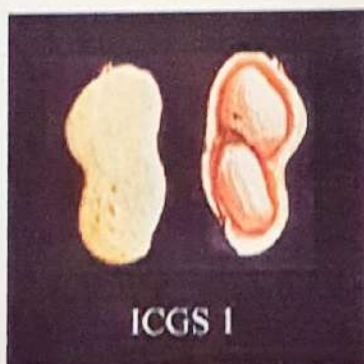
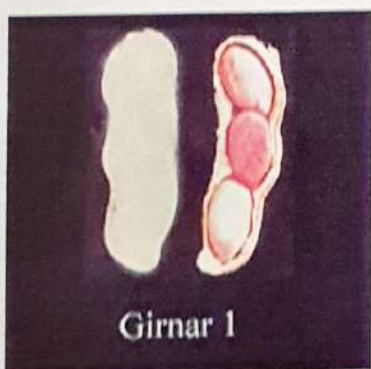
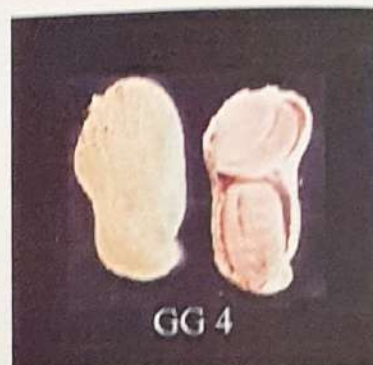
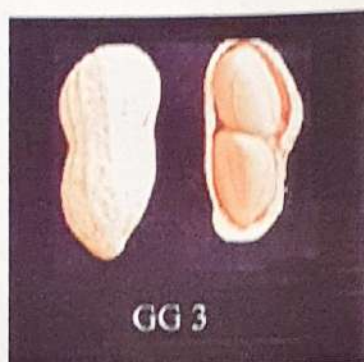
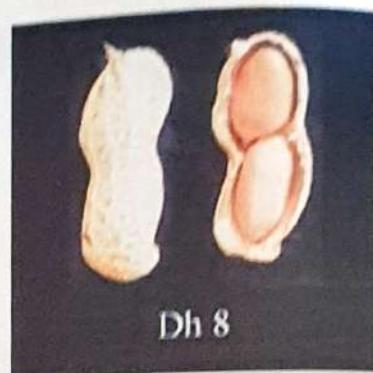
UF 70-103

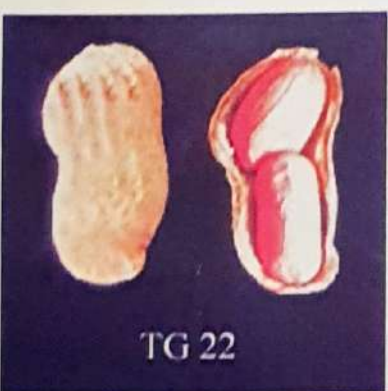
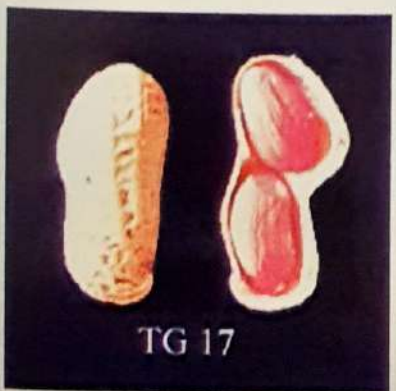


AK 12-24



ALR 2







TG 3



Tirupati 1



Tirupati 2



TKG 19A



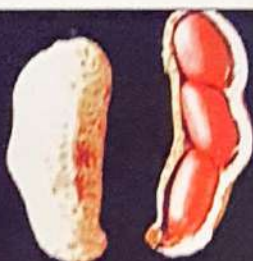
TMV 12



TMV 2



TMV 7



Gangapuri



MH 2



MH 4

Habit groupwise groundnut varieties and their areas of adaptation

Cultivar		Area for which released
Virginia Bunch		
1	ALR 1	Pollachi tract of Tamil Nadu
2	B 95	Southern Maharastra
3	BAU 13	Bihar, Uttar Pradesh, Rajasthan, Gujarat Maharastra and Tamil Nadu
4	BG 2	Bihar
5	GG 20	Gujarat
6	ICGS 5	Uttar Pradesh
7	ICGS 76	Southern Maharashtra, Andhra Pradesh, Tamil Nadu, Karnataka
8	ICGV 86325	Southern Maharastra, Andhra Pradesh, Tamil Nadu, Karnataka and Kerala
9	Kadiri 3	Andhra Pradesh but adapted to entire country
10	M 145	Punjab
11	M 522	Punjab
12	RS 138	Rajasthan
13	RSB 87	Kota division and other heavy soil area of Rajasthan
14	T 28	Uttar Pradesh
15	T 64	Uttar Pradesh
16	TMV 10	Tamil Nadu but suitable for entire country
Virginia Runner		
17	Chandra	Uttar Pradesh
18	Chitra	Uttar Pradesh
19	CSMG 84-1	Rajasthan, Punjab, Haryana and Uttar Pradesh
20	GAUG 10	Gujarat
21	GG 11	Gujarat
22	GG 12	Gujarat
23	GG 13	Gujarat
24	Karad 4-11	Satara, Sangli, Kolhapur, Sholapur and Pune district
25	Kaushal	All India
26	M 13	Entire country
27	M 197	Punjab state
28	M 335	Sandy areas of Punjab under irrigated condition during kharif
29	M 37	Punjab
30	Punjab 1	Punjab but is grown in Gujarat and Rajasthan states
31	RS 1	Rajasthan
32	Somnath	Gujarat
33	UF 70-103	Vidharbha and western region of Maharashtra state

Cultivar		Area for which released
Spanish		
34	AK12-24	Vidharbha region of Maharashtra but grown in the states of Orissa, Madhya Pradesh and Rajasthan
35	ALR 2	Tamil Nadu, Pollachi tract
36	Co 1	Tamil Nadu
37	Dh 3-30	Northern Karnataka
38	Dh 8	Transitional tract of northern Karnataka
39	GG 2	Saurashtra region of Gujarat for summer season
40	GG 3	Madhya Pradesh and Northern Maharashtra
41	GG 4	Gujarat
42	Gimar 1	Western Maharashtra, Andhra Pradesh, Tamil Nadu and Karnataka
43	ICGS 1	Haryana, Uttar Pradesh, Punjab, Bihar, Rajasthan
44	ICGS 11	Parts of Madhya Pradesh and Maharashtra and Andhra Pradesh, Karnataka and parts of Maharashtra for Rabi/ Summer cultivation
45	ICGS 21	Maharashtra
46	ICGS 44	Gujarat, Northern Maharashtra & Madhya Pradesh
47	ICGV 86590	Peninsular India
48	J 11	Gujarat, suitable for other states also
49	JL 24	Maharashtra, suitable for other states
50	K 134	Andhra Pradesh and Tamil Nadu
51	MH 1	Haryana
52	RG 141	Black soils of Rajasthan
53	SB XI	Maharashtra
54	SG 84	Loamy soil of Punjab under irrigation for spring season
55	Spanish improved	Tract of Bombay and Karnataka region
56	TAG 24	Maharashtra
57	TG 17	Maharashtra for summer season
58	TG 22	Maharashtra
59	TG 26	Rabi-summer areas of Gujarat, northern Maharashtra and Madhya Pradesh
60	TG 3	Kerala
61	Tirupati 1	Andhra Pradesh
62	Tirupati 2	Andhra Pradesh
63	TKG 19 A	Konkan region for rabi summer and kharif
64	TMV 12	Tamil Nadu
65	TMV 2	Tamil Nadu, currently grown in Andhra Pradesh and Karnataka
66	TMV 7	Tamil Nadu
Valencia		
67	Gangapuri	Madhya Pradesh and entire country
68	MH 2	Haryana
69	MH 4	Haryana

Agro-Meteorological data of Junagadh during crop season for the year 1995,96,97

Months	Temp °C		RH	Rain fall	
	Max	Min	%	mm	rainy days
June 1995	38.2	27.0	82	303.0	09
June 1996	35.9	26.3	84	305.5	4
June 1997	33.0	25.0	85	231.7	N.A.
July 1995	31.9	25.2	90	301.3	20
July 1996	31.3	25.4	92	333.4	16
July 1997	31.0	26.0	91	281.5	N.A.
August 1995	30.9	24.8	93	46.5	9
August 1996	29.5	24.1	94	65.0	9
August 1997	32.8	26.1	98	96.4	N.A.
Sept. 1995	33.2	23.6	88	123.8	7
Sept. 1996	32.9	23.4	87	0.9	2
Sept. 1997	31.9	23.6	88	217.6	N.A.
October 1995	35.4	22.3	77	33.2	2
October 1996	35.0	21.1	71	26.2	3
October 1997	35.6	21.2	81	39.3	N.A.
Nov. 1995	33.6	15.0	65	—	—
Nov. 1996	32.4	13.6	69	—	—
Nov. 1997	28.6	14.8	74	—	—