



# HIGH YIELDING VARIETIES OF CASHEW



**Kerala Agricultural University, Thrissur**

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VARIETIES OF  
CASHEW

Kerala Agricultural University, Thrissur

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# HIGH YIELDING CASHEW SELECTIONS



← **BLA-139-1.**  
ANAKAYAM-1  
FLOWERING: EARLY, SHORT  
FLOWERING PHASE  
MEAN TREE YIELD : 32.7Kg  
NUT SIZE : 6.0g  
SHELLING PERCENT: 28.0



← **H-856**  
FLOWERING : LATE  
MEAN TREE YIELD : 9.98Kg  
NUT SIZE : 9.96g  
SHELLING PERCENT: 30.37



← **H-1598**  
FLOWERING : MIDDLE  
MEAN TREE YIELD : 15.41Kg  
NUT SIZE : 6.80g  
SHELLING PERCENT : 40.28



← **K-22-1**  
FLOWERING : LATE  
MEAN TREE YIELD : 19.2Kg  
NUT SIZE : 6.2g  
SHELLING PERCENT: 22.7



← **H-1591**  
FLOWERING : MIDDLE  
MEAN TREE YIELD : 12.66Kg  
NUT SIZE : 10.85g  
SHELLING PERCENT : 30.50



← **H-1600**  
FLOWERING : MIDDLE  
MEAN TREE YIELD : 11.87Kg  
NUT SIZE : 8.20g  
SHELLING PERCENT : 27.27



← **BLA-39-4.**  
FLOWERING: MIDDLE SEASON  
MEAN TREE YIELD : 14.7Kg  
NUT SIZE : 6.2g  
SHELLING PERCENT: 26.8



← **H-1593**  
FLOWERING : MIDDLE  
MEAN TREE YIELD : 12.14Kg  
NUT SIZE : 7.80g  
SHELLING PERCENT : 30.95



← **H-1602**  
FLOWERING : MIDDLE  
MEAN TREE YIELD : 14.13Kg  
NUT SIZE : 10.20g  
SHELLING PERCENT : 23.08



← **NDR-2-1.**  
FLOWERING : LATE, SHORT  
FLOWERING PHASE  
MEAN TREE YIELD : 17.1Kg  
NUT SIZE : 7.3g  
SHELLING PERCENT: 26.2



← **H-1596**  
FLOWERING : MIDDLE  
MEAN TREE YIELD : 12.95Kg  
NUT SIZE : 7.40g  
SHELLING PERCENT : 27.63



← **H-1608**  
FLOWERING : MIDDLE  
MEAN TREE YIELD : 17.49Kg  
NUT SIZE : 9.60g  
SHELLING PERCENT : 27.09



← **H-3-17**  
FLOWERING : MIDDLE  
MEAN TREE YIELD : 17.9Kg  
NUT SIZE : 5.7g  
SHELLING PERCENT : 26.3



← **H-1597**  
FLOWERING : MIDDLE  
MEAN TREE YIELD : 14.90Kg  
NUT SIZE : 7.10g  
SHELLING PERCENT: 31.58



← **H-1610**  
FLOWERING : MIDDLE  
MEAN TREE YIELD : 16.41Kg  
NUT SIZE : 9.20g  
SHELLING PERCENT: 26.09

# Foreword

Cashew is one of the most important commercial crops of our country that helps to earn considerable amount of foreign exchange through export of its kernels. During 1994-95, an amount of Rs. 1244 crores could be earned through export of cashew kernels.

At present, cashew production in India meets about 50 percent of the requirement of the country. It is absolutely essential to enhance the cashew production in the country. Popularisation of high yielding varieties and appropriate technologies among the farmers would enable to enhance cashew production in the country.

High yielding varieties of cashew have been released by the different State Agricultural Universities and the National Research Centre for Cashew, Puttur. However, information regarding the yield potential, apple colour, nut weight, kernel weight, shelling percentage, export grade, source of planting material, suitability to the region etc. of the varieties are essential for the farmers to choose from among them. The authors of this book have attempted to present the salient characters of the high yielding varieties of cashew and the other promising materials in the pipeline.

I am sure that this publication will be a very valuable reference material to the farmers, students, teachers, researchers, extension workers and the planters who are coming in a big way to boost cashew production in the country.

I congratulate the authors for bringing out this valuable publication and the Directorate of Cashewnut Development, Cochin, for coming forward to publish the same.

Dr. A.M. Michael  
Vice Chancellor  
Kerala Agricultural University  
Thrissur



## *Preface*

In the context of attained importance for cashew in the commercial scenario of our country, the part being played by it, is not the least. From a mere soil binding or an afforestating species, cashew has gained the status of a commercial horticultural crop, ranking first in the export earnings. Cashew continues to bring in considerable amount of foreign exchange to India. During the year 1994-95, a record foreign exchange earning to the tune of Rs. 1244 crores through the export of cashew kernels was possible. Apart from its commercial importance, as an industrial agro-based raw material, it plays a significant role adding to the continued motion of the industrial wheels in India. Being a crop, largely cultivated, nurtured and exploited by the small and marginal farming sector, for effective wasteland developments, it has a further impetus to add to the rural economy of our country as well.

Popularisation of cashew hitherto has remained with indiscriminate seedling progenies and it was mainly due to the non-availability of high yielding varieties. The dawn of the 8th plan has witnessed emergence of a good amount of high yielding varieties suited to different agro-climatic tracts of India. Such varieties are not only high yielders but also are with characters conforming to qualities, required for improving export performance. Popularisation of such high yielding varieties with appropriate production technologies among the farmers would therefore enable enhancement of cashew production to a greater extent. Such high yielding varieties have been released by different State Agricultural Universities and National Research Institutes like National Research Centre for Cashew, Puttur.



The authors in this compiled version of High Yielding Varieties of Cashew have made an attempt to bring about available information on the varietal features including production potential, yield parameters, commercial characteristics of nuts and kernels etc. of some of the high yielding varieties of cashew for large scale adoption of farmers of Kerala, Tamil Nadu in particular and for other regions in general. However, M 44/3(VRI-2) is a national variety which can be adopted for cultivation in all the traditional and non-traditional cashew growing tracts.

The cashew development programmes in the 8th Plan have attained a significant momentum because of the higher outlay of Rs. 48 crores obtained for the purpose. When viewed against the activities of the Directorate of Cashewnut Development to develop more and more new plantations, to replant or rejuvenate uneconomic and senile plantations and to adopt transfer of technology in a larger way, dissemination of knowledge on high yielding varieties of cashew is an appropriate attempt.

It is hoped that this publication will serve as a useful reference material for the researchers, students and as a guide to the farmers, extension workers and planters. The efforts of the Directorate of Cashewnut Development, Cochin to bring out this publication as intended, are gratefully acknowledged.

The authors are grateful to Dr. A. M. Michael, the Honourable Vice Chancellor, Kerala Agricultural University for his guidance and encouragements during the work.

**Dr. M. Abdul Salam**

**Dr. N. Mohanakumaran**

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*Kerala Agricultural University, Vellanikkara 680654, Thrissur, Kerala, India.*

*Cashew Research Station, Andhra Pradesh Agricultural University, Bapatla - 522 101, Andhra Pradesh.*

*All India Co-ordinated Research Project on Cashew. National Research Centre for Cashew (Indian Council of Agricultural Research), Puttur - 574 202, Dakshina Kannada*

*Regional Fruit Research Station, Konkan Krishi Vidya Peeth, Vengurla 416 516, Sindhudurg District, Maharashtra.*

*Regional Research Station, Tamil Nadu Agricultural University, Vridhachalam 606 001, Tamil Nadu.*

*The Kerala Agricultural University and we in personal capacity are highly indebted to Shri. P. P. Balasubramanian, Director, Directorate of Cashewnut Development for publishing this Bulletin as a part of their activity towards publicity on promotion of Cashew.*

**Dr. M. Abdul Salam**

**Dr. N. Mohana Kumaran**

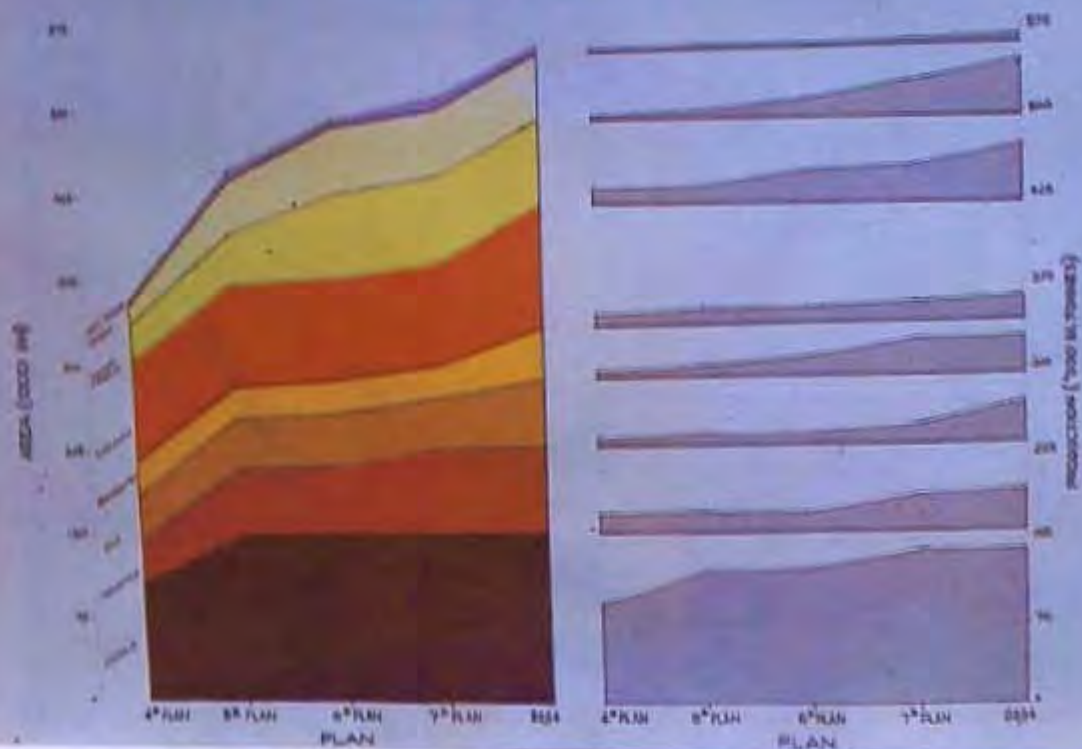


## GENERAL INFORMATION ABOUT CASHEW

Common Name	Cashew
Scientific Name	<i>Anacardium occidentale L.</i>
Family	Anacardiaceae
Origin	Brazil
Yielding behaviour	Flowers and fruits once in a year
Major cashew growing countries	India, Brazil, Australia, Benin, Costa Rica, El Salvador, Guatemala, Honduras, Indonesia, Ivory Coast, Kenya, Madagascar, Malaysia, Mozambique, Nigeria, Panama, Philippines, Sri Lanka, Tanzania, Thailand, Togo, Venezuela & Vietnam.
Major Cashew growing States in India	Kerala, Karnataka, Andhra Pradesh, Tamil Nadu, Goa, Maharashtra, Orissa, & West Bengal
Area in India (1994-95)	5.77 lakh hectares
Production in India (94-95)	3.22 lakh tonnes
Average productivity in India	631 kg/ha
State with maximum area & production :	Kerala
State with highest productivity	Maharashtra (1100 kg/ha)
Export earnings during 94-95	Rs. 1244 crores



**PLAN WISE AREA & PRODUCTION OF CASHEW IN MAJOR STATES.**



### Area, Production and Productivity of Cashewnut in India (1994-95)

Area in '000 ha  
Production in '000 MT  
Productivity Kg/ha

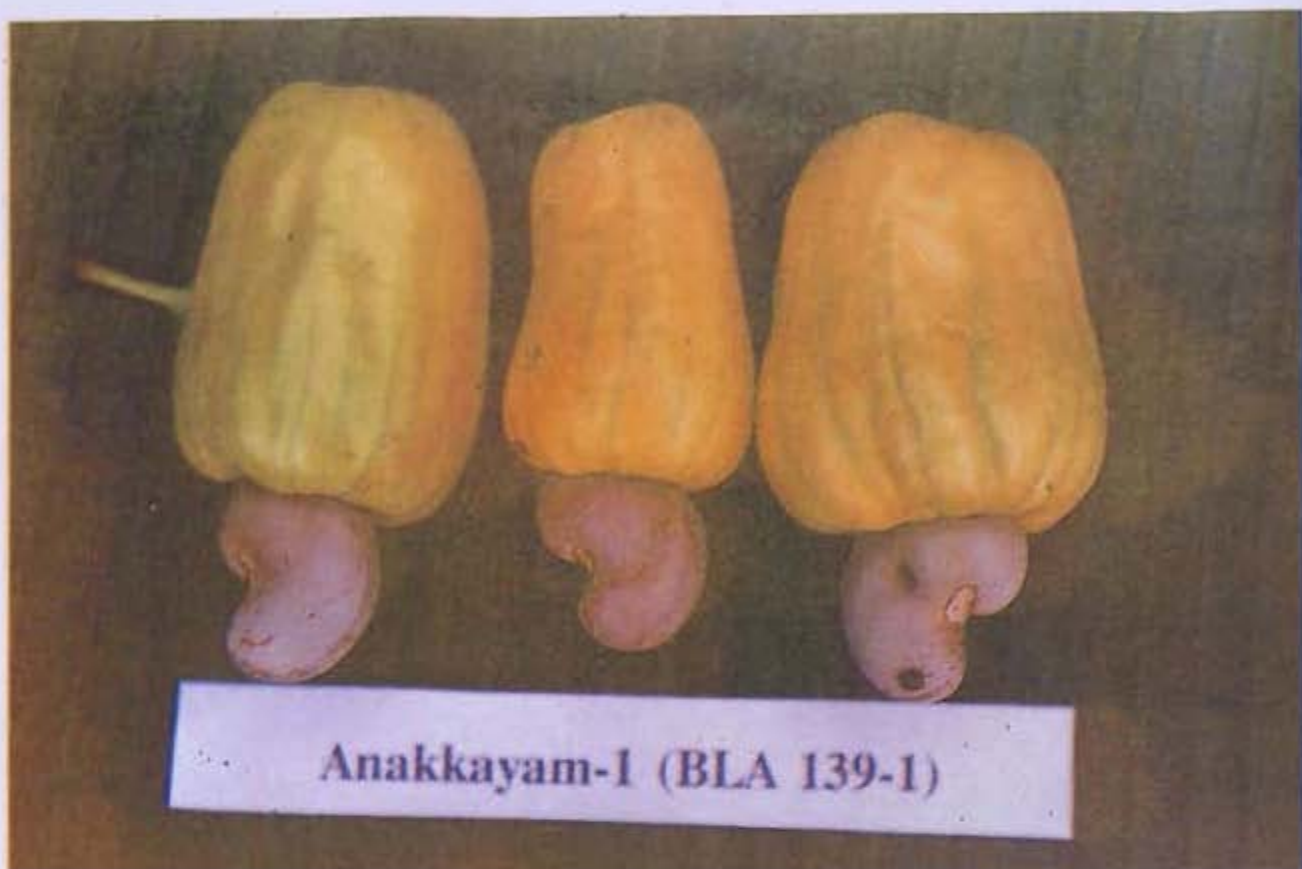
State	Area	Production	Productivity
Kerala	156.20	119.20	781
Karnataka	75.30	26.40	400
Goa	47.50	29.60	671
Maharashtra	58.20	25.00	1100
Tamil Nadu	97.20	22.00	232
Andhra Pradesh	73.30	58.70	880
Orissa	60.60	37.20	679
West Bengal	7.00	3.30	490
Other States	1.90	0.30	250
Total	577.20	321.70	631

Source : Directorate of Cashewnut Development, Cochin-16.

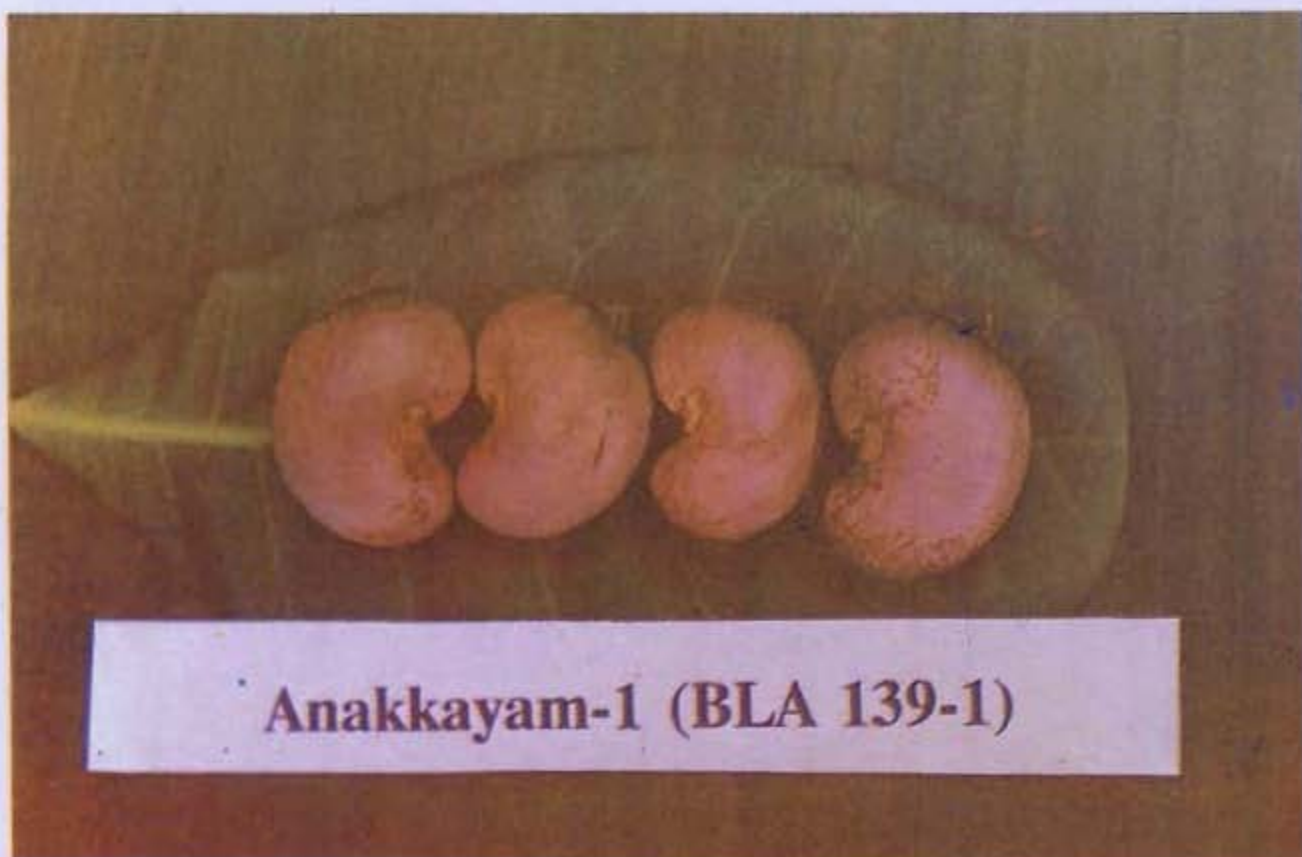


**VARJETAL**  
**DESCRIPTION**





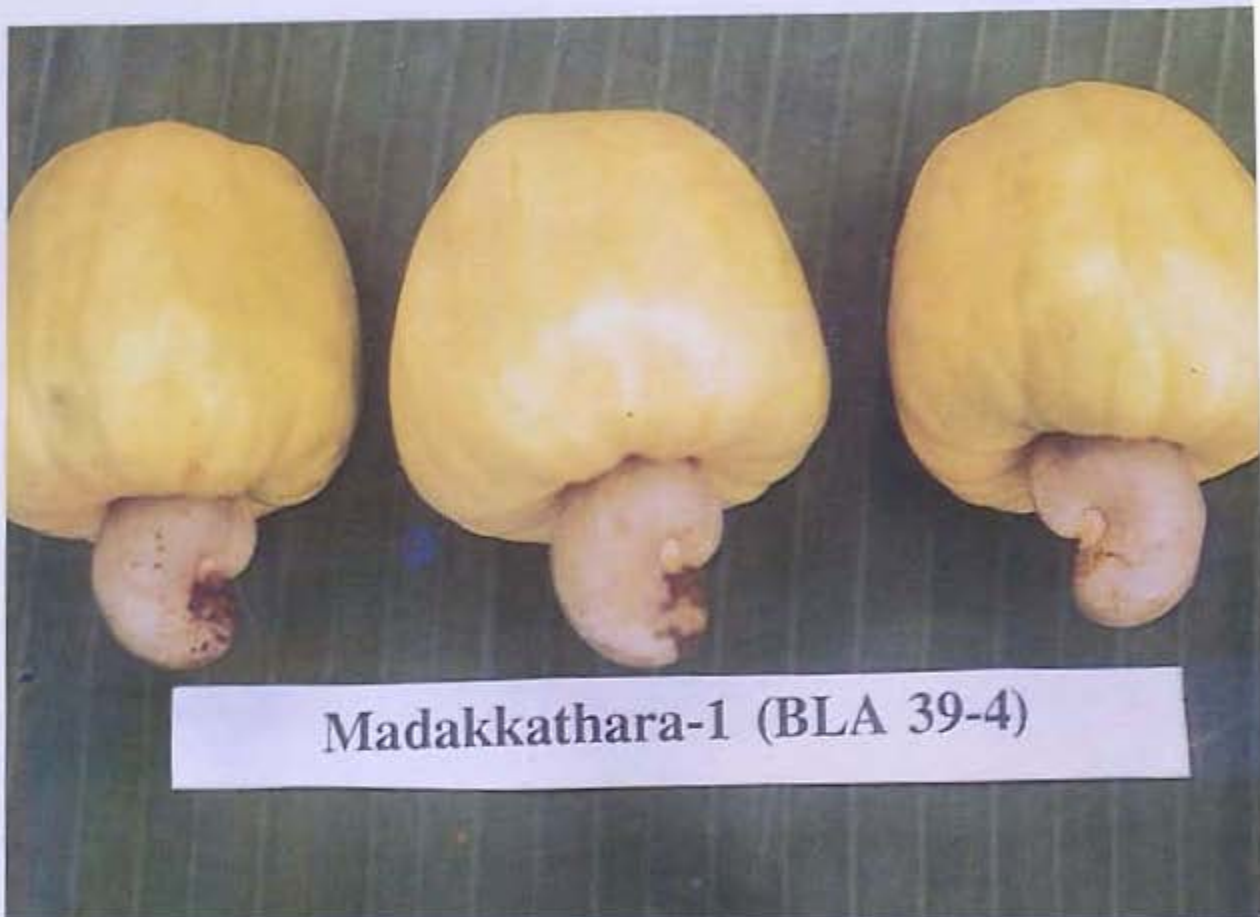
Anakkayam-1 (BLA 139-1)



Anakkayam-1 (BLA 139-1)

Name of variety	Anakkayam-1 (BLA-139-1)
Apple colour	: Pinkish Yellow
Nut weight	5.95 g
Kernel weight	1.67g
Shelling percentage	27.99
Export grade	: W 280
Mean nut yield per tree	12.0 Kg
Source of planting material	Cashew Research Station Kerala Agricultural University Madakkathara - 680656, Thrissur  and  Cashew Research Station Kerala Agricultural University Anakkayam, Malappuram Dt.
Recommended regions for cultivation	: Kerala, Manipur, Tripura and Andaman & Nicobar Islands.
Recognition	: Kerala Agricultural University

*N.B: The nut size of the variety is found to be small and hence not recommended for large scale adoption, as per the recommendation of National Workshop on Cashew of 1987.*



**Madakkathara-1 (BLA 39-4)**

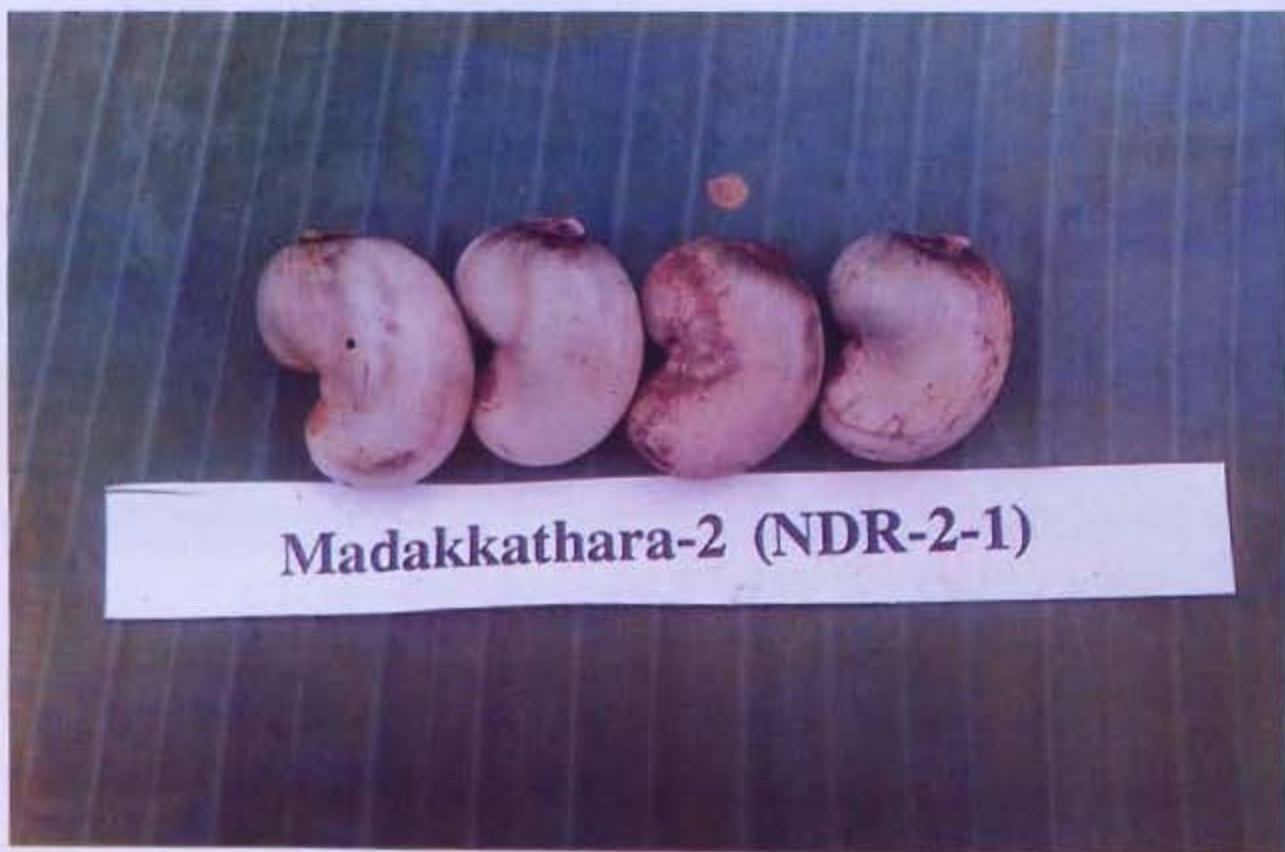


**Madakkathara-1 (BLA 39-4)**

Name of variety	Madakkathara-1 (BLA-39-4)
Apple colour	Yellow
Nut weight	: 6.2 g
Kernel weight	1.64 g
Shelling percentage	: 26.8
Export grade	: W 280
Mean nut yield per tree	13.8 Kg
Source of planting material	: Cashew Research Station Kerala Agricultural University Madakkathara - 680656, Thrissur  and  Cashew Research Station, Kerala Agricultural University Anakkayam, Malappuram Dt.
Recommended regions for cultivation	: Kerala, West Bengal, Manipur and Andaman & Nicobar Islands.
Recognition	: National Workshop on Cashew 1987



**Madakkathara-2 (NDR-2-1)**



**Madakkathara-2 (NDR-2-1)**

<b>Name of variety</b>	<b>: Madakkathara-2 (NDR-2-1)</b>
Apple colour	: Red
Nut weight	: 6.0 g
Kernel weight	: 2.80 g
Shelling percentage	: 28
Export grade	: W 210
Mean nut yield per tree	: 17.0 Kg
Source of planting material	: Cashew Research Station, Kerala Agricultural University Madakkathara - 680656, Thrissur  and  Cashew Research Station Kerala Agricultural University Anakkayam, Malappuram Dt.
Recommended regions for cultivation:	Kerala
Recognition	: National Workshop on Cashew 1987



<b>Name of variety</b>	<b>: K-22-1</b>
Apple colour	: Red
Nut weight	: 6.20 g
Kernel weight	: 1.60 g
Shelling percentage	: 23
Export grade	: W 280
Mean nut yield per tree	: 13.2 Kg
Source of planting material	: Cashew Research Station Kerala Agricultural University Madakkathara - 680656, Thrissur  and  Cashew Research Station, Kerala Agricultural University Anakkayam, Malappuram Dt.
Recommended regions for cultivation:	Kerala
Recognition	: National Workshop on Cashew 1987





<b>Name of variety</b>	<b>: Kanaka (H-1598)</b>
Apple colour	Yellow
Nut weight	6.80 g
Kernel weight	2.08 g
Shelling percentage	30.58
Export grade	: W 280
Mean nut yield per tree	12.8 Kg
Source of planting material	Cashew Research Station Kerala Agricultural University Madakkathara - 680656, Thrissur  and  Cashew Research Station Kerala Agricultural University Anakkayam, Malppuram Dt.
Recommended regions for cultivation	Kerala
Recognition	: State Variety Release Committee

*N. B: The nut size of the variety is found to be small and hence not recommended for large scale adoption as per the recommendation of National Workshop on Cashew of 1993.*



**Dhana (H-1608)**



**Dhana (H-1608)**

<b>Name of variety</b>	: <b>Dhana (H-1608)</b>
Apple colour	: Yellow
Nut weight	: 9.6 g
Kernel weight	: 2.22 g
Shelling percentage	: 27.08
Export grade	: W 210
Mean nut yield per tree	: 10.66 Kg
Source of planting material	: Cashew Research Station, Kerala Agricultural University Madakkathara - 680656, Thrissur  and  Cashew Research Station, Kerala Agricultural University Anakkayam, Malappuram Dt.
Recommended regions for cultivation	: Kerala
Recognition	: National Workshop on Cashew 1993



<b>Name of variety</b>	<b>: H-3-17</b>
Apple colour	Yellow
Nut weight	5.70 g
Kernel weight	1.50 g
Shelling percentage	26.2
Export grade	W 320
Mean nut yield per tree	17.9 Kg.
Source of planting material	Cashew Research Station Kerala Agricultural University Madakkathara - 680656, Thrissur  and  Cashew Research Station Kerala Agricultural University Anakkayam, Malappuram Dt.
Recommended regions for cultivation	Kerala
Recognition	: State Variety Release Committee

*N.B: The nut size of the variety is found to be small and hence not recommended for large scale adoption as per the recommendation of National Workshop on Cashew of 1987.*



Name of variety	: Priyanka (H-1591)
Apple colour	: Yellowish Red
Nut weight	: 10.80 g
Kernel weight	: 2.867 g
Shelling percentage	: 26.54
Export grade	: W 180
Mean nut yield per tree	: 16.90 Kg
Source of planting material	: Cashew Research Station Kerala Agricultural University Madakkathara-680656, Thrissur
Recommended regions for cultivation	: Kerala
Recognition	: National Workshop on Cashew 1995





**VRI-1**



**VRI-1**

<b>Name of variety</b>	: <b>Vridhachalam-I (M.10/4)</b>
Apple colour	: Yellow
Nut weight	: 5.00 g
Kernel weight	1.40 g
Shelling percentage	: 28
Export grade	: W 320
Mean nut yield per tree	: 7.12 Kg
Source of planting material	: Regional Research Station, Tamil Nadu Agricultural University Vridhachalam - 606 001 Tamil Nadu
Recommended regions for cultivation	: Tamil Nadu
Recognition	: Tamil Nadu Agricultural University 1981



Name of variety	: Vridhachalam -2 (M.44/3)
Apple colour	: Pinkish Yellow
Nut weight	: 5.12 g
Kernel weight	1.45 g
Shelling percentage	: 28.5
Export grade	: W 320
Mean nut yield per tree	: 6.00 Kg
Source of planting material	Regional Research Station Tamil Nadu Agricultural University Vridhachalam - 606 001 Tamil Nadu
Recommended regions for cultivation	: National variety for cultivation in all the traditional cashew growing tracts.
Recognition	: National Workshop on Cashew 1983



<b>Name of variety</b>	<b>: Vridhachalam-3 (M.26/2)</b>
Apple colour	: Pink
Nut weight	: 7.18 g
Kernel weight	: 2.16 g
Shelling percentage	: 29.1
Export grade	: W 210
Mean nut yield per tree	: 14.19 Kg
Source of planting material	: Regional Research Station Tamil Nadu Agricultural University Vridhachalam - 606 001, Tamil Nadu
Recommended regions for cultivation	: Tamil Nadu
Recognition	: National Workshop on Cashew 1993



**PROMISING HYBRIDS  
IN PIPELINE**





<b>Name of variety</b>	<b>: H-1597</b>
Apple colour	Yellow
Nut weight	7.10 g
Kernel weight	2.24 g
Shelling percentage	31.58
Export grade	W 210
Mean nut yield per tree	17.6 kg
Source of planting material	Cashew Research Station Kerala Agricultural University Madakkathara - 680656, Thrissur
Recommended regions for cultivation	Kerala



Name of variety	H-1600
Apple colour	Red
Nut weight	8.2 g
Kernel weight	2.00 g
Shelling percentage	27.27
Export grade	W 240
Mean nut yield per tree	13.48 kg
Source of planting material	Cashew Research Station, Kerala Agricultural University Madakkathara - 680656, Thrissur
Recommended regions for cultivation	Kerala



Name of variety	H-1610
Apple colour	Yellow
Nut weight	9.20 g
Kernel weight	2.25 g
Shelling percentage	26.09
Export grade	W 210
Mean nut yield per tree	10.62 kg
Source of planting material	Cashew Research Station Kerala Agricultural University Madakkathara - 680656, Thrissur
Recommended regions for cultivation	Kerala

