

ICAR-DCR Technologies for Commercialization



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ICAR-DIRECTORATE OF CASHEW RESEARCH
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Signing of license agreement with M/s. Yashaswi Nursey, Kemminje, Puttur for commercialization of Cashew hybrid : H126 (Nethra Jumbo-1).



Signing of license agreement with Chandrashekhar Nayak, Pravin Nayak and Narayan Roop Singh Lamani, Brahmanandapuram (Beladhadi) Gadag for commercialization of Cashew apple fruit bar, Cashew apple jam and Cashew apple pomace powder cookies

Cashew Research and IP Management



Cashew (*Anacardium occidentale* L.) is a tree nut crop introduced from Brazil to India by the Portuguese in the 16th Century. Over the years, cashew became a crop with high economic value and is earning a considerable foreign exchange for the country as a result of systematic cultivation and research. National Research Centre on cashew (NRCC) was established in the year 1986 to carryout research on cashew crop improvement, production, protection and processing. NRCC was upgraded into Directorate of Cashew Research (DCR) in 2009. As result of a number research projects carried out over the years the institute has come up with a number of technologies such as cashew varieties/hybrids, processing machineries, crop production and protection techniques and cashew apple based products.

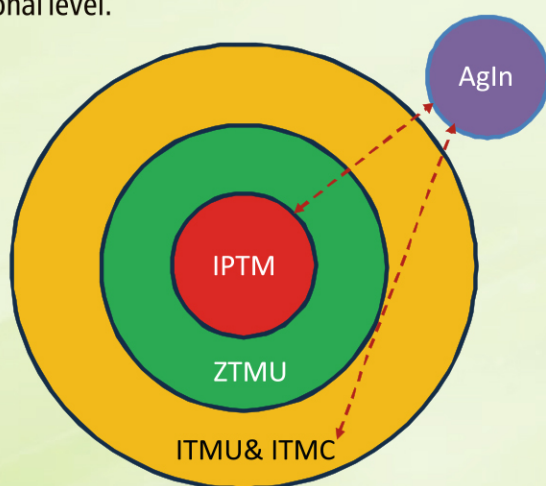
ICAR-DCR is now transferring the technologies which are suitable for commercialization to private enterprisers and startups through the intellectual property and technology management mechanism so that the benefits of these technologies reach the consumers and also motivates inventors and wider public interest. Besides it fosters a public private partnership. Among the technologies, H-130 a high yielding bold nut cashew hybrid helps to increase productivity of cashew nuts. Cashew apple based technologies enable utilization of crop produce (which otherwise goes waste) will give additional income to the farmers, and cashew nut processing related technologies will strengthen the processing industry. Thus, these technologies are beneficial to cashew farmers, rural women, youth and cashew.

Mechanism of Commercialization of ICAR Technologies

Intellectual Property & Technology Management (IP&TM)

Intellectual Property Rights (IPRs) have become an integral part of research management in R&D institutions. Keeping it in mind, ICAR has institutionalized a three-tier IP management mechanism and framed guidelines for management IPs and commercialization of technologies developed by the research institutes of ICAR. The intellectual Property and technology Management (IP&TM) Unit is at the helm of the three-tier system which manages all the matters related to intellectual properties and technology commercialization.

Every institute of ICAR is empowered to take up license contracts or commercial agreements with potential clients for the commercial transfer of its technologies. To meet this objective each institute is institutionalized with an Institute Technology Management Unit (ITMU) which acts as a facilitating and supporting unit. Further to support the ITMU in recognition of technologies for commercialization and IP management an Institute Technology Management Committee (ITMC) is constituted at each institute. Between the IPTM and ITMU, a middle-tier Zonal Technology Management (ZTM) unit consisting of 10 subject specific ITMU units is instituted to support the ITMU units under it in the matters related to the IP management and technology commercialization. At ICAR-DCR, ITMU shoulders the responsibility of commercialization of technologies developed by ICAR-DCR, Puttur. In addition, AgIn (Agrinnovate India Limited) company owned by DARE, Mo. Agriculture & Farmer's Welfare, which promotes the spread of Research & Development outcomes of ICAR through IPR protection & commercialization at national and international level.



Three tier IP Management system of ICAR.

Objectives of Institute Technology Management Unit (ITMU)

- To identify the commercialize-able technologies developed in the institute
- To manage the IP portfolios of the institute: Patenting of technologies, copyright, Trademark and varietal registration etc.



Technology recognition and commercialization process:

- Step 1 Identification of Technologies with potential of commercialization**
- The technologies developed by scientists working on different aspects of cashew production and processing at ICAR-DCR, Puttur through research projects are presented in the Research Advisory Committee (RAC) and Institute Research Council (IRC) meetings of the Institute. Among the presented technologies, the ones suitable for commercialization are identified by the ITMU and inventor is informed to submit the Technology Disclosure Form (TDF) to ITMU.
- Step 2 Technology Disclosure**
- Inventors submit the TDF form giving detailed information about technology including protocol, cost of the technology, suitability for parenting, business plan etc.
- Step 3 Assessment and recognition (ITMU & ITMC)**
- ITMU does the prior art search about the technology details for duplication or availability of similar products and potential market etc. After the prior art search, the TDF is put before the ITMC for assessment and recognition of technology. If the technology is found suitable for commercialization, the ITMC recognizes the technology for commercialization or return the TDF if further improvements are required or reject if it cannot be commercialized.
- Step 4 Identifying potential licensees and licensing**
- ITMC and inventors decide about the licensing terms. The ITMU unit identifies and invites the potential licensees and showcases the technologies with the help of the inventors. Upon acceptance of technologies by the potential licensees a Memorandum of Understanding (MoU) is signed between the licensee and Institute.
- Step 5 Licensing**
- After MoU, details and demonstration of the technology will be given to licensee. License terminates after a specified time and the technology can be relicensed.



Technology Commercialization



Institute Technology Management Committee (ITMC) meeting for recognition of technologies and discussing IPR related issues.

Commercialization is process of introducing new products or services in the market to get commercially viable value. The major objective of the commercialization of IPR is to bring IPs into the market and make it marketable and profitable in nature

Types of IPR Commercialization

1. Commercialization by the owner
2. Commercialization by assignments/licensing

Types of Licensing

1. Exclusive licensing: License is given to only one individual or firm
2. Non-exclusive licensing: License is given to more than one firm

ICAR follows mainly the non-exclusive licensing.

Technologies developed by ICAR-Directorate of Cashew Research (DCR)

Currently, 18 technologies developed by scientists of ICAR-DCR have been recognized for commercialization which can be classified into the following three main categories.

- A. Cashew planting material: High yielding varieties and hybrids
- B. Cashew apple based products
- C. Processing machineries: Small scale / cottage processing machineries
- D. Cashew DNA Fingerprinting

Licensing terms for ICAR-DCR technologies

1. Plant material-Provide grafts for establishing mother blocks in the nurseries
2. Food products-Provide the detailed protocol and demonstration of the technology
3. Machineries-Provide the engineering drawings and demonstrate working of the Machine
4. DNA Fingerprinting-Cashew genotype's DNA fingerprinting is provided

Duration of licensing: 3-10 years depending on the nature of the technologies



Main Features of ICAR-DCR Technologies & Licensing

Cashew is a perennial crop having 20-25 years commercial production period. Hence quality of planting material (variety/hybrid) plays a great role in getting high productivity and make cashew cultivation profitable. ICAR-DCR, Puttur has developed cashew varieties and hybrids producing high nut yield, dual type (Good apple quality) and dwarf types suitable for Ultra High Density Planting (UHDP) system.

A. Cashew varieties/hybrids

1. Nethra Ganga (H-130): a new jumbo Cashew hybrid

- H-130 is a new high yielding, bold nut cashew hybrid developed and released from ICAR- Directorate of Cashew Research, Puttur
- It is highly precocious i.e., early bearing
- This cashew hybrid has both bold nut and cluster bearing character
- The tree bears bold nuts (10-14 g) and big size yellow colour apples (75-120G). The shelling percentage is 29.5% and kernel grade is W180
- Responds well to the pruning and can be used in High Density Planting (HDP)

Bearing Tree of Nethra Ganga



Kernels of Nethra Ganga



Nut and Fruit Bunches



Tenure of License: Ten years from the day of signing the licensing agreement

Potential Licensees: Nursery owners and people interested in starting Cashew Nursery



2. Nethra Jumbo-1 (H-126): a new jumbo Cashew hybrid

- H-126 is a new high yielding, jumbo nut cashew hybrid developed and released from ICAR-Directorate of Cashew Research, Puttur
- The hybrid, H-126 has a special character of jumbo nut (nut weight of 12g and above), with a shelling percentage of 29.1 and kernel weight of 3.4 g which fits into kernel grade bigger than W180.
- Because of the jumbo nuts, apart from saving labour on picking, this hybrid can ensure about 15% higher price for the farmers due to higher nut size.
- The hybrid also recorded an apple weight of 102g with a juice content of 72% with a TSS of 13 brix °C. The bigger size of apple coupled with high juice content and TSS can make this hybrid suitable for apple utilization also.

**Flowers of
Nethra Jumbo-1**



**Kernels of
Nethra Jumbo-1**



**Developed
Nut bunches**



**Nut and Fruit
Bunches**

Tenure of License: Ten years from the day of signing the licensing agreement

Potential Licensees: Nursery owners and people interested in starting Cashew Nursery



3. Nethra Vaman: a new dwarf Cashew variety

- Nethra Vaman is a dwarf genotype, it attains around 2.5m height and around 6m spread in 10 years and this is the first dwarf variety released from ICAR-Directorate of Cashew Research, Puttur
- The variety is having slow growth habit, precocious bearing, moderate yielding, prolonged bearing period (4-5 months).
- Suitable for High and Ultra high Density planting with minimum pruning and trimming.
- Nethra Vaman is also amenable for homestead cultivation.

Bearing Tree of Nethra Vaman



Nethra Vaman Nuts



Developed Nut bunches



Nut and Fruit Bunches

Tenure of License: Ten years from the day of signing the licensing agreement

Potential Licensees: Nursery owners and people interested in starting Cashew Nursery

4. Nethra Ubhaya: a dual purpose cashew variety

- Nethra Ubhay is a dual type with desirable nuts and apples developed and released from ICAR Directorate of Cashew Research, Puttur.
- It is early fruiting (Jan-March).
- This cashew variety has moderate nut size and kernels weigh 2.44g in an average.
- This tree bears average nuts (7-8g) and big cashew apple in yellow red color (81.24g).
- The shelling percentage is very high (34.66%) and kernel grade is W 210.
- It has very good kernel recovery (29.51%) and high juice recovery (75.6%)
- It has less tannin in cashew apple (3.43mg/100g) and peeling of testa is very easy.

**Nethra Ubhaya
Plant**



**Cashew
Kernels**



**Cashew Apple
with Nut**



Tenure of License: Ten years from the day of signing the licensing agreement

Potential Licensees: Nursery owners and people interested in starting Cashew Nursery

B. Cashew Apple Based Products

Cashew apple is a juicy fruit that can be an additional profit earning source for cashew farmers. But due to lack of suitable technologies in handling cashew apple during harvest and post-harvest management about 4-6 tons of cashew apple per hectare goes waste without utilization. These cashew apples are rich source of vitamin-C which has an anti-scurvy effect and also possess anti-bacterial properties.

In spite of having high nutritional value, neither the fresh cashew apples nor the juice is consumed due to astringency. ICAR-Directorate of Cashew Research has developed several cashew apple technologies which are free from astringency and helpful to get additional income to cashew farmers and create employment opportunities in cashew nut growing areas of the country.

5. Cashew apple RTS (Cashlime): Unfermented beverage

Cashlime is a cashew apple and lemon juice blend RTS/Nectar prepared using cashew apple juice. This nutrient rich drink can be stored under refrigerated conditions for five months with retention of nutrients and biochemical quality.

Tenure of License: Three years from the day of signing licensing agreement

Potential Licensees: Self-help groups (women), rural youths, small scale food processing



6. Cashew apple Cider: Fermented beverage



Cashew apple cider is a fermented beverage with alcohol content of 3.5-6.0%. Traditional cashew apple fermented beverage i.e. Feni has alcohol content of 42% which may have adverse effect on health. Whereas mild alcohol containing cashew apple cider can have beneficial effects.

Tenure of License: Three years from the day of signing the licensing agreement

Potential Licensees: Self-help groups (women), rural youths, small scale food processing industries etc.

7. Cashew apple Jam

Cashew apple jam is an antioxidant rich functional food. ICAR-Directorate of Cashew Research has standardized a protocol for astringency free cashew apple jam, which could be stored for 6

Tenure of License: Three years from the day of signing the licensing agreement

Potential Licensees: Self-help groups (women), rural youths, small scale food processing industries etc.



8. Cashew apple Jelly

Cashew apple jelly is an attractive semisolid product of cashew apple juice and sugar. Jelly making is a good way to preserve fruit flavors throughout the year which is enjoyed by all. It is also an easy-to-prepare product without much special equipment.

Tenure of License: Three years from the day of signing the licensing agreement

Potential Licensees: Self-help groups (women), rural youths, small scale food processing industries etc.



9. Cashew apple Crisp



Cashew apple crisp is an important extruded product prepared out of cashew apple pomace powder. This is similar to crispy snacks available in the market but enriched with natural fibers, proteins and bio minerals which are beneficial to the human health. The methodology for preparation of cashew apple pomace powder has been standardized by ICAR-DCR, Puttur. Converting the perishable cashew apple pomace to powder form helps in storing the raw material for diversified uses during off season.

Tenure of License: Three years from the day of signing the licensing agreement

Potential Licensees: Self-help groups (women), rural youths, small scale food processing industries etc.

10. Cashew apple Fruit Bar:

Fruit bar also known as fruit leather or fruit roll are the dried bars or sheets of fruit pulp that have soft rubbery texture and sweet taste. It is considered as a confectionery product with longer shelf life and consumed readily. It is chewy and flavorful and naturally low in fat and high in fiber and carbohydrates. It is also light in weight and can be easily packed and stored. The cashew apple fruit bars are rich in total phenols and total antioxidant. The total ash content is higher. The total carotenoids content is 0.25 mg and protein content is 2.27%.

Tenure of License: Three years from the day of signing the licensing agreement

Potential Licensees: Self-help groups (women), rural youths, small scale food processing industries etc.



11. Cashew apple pomace powder cookies:

Most of the commercially available cookies are prepared from refined flour (maida) which is considered not good from health perspective. Cashew apple pomace based cookies are rich in nutrients prepared from cashew apple pomace after extraction of juice & without adding any maida. The Cashew apple Pomace Powder cookies consists of crude proteins (6.84%), crude fats (13.3%), ashes (92.30%) and higher fibre (6.33%) contents in it

Tenure of License:

Three years from the day of signing the licensing agreement

Potential Licensees:

Self-help groups (women), rural youths, small scale food processing industries etc.



C. Cashew nut Processing Machineries

ICAR-Directorate of Cashew Research has developed several cashew nut processing machinery technologies suitable for small scale processing. Two of these technologies are patent protected. In these machineries emphasis is given on improving efficiency and quality of cashew nut and cashew apple processing.

12. Dual mode dryer for raw cashew nuts

Raw cashew nuts are normally dried under the sun light after harvest to reduce the moisture content to 8% which is safe for storage. Early onset of monsoon in Southern states and coincidence of rains and cashew nut harvest in North-Eastern hills of India will affect the quality of raw cashew nuts, thus fetching a low price in the market. Therefore, it was envisaged to develop a dual mode dryer for raw cashew nuts which can be operated by either electricity or biomass such as cashew shell cake (CSC), wood etc. This dryer can also be used for drying of any farm commodities such as Spices, Arecanut etc.

Tenure of License: Five years from the day of signing the licensing agreement

Potential Licensees: Machine manufacturing units



13. Radial Arm type Cashew Kernel Extracting Machine (Patent No.272371)

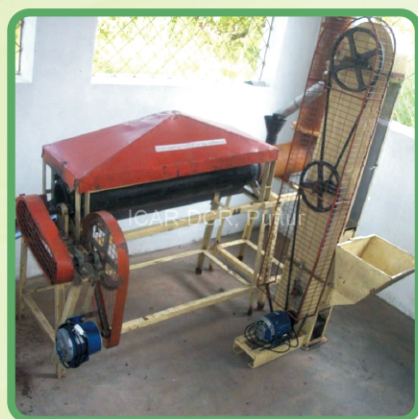
In this kernel extractor, single operation enables splitting of steam boiled cashew nuts. This machine is operated in sitting posture, which reduces strain faced by laborer during shelling of raw cashew nut. This increases work efficiency and production rate. This technology is suitable for small scale cashew nut processing units.

Tenure of License: Five years from the day of signing the licensing agreement

Potential Licensees: Machine manufacturing units



14. Rotating drum roasting machine for raw cashew nuts (Patent No.359214)



Kernels obtained by drum roasting mode of processing gives a unique taste and flavour which is preferred over the steam boiled processed kernels. Traditional drum roasting of raw cashew nuts is being followed in certain parts of Andhra Pradesh, Tamil Nadu, Kerala and North Eastern states. However, these traditional methods are labour oriented where continuous attention of labour is needed for feeding the nuts, rotating the drum, regulating the fire below the drum and to remove the roasted cashew nuts from drum. These activities are performed automatically by rotating drum roasting

machine developed by ICAR-DCR, which reduces cost of processing. Another important feature of this machine is that the chimney is designed to reduce the release of smoke generated during roasting process

Tenure of License: Five years from the day of signing the licensing agreement

Potential Licensees: Machine manufacturing units

15. Concentric drum type rotary sieve grader for raw cashew nuts



In the raw cashew nut processing, the cashew nuts are graded based on size before processing because it increases the efficiency of shelling, peeling and grading processes. It can overcome problem of labour scarcity. Four different sizes of nuts can be segregated using this ICAR-DCR developed machine. This technology is suitable for medium to large scale cashew nut processing units.

Tenure of License: Five years from the day of signing the licensing agreement

Potential Licensees: Machine manufacturing units

16. Hydraulic type cashew apple juice extractor

Extraction of juice is essential in the cashew apple based beverage preparation such as RTS and Cider. Therefore to extract clear juice from cashew apple, a hydraulic juice extractor was developed with this juice extractor about 80-85% of juice can be extracted in the first pass and about 60-65% of the residual juice is extracted in the second pass. This technology is suitable for cashew apple processing units.

Tenure of License: Five years from the day of signing the licensing agreement

Potential Licensees: Machine manufacturing units



17. Updraft gasifiers for cashew shell cake

Cashew shell cake is a byproduct of cashew nut processing industry. Currently, large quantity of Cashew shell cake is utilized for energy generation by burning which cause extensive pollution due to inefficient combustion. The gasification of biomass such as cashew shell cake into fuel can enhance its potential as an



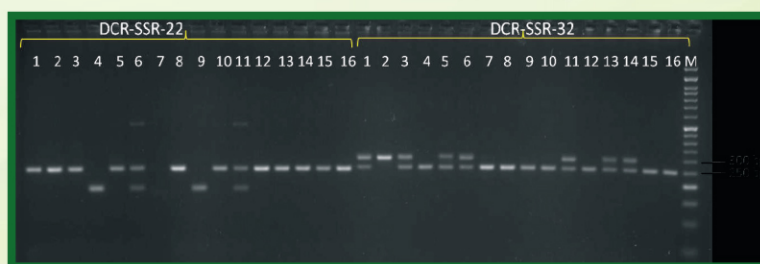
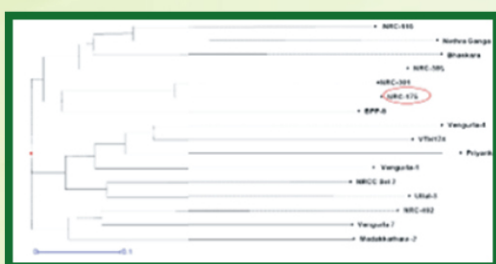
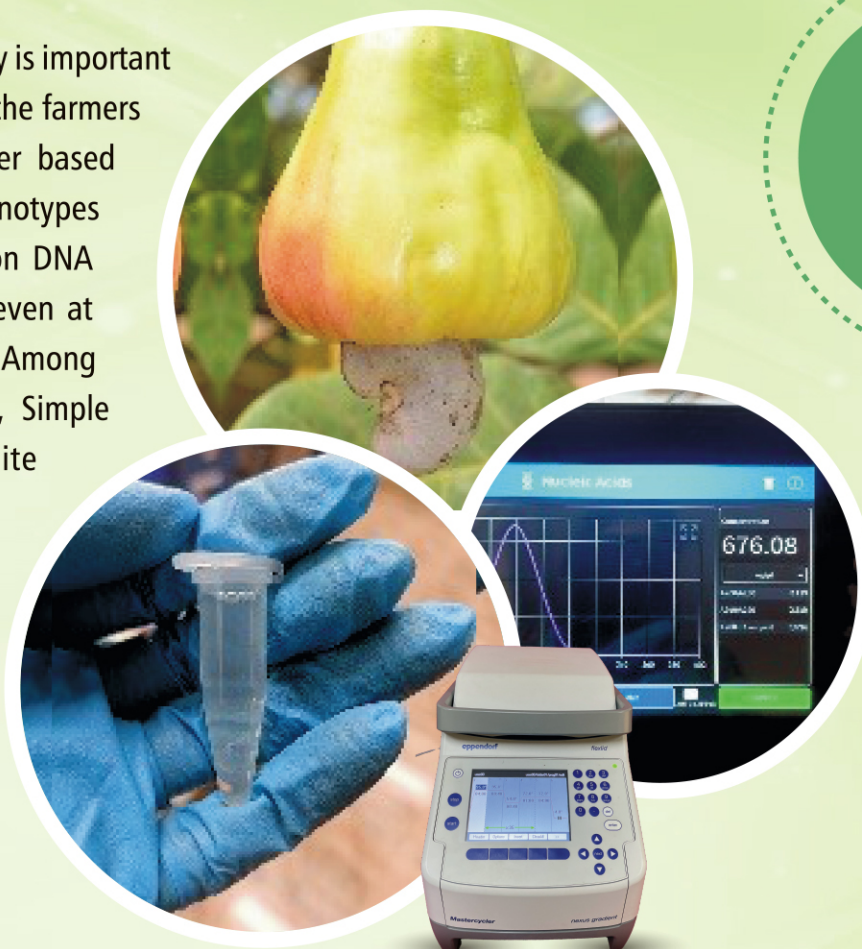
energy resource. This is a bioenergy technology which can be used in all thermal applications viz. cooking purpose in home and hotels, cashew processing and other industrial applications.

Tenure of License: Five years from the day of signing the licensing agreement

Potential Licensees: Machine manufacturing units

D. DNA Fingerprinting

Maintaining genetic purity of cashew variety is important for providing quality planting materials to the farmers and for future breeding. Molecular marker based fingerprinting allow differentiation of genotypes without ambiguity. Fingerprinting based on DNA markers allows identification of varieties even at early stages of growth i.e., Nursery stage. Among the various molecular marker techniques, Simple Sequence Repeats (SSR) or microsatellite markers have been found to be choice of markers for fingerprinting at lower costs. At ICAR-DCR, Puttur, DNA fingerprinting technology for Cashew based on SSR markers has been developed. This is utilized for fingerprinting of newly developed varieties / hybrids as part of DUS characterization or in case of any dispute resolution.



References

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2. IP&TM, ICAR: <https://icar.org.in/node/131>
3. Preethi, P., Raj Kumar, A.D., Shamsudheen, M. and Nayak, M.G., 2019. Prospects of Cashew Apple -A Compilation Report, Technical Bulletin No. 2/2019. ICAR-Directorate of Cashew Research, Puttur, Karnataka, India, pp. 28.
4. Savadi, S., Muralidhara, B. M., Venkataravanappa, V. and Adiga, J. D., 2023. Genome-wide survey and characterization of microsatellites in cashew and design of a web-based microsatellite database: CMDB. *Frontiers in Plant Science*, 14, p.1242025.



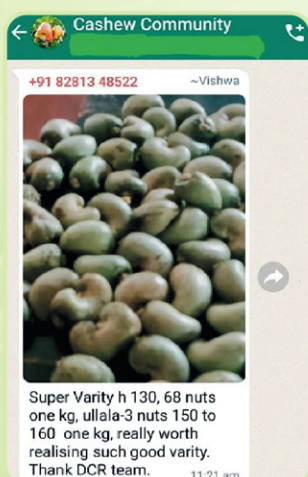
List of firms and licensed technologies of ICAR-DCR, Puttur

Name and Address of Firm	Licensed Technology
M/s Pro B Products, #342B, 4th Phase, 9th Cross, Peenya Industrial Area, Bangalore 560 058 +91-90360 17129 marketing@probproducts.com	<ol style="list-style-type: none"> 1. Radial arm type cashew kernel extracting machine (Patent no.272371) 2. Dual mode dryer for raw cashew nuts 3. Rotating drum roasting machine for Raw cashew nuts (Patent no.3843/CHE/2013) 4. Concentric drum type rotary sieve grader for raw cashew nuts 5. Hydraulic type cashew apple juice extractor 6. Updraft gasifier for cashew shell cake
M/s Newtech Industries, D116, Industrial Estate, Baikampady, Mangalore, Karnataka 575 011 +91-98449 49338 sales@newtechindustries.net	<ol style="list-style-type: none"> 1. Dual mode dryer for raw cashew nuts
M/s Rotex Transmission, Kaaju house, Behind Mahanand dairy, Near Katraj Bhilarewadi, Pune, Maharashtra 411 046 +91-98500 39447 Rotexglobal@gmail.com	<ol style="list-style-type: none"> 1. Radial arm type cashew kernel extracting machine (Patent no.272371) 2. Rotating drum roasting machine for raw cashew nuts (Patent no.3843/CHE/2013) 3. Concentric drum type rotary sieve grader for raw cashew nuts 4. Hydraulic type cashew apple juice extractor 5. Updraft gassifier for cashew shell cake
M/s Taimim Foods, SF/2263, Cariamoddi, Curchorem, Goa- 403 706 +91-90755 24604 taimimgoa@gmail.com	<ol style="list-style-type: none"> 1. Cashew apple ready to serve beverage
M/s Annai Velankanni Nursery Pudhukooraipetti, Kuppanatham Post, Vriddhachalam Taluk Cuddalore, Tamil Nadu +91-98941 12554	<ol style="list-style-type: none"> 1. Cahew Hybrid: H-130
M/s Abhay Engineers Hoige Bazar, Mangalore 575 001 +91-98453 03536 abhayengineers@gmail.com	<ol style="list-style-type: none"> 1. Rotating drum roasting machine for raw cashew nuts (Patent no.3843/CHE/2013)
M/s Yashaswi Nursery, Korungu, Kemminje, puttur, Karnataka – 574202 +91-9449033758	<ol style="list-style-type: none"> 1. Cahew Hybrid:H-126
Mr. Narayan Roop Singh Lamani, Brahmanandapura (Beladhadi) village, Gadag taluk & District, Karnataka	<ol style="list-style-type: none"> 1. Cashew Apple Pomace Powder Cookies 2. Cashew Apple Jelly
Mr. Chandrashekhhar Nayak Brahmanandapura (Beladhadi) village, Gadag taluk & District, Karnataka	<ol style="list-style-type: none"> 1. Cashew Apple Fruit Bar 2. Cashew Apple Jam
Mr. Pravin Nayak Brahmanandapura (Beladhadi) village, Gadag taluk & District, Karnataka	<ol style="list-style-type: none"> 1. Cashew Apple Fruit Bar 2. Cashew Apple Pomace Powder Cookies



IPRs of ICAR-DCR, Puttur

IPRs	Sl. No.	Name of Innovation/technology/product/variety	Dairy No.	Registration No.
Copyrights	Software/Mobile Applications			
	1	Cashew leaf diagnosis (https://cashew.icar.gov.in/leafanalysis/)	347/2022-CO/SW	SW-15715/2022
	2	DCR- Cashew Drip/Fertigation Calculator (https://cashew.icar.gov.in/water/)	138/2022-CO/SW	SW-16781/2023
	3	NUTRIENT MANAGEMENT IN CASHEW (https://cashew.icar.gov.in/soil/)	139/2022-CO/SW	SW-16625/2023
	4	OFFLINE SOFTWARE ON SOIL HEALTH CARD GENERATOR	135/2022-CO/SW	SW-16948/2023
	5	Cashew Site Suitability Evaluator	8053/2022-CO/SW	SW-16303/2023
	6	Cashew Nutrient Deficiency Management	8057/2022-CO/SW	SW-18091/2024
	7	Cashew pest management	8058/2022-CO/SW	SW-18092/2024
	8	Cashew diseases and their management	8060/2022-CO/SW	SW-17667/2023
	9	DCR-Cashew Nutrient Manager	8061/2022-CO/SW	-
	10	DCR-Cashew Nutrient Manager – Offline	8062/2022-CO/SW	SW-15864/2022
	11	DCR- Cashew Drip/Fertigation Calculator	138/2022-CO/SW	SW-15535/2022
	12	Cashew leaf diagnosis	8066/2022-CO/SW	SW-16738/2023
	13	Cashew Site Suitability	8069/2022-CO/SW	SW-16875/2023
	14	Cashew Nutrient Deficiency	8071/2022-CO/SW	-
	15	Cashew pest management	8072/2022-CO/SW	-
	16	Cashew diseases	8073/2022-CO/SW	-
	Databases			
	17	Cashew Microsatellites Database (CMDB)	29766/2023-CO/SW	-
	18	Cashew Single Nucleotide Polymorphisms Database (CSNPDB)	29769/2023-CO/SW	SW-18179/2024
	Videos			
	19	High density and ultra-high-density planting in cashew (English)	34949/2023-CO/CF	-
20	Geru maragalige aakara needuvike matthu savaruvike (Kannada)	34947/2023-CO/CF	CF-5636/2024	
21	Training and pruning in cashew (English)	34952/CO/CF	-	
22	Gerinalli Sandra besaya hagu athisandra besaya (Kannada)	34876/CO/CF	CF-5656/2024	
Patent	1	Radial Arm Type Cashew Kernel Extracting Machine	1589/CHE/2007	272371
	2	Rotating Drum Roasting Machine for Raw Cashew Nuts	3483/CHE/2013	359214
	3	Cashew Moisture Meter	TEMP/E-1/1646/2024-CHE	-
Trademark	1	NETHRA	5366651 (Advertised in the Indian Trademark Journal no. 2147 on 11th March 2024)	-
Plant Variety	1	Bhaskara	Reg/2018/674	207 of 2019
	2	Nethra Ganga	Reg/2020/54	-
	3	Nethra Vaman	Reg/2021/0150	-
	4	Nethra Jumbo-1	Reg/2021/0225/2050	-
	5	Nethra Ubhay	Reg/2023/0125	-



**Views of Clients about
ICAR-DCR Technologies:
About Nethra Ganga (H-130)
Jumbo nut cashew hybrid**





Industry/Technology meet held with VNR Nursery Pvt. Ltd.,Raipur, Chattisgarh.



Signing of license agreement with M/s. Annai Velankanni Nursery, Vridhachalam, Tamil Nadu for commercialization of Cashew Hybrid: H-130



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