

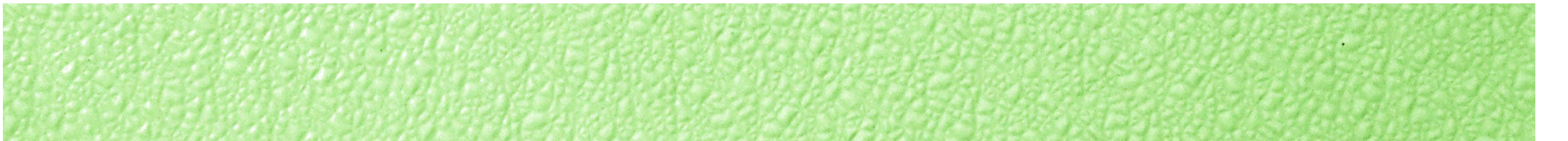


ENVIRONMENT AUDIT REPORT

**RAJAGIRI COLLEGE OF MANAGEMENT AND
APPLIED SCIENCES
KAKKANAD**

2023-24

Executed by



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ENVIRONMENT AUDIT REPORT

RAJAGIRI COLLEGE OF MANAGEMENT AND APPLIED SCIENCES

KAKKANAD

2023-24





Environment Audit Report
Rajagiri college of Management & Applied sciences
Report No: EA 1126
2023-24

Environment Audit Team

Ottotractions

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About OTTOTRACTIONS

OTTOTRACTIONS established in 2005, is an organization with proven track record and knowledge in the field of energy, engineering, and environmental services. They are the first Accredited Energy Auditor from Kerala for conducting Mandatory Energy Audits in Designated Consumers as per Energy Conservation Act-2001. Government of Kerala recognized and appreciated **OTTOTRACTIONS** by presenting its prestigious “**The Kerala State Energy Conservation Award 2009**” for the best performance as an Energy Auditor. Ottotractions is an ISO 9001-2015, ISO 17020-2012 and ISO 14001-2015 Certified organization, which ensures the quality of its services.

Acknowledgement

We were privileged to work together with the administration and staff of Rajagiri college of Management and Applied Sciences, Kakkanad, for their timely help extended to complete the audit and bringing out this report.

With gratitude, we acknowledge the diligent effort and commitments of all those who have helped to bring out this report.

We also take this opportunity to thank the bona-fide efforts of team OTTOTRACTIONS for unstinted support in carrying out this audit.

We thank our consultants, engineers and backup staff for their dedication to bring this report.

Thank you.

B V Suresh Babu
Accredited Energy Auditor
AEA 33, Bureau of Energy Efficiency

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INTRODUCTION

Rajagiri College of Management and Applied Sciences, Kakkand has entrusted Ottotractions to carry out an environment audit of their campus building.

Each section contains recommendations for improvements relating to environmental issues, which are consolidated in the action plan in section 4.

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BACKGROUND

Rajagiri College of Management and Applied Sciences, Kakkanad is a conception of the Sacred Heart Province of Carmelites of Mary Immaculate (CMI) Congregation, the first indigenous Catholic religious congregation in India. The institution marked its inception in the year 2005 and is modelled on the dream and vision of Saint Kuriakose Elias Chavara, the founder of CMI Congregation and a social reformer of 19th century. Celebrating its crystal jubilee the college aims at the formation of future leaders who intellectually, spiritually and morally champion the cause of justice, love,

truth and peace. It is situated at the Rajagiri Valley campus which is beautifully landscaped on the banks of Chithrapuzha and Kadamprayar. The campus takes pride in its proximity to major industrial and technological establishments. Affiliated to Mahatma Gandhi University, the college offers two post graduate programmes and ten undergraduate programmes in Commerce, Management, Computer Science, Animation and English.

The college is headed by Dr. Laly Mathew, Principal with a team of unwavering associates comprising of sixty-six faculty members in five departments and twenty-eight supporting staff with a vision of transforming an individual into an integral and ideal human being. The college strives to fulfill its mission to mould individuals to become responsible citizens with intellectual, social and environmental awareness .

Occupancy Details	
Particulars	2023-24
Total Students	1856
Staffs	100
Total Occupancy of the college	1956

Total student strength of the campus is 1856. For calculating per capita carbon emission estimation, the student strength is taken into account.



ENVIRONMENTAL ISSUES

This section is broken down into the following different areas: waste, water, energy, resource and materials use and procurement. A final 'other' section is also included for any additional issues.

1.1. Waste

The way communities generate and manage their waste plays an absolutely key role in their ability to use resources efficiently. Each floor in the building contains separate bins for both general waste and mixed recyclables (plastic bottles, card, cans and paper). The bins are emptied by the cleaning staff regularly. Bins are marked and kept in different colors for identification: two types of waste bins are provided at campus for the separate collection of biodegradable and non-biodegradable waste.

There are four basic ways in which campus can do **plastic** recycling **collection** services for **plastic** bottles and containers – curbside, drop-off, buy-back or deposit/refund programs. The first, and most widely accessible, **collection** method is curbside **collection** of recyclables. The campus has installed bins to collect plastic bottles and single use plastics. The college has given a proper awareness on plastic waste problems and they are discouraging the students or teachers to carry plastics to the campus.



The major concern of waste management will be focused on the solid waste produced by the campus. Solid wastes produced in the campus are mainly of three types, food waste, paper waste, and plastic waste. Food wastes produced in the campus are mainly by two means. The vegetable wastes produced in the kitchen during the food preparation. The food waste produced by the students and staffs of the campus after the consumption of meals. The degradable waste is treated in the biogas plant.

Degradable Waste Generation	
Rajagiri College of Management and Applied Sciences.	
Particulars	2023-24
Total Occupancy	1956
Waste generated in kg /day	39.12
Waste generated in kg /Yr	8606.4

Burning plastics is strictly restricted inside the campus. **Burning plastic** and other wastes releases dangerous substances such as heavy metals, Persistent Organic Pollutants, and other toxics into the air and ash waste residues. Such pollutants contribute to the development of asthma, cancer, endocrine disruption, and the global burden of disease.

Solid non degradable Waste Generation	
Rajagiri College of Management and Applied Sciences.	
Particulars	2023-24
Total Occupancy	1956
Waste paper generated in kg /day	0.3912
Waste plastic generated in kg /day	0.5868
Waste paper generated in kg /Yr	86.06
Waste plastic generated in kg /Yr	129.10

WASTE MINIMIZATION AND RECYCLING		
1	Does your institute generate any waste? If so, what are they?	Yes, electronic waste, solid waste, canteen waste, paper, plastic, horticulture waste etc.
2	What is the approximate amount of waste generated per day? (in Kilograms/) (approx.)	40.56
3	How is the waste generated in the institute managed? By	Reuse of one side printed Paper for internal communication. Kitchen waste can used to generate manures and is given to Pig Farm outside. Two types of Waste bins are provided

		at campus for biodegradable and non-biodegradable waste.
	1 Composting	In-house
	2 Recycling	In-house
	3 Reusing	In-house
	4 Others (specify)	
4	Do you use recycled paper in institute?	Yes
5	Do you use reused paper in institute?	Yes
6	How would you spread the message of recycling to others in the community? Have you taken any initiatives? If yes, please specify.	Yes. The college spreads the message of recycling through various initiatives like organizing educational workshops, awareness campaigns and community events to highlight the importance of recycling. The curriculum integrates courses on environmental studies and collaborate with local partners to strengthen recycling efforts. Additionally, the National Service Scheme (NSS) conducts regular cleaning drives and various departments of the college also engage in similar activities to promote a cleaner and greener environment. One side printed papers are reused for other occasions to avoid paper wastage in various departments. Rainwater harvesting has been implemented in the institution. Through these efforts, the institution aims to create a culture of sustainability and inspire the community to take action for a healthier planet. The college participated in the Kochi flower show competition and won the second prize for its plastic installation, aligned with the theme of "art from waste." Named "Throbe of Life," this installation emphasizes the reuse of plastic and waste materials.
7	Can you achieve zero garbage in your institute? If yes, how?	Yes, Achieving zero garbage in the college is possible through a comprehensive approach involving waste reduction, segregation,

		composting, recycling and awareness campaigns. The institution encourages practices like reusable materials, proper waste segregation, composting organic waste and recycling, along with reducing food waste. Digital initiatives, partnerships with local facilities and continuous monitoring are also helpful. Through these efforts, college creates a sustainable environment where waste is minimized, and resources are conserved.
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Green Cover Audit		
1	Is there a garden in your institute?	Yes
2	Do students spend time in the garden?	Yes
3	Total number of Plants in Campus	Plant type
		Trees
		Ornamental
		Approx. number
		845
		340
4	Number of Tree Plantation Drives organized by School per annum. (If Any)	Yes, plantation drives are organized in association with NSS unit and nature club, on an average of three activities per annum.
5	Number of Trees Planted in Last FY.	40
	Survival Rate	100%

All the activities including energy consumption and waste management have their equivalent carbon emission and they positively contribute to the carbon footprint of the campus. Carbon sequestration is the reverse process, at which the emitted carbon dioxide will get sequestered according to the type of carbon sequestration employed. Even though there are many natural sequestration processes are involved in a campus, the major type of sequestration among them is the carbon sequestration by trees.

Trees sequester carbon dioxide through the biochemical process of photosynthesis and it is stored as carbon in their trunk, branches, leaves and roots. The amount of carbon sequestered by a tree can be calculated by different methods. In this study, the volumetric approach was taken into account, thus the details including CBH

(Circumference at Breast Height), height, average age, and total number of the trees, are required. Detailed table is included in the technical supplement.

Carbon Sequestration	
Particulars	2023-24
Total No of Trees	849
Carbon sequestrated by trees in the campus (tCO₂e)	6.40

Carbon sequestrated by a tree can be found out by using different methods. Since this study is employed the volumetric approach, the calculation consists of five processes.

- Determining the total weight of the tree
- Determining the dry weight of the tree
- Determining the weight of carbon in the tree
- Determining the weight of CO₂ sequestrated in the tree
- Determining the weight of CO₂ sequestrated in the tree per year

Carbon sequestrated by each species of trees in the campus compound is given in the Table. Detailed calculation results are listed out in the tables provided in the technical supplements of 'Carbon sequestration'.



3.1.1 ENERGY

a. Electricity

The total emission of the carbon dioxide per student is -76.91 kg per year. Emission reduction plans were prepared to bring the existing per capita carbon footprint to zero or below so as to bring the campus a carbon neutral or carbon negative campus. All energy efficiency projects shall be implemented, So, the effective specific carbon emission per student is -79.kg of CO₂ per year only. This can be

achieved in many ways but, every alternate plan must be in such a way that, it must fulfill the actual purpose of each activity that is considered.

Here, three major methods are taken in to account as the plans for reducing the carbon emission of the campus.

- Resource optimization
- Energy efficiency
- Renewable energy

Electricity Consumption

Electricity Connection Details		
Rajagiri College of Management and Applied Sciences.		
1	Name of the Consumer	Rajagiri College of Management and Applied Sciences.
2	Annual Electricity Consumption (kWh)	42116

RESOURCE OPTIMISATION

The effective use of resources can limit its unnecessary wastage. Optimal usage of the resources (such as fuels) can save the fuel and can also reduce the carbon emission due to its consumption. This technique can be effectively implemented in the 'transportation' and 'waste' sectors of the campus.

WASTE MINIMISATION

Optimal utilization of paper and plastic stationaries can reduce the frequency of purchase of items. This can reduce the unnecessary wastage of money as well as the excess production of waste. In the case of food, proper food habits and housekeeping practices can optimize its usage.

Currently, College is taking an appreciable effort to reduce the unnecessary production of wastes. But the campus still has opportunities to reduce the generation

of waste and can improve much more. Resource optimization can be effectively implemented in all type of waste generated in the campus and the campus can expect about 50% reduction the total waste produced.



ENERGY EFFICIENCY

Energy efficiency is the practice of reducing the energy requirements while achieving the required energy output. Energy efficiency can be effectively implemented in all the sectors of the campus.

TRANSPORTATION

Energy efficiency of the transportation sector is mainly depended on the fuel efficiency of the vehicles used. Here mileage of the vehicle (kmpl - Kilometres per Litre) is calculated to assess the fuel efficiency of the vehicle. Percentage of closeness is the ratio of actual mileage of the vehicle to its expected mileage. If the percentage of closeness of mileages of each vehicle is greater than that of its average, then the efficiency status of the vehicle is considered as 'Above average' and else, it is considered as 'Below average'

Renewable Energy

Solar power plant is installed in the campus which helps offsetting the carbon foot print. The details of these projects are given in the concerned chapters.

After analyzing the historical and measured data the following projects are proposed to make the campus carbon neutral. The projects are from energy efficiency and renewable energy. The further additions in the green cover increase will also give positive impact in the carbon mitigation.

OTTOTRACTIONS- ENERGY AUDIT						
Rajagiri College of Management and Applied Sciences.						
Greenhouse Gas Mitigation through Major Energy Efficiency Projects						
Sl No	Projects proposed	Energy saved(Yearly)		Sustainability (Years)	First year ton of CO2 mitigated Expected Tons	of CO2 mitigated through out life
		(kWh)	MWh	Years		
1	Energy Saving in Lighting by replacing existing 6 No's T8 (40W) Lamps to 18W LED Tube	95.04	0.10	10	0.07	0.7
2	Energy Saving by replacing existing 236 No's in-efficient ceiling fans with Energy Efficient Five star fans	6706	6.71	10	4.90	48.96
Total		6801	7	10	4.96	49.65

Water Conservation Activities	
List four uses of water in your institute	Basic use of water in campus:
	1. Drinking – Ground Water
	2. Gardening – Rain water
	3. Kitchen and Toilets –Ground water
	4. Others – Lab
How does your institute store water? Are there any water saving techniques followed in your institute?	Overhead Water Tanks and Sumps are installed for storage of water. The campus is bordered by a canal and utilizes 82

	small ponds, as well as rainwater harvesting systems.
	Rain Water Harvesting system in place
If there is water wastage, specify why and How can the wastage be prevented / stopped?	No
Record water use from the institute water meter for six months (record at the same time of each day). At the end of the period, compile a table to show how many liters of water have been used.	The college is planning to keep logbooks as earliest as possible.
Does your institute harvest rain water?	Yes
Is there any water recycling system?	Yes

General Environmental Awareness Questionnaire	
Are you aware of any environmental Laws pertaining to different aspects of environmental management?	Yes
Does your institute have any rules to protect the environment? List possible rules you could include.	<p style="text-align: center;">Yes</p> <p>1. Restricted use of plastic in the campus. 2. All students and staff must use reusable containers, bottles, and bags for meals and snacks brought onto campus. 3. Lights, computers, and other electronic devices should be turned off when not in use, and energy-saving settings should be enabled whenever possible.</p>
Does Environmental Ambient Air Quality Monitoring conducted by the Institute?	No
Does Environmental Water and Wastewater Quality monitoring conducted by the Institute?	Yes
Does stack monitoring of DG sets conducted by the Institute?	No
Is any warning notice, letter issued by state government bodies?	No
Does any Hazardous waste generated by the Institute? If yes explain its category and disposal method	No
Are you aware of any environmental Laws pertaining to different aspects of environmental management?	Yes
Does your institute have any rules to protect the environment? List possible rules you could include.	Yes
Does housekeeping schedule in your campus?	Yes
Are students and faculty aware of environmental cleanliness ways? If Yes Explain	<p style="text-align: center;">Yes,</p> <p>Awareness sessions were conducted. Littering in the campus is strictly prohibited.</p>
Are important Days Like World Environment Day, Earth Day, Ozone Day etc. eminent in Campus?	Yes

Does Institute participate in National and Local Environmental Protection Movement?	Yes
Does the institute have any Recognition/certification for environment friendliness?	Yes
Does the institute use renewable energy?	Yes
Does the Institution conduct a green/environmental audit of its campus?	Yes
Has the institution been audited / accredited by any other agency such as NABL, NABET, TQPM, NAAC etc.?	No

Best Practices and Initiatives	
Renewable Energy	Yes
Solar Power Plant	Yes
Energy Audit and Green Audit Conducted	Yes
Biogas Plant installed	Yes
Biodiversity Conservation	Yes
Green Cover	Yes
Tree Plantation Drives	Yes
ECO clubs	Yes
Groundwater Recharge	Yes
Rain Water Harvesting System.	Yes
Pollution Reduction Public Transportation	Yes
E Waste Management	Yes
Connected to authorized recycler	Yes
Solid Waste Management	Yes

Lifting of garbage from the campus on alternate days by the Municipal Corporation.	No
Adoption of Village	No
CSR	Yes
Water Conservation	Yes
Energy Conservation	Yes



RECOMMENDATIONS

1. Implement a utility monitoring program.
 - Allocate staff to carry out meter readings for electricity, waste and water on regular basis
 - Add monitoring data to spreadsheet so results can be viewed graphically
 - Compare with the utility bills meter readings in order to ensure accuracy;
2. Consider adopting and implementing a sustainable procurement policy which takes into account the whole life cycle of a product, and make sure environmental issues are written into tenders when contracting out.
3. Consider trialing recycled paper again – many recycled brands today, such as

Evolve, are just as good as virgin paper.

4. Trial the use of re-manufactured (i.e., refilled) ink and toner cartridges rather than purchasing new ones.
5. Consider producing some designated 'environmental' pages on the intranet to make it easier for staff to find environmental information. If possible, a discussion forum could be set up to allow easy internal communications and staff to make suggestions for environmental improvements.
6. Environmental training could be formalized and carried out for all staff. It does not have to be too long or onerous, providing it covers key points, particularly in relation to waste so all staff are aware of the legal requirements. At the very least, environmental information should be included in the induction pack.
7. It is strongly recommended that environmental information is also given to students and staff during induction. It is particularly important for them to be aware of what waste they can dispose of on site and where they can dispose of it, and what waste streams they must take away with them.
8. Consider implementing an environmental management system to incorporate all improvements and monitoring requirements. It does not need to be a complex system certified to any particular standard, merely a way of ensuring that baselines are set and progress is measured. Formation of Environment Policy and communicated to all faculties and other staff.
9. Plan for Zero Waste Campus Project
10. E-waste monthly inventory be maintained at campus as per E waste rules 2016.
11. A Water Meter should be installed at the institute for monitoring of water consumption per capita.
12. Increase in Environmental promotional activities for spreading awareness at campus.
13. Environment/Green committee formation for regulating eco-friendly initiatives at campus premises and periphery.



CONCLUSION

This audit involved extensive consultation with all the campus team, interactions with key personnel on a wide range of issues related to Environmental aspects. The audit has identified several observations for making the campus premise more environmentally friendly. The recommendations are also mentioned with observations for Rajagiri college of Management and Applied Sciences, Kakkanad team to initiate actions.

Carbon Foot Print			
Sl. No.	Particulars	2023-24	tCO ₂ e
1	Electricity (kWh)	43166	35.40
2	Diesel (L)	3950	12.64
3	LPG (kg)	190.00	0.29
4	Biogas (kg)	123.75	0.173
5	Degradable Waste in kg/yr.	8606.4	5.42
6	Paper Waste in kg/yr	86.06	0.05
Total Carbon Foot Print tCO₂e/yr			53.96

However, there is scope for further improvement, particularly in relation to waste minimization and energy monitoring. By implementing a basic environmental management system, current good practice can be formalized and a framework can be set up for monitoring, implementation of action plans and continual improvement.

The audit team observed that the overall site is maintained well from an environmental perspective. There are no major observations but few things are important to initiate urgently are waste management records by monthly inventory of hazardous waste, rainwater harvesting recharge; water balance cycle and periodic inspection of buildings; environment policy and initiation of composting at campus.

Net Carbon Emission after implementing Energy Efficiency projects and Renewable Energy Projects Proposed		
1	Total Carbon Foot Print tCO ₂ e/yr	53.96
2	Carbon Sequestered tCO ₂ e/yr	6.40
3	Carbon mitigated by Renewable Energy tCO ₂ e/yr (Installed)	190.83
4	Carbon mitigated by Renewable Energy tCO ₂ e/yr (Proposed)	0.00
5	Carbon mitigated by Energy Efficiency (Proposed) tCO ₂ e/yr	4.96
6	Effective Carbon footprint tCO ₂ e/yr	-148.23
7	Total No of Students	1856
8	Specific Carbon Footprint kg CO ₂ e/Student/Yr	-79.86

References

- The Environment [Protection] Act – 1986 (Amended 1991) & Rules-1986 (Amended 2010)
- The Petroleum Act: 1934 – The Petroleum Rules: 2002
- The Central Motor Vehicle Act: 1988 (Amended 2011) and The Central Motor Vehicle
- Rules:1989 (Amended in 2005)
- Energy Conservation Act 2010.
- The Water [Prevention & Control Of Pollution] Act – 1974 (Amended 1988) & the Water (Prevention & Control of Pollution) Rules – 1975
- The Water [Prevention & Control Of Pollution] Cess Act-1977 (Amended 2003) and Rules- 1978
- The Air [Prevention & Control Of Pollution] Act – 1981 (Amended 1987) The Air (Prevention & Control of Pollution) Rules – 1982
- The Gas Cylinders Rules – 2016 (Replaces the Gas Cylinder Rules – 1981
- E-waste management rules 2016
- Electrical Act 2003 (Amended 2001) / Rules 1956 (Amended 2006)
- The Hazardous Waste (Management and Handling and Trans-boundary Movement) Rules, 2008 (Amended 2016)
- The Noise Pollution Regulation & Control rules, 2000 (Amended 2010)
- The Batteries (Management and Handling) rules, 2001 (Amended 2010)
- Relevant Indian Standard Code practices



TECHNICAL SUPPLEMENTS

Technical Supplements

SI No	Name of the tree	Circumference (cm)	Radius (cm)	Radius (m)	Height (m)	Trunk volume (m ³)	Trunk Biomass (Ton)	Root biomass (Ton)	Total biomass (Ton)	Tree dry weight (Ton)	Carbon content of the tree (Ton)	Carbon dioxide Sequestered (Ton)	No of Similar trees	Carbon dioxide Sequestered (Ton) for all similar trees	Age of the tree (Years)	Carbon sequestered per year (Ton)
1	<i>Pseuderanthemum maculatum</i> (G.Lodd.) I.M.Turner	26	4.14	0.04	2.10	0.01	0.01	0.00	0.01	0.01	0.00	0.01	1	0.01	2	0.01
2	<i>Hydnocarpus pentandrus</i> (Buch.-Ham.) Oken	55	8.76	0.09	1.90	0.05	0.02	0.01	0.04	0.03	0.01	0.05	1	0.05	5	0.01
3	<i>Hymenocallis littoralis</i> (Jacq.) Salisb.	34	5.41	0.05	3.96	0.04	0.02	0.01	0.03	0.02	0.01	0.04	2	0.08	5	0.02
4	<i>Anacardium occidentale</i> L.	38	6.05	0.06	6.00	0.07	0.04	0.02	0.06	0.04	0.02	0.08	1	0.08	3	0.03
5	<i>Spondias pinnata</i> (L.f.) Kurz	16	2.55	0.03	6.20	0.01	0.01	0.00	0.01	0.01	0.00	0.01	1	0.01	7	0.00
6	<i>Mangifera indica</i> L.	38	6.05	0.06	5.30	0.06	0.03	0.02	0.05	0.04	0.02	0.07	1	0.07	7	0.01
7	<i>Holigarna arnottiana</i> Hook.f.	18	2.87	0.03	7.10	0.02	0.01	0.01	0.02	0.01	0.01	0.02	1	0.02	6	0.00
8	<i>Gluta travancorica</i> Bedd.	12	1.91	0.02	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.01	1	0.01	3	0.00
9	<i>Monoon fragrans</i> (Dalzell) B.Xue & R.M.K.Saunders	23	3.66	0.04	3.10	0.01	0.01	0.00	0.01	0.01	0.00	0.01	1	0.01	2	0.01
10	<i>Annona muricata</i> L.	69	10.99	0.11	6.60	0.25	0.13	0.08	0.21	0.15	0.08	0.28	1	0.28	8	0.03
11	<i>Annona squamosa</i> L.	35	5.57	0.06	5.3	0.05	0.03	0.02	0.04	0.0	0.02	0.06	1	0.06	12	0.00

					0					3						
12	<i>Stelechocarpus burahol</i> (Blume) Hook.f. & Thomson	33	5.25	0.05	4.2 0	0.04	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	6	0.01
13	<i>Alstonia scholaris</i> (L.) R. Br.	21	3.34	0.03	3.3 0	0.01	0.01	0.00	0.01	0.0 1	0.00	0.01	1	0.01	8	0.00
14	<i>Tabernaemontana divaricata</i> (L.) R.Br. ex Roem. & Schult.	28	4.46	0.04	6.0 0	0.04	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	4	0.01
15	<i>Wrightia tinctoria</i> (Roxb.) R. Br.	25	3.98	0.04	3.0 0	0.01	0.01	0.00	0.01	0.0 1	0.00	0.02	1	0.02	3	0.01
16	<i>Holarrhena pubescens</i> Wall. & G.Don	26	4.14	0.04	3.7 0	0.02	0.01	0.01	0.02	0.0 1	0.01	0.02	1	0.02	6	0.00
17	<i>Nerium oleander</i> L.	32	5.10	0.05	6.8 0	0.06	0.03	0.02	0.05	0.0 3	0.02	0.06	1	0.06	3	0.02
18	<i>Allamanda cathartica</i> L.	19	3.03	0.03	6.2 0	0.02	0.01	0.01	0.01	0.0 1	0.01	0.02	1	0.02	4	0.00
19	<i>Allamanda blanchetii</i> A.DC.	22	3.50	0.04	5.8 0	0.02	0.01	0.01	0.02	0.0 1	0.01	0.02	1	0.02	12	0.00
20	<i>Wrightia antidysenterica</i> (L.) R.Br.	27	4.30	0.04	6.2 0	0.04	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	8	0.00
21	<i>Amorphophallus paeoniifolius</i> (Dennst.) Nicolson	32	5.10	0.05	5.8 0	0.05	0.03	0.01	0.04	0.0 3	0.01	0.05	1	0.05	3	0.02
22	<i>Aglaonema commutatum</i> Schott	32	5.10	0.05	3.9 6	0.03	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	3	0.01
23	<i>Philodendron erubescens</i> K.Koch & Augustin	33	5.25	0.05	6.0 0	0.05	0.03	0.02	0.04	0.0 3	0.02	0.06	1	0.06	5	0.01
24	<i>Heptapleurum arboricola</i> Hayata	22	3.50	0.04	6.2 0	0.02	0.01	0.01	0.02	0.0 1	0.01	0.03	1	0.03	4	0.01
25	<i>Polyscias scutellaria</i> (Burm.f.) Fosberg	27	4.30	0.04	5.3 0	0.03	0.02	0.01	0.03	0.0 2	0.01	0.03	2	0.07	8	0.01

26	<i>Cyrtostachys renda</i> Blume	31	4.94	0.05	5.1 0	0.04	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	14	0.00
27	<i>Elaeis guineensis</i> Jacq.	18	2.87	0.03	3.9 6	0.01	0.01	0.00	0.01	0.0 1	0.00	0.01	1	0.01	14	0.00
28	<i>Areca catechu</i> L.	27	4.30	0.04	3.1 0	0.02	0.01	0.01	0.01	0.0 1	0.01	0.02	1	0.02	14	0.00
29	<i>Pseudophoenix</i> <i>sargentii</i> H.Wendl. ex Sarg.	31	4.94	0.05	6.6 0	0.05	0.03	0.02	0.04	0.0 3	0.02	0.06	1	0.06	6	0.01
30	<i>Cocos nucifera</i> L.	27	4.30	0.04	5.3 0	0.03	0.02	0.01	0.03	0.0 2	0.01	0.03	1	0.03	2	0.02
31	<i>Dracaena trifasciata</i> (Prain) Mabb.	24	3.82	0.04	4.2 0	0.02	0.01	0.01	0.02	0.0 1	0.01	0.02	1	0.02	3	0.01
32	<i>Asparagus racemosus</i> Willd.	35	5.57	0.06	3.3 0	0.03	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	8	0.00
33	<i>Dracaena reflexa</i> Lam.	19	3.03	0.03	6.0 0	0.02	0.01	0.01	0.01	0.0 1	0.01	0.02	1	0.02	5	0.00
34	<i>Cordyline fruticosa</i> (L.) A.Chev.	35	5.57	0.06	4.0 0	0.04	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	6	0.01
35	<i>Ophiopogon</i> <i>japonicus</i> (Thunb.) Ker Gawl.	33	5.25	0.05	3.7 0	0.03	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	4	0.01
36	<i>Eupatorium</i> <i>capillifolium</i> (Lam.) Small ex Porter & Britton	34	5.41	0.05	6.8 0	0.06	0.03	0.02	0.05	0.0 4	0.02	0.07	1	0.07	8	0.01
37	<i>Crescentia cujete</i> L.	32	5.10	0.05	8.2 0	0.07	0.04	0.02	0.06	0.0 4	0.02	0.07	1	0.07	4	0.02
38	<i>Amphitecna latifolia</i> (Mill.) A.H.Gentry	25	3.98	0.04	7.8 0	0.04	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	7	0.01
39	<i>Tecoma stans</i> (L.) Juss. ex Kunth	26	4.14	0.04	7.2 1	0.04	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	12	0.00
40	<i>Dolichandra unguis-</i> <i>cati</i> (L.) L.G.Lohmann	34	5.41	0.05	4.2 0	0.04	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	11	0.00
41	<i>Bixa orellana</i> L.	19	3.03	0.03	4.1 3	0.01	0.01	0.00	0.01	0.0 1	0.00	0.01	1	0.01	10	0.00

42	<i>Canarium strictum Roxb.</i>	22	3.50	0.04	4.1 7	0.02	0.01	0.00	0.01	0.0 1	0.00	0.02	1	0.02	8	0.00
43	<i>Selenicereus undatus (Haw.) D.R.Hunt</i>	28	4.46	0.04	5.8 6	0.04	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	3	0.01
44	<i>Tamarindus indica L.</i>	48	7.64	0.08	4.3 0	0.08	0.04	0.02	0.07	0.0 5	0.02	0.09	1	0.09	3	0.03
45	<i>Calophyllum inophyllum L.</i>	36	5.73	0.06	7.2 1	0.07	0.04	0.02	0.06	0.0 4	0.02	0.08	1	0.08	8	0.01
46	<i>Mesua ferrea L.</i>	43	6.85	0.07	5.2 1	0.08	0.04	0.02	0.06	0.0 5	0.02	0.08	1	0.08	11	0.01
47	<i>Canna indica L.</i>	18	2.87	0.03	6.1 1	0.02	0.01	0.00	0.01	0.0 1	0.00	0.02	1	0.02	8	0.00
48	<i>Crateva religiosa G.Forst.</i>	40	6.37	0.06	3.1 2	0.04	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	14	0.00
49	<i>Carica papaya L.</i>	23	3.66	0.04	4.1 6	0.02	0.01	0.01	0.01	0.0 1	0.01	0.02	1	0.02	14	0.00
50	<i>Salacia fruticosa Wall. ex M.A.Lawson</i>	32	5.10	0.05	5.2 1	0.04	0.02	0.01	0.04	0.0 3	0.01	0.05	1	0.05	14	0.00
51	<i>Lophopetalum wightianum Arn.</i>	21	3.34	0.03	4.9 8	0.02	0.01	0.01	0.01	0.0 1	0.01	0.02	1	0.02	6	0.00
52	<i>Garcinia indica (Thouars) Choisy</i>	22	3.50	0.04	5.8 8	0.02	0.01	0.01	0.02	0.0 1	0.01	0.03	1	0.03	2	0.01
53	<i>Garcinia mangostana L.</i>	22	3.50	0.04	5.6 7	0.02	0.01	0.01	0.02	0.0 1	0.01	0.02	1	0.02	3	0.01
54	<i>Garcinia intermedia (Pittier) Hammel</i>	22	3.50	0.04	5.9 3	0.02	0.01	0.01	0.02	0.0 1	0.01	0.03	1	0.03	9	0.00
55	<i>Garcinia xanthochymus Hook.f.</i>	35	5.57	0.06	4.6 3	0.05	0.02	0.01	0.04	0.0 3	0.01	0.05	1	0.05	5	0.01
56	<i>Garcinia gummi-gutta (L.) N.Robson</i>	33	5.25	0.05	5.1 2	0.04	0.02	0.01	0.04	0.0 3	0.01	0.05	1	0.05	6	0.01
57	<i>Poeciloneuron indicum Bedd.</i>	28	4.46	0.04	6.1 7	0.04	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	8	0.01
58	<i>Terminalia arjuna (Roxb. ex DC.) Wight & Arn.</i>	10	1.59	0.02	4.7 7	0.00	0.00	0.00	0.00	0.0 0	0.00	0.00	1	0.00	4	0.00

59	<i>Terminalia bellirica (Gaertn.) Roxb.</i>	25	3.98	0.04	5.1 2	0.03	0.01	0.01	0.02	0.0 2	0.01	0.03	1	0.03	3	0.01
60	<i>Terminalia elliptica Willd.</i>	26	4.14	0.04	6.7 7	0.04	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	6	0.01
61	<i>Combretum indicum (L.) DeFilipps</i>	32	5.10	0.05	4.1 2	0.03	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	3	0.01
62	<i>Combretum constrictum (Benth.) M.A.Lawson</i>	19	3.03	0.03	3.9 6	0.01	0.01	0.00	0.01	0.0 1	0.00	0.01	1	0.01	4	0.00
63	<i>Costus pictus D.Don</i>	22	3.50	0.04	6.0 0	0.02	0.01	0.01	0.02	0.0 1	0.01	0.03	1	0.03	12	0.00
64	<i>Cycas circinalis L.</i>	36	5.73	0.06	6.2 0	0.06	0.03	0.02	0.05	0.0 4	0.02	0.07	1	0.07	8	0.01
65	<i>Cycas revoluta Thunb.</i>	32	5.10	0.05	5.3 0	0.04	0.02	0.01	0.04	0.0 3	0.01	0.05	1	0.05	3	0.02
66	<i>Dillenia indica L.</i>	75	11.9 4	0.12	7.1 0	0.32	0.17	0.10	0.26	0.1 9	0.10	0.35	2	0.70	3	0.23
67	<i>Diospyros buxifolia (Blume) Hiern</i>	23	3.66	0.04	3.9 6	0.02	0.01	0.01	0.01	0.0 1	0.01	0.02	1	0.02	8	0.00
68	<i>Diospyros ebenum Koenig ex Retz.</i>	38	6.05	0.06	3.1 0	0.04	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	11	0.00
69	<i>Diospyros malabarica (Desr.) Kostel.</i>	25	3.98	0.04	6.6 0	0.03	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	8	0.00
70	<i>Diospyros blancoi A.DC.</i>	44	7.01	0.07	5.3 0	0.08	0.04	0.02	0.07	0.0 5	0.02	0.09	1	0.09	14	0.01
71	<i>Elaeocarpus angustifolius Blume</i>	38	6.05	0.06	4.2 0	0.05	0.03	0.01	0.04	0.0 3	0.01	0.05	1	0.05	14	0.00
72	<i>Elaeocarpus serratus L.</i>	52	8.28	0.08	3.3 0	0.07	0.04	0.02	0.06	0.0 4	0.02	0.08	1	0.08	14	0.01
73	<i>Elaeocarpus tuberculatus Roxb.</i>	43	6.85	0.07	6.0 0	0.09	0.05	0.03	0.07	0.0 5	0.03	0.10	1	0.10	6	0.02
74	<i>Glochidion ellipticum Wight.</i>	38	6.05	0.06	5.0 0	0.06	0.03	0.02	0.05	0.0 3	0.02	0.06	1	0.06	2	0.03
75	<i>Baccaurea ramiflora Lour.</i>	28	4.46	0.04	3.7 0	0.02	0.01	0.01	0.02	0.0 1	0.01	0.03	1	0.03	3	0.01
76	<i>Jatropha integerrima</i>	22	3.50	0.04	6.8	0.03	0.01	0.01	0.02	0.0	0.01	0.03	1	0.03	8	0.00

	Jacq.				0					2						
77	<i>Baliospermum solanifolium</i> (Burm.) Suresh	42	6.69	0.07	5.2 0	0.07	0.04	0.02	0.06	0.0 4	0.02	0.08	1	0.08	5	0.02
78	<i>Codiaeum variegatum</i> (L.) Rumph. ex A.Juss.	32	5.10	0.05	7.8 0	0.06	0.03	0.02	0.05	0.0 4	0.02	0.07	1	0.07	6	0.01
79	<i>Excoecaria cochinchinensis</i> Lour.	28	4.46	0.04	6.7 7	0.04	0.02	0.01	0.04	0.0 3	0.01	0.05	1	0.05	4	0.01
80	<i>Euphorbia ingens</i> E.Mey. ex Boiss.	22	3.50	0.04	4.1 2	0.02	0.01	0.00	0.01	0.0 1	0.00	0.02	1	0.02	8	0.00
81	<i>Euphorbia antiquorum</i> L.	44	7.01	0.07	3.9 6	0.06	0.03	0.02	0.05	0.0 4	0.02	0.07	1	0.07	4	0.02
82	<i>Pongamia pinnata</i> (L.) Pierre	45	7.17	0.07	6.0 0	0.10	0.05	0.03	0.08	0.0 6	0.03	0.11	1	0.11	7	0.02
83	<i>Saraca asoca</i> (Roxb.) Willd.	23	3.66	0.04	6.2 0	0.03	0.01	0.01	0.02	0.0 2	0.01	0.03	1	0.03	12	0.00
84	<i>Amherstia nobilis</i> Wall.	43	6.85	0.07	5.3 0	0.08	0.04	0.02	0.06	0.0 5	0.02	0.09	1	0.09	11	0.01
85	<i>Bauhinia acuminata</i> L.	13	2.07	0.02	7.1 0	0.01	0.01	0.00	0.01	0.0 1	0.00	0.01	1	0.01	10	0.00
86	<i>Cassia fistula</i> L.	43	6.85	0.07	3.9 6	0.06	0.03	0.02	0.05	0.0 4	0.02	0.06	1	0.06	8	0.01
87	<i>Caesalpinia pulcherrima</i> (L.) Sw.	30	4.78	0.05	3.1 0	0.02	0.01	0.01	0.02	0.0 1	0.01	0.02	1	0.02	14	0.00
88	<i>Inga edulis</i> Mart.	45	7.17	0.07	6.6 0	0.11	0.06	0.03	0.09	0.0 6	0.03	0.12	1	0.12	14	0.01
89	<i>Pterocarpus marsupium</i> Roxb.	56	8.92	0.09	5.3 0	0.13	0.07	0.04	0.11	0.0 8	0.04	0.15	1	0.15	14	0.01
90	<i>Butea monosperma</i> (Lam.) Kuntze	42	6.69	0.07	4.2 0	0.06	0.03	0.02	0.05	0.0 4	0.02	0.07	1	0.07	6	0.01
91	<i>Pterocarpus santalinoides</i> L'Hér. ex DC.	43	6.85	0.07	3.3 0	0.05	0.03	0.01	0.04	0.0 3	0.01	0.05	1	0.05	2	0.03
92	<i>Albizia procera</i> (Roxb.) Benth.	73	11.6 2	0.12	6.0 0	0.25	0.13	0.08	0.21	0.1 5	0.08	0.28	1	0.28	3	0.09
93	<i>Bauhinia purpurea</i> L.	50	7.96	0.08	5.0	0.10	0.05	0.03	0.08	0.0	0.03	0.11	1	0.11	8	0.01

					0					6						
94	<i>Pterygota alata</i> (Roxb.) R.Br.	46	7.32	0.07	3.7 0	0.06	0.03	0.02	0.05	0.0 4	0.02	0.07	1	0.07	8	0.01
95	<i>Dalbergia latifolia</i> Roxb.	29	4.62	0.05	6.8 0	0.05	0.02	0.01	0.04	0.0 3	0.01	0.05	1	0.05	6	0.01
96	<i>Cynometra</i> <i>travancorica</i> Bedd.	53	8.44	0.08	5.2 0	0.12	0.06	0.03	0.10	0.0 7	0.03	0.13	1	0.13	4	0.03
97	<i>Senna spectabilis</i> (DC.) H.S.Irwin & Barneby	32	5.10	0.05	7.8 0	0.06	0.03	0.02	0.05	0.0 4	0.02	0.07	1	0.07	8	0.01
98	<i>Humboldtia vahliana</i> Wight	28	4.46	0.04	4.2 0	0.03	0.01	0.01	0.02	0.0 2	0.01	0.03	1	0.03	4	0.01
99	<i>Crotalaria retusa</i> L.	22	3.50	0.04	3.3 0	0.01	0.01	0.00	0.01	0.0 1	0.00	0.01	1	0.01	6	0.00
10 0	<i>Bauhinia phoenicea</i> B.Heyne ex Wight & Arn.	43	6.85	0.07	6.0 0	0.09	0.05	0.03	0.07	0.0 5	0.03	0.10	1	0.10	8	0.01
10 1	<i>Cynometra ramiflora</i> L.	21	3.34	0.03	4.0 0	0.01	0.01	0.00	0.01	0.0 1	0.00	0.02	1	0.02	4	0.00
10 2	<i>Flacourtia montana</i> J.Graham	102	16.2 4	0.16	3.7 0	0.31	0.16	0.09	0.25	0.1 8	0.09	0.34	1	0.34	3	0.11
10 3	<i>Scaevola taccada</i> (Gaertn.) Roxb.	22	3.50	0.04	6.8 0	0.03	0.01	0.01	0.02	0.0 2	0.01	0.03	1	0.03	6	0.00
10 4	<i>Heliconia psittacorum</i> L.f.	27	4.30	0.04	8.2 0	0.05	0.03	0.01	0.04	0.0 3	0.01	0.05	1	0.05	3	0.02
10 5	<i>Sarcostigma kleinii</i> Wight & Arn.	35	5.57	0.06	7.8 0	0.08	0.04	0.02	0.06	0.0 5	0.02	0.08	1	0.08	4	0.02
10 6	<i>Vitex negundo</i> L.	37	5.89	0.06	6.7 7	0.07	0.04	0.02	0.06	0.0 4	0.02	0.08	1	0.08	12	0.01
10 7	<i>Volkameria inermis</i> L.	18	2.87	0.03	4.1 2	0.01	0.01	0.00	0.01	0.0 1	0.00	0.01	1	0.01	8	0.00
10 8	<i>Clerodendrum</i> <i>quadrioculare</i> (Blanco) Merr.	38	6.05	0.06	3.9 6	0.05	0.02	0.01	0.04	0.0 3	0.01	0.05	1	0.05	3	0.02
10 9	<i>Cinnamomum</i> <i>camphora</i> (L.) J.Presl	26	4.14	0.04	6.0 0	0.03	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	3	0.01

110	<i>Cinnamomum verum J.Presl</i>	36	5.73	0.06	6.20	0.06	0.03	0.02	0.05	0.04	0.02	0.07	1	0.07	8	0.01
111	<i>Machilus glaucescens (Nees) Wight</i>	27	4.30	0.04	5.30	0.03	0.02	0.01	0.03	0.02	0.01	0.03	1	0.03	11	0.00
112	<i>Phoebe lanceolata (Nees) Nees</i>	35	5.57	0.06	7.10	0.07	0.04	0.02	0.06	0.04	0.02	0.08	1	0.08	8	0.01
113	<i>Actinodaphne lawsonii Gamble</i>	37	5.89	0.06	3.96	0.04	0.02	0.01	0.04	0.03	0.01	0.05	1	0.05	14	0.00
114	<i>Persea americana Mill.</i>	36	5.73	0.06	3.10	0.03	0.02	0.01	0.03	0.02	0.01	0.04	1	0.04	14	0.00
115	<i>Couroupita guianensis Aubl.</i>	50	7.96	0.08	6.60	0.13	0.07	0.04	0.11	0.08	0.04	0.15	1	0.15	14	0.01
116	<i>Careya arborea Roxb.</i>	27	4.30	0.04	5.30	0.03	0.02	0.01	0.03	0.02	0.01	0.03	1	0.03	6	0.01
117	<i>Barringtonia acutangula Gaertn.</i>	35	5.57	0.06	4.20	0.04	0.02	0.01	0.03	0.02	0.01	0.05	1	0.05	2	0.02
118	<i>Leea indica (Burm.f.) Merr.</i>	37	5.89	0.06	3.30	0.04	0.02	0.01	0.03	0.02	0.01	0.04	1	0.04	3	0.01
119	<i>Hugonia mystax L.</i>	16	2.55	0.03	6.00	0.01	0.01	0.00	0.01	0.01	0.00	0.01	1	0.01	8	0.00
120	<i>Lagerstroemia speciosa Pers.</i>	32	5.10	0.05	5.00	0.04	0.02	0.01	0.03	0.02	0.01	0.05	1	0.05	5	0.01
121	<i>Malpighia glabra L.</i>	15	2.39	0.02	3.70	0.01	0.00	0.00	0.01	0.00	0.00	0.01	1	0.01	6	0.00
122	<i>Hiptage benghalensis (L.) Kurz</i>	24	3.82	0.04	6.80	0.03	0.02	0.01	0.03	0.02	0.01	0.03	1	0.03	4	0.01
123	<i>Byrsonima crassifolia Kunth</i>	24	3.82	0.04	5.20	0.02	0.01	0.01	0.02	0.01	0.01	0.03	1	0.03	8	0.00
124	<i>Ceiba pentandra (L.) Gaertn.</i>	47	7.48	0.07	7.80	0.14	0.07	0.04	0.11	0.08	0.04	0.15	1	0.15	4	0.04
125	<i>Grewia tiliifolia Vahl</i>	23	3.66	0.04	3.30	0.01	0.01	0.00	0.01	0.01	0.00	0.02	1	0.02	7	0.00
126	<i>Durio zibethinus L.</i>	32	5.10	0.05	6.00	0.05	0.03	0.01	0.04	0.03	0.01	0.05	1	0.05	12	0.00
127	<i>Hibiscus rosa-sinensis L.</i>	28	4.46	0.04	4.00	0.02	0.01	0.01	0.02	0.02	0.01	0.03	1	0.03	11	0.00

128	<i>Hibiscus arnottianus</i> A.Gray	22	3.50	0.04	3.7 0	0.01	0.01	0.00	0.01	0.0 1	0.00	0.02	1	0.02	10	0.00
129	<i>Hibiscus tiliaceus</i> L.	18	2.87	0.03	6.8 0	0.02	0.01	0.01	0.01	0.0 1	0.01	0.02	1	0.02	12	0.00
130	<i>Memecylon randerianum</i> S.M.Almeida & M.R.Almeida	32	5.10	0.05	8.2 0	0.07	0.04	0.02	0.06	0.0 4	0.02	0.07	1	0.07	7	0.01
131	<i>Memecylon edule</i> Roxb.	26	4.14	0.04	7.8 0	0.04	0.02	0.01	0.03	0.0 3	0.01	0.05	1	0.05	6	0.01
132	<i>Memecylon umbellatum</i> Burm.f.	27	4.30	0.04	4.3 2	0.03	0.01	0.01	0.02	0.0 2	0.01	0.03	1	0.03	8	0.00
133	<i>Swietenia macrophylla</i> King in Hook.	67	10.6 7	0.11	3.1 1	0.11	0.06	0.03	0.09	0.0 7	0.03	0.12	2	0.25	3	0.08
134	<i>Azadirachta indica</i> A.Juss.	21	3.34	0.03	5.1 2	0.02	0.01	0.01	0.01	0.0 1	0.01	0.02	1	0.02	11	0.00
135	<i>Alangium salviifolium</i> (L.f.) Wangerin	22	3.50	0.04	4.3 3	0.02	0.01	0.01	0.01	0.0 1	0.01	0.02	1	0.02	15	0.00
136	<i>Melia dubia</i> Cav.	38	6.05	0.06	3.9 6	0.05	0.02	0.01	0.04	0.0 3	0.01	0.05	1	0.05	4	0.01
137	<i>Sandoricum koetjape</i> Merr.	41	6.53	0.07	6.0 0	0.08	0.04	0.02	0.07	0.0 5	0.02	0.09	2	0.18	6	0.03
138	<i>Artocarpus hirsutus</i> Lam.	54	8.60	0.09	6.2 0	0.14	0.08	0.04	0.12	0.0 9	0.04	0.16	1	0.16	8	0.02
139	<i>Artocarpus heterophyllus</i> Lam.	32	5.10	0.05	5.3 0	0.04	0.02	0.01	0.04	0.0 3	0.01	0.05	1	0.05	4	0.01
140	<i>Morus rubra</i> L.	35	5.57	0.06	7.1 0	0.07	0.04	0.02	0.06	0.0 4	0.02	0.08	1	0.08	3	0.03
141	<i>Ficus pumila</i> L.	33	5.25	0.05	3.9 6	0.03	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	7	0.01
142	<i>Artocarpus lacucha</i> Roxb. ex Buch.-Ham.	41	6.53	0.07	3.1 0	0.04	0.02	0.01	0.03	0.0 2	0.01	0.05	1	0.05	6	0.01
143	<i>Ficus hispida</i> L.f.	32	5.10	0.05	6.6 0	0.05	0.03	0.02	0.04	0.0 3	0.02	0.06	1	0.06	4	0.01
144	<i>Morus alba</i> L.	25	3.98	0.04	5.3	0.03	0.01	0.01	0.02	0.0	0.01	0.03	1	0.03	5	0.01

4					0					2						
145	<i>Ficus tsjahela</i> Burm.f.	26	4.14	0.04	4.20	0.02	0.01	0.01	0.02	0.01	0.01	0.02	1	0.02	7	0.00
146	<i>Ficus drupacea</i> Thunb.	29	4.62	0.05	3.30	0.02	0.01	0.01	0.02	0.01	0.01	0.02	1	0.02	5	0.00
147	<i>Ficus racemosa</i> L.	19	3.03	0.03	6.00	0.02	0.01	0.01	0.01	0.01	0.01	0.02	1	0.02	6	0.00
148	<i>Artocarpus altilis</i> (Parkinson ex F.A.Zorn) Fosberg	22	3.50	0.04	3.00	0.01	0.01	0.00	0.01	0.01	0.00	0.01	2	0.03	7	0.00
149	<i>Myristica fragrans</i> Hoult.	20	3.18	0.03	3.70	0.01	0.01	0.00	0.01	0.01	0.00	0.01	1	0.01	3	0.00
150	<i>Myristica malabarica</i> Lam.	21	3.34	0.03	6.80	0.02	0.01	0.01	0.02	0.01	0.01	0.03	1	0.03	11	0.00
151	<i>Knema attenuata</i> (Wall. ex Hook.f. & Thomson) Warb.	32	5.10	0.05	6.00	0.05	0.03	0.01	0.04	0.03	0.01	0.05	1	0.05	10	0.01
152	<i>Embelia tsjeriamcottam</i> (Roem. & Schult.) A.DC.	37	5.89	0.06	5.12	0.06	0.03	0.02	0.05	0.03	0.02	0.06	1	0.06	8	0.01
153	<i>Psidium guajava</i> L.	28	4.46	0.04	4.32	0.03	0.01	0.01	0.02	0.02	0.01	0.03	1	0.03	6	0.00
154	<i>Syzygium jambos</i> (L.) Alston	28	4.46	0.04	4.44	0.03	0.01	0.01	0.02	0.02	0.01	0.03	1	0.03	8	0.00
155	<i>Syzygium caryophyllatum</i> (L.) Alston	28	4.46	0.04	6.77	0.04	0.02	0.01	0.04	0.03	0.01	0.05	1	0.05	4	0.01
156	<i>Syzygium aqueum</i> (Burm.f.) Alston	68	10.83	0.11	4.12	0.15	0.08	0.05	0.13	0.09	0.05	0.17	1	0.17	3	0.06
157	<i>Syzygium zeylanicum</i> (L.) DC.	21	3.34	0.03	3.96	0.01	0.01	0.00	0.01	0.01	0.00	0.02	1	0.02	6	0.00
158	<i>Syzygium malaccense</i> (L.) Merr. & L.M.Perry	27	4.30	0.04	6.00	0.03	0.02	0.01	0.03	0.02	0.01	0.04	1	0.04	3	0.01
159	<i>Syzygium cumini</i> (L.) Skeels	41	6.53	0.07	6.20	0.08	0.04	0.02	0.07	0.05	0.02	0.09	1	0.09	4	0.02
160	<i>Syzygium myrtifolium</i>	35	5.57	0.06	5.3	0.05	0.03	0.02	0.04	0.0	0.02	0.06	2	0.11	12	0.01

0	Walp.				0					3						
16 1	<i>Pimenta dioica (L.) Merr.</i>	33	5.25	0.05	7.1 0	0.06	0.03	0.02	0.05	0.0 4	0.02	0.07	1	0.07	8	0.01
16 2	<i>Eugenia uniflora L.</i>	22	3.50	0.04	3.9 6	0.02	0.01	0.00	0.01	0.0 1	0.00	0.02	1	0.02	3	0.01
16 3	<i>Melaleuca linariifolia Sm.</i>	32	5.10	0.05	3.1 0	0.03	0.01	0.01	0.02	0.0 2	0.01	0.03	1	0.03	3	0.01
16 4	<i>Melaleuca citrina (Curtis) Dum.Cours.</i>	25	3.98	0.04	6.6 0	0.03	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	8	0.00
16 5	<i>Syzygium stocksii (Duthie) Gamble</i>	26	4.14	0.04	5.3 0	0.03	0.02	0.01	0.02	0.0 2	0.01	0.03	1	0.03	11	0.00
16 6	<i>Xanthostemon chrysanthus (F.Muell.) Benth.</i>	16	2.55	0.03	4.2 0	0.01	0.00	0.00	0.01	0.0 1	0.00	0.01	1	0.01	8	0.00
16 7	<i>Psidium cattleianum Sabine</i>	19	3.03	0.03	3.3 0	0.01	0.01	0.00	0.01	0.0 1	0.00	0.01	1	0.01	14	0.00
16 8	<i>Psidium guajava L.</i>	22	3.50	0.04	6.0 0	0.02	0.01	0.01	0.02	0.0 1	0.01	0.03	1	0.03	14	0.00
16 9	<i>Bougainvillea spectabilis Willd.</i>	24	3.82	0.04	5.0 0	0.02	0.01	0.01	0.02	0.0 1	0.01	0.03	1	0.03	14	0.00
17 0	<i>Ochna jabotapita L.</i>	18	2.87	0.03	3.7 0	0.01	0.01	0.00	0.01	0.0 1	0.00	0.01	1	0.01	6	0.00
17 1	<i>Ochna serrulata (Hochst.) Walp.</i>	13	2.07	0.02	6.8 0	0.01	0.00	0.00	0.01	0.0 1	0.00	0.01	1	0.01	2	0.01
17 2	<i>Myxopyrum smilacifolium (Wall.) Blume</i>	12	1.91	0.02	5.2 0	0.01	0.00	0.00	0.00	0.0 0	0.00	0.01	1	0.01	3	0.00
17 3	<i>Tetrapilus dioicus (Roxb.) L.A.S.Johnson</i>	13	2.07	0.02	6.1 0	0.01	0.00	0.00	0.01	0.0 0	0.00	0.01	1	0.01	8	0.00
17 4	<i>Jasminum sambac (L.) Aiton</i>	26	4.14	0.04	4.2 0	0.02	0.01	0.01	0.02	0.0 1	0.01	0.02	1	0.02	5	0.00
17 5	<i>Jasminum azoricum L.</i>	33	5.25	0.05	4.2 3	0.04	0.02	0.01	0.03	0.0 2	0.01	0.04	2	0.08	6	0.01
17 6	<i>Jasminum multiflorum (Burm.f.) Andrews</i>	18	2.87	0.03	4.6 0	0.01	0.01	0.00	0.01	0.0 1	0.00	0.01	1	0.01	4	0.00

177	<i>Averrhoa carambola</i> L.	17	2.71	0.03	4.2 0	0.01	0.01	0.00	0.01	0.0 1	0.00	0.01	1	0.01	8	0.00
178	<i>Phyllanthus acidus</i> (L.) Skeels	21	3.34	0.03	3.3 0	0.01	0.01	0.00	0.01	0.0 1	0.00	0.01	1	0.01	4	0.00
179	<i>Bridelia stipularis</i> (L.) Blume	43	6.85	0.07	6.0 0	0.09	0.05	0.03	0.07	0.0 5	0.03	0.10	1	0.10	7	0.01
180	<i>Phyllanthus emblica</i> L.	28	4.46	0.04	5.0 0	0.03	0.02	0.01	0.03	0.0 2	0.01	0.03	1	0.03	12	0.00
181	<i>Aporosa cardiosperma</i> (Gaertn.) Merr.	28	4.46	0.04	3.7 0	0.02	0.01	0.01	0.02	0.0 1	0.01	0.03	1	0.03	11	0.00
182	<i>Breynia androgyna</i> (L.) Chakrab. & N.P.Balakr.	31	4.94	0.05	6.7 7	0.05	0.03	0.02	0.04	0.0 3	0.02	0.06	1	0.06	10	0.01
183	<i>Piper colubrinum</i> Link	33	5.25	0.05	4.1 2	0.04	0.02	0.01	0.03	0.0 2	0.01	0.04	2	0.08	3	0.03
184	<i>Bambusa ventricosa</i> McClure	48	7.64	0.08	3.9 6	0.07	0.04	0.02	0.06	0.0 4	0.02	0.08	2	0.16	11	0.01
185	<i>Bambusa vulgaris</i> Schrad. ex J.C.Wendl.	22	3.50	0.04	6.0 0	0.02	0.01	0.01	0.02	0.0 1	0.01	0.03	1	0.03	15	0.00
186	<i>Saccharum officinarum</i> L.	31	4.94	0.05	6.2 0	0.05	0.03	0.01	0.04	0.0 3	0.01	0.05	1	0.05	4	0.01
187	<i>Afrocarpus falcatus</i> (Thunb.) C.N.Page	59	9.39	0.09	5.3 0	0.15	0.08	0.04	0.12	0.0 9	0.04	0.16	1	0.16	6	0.03
188	<i>Podocarpus salignus</i> D.Don	20	3.18	0.03	7.1 0	0.02	0.01	0.01	0.02	0.0 1	0.01	0.02	1	0.02	8	0.00
189	<i>Coccoloba uvifera</i> L.	28	4.46	0.04	3.9 6	0.02	0.01	0.01	0.02	0.0 1	0.01	0.03	1	0.03	4	0.01
190	<i>Portulaca grandiflora</i> Hook.	23	3.66	0.04	3.1 0	0.01	0.01	0.00	0.01	0.0 1	0.00	0.01	1	0.01	3	0.00
191	<i>Ardisia elliptica</i> Thunb.	43	6.85	0.07	6.6 0	0.10	0.05	0.03	0.08	0.0 6	0.03	0.11	1	0.11	7	0.02
192	<i>Maesa macrophylla</i> C.B.Clarke	38	6.05	0.06	5.3 0	0.06	0.03	0.02	0.05	0.0 4	0.02	0.07	1	0.07	6	0.01
193	<i>Putranjiva roxburghii</i> Wall.	28	4.46	0.04	4.2 0	0.03	0.01	0.01	0.02	0.0 2	0.01	0.03	1	0.03	4	0.01

194	<i>Ziziphus jujuba Mill.</i>	35	5.57	0.06	3.30	0.03	0.02	0.01	0.03	0.02	0.01	0.04	1	0.04	12	0.00
195	<i>Ziziphus mauritiana Lam.</i>	17	2.71	0.03	6.00	0.01	0.01	0.00	0.01	0.01	0.00	0.02	1	0.02	4	0.00
196	<i>Carallia brachiata (Lour.) Merr.</i>	48	7.64	0.08	5.00	0.09	0.05	0.03	0.08	0.06	0.03	0.10	2	0.20	12	0.02
197	<i>Gardenia gummifera L.f.</i>	22	3.50	0.04	3.70	0.01	0.01	0.00	0.01	0.01	0.00	0.02	1	0.02	8	0.00
198	<i>Morinda citrifolia L.</i>	31	4.94	0.05	6.80	0.05	0.03	0.02	0.04	0.03	0.02	0.06	1	0.06	3	0.02
199	<i>Mitragyna parvifolia (Roxb.) Korth.</i>	59	9.39	0.09	5.20	0.14	0.08	0.04	0.12	0.09	0.04	0.16	1	0.16	3	0.05
200	<i>Gardenia jasminoides J.Ellis</i>	27	4.30	0.04	7.80	0.05	0.02	0.01	0.04	0.03	0.01	0.05	2	0.10	8	0.01
201	<i>Melicope denhamii (Seem.) T.G.Hartley</i>	18	2.87	0.03	4.20	0.01	0.01	0.00	0.01	0.01	0.00	0.01	1	0.01	11	0.00
202	<i>Citrus pennivesiculata (Lushington) Tanaka</i>	32	5.10	0.05	3.30	0.03	0.01	0.01	0.02	0.02	0.01	0.03	1	0.03	8	0.00
203	<i>Citrus hystrix DC.</i>	28	4.46	0.04	6.00	0.04	0.02	0.01	0.03	0.02	0.01	0.04	1	0.04	14	0.00
204	<i>Casearia graveolens Dalzell</i>	22	3.50	0.04	5.00	0.02	0.01	0.01	0.02	0.01	0.01	0.02	1	0.02	14	0.00
205	<i>Azima tetraacantha Lam.</i>	18	2.87	0.03	3.70	0.01	0.01	0.00	0.01	0.01	0.00	0.01	2	0.02	14	0.00
206	<i>Santalum album L.</i>	18	2.87	0.03	7.10	0.02	0.01	0.01	0.02	0.01	0.01	0.02	1	0.02	6	0.00
207	<i>Nephelium lappaceum L.</i>	32	5.10	0.05	3.96	0.03	0.02	0.01	0.03	0.02	0.01	0.04	1	0.04	2	0.02
208	<i>Sapindus laurifolius Balb. ex DC.</i>	28	4.46	0.04	3.10	0.02	0.01	0.01	0.02	0.01	0.01	0.02	1	0.02	3	0.01
209	<i>Pometia pinnata J.R.Forst. & G.Forst.</i>	22	3.50	0.04	6.60	0.03	0.01	0.01	0.02	0.02	0.01	0.03	1	0.03	8	0.00
210	<i>Dimocarpus longan Lour.</i>	36	5.73	0.06	5.30	0.05	0.03	0.02	0.05	0.03	0.02	0.06	1	0.06	5	0.01
211	<i>Pouteria campechiana (Kunth)</i>	42	6.69	0.07	2.33	0.03	0.02	0.01	0.03	0.02	0.01	0.04	1	0.04	6	0.01

	<i>Baehni</i>															
21 2	<i>Manilkara zapota (L.) P.Royen</i>	33	5.25	0.05	6.7 7	0.06	0.03	0.02	0.05	0.0 4	0.02	0.06	1	0.06	4	0.02
21 3	<i>Chrysophyllum cainito L.</i>	32	5.10	0.05	4.1 2	0.03	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	8	0.00
21 4	<i>Mimusops elengi L.</i>	28	4.46	0.04	3.9 6	0.02	0.01	0.01	0.02	0.0 1	0.01	0.03	1	0.03	4	0.01
21 5	<i>Synsepalum dulcificum (Schumach. & Thonn.) Daniell</i>	22	3.50	0.04	6.0 0	0.02	0.01	0.01	0.02	0.0 1	0.01	0.03	2	0.05	7	0.01
21 6	<i>Samadera indica Gaertn.</i>	41	6.53	0.07	6.2 0	0.08	0.04	0.02	0.07	0.0 5	0.02	0.09	1	0.09	12	0.01
21 7	<i>Simarouba glauca DC.</i>	29	4.62	0.05	5.3 0	0.04	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	11	0.00
21 8	<i>Symplocos cochinchinensis (Lour.) S.Moore</i>	32	5.10	0.05	7.1 0	0.06	0.03	0.02	0.05	0.0 3	0.02	0.06	1	0.06	10	0.01
21 9	<i>Phaleria macrocarpa Boerl.</i>	28	4.46	0.04	3.9 6	0.02	0.01	0.01	0.02	0.0 1	0.01	0.03	1	0.03	3	0.01
22 0	<i>Holoptelea integrifolia (Roxb.) Planch.</i>	22	3.50	0.04	3.1 0	0.01	0.01	0.00	0.01	0.0 1	0.00	0.01	1	0.01	11	0.00
22 1	<i>Pourouma cecropiifolia Mart.</i>	22	3.50	0.04	6.6 0	0.03	0.01	0.01	0.02	0.0 2	0.01	0.03	1	0.03	15	0.00
22 2	<i>Citharexylum flexuosum (Ruiz & Pav.) D.Don</i>	32	5.10	0.05	5.3 0	0.04	0.02	0.01	0.04	0.0 3	0.01	0.05	1	0.05	4	0.01
22 3	<i>Lantana camara L.</i>	28	4.46	0.04	4.2 0	0.03	0.01	0.01	0.02	0.0 2	0.01	0.03	1	0.03	6	0.00
22 4	<i>Duranta erecta L.</i>	22	3.50	0.04	3.3 0	0.01	0.01	0.00	0.01	0.0 1	0.00	0.01	1	0.01	8	0.00
22 5	<i>Citharexylum spinosum L.</i>	28	4.46	0.04	6.0 0	0.04	0.02	0.01	0.03	0.0 2	0.01	0.04	1	0.04	4	0.01
22 6	<i>Alpinia calcarata (Andrews) Roscoe</i>	32	5.10	0.05	5.0 0	0.04	0.02	0.01	0.03	0.0 2	0.01	0.05	1	0.05	3	0.02

227	<i>Mussaenda erythrophylla</i> Schumach. & Thonn.	28	4.46	0.04	3.70	0.02	0.01	0.01	0.02	0.01	0.01	0.03	1	0.03	7	0.00
228	<i>Rosenbergiodendron formosum</i> (Jacq.) Fagerl.	22	3.50	0.04	6.80	0.03	0.01	0.01	0.02	0.02	0.01	0.03	1	0.03	6	0.00
229	<i>Ixora chinensis</i> Lam.	32	5.10	0.05	5.20	0.04	0.02	0.01	0.04	0.03	0.01	0.05	1	0.05	3	0.02
230	<i>Citrus medica</i> L.	50	7.96	0.08	7.80	0.16	0.08	0.05	0.13	0.09	0.05	0.17	1	0.17	11	0.02
231	<i>Aegle marmelos</i> (L.) Corrêa	39	6.21	0.06	4.20	0.05	0.03	0.02	0.04	0.03	0.02	0.06	1	0.06	15	0.00
232	<i>Citrus limon</i> (L.) Osbeck	33	5.25	0.05	3.30	0.03	0.02	0.01	0.02	0.02	0.01	0.03	1	0.03	4	0.01
233	<i>Glycosmis pentaphylla</i> (Retz.) DC.	33	5.25	0.05	6.00	0.05	0.03	0.02	0.04	0.03	0.02	0.06	1	0.06	6	0.01
234	<i>Murraya koenigii</i> (L.) Spreng.	32	5.10	0.05	5.00	0.04	0.02	0.01	0.03	0.02	0.01	0.05	1	0.05	8	0.01
235	<i>Artocarpus heterophyllus</i> Lam.	28	4.46	0.04	3.70	0.02	0.01	0.01	0.02	0.01	0.01	0.03	1	0.03	4	0.01
236	<i>Artocarpus heterophyllus</i> Lam.	22	3.50	0.04	2.13	0.01	0.00	0.00	0.01	0.00	0.00	0.01	1	0.01	3	0.00
237	<i>Artocarpus heterophyllus</i> Lam.	18	2.87	0.03	3.22	0.01	0.00	0.00	0.01	0.00	0.00	0.01	1	0.01	7	0.00
238	<i>Artocarpus heterophyllus</i> Lam.	35	5.57	0.06	4.20	0.04	0.02	0.01	0.03	0.02	0.01	0.05	1	0.05	6	0.01
239	<i>Artocarpus heterophyllus</i> Lam.	41	6.53	0.07	3.30	0.04	0.02	0.01	0.04	0.03	0.01	0.05	1	0.05	4	0.01
240	<i>Dalbergia latifolia</i>	18	2.87	0.03	6.00	0.02	0.01	0.00	0.01	0.01	0.00	0.02	8	0.14	12	0.01
241	<i>Dalbergia latifolia</i>	32	5.10	0.05	5.00	0.04	0.02	0.01	0.03	0.02	0.01	0.05	12	0.54	13	0.04
242	<i>Dalbergia latifolia</i>	28	4.46	0.04	3.70	0.02	0.01	0.01	0.02	0.01	0.01	0.03	11	0.28	8	0.04
24	<i>Cocos nucifera</i>	22	3.50	0.04	16.	0.06	0.03	0.02	0.05	0.0	0.02	0.07	52	3.54	11	0.32

3					00					4						
24 4	<i>Cocos nucifera</i>	18	2.87	0.03	10. 00	0.03	0.01	0.01	0.02	0.0 2	0.01	0.03	28	0.80	9	0.09
24 5	<i>Swietenia mahagoni</i>	35	5.57	0.06	12. 00	0.12	0.06	0.04	0.10	0.0 7	0.04	0.13	14	1.81	13	0.14
24 6	<i>Swietenia mahagoni</i>	41	6.53	0.07	10. 00	0.13	0.07	0.04	0.11	0.0 8	0.04	0.15	32	4.73	12	0.39
24 7	<i>Swietenia mahagoni</i>	18	2.87	0.03	9.0 0	0.02	0.01	0.01	0.02	0.0 1	0.01	0.03	21	0.54	10	0.05
24 8	<i>Swietenia mahagoni</i>	15	2.39	0.02	6.0 0	0.01	0.01	0.00	0.01	0.0 1	0.00	0.01	51	0.61	6	0.10
24 9	<i>Saraca asoca</i>	41	6.53	0.07	10. 00	0.13	0.07	0.04	0.11	0.0 8	0.04	0.15	5	0.74	10	0.07
25 0	<i>Saraca asoca</i>	37	5.89	0.06	9.6 7	0.11	0.06	0.03	0.09	0.0 6	0.03	0.12	6	0.70	6	0.12
25 1	<i>Saraca asoca</i>	42	6.69	0.07	6.2 1	0.09	0.05	0.03	0.07	0.0 5	0.03	0.10	6	0.58	8	0.07
25 2	<i>Mangifera indica L.</i>	51	8.12	0.08	4.1 2	0.09	0.05	0.03	0.07	0.0 5	0.03	0.09	26	2.45	12	0.20
25 3	<i>Mangifera indica L.</i>	28	4.46	0.04	5.3 2	0.03	0.02	0.01	0.03	0.0 2	0.01	0.04	16	0.59	8	0.07
25 4	<i>Mangifera indica L.</i>	18	2.87	0.03	7.2 1	0.02	0.01	0.01	0.02	0.0 1	0.01	0.02	38	0.78	6	0.13
25 5	<i>Mangifera indica L.</i>	23	3.66	0.04	6.0 2	0.03	0.01	0.01	0.02	0.0 2	0.01	0.03	180	5.04	3	1.68
25 6	<i>Psidium guajava L.</i>	16	2.55	0.03	4.1 2	0.01	0.00	0.00	0.01	0.0 1	0.00	0.01	21	0.19	8	0.02
25 7	<i>Psidium guajava L.</i>	9	1.43	0.01	4.8 8	0.00	0.00	0.00	0.00	0.0 0	0.00	0.00	37	0.13	2	0.06
25 8	<i>Psidium guajava L.</i>	12	1.91	0.02	5.8 9	0.01	0.00	0.00	0.01	0.0 0	0.00	0.01	32	0.24	1	0.24