DIVERSITY OF CULTIVATED CROPS IN KERALA

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1.1 DIVERSITY OF CULTIVATED CROPS IN KERALA

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Abstract

It is often claimed that Kerala is rich in biodiversity as well as agrobiodiversity. The present study was done with the objective of generating an up-to-date list of all the crops grown in Kerala both commercially and in the homesteads by visiting various farms and nurseries of both individuals and institutions. Peoples' Biodiversity Registers prepared by various local self government institutions, published literature, and Internet resources were also consulted. The observed crops were listed after classifying them to various categories based on 'primary use'. The study revealed that a total of 452 crops belonging to 82 families are being grown in Kerala. Among these, 256 crops have edible uses (cereals and millets, pseudocereals, pulses, oil seeds, tuber crops, sugars and starches, fruits and nuts, and vegetable crops). A total of 118 fruits and nuts have been recorded including 22 subtropical fruits. Others in the list are cereals and millets–11, pseudocereals–4, pulses–10, oil seeds–8, tuber crops–24, sugars and starches–8, vegetables–73, spices and condiments– 21, beverages–5, stimulants– 3, cut flowers–20, cut foliage plants–14, green manure crops–10, cover crops–4, fodder crops–42, fibre crops–6, rubber crops–1, essential oil yielding plants–7, medicinal plants–45, and crops of miscellaneous uses–18. The list is not exhaustive as attempts are going on for introducing new crops, especially fruits.

Keywords: Agrobiodiversity, crop diversity, cultivated plants, Western Ghats, Kerala

Introduction

Considering the population of endemic plants and the threat to original natural vegetation, the Conservation International has identified 36 regions of the world as biodiversity hotspots, that is, areas biologically rich and seriously threatened (Conservation International, 2021). Kerala lies in one of such hotspots, Western Ghats and Sri Lanka. In fact, this is one of the hottest hotspots! The concern for biodiversity loss should also include the concern for agro-biodiversity loss; in other words, concern for the loss of species important for agriculture, loss of populations within such species, and loss of agro-ecosystems. In biodiversity, concern is more on the loss of species diversity, but in agrobiodiversity, people are more worried about the loss of genetic diversity, that is, loss of landraces and cultivars within species. Nayar et al (2009) identified 22 agrobiodiversity hotspots in India, and put the entire Kerala state under the 'Malabar Agrobiodiversity Region' situated in the southern region of the Western Ghats extending from Dakshin Kannada in the north to Kanyakumari in the south. In addition to all the districts of Kerala, it also includes Udhagamandalam and Kanyakumari districts of Tamil Nadu and districts of Dakshin Kannada, Kodagu and Udipi in Karnataka state.

The climate of Kerala is characterized by hot and mild summers and a rainy season of about six months. Most of the districts have average annual precipitation exceeding 2000 mm, normal being 2948 mm (GOK, 2021). There is abundant water availability due to the extensive network of rivers, streams, lakes, and backwaters. The region is represented by long growing season, which may extend to more than 270 days. However, because of seasonal dry spells,

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especially during February to April, there is some moisture deficit in the affected areas and irrigation may become necessary in such months. The soil is generally lateritic and alluvial soils occur in the coastal plains. The soil is moderately acidic and poor in base saturation. Because of the climatic differences and other features among the low lands (0-7.5m above MSL), midlands (7.5-75m above MSL), highlands (75-750m above MSL), and high ranges (above 750m MSL), an array of crops can be grown in Kerala.

Kerala is famous for homestead farming system, which integrates the home with useful fruit trees and shrubs, vegetables, tuber crops, spice crops, fodder crops, livestock, and poultry in a small (usually about 0.10 ha or more) area of land. The typical hamlet type of villages in Kerala, pressure on land, and the fragmentation of holdings encouraged this type of farming system. Homesteads are havens of rich agrobiodiversity, where you could see an assortment of crops in typical multiple cropping or mixed farming style.

Although most parts of Kerala lies in the humid tropical region, certain parts especially the high ranges enjoys mild cool climate. Idukki and Wayanad districts, Ponmudi in Thiruvananthapuram district, and Nelliyampathy in Palakkad district are typical high ranges, where subtropical fruits and vegetables are grown. The areas like Vattavada and Kanthalloor in Idukki District are home to several temperate fruits such as apple, peach, plum, persimmon, cabbage, cauliflower, and the like.

A crop is any plant used by people for some purpose. Crops may be harvested from natural ecosystems or they may be grown intentionally as with domesticated plants in agriculture. Several crops are grown for specific purposes such as food, feed, fibre, fuel, and timber. Some are grown for aesthetic and industrial purposes. A plant is termed '*wild*', if it has not been significantly altered by deliberate human selection, nor has it adapted specifically to habitats disturbed by humans. The term '*weed*' is used to denote a plant adapted to habitats disturbed by humans or which come up where it is not desired to grow. A plant that has been altered genetically through intentional human selection is called a '*domesticate*' or '*domesticated plant'*. Most crop plants are domesticates; however, the term 'crop' does not always mean a domesticated plant. Some plants are crops but are not domesticates, for example, many trees cut for timber or for medicinal uses are not domesticates. You may also find many more examples including fruits, nuts, vegetables, and forage plants, which are not domesticated.

According to the latest estimate of the Botanical Survey of India (BSI), India has 54,733 plants including 21,849 angiosperms, 82 gymnosperms, 1310 pteridophytes, 2791 bryophytes, 2961 lichens, 15,504 fungi, 8979 algae, and 1257 microbes. These represent approximately 14 percent of the total recorded plant species in the world (BSI, 2021). Ambasta et al. (1986) catalogued information on nearly 5000 species of useful plants of India. Singh et al. (1983) documented brief details of 3500 plants of economic importance in India in a dictionary format listing the plants in alphabetical sequence of their scientific names followed by synonyms. National Bureau of Plant Genetic Resources in one of its Manuals reported and listed 480 cultivated plant species in India (Nayar et al., 2003). In an inventory of cultivated plant species and their wild relatives for the Protection of Plant Varieties and Farmers' Rights Authority, 1641 plants have been listed (Nayar, 2009). In 'Malabar agrobiodiversity region', the listed endemic plant species of agrobiodiversity importance is 74 and threatened species of agrobiodiversity importance is 44.

The first authentic account on the plants of Kerala is the much acclaimed 12-volume monumental treatise, *Hortus Indicus Malabaricus* by the Dutch explorer, Hendrik van Rheede (1678–1693) in collaboration with Itty Achuden, a noted herbalist (Manilal, 2003). Please note that this work occurred before Carl von Linne (Carolus Linnaeus) (1707-1778) and his binomial

nomenclature! A notable work on flora of South India following this was that of J.S. Gamble in three volumes covering the flora of erstwhile Madras Presidency (Gamble, 1847-1925). Later, several attempts have been made to list the regional flora of Kerala (e.g., Manilal and Sivarajan, 1982; Sreekumar and Nair, 1991; Sasidharan and Sivarajan, 1996; Sivarajan and Mathew, 1997). A few recent publications are *Biodiversity Documentation for Kerala: Flowering Plants* (Sasidharan, 2004), *The Flora of Kerala* Vol.1 (Daniel, 2005), *Flowering Plants of Kerala–A Handbook* (Nayar et al., 2006), and a DVD*, Flowering Plants of Kerala* (Sasidharan, 2012). According to the latest estimate, Kerala state harbours 5094 flowering plants under 1537 genera and 221 families (Sasidharan, 2012). As reported by Nayar et al. (2008), a total of 1709 flowering plants endemic to Peninsular India are found in Kerala; of which 237 species distributed in 47 families are exclusively endemic to the state.

Nayar et al. (2008) accounted 417 plants as cultivated or planted species in the State. According to Sasidharan (2012), the flowering plants of Kerala include 858 exotics that have been introduced for use in agriculture, horticulture, forestry, or accidentally entered species including invasive weeds; of which around 200 species have become naturalised in the state. Sreekumar et al. (2020) reviewed the ethnobotanical knowledge on wild edible fruits traditionally used by the tribal and rural peoples of the Western Ghats, and listed 237 wild fruiting plants, which includes 37 endemic and 11 red listed plants.

Despite several works to document the flowering plants of Kerala at large, not much works to document agricultural biodiversity of the state could be seen. An early publication is *Guide to the Economic Plants of South India* (Sundararaj and Balasubramanyam, 1959), wherein they tabulated information on 1145 species of economic plants including crops. Purseglove (1974; 1975) gave a good account of tropical crops, which included both botany and agronomy including systematics of most crops grown in the tropics. Gopimony (1991) listed 1251 plants of economic importance in Malayalam in a book, *Sasya Shabdavali* (Glossary of Plant Names). The Package of Practises Recommendation of Kerala Agricultural University includes the recommendations for 152 major and minor crops of some importance in Kerala (KAU, 2016). In the Farm Guide published by Farm Information Bureau, the names of 166 crops including 43 medicinal and aromatic plants have been listed (FIB, 2021). Nayar (2011) listed and documented 142 crops belonging to 104 genera and 43 families, and presented the list as agrobiodiversity of Kerala state. However, a cursory examination of the paper shows that many of the common crops such as cotton, custard apple, curry leaf, rambutan, and rose apple were left out. He mentioned very few fodder grasses and legumes. He also missed out most of the subtropical and temperate fruits and vegetables grown in the high ranges. Therefore, an extensive survey covering the entire state has been planned with the objective of listing out all the crops grown in Kerala both commercially and in the homesteads.

Materials and methods

The starting point of the present study was the documents of Nayar (2011), KAU (2016), and FIB (2021), and the intention was to find out and list the crops missed in these documents. The present study was done by visiting various farms and nurseries of both individuals and institutions. People's Biodiversity Registers prepared by various local self government institutions kept at the Kerala State Biodiversity Library were also consulted. In addition, an extensive search of published literature including that published in popular farm magazines was also done. Internet resources were also reviewed. When the survey was in the midway, an updation of the work of Nayar (2011) came to light, which mentioned 306 crops excluding medicinal and aromatic plants, ornamental plants, and forestry species (Pradheep et al., 2021). However, the search was continued for preparing an extensive list covering all the agro-ecological regions

of Kerala. In the present account of cultivated crops, only domesticated or introduced crops grown in Kerala were considered. You may find several other 'crops' in the wild or as weeds, which may have some uses. However, such plants were excluded from the list (e.g., *Senna tora, Amaranthus viridis, Boerhavia diffusa*).

The observed crops were listed after classifying them to various categories based on 'primary use'. Crops can be classified by use and by the type of product, which generally implies agronomic use. A crop may be utilized for several uses. For example, although the primary use of mango, papaya, and jackfruit is as fruit, these can be used as vegetable as well. So is the case with coconut, which has several uses although its primary use is as oil. The classification of crops based on primary use is useful for general applications.

In Kerala, numerous medicinal plants occur as weeds or in the wild. Nayar et al. (2008) reported that 1170 species occurring in the state (27%) have some medicinal properties. Out of these, 1096 species are indigenous and the remaining 74 are exotic. However, only a few among them have been domesticated and cultivated extensively. The case of ornamental plants is different. Although there are innumerable plants, which are grown as ornamental plants in gardens or as house plants, not many are grown for cut flowers. Ornamental plants grown exclusively for cut flowers and traded have been included. A recent trend is growing foliage plants for cut foliage and export. Cut leaves of tropical foliage plants have good demand overseas. In the case of forage plants and green manure plants, several naturally occurring legumes and grasses can be utilized for the purpose. However, only those, which yield heavily and amenable to management are cultivated.

Results and discussion

The study revealed that a total of 452 crops belonging to 82 families are being cultivated in Kerala. In some crop species, separate subspecies, botanical varieties, or cultivated varieties (cultivars) are available for specific uses. Note that there are some differences between the 'cultivated variety' and the analogous naturally occurring taxon, 'botanical variety'. The phrase, 'cultivated variety' (often, its contraction 'cutivar') is used to designate a new type in a crop intentionally bred and released for cultivation. A cultivar is not natural but artificially maintained by human efforts but botanical variety is natural, which comes after species. For example, in cowpea, yard long bean (Kuruthola payar) is considered as a subspecies, *Vigna unguiculata* subsp. *sesquipedalis*. In Brassicaceae family, five botanical varieties in the species *Brassica oleracea* represents five crops - cabbage, cauliflower, broccoli, brussels sprout, and kale. Similarly, in certain crops, cultivars differ considerably for the use as food and fodder; and therefore, fodder sorghum, fodder maize, fodder bajra, and fodder cowpea were considered as separate crops and included under fodder crops in addition to listing them under cereals or pulses. In cut foliage plants, certain cultivars of *Dracaena* have been considered as crops. Considering these aspects, the above 452 crops represent 436 species grown in Kerala.

Out of 452 crops cultivated in Kerala, 256 crops have edible uses. A total of 118 fruits and nuts have been recorded including 22 subtropical fruits. The list is not exhaustive as attempts are going on for introducing new crops, especially fruits. Others in the list are cereals and millets–11, pseudocereals–4, pulses–10, oil seeds–8, tuber crops–24, vegetables–73, spices and condiments– 21, beverages–5, stimulants– 3, cut flowers–20, cut foliage plants–14, green manure crops– 10, cover crops–4, fodder crops–42, sugars and starches–8, fibre crops–6, rubber crops–1, essential oil yielding plants–7, medicinal plants–45, and crops of miscellaneous uses–18. Although 452 crops have been listed, area under cultivation is available for 69 crops only (GOK, 2021). However, area of minor crops are available as groups of 'other oil seeds', 'other tuber crops', 'other spices and condiments', 'other fruits', 'other vegetables',

‘fodder crops’, ‘green manure crops’, ‘medicinal plants’, and ‘other crops and trees’ indicating that such crops are grown in small scale, as a part of homesteads or along with other crops such as coconut in multiple cropping systems.

In Kerala, there are only four crops - coconut, rubber, rice, and banana (including plantain), which have an area above one lakh hectares. Crops occupying more than 10,000ha are 17 only. The maximum area is under coconut (1) followed by rubber (2) and rice (3). Other crops in the order of rank based on area occupied are banana and plantain (4), arecanut (5), jack fruit (6), coffee (7), black pepper (8), mango (9), cassava (10), cashew nut (11), cardamom (12), tea (13), nutmeg (14), papaya (15), drumstick (16), and cocoa (17). More details about the crops are given in Table 2 after classifying them based on primary use. Please note that in Table 2, only the essential part of the botanical name (the binomial without adding authority names) is given mainly to make the list compact. I have tried to provide the latest and accepted scientific name but synonyms were not given. In the case of common names too, the most widely used common name in circulation is given. Readers please note that it is very easy to obtain additional botanical features, synonyms, and common names from the Internet. You may use Table 2 as a check list.

1. Cereals and millets

The term cereal is from *Ceres*, the Roman goddess of harvest. Cereals are the cultivated grasses grown for their edible starchy grains. They form the principal sources of food for humans and feed for animals. In general, the term *cereal* is restricted to the large grained crops such as rice, wheat, maize, and barley, and the small grained crops such as sorghum, pearl millet, and finger millet are called *millets.* In the group of cereals and millets, 11 crops are grown in Kerala. However, excepting rice, the area under other crops is relatively much less.

The recorded maximum area under rice from all the three seasons of Virippu, Mundakan, and Punja was 8.81 lakh ha in the year 1974-75(Thomas and Indulekha, 2018). However, its area has sharply declined to 1.98 lakh ha in 2019-20 due to a variety of reasons; and now, it is grown in just 7.66 percent of the gross cropped area (GOK, 2021). As reported by Nayar et al (2009), 600 cultivars of rice are present in the Malabar agrobiodiversity region, which comprises of medicinal, scented, flood tolerant, salt tolerant, and drought tolerant cultivars. Latha et al (2013) collected 623 land races of rice for conservation, but very few are cultivated by farmers. Emmer wheat, often used for making Uppuma, is grown in certain patches in Kanthalloor and Vattavada regions of Idukki district. However, its area has shrunk to miniscule level and as shown in Table 1, it is being grown in just 1ha only. Cultivation of millets is concentrated mainly in Palakkad district.

2. Pseudocereals

A *pseudocereal* is the grain from certain non-grass crops used almost in the same way as grassy cereals, the true cereals. Pseudocereals can be processed and used like cereals by grinding into flour. Pseudocereals grown in Kerala include two types of grain amaranth, quinoa, and chia. No concerted efforts have been observed for their cultivation, but found as a part of homestead cultivation and experimental farms.

3. Pulses

The term ‘pulse’ is used generally for the seeds of leguminous plants used as food (edible seed legumes). They are rich in proteins and are essential ingredients in vegetarian diets. The fruit of leguminous plants is a pod and is usually called a ‘legume’. A ‘legume’ is actually a dehiscent fruit developed from a simple superior ovary dehiscing or separating into two halves by both ventral and dorsal sutures with the seeds attached to the ventral suture.

Although pulses have great importance at the national level, in Kerala, it is often ignored (Thomas, 2016). In 1961-62, pulses such as red gram, green gram, black gram, horse gram, and cowpea occupied an area of 43,546 ha, but now their total area shrunk to just 2260 ha (Table 1). In Table 2, the names of 10 pulses have been listed. Probably, red gram is the most important pulse of Kerala. In Table 1, the area under 'gram' has been reported, which seems to include green gram, black gram, and horse gram. However, 'gram' is a misrepresentation for such crops, because in North India, gram without any epithets means chick pea. Note that in Kerala, chick pea is sparingly grown in experimental farms and by some enthusiasts at very small level.

4. Oil seeds

Oil yielding crops include crops that give both edible and non-edible oils. Edible oils are important ingredients in human diet and are used extensively as a cooking medium, which also adds taste. These are also used for soap making and have many other industrial uses. Coconut, sesame, groundnut, oil palm, soybean, sunflower, and brown mustard are edible oils grown in Kerala; while castor oil is non-edible. However, excluding coconut, oil palm, sesame, and ground nut, all others are considered as minor oil seed crops in Kerala. Although castor oil is often projected as non-edible, recently, edible castor oil also hit the market.

Coconut is the most important oil seed crop of Kerala occupying the largest area (7.6l lakh ha). Note that coconut has several other uses such as grated coconut for adding taste in curries, coconut milk, confectionaries, toddy, and jaggery. Its timber and leaves also have many uses. Oil palm is grown in an area of 3646 ha (Oil palm India, 2017). In the past, sesame was a much valued crop, which once occupied 14,285 ha (1985-86); however, the area under sesame is fast dwindling, and in 2019-20, its area was just 208 ha only.

5. Sugars and starches

Under this category, eight crops have been listed in Table 2. These crops are grown primarily for the production of sugar, starch, or other sweet-tasting products. Jaggery is produced not only from sugarcane but also from toddy palm and palmyrah palm. Jaggery can also be made from coconut toddy but not listed here as its primary use is oil. Starch producing plants sporadically grown in Kerala include queen sago, talipot palm, and Wight's sago palm. Stevia is grown in small scale especially in homesteads.

6. Tuber crops

Tuber crops are plants with modified swollen root or underground stem, which act as storage organs. Crops with modified roots are distinct from those having modified stems. These organs are rich sources of carbohydrates and are commonly used as food for humans, livestock feed, or as raw materials for industrial purposes such as starch and alcohol production, or processed into various food products. Kerala is rich in tuber crops, and 24 tuber crops have been listed. Cassava or tapioca is the most important tuber crop, which once occupied 3.27 lakh ha (1975-76). In 2019-20, its area was 0.62 lakhs. A few new tuber crops have been noted with enthusiastic growers, which included yacon and yam bean. In Table 2, the area under colocasia has been shown as 6336ha. This seems to include tannia also (Seema chembu/Vettu chembu) with the botanical name, *Xanthosoma sagittifolium*. Tannia is more popular and fetches higher price than colocasia in the villages. Tannia is a true shade loving species (Thomas, 2017).

7. Vegetables

Vegetable crops are protective in nature in the sense that they provide the much-valued vitamins, minerals, and fibres essential for a balanced diet. In Kerala, 73 vegetables are grown including 17 cool season vegetables. Earlier, cool season vegetables such as cabbage and

cauliflower were grown only in the high ranges, but now specific cultivars suitable for the plains are available. Among the vegetables, drumstick, a perennial tree, occupies the greatest area followed by vegetable cowpea, amaranth, and bitter gourd. The area under vegetables is almost steady despite a decreasing tendency through the years. In 2005-06, vegetables were grown in 47, 256 ha, in 2010-11, it was 42,117 ha, and in 2019-20, the area was 41,053 ha.

8. Fruits and nuts

Fruits are essential ingredients of food as they are rich in energy and protective, supplying various vitamins, minerals, and fibres. Some fruit crops such as cashew produce nuts, which are rich in energy and nutrients. The study revealed that 118 fruit plants are being grown in Kerala including 96 tropical and 22 subtropical fruits. Although 118 fruit plants have been listed, very few are cultivated on a commercial scale in Kerala.

Banana and plantain together occupy 1,16,877 ha, and it is the most important commercially grown fruit crop in Kerala. *Banana* and *plantain* are two terms used to refer to fruits belonging to the genus *Musa*. The division is based on their intended use as food. In the strict sense, 'banana' is dessert banana, which is consumed only at ripe stage. Examples of dessert banana include Poovan, Chenkadali, Njalipoovan, Palayamkodan, Karpoora Valli, Koompilla Kannan, Kunnan, Red banana, Robusta, Gros Michel, Grand Nain and Dwarf Cavendish. On the contrary, plantains are starchier and less sweet, often eaten cooked rather than raw. They have thicker skin and used at any stage of ripeness. For example, 'Nendran', a popular true plantain of Kerala is consumed in various stages of ripeness (AAB group). In fact, Nendran is a dual-purpose type used for dessert and cooking purpose. Attunendran, Nedunenthran, Chengalikodan, Manjeri nendran, Zansibar, and Big Ebanga are some clones of Nendran. Often, a subgrouping under the plantain, the cooking bananas, is also mentioned, which are consumed only after cooking. Examples include Monthan, Batheesa, Kanchikela, and Nendra Padatty. In Table 2, banana is entered as 'Banana and plantain'. Please note that the word plantain is not popular in Kerala and for Keralites, all the types coming under *Musa* are banana (*Vazha*).

The accepted scientific names for most groups of cultivated bananas are *Musa acuminata* and *Musa balbisiana* (for the ancestral species), and *Musa* X *paradisiaca for* the hybrids between *M. acuminata* X *M. balbisiana*. *Musa* X *paradisiaca* is applicable to all the hybrids of *M. acuminata* and *M. balbisiana* despite their genome composition. Simmonds and Shepherd (1955) introduced genome-based classiciation system for banana wherein cultivars related to *Musa acuminata* and *Musa balbisiana* are classified according to the relative contribution of these species, designated by the letter 'A' for *acuminata* and 'B', for *balbisiana*. A banana cultivar is assigned to a genome group according to the number of chromosome sets in its genome (ploidy) and the species that donated them. Diploid cultivars belong to the AA or AB genome group, while triploid cultivars fall into three genome groups: AAA, AAB, or ABB. Tetraploid cultivars such as ABBB or AABB also exist. Most dessert bananas belong to AAA group while most plantains belong to AAB group. However, the popular dessert bananas in Kerala, Poovan, Njali Poovan, Koompilla Kannan, and Kunnan belong to AB group, and Palayankodan, AAB group.

If you consider banana and plantain together, jackfruit is the second fruit in area, but it is a crop of the homesteads. Like jackfruit, mango is also a versatile crop of the homesteads (third in area), but it is commercially cultivated in certain pocket areas such as Muthalamada in Palakkad district. Cashewnut provides the acclaimed cashew nut and its apple (a pseudofruit), but it is always mentioned as a commercial crop. Its area, however, is declining because of pest problems and competition with rubber. Papaya, an introduced crop, is an essential crop in the homesteads especially near the house. Most households will have one or two papaya plants. Presently, the cultivation of pineapple, an introduced fruit, is catching up, as it is highly suitable for growing in the early stages of replanted rubber estates.

A recent trend in Kerala is introduction of fruit plants from countries similar in climate, for example, Malaysia, Indonesia, Singapore, South America, and tropical Africa. Some enthusiastic individuals and nursery people are behind this trend. It is interesting to note that among the 118 crops, only 32 fruits are indigenous and all other are introductions at various points of time. Among the recent introductions, rambutan and dragon fruit seems to be promising.

Table 1. Area under major crops in Kerala.

Sl. No.	Crop	Area(ha)	Sl. No.	Crop	Area(ha)
	Cereals & Millets			**Fruits & Nuts**	
1	Rice	198180	1	Cashew nut	39898
2	Wheat (Emmer)	1	2	Mango	78554
3	Maize	113	3	Banana	60678
4	Sorghum	285	4	Plantain	56199
5	Little millet	57	5	Jack fruit	93209
6	Finger millet	213	6	Pine apple	9625
	Pulses		7	Papaya	18550
1	Red gram	313	8	Orange	240
2	Gram	600	9	Lemon	1150
3	Other pulses	1347	10	Other fruits	12927
	Oil seeds			Total fruits	371030
1	Coconut	760776		**Vegetables**	
2	Sesame	208	1	Drumstick	16977
3	Ground nut	117	2	Amaranth	1956
4	Sunflower	1	3	Bitter gourd	1936
5	Other oil seeds	2241	4	Snake gourd	994
	Tuber Crops		5	Okra	1462
1	Cassava	62070	6	Brinjal	1270
2	Elephant foot yam	6049	7	Green chillies	1621
3	Colocasia	6336	8	Bottle gourd	224
4	Greater yam	1419	9	Little gourd	1662
5	Lesser yam	187	10	Ash gourd	1067
6	Sweet potato	194	11	Pumpkin	1258
7	Koorka	993	12	Cucumber	1024
8	Potato	490	13	Veg. cowpea	5128
9	Other tuber crops	478	14	Carrot	953
	Sugars and Starches		15	Beet root	3
1	Sugarcane	950	16	Cabbage	150
2	Palmyrah	1873	17	Beans	1154
	Spices & Condiments		18	Onion	11
1	Black pepper	83765	19	Tomato	464
2	Cardamom	39697	20	Other vegetables	1225
3	Cinnamon	92		Total vegetables	41053
4	Nutmeg	23329		**Beverage crops**	
5	Tamarind	9962	1	Coffee	85880
6	Vanilla	53	2	Tea	35871

7	Clove	854	3	Cocoa	14276
8	Ginger	2819		**Other Crops**	
9	Turmeric	2277	1	Rubber	551200
10	Garlic	191	2	Cotton	54
11	Others	1413	3	Lemon grass	101
	Stimulants		4	Fodder crops	6307
1	Tobacco	8	5	Green manure crops	19712
2	Arecanut	96921	6	Medicinal plants	1328
3	Betel leaf	259		Other crops & trees	126213
				Teak	26786

Source: Agricultural Statistics 2019-20. Department of Economics & Statistics, Govt. of Kerala.

9. Spices and condiments

Spices and condiments are food adjuvants added to make the foodstuffs tastier and improve flavour and aroma. Note, however, that spices usually give aroma and flavour and condiments taste. In general, 'condiments' are cooked along with the foodstuffs and 'spices' are added after cooking. Under the category of spices and condiments, 21 crops are grown in Kerala. Black pepper, the 'king of spices' is the most important spice crop of Kerala followed by cardamom, the 'queen of spices'. Nutmeg cultivation is catching up in area, and it is the third spice crop in terms of area in Kerala. Although tamarind is fourth in area occupying 9962 ha, it is mostly confined to homesteads.

10. Beverage crops

A beverage is a drinkable liquid. Beverage crops are used for making drinkable liquids such as coffee, tea, and chocolate drink. Tea and coffee are predominantly grown in highrange districts of Kerala, Idukki, and Wayanad. Coffee is obtained from *Coffea robusta, Coffea arabica,* and *Coffea liberica,* but *Coffea robusta* is the mostly widely grown species in Kerala. Recently, 'Wayanad Robusta coffee', coming specifically from Waynad district of Kerala, has been awarded GI (Geographical Indication) tag. Cocoa is grown primarily as an intercrop in coconut gardens,

11. Fibre crops

Fibre crops are important for making cloths and bags. Although six fibre crops have been listed, their cultivation is not popular in Kerala. Although cotton is the most important fibre crop of the world, in Kerala, it is grown in just 54 ha in Palakkad district. Jute is important for making gunny bags, twines, and other packing materials, which are important for storing and transporting several products. Its cultivation is confined to some stray cases and experimental farms.

12. Stimulant crops

These groups generally include *fumitories,* the substances used for smoking for a stimulating effect, *masticatories*, the substances that are chewed, and *narcotics,* which have an intoxicating, stimulating, or drowsy effect in moderate doses. Legal sanction is required to grow narcotics. Tobacco, betel leaf, and arecanut are the crops coming under stimulant crops.

13. Rubber crops

Rubber crops are plants grown for the production of latex. Rubber is an elastic hydrocarbon polymer constructed of isoprene units. It has widespread uses, from household to industrial products, with the main bulk use in the transportation sector. Although rubber yielding plants such as castilla rubber (*Castilla elastica*), ceara rubber (*Manihot glaziovii*), guayule (*Parthenium argentatum*), and lagos silk rubber (*Funtumia elastica*) are occasionally grown, in Kerala, we have only one crop, para rubber (*Hevea brasiliensis*) originated in Brazil. Presently, it occupies about 25 percent of the net cultivated area.

14. Medicinal plants

These are plants generally used as such for use in Ayurvedic preparations. Crops utilized for making drugs in pharmaceuticals, for example, cinchona, are also included in this category. In Kerala, numerous medicinal plants occur as weeds or in the wild. Nayar et al. (2008) reported that 1170 species occurring in the state (27%) have some medicinal properties. Out of these, 1096 species are indigenous and the remaining 74 are exotic. However, only a few among them have been domesticated and cultivated extensively; and 45 of such plants have been listed in Table 2, In Kerala, presently, medicinal plants are grown in 138 ha, but the trend shows that the area is increasing.

15. Fodder crops

Forage crops include grasses and legumes that are harvested by grazing animals as well as those that are mechanically harvested and used for feeding in green state or as silage or hay after preservation. The species may differ according to climate and ecological situations. Forage species are often native plants (introduced species can also be important) while mechanically harvested species are highly adapted introduced species such as napier, hybrid napier, guinea grass, signal grass, and congo signal. The cultivated forage crops are generally called fodder crops. Thomas (2008) described 101 plants, which can be utilized as forage for animals. Out of these, 42 crops can be listed as cultivated (fodder), and others are collected from the wild or occur as weeds. In 2019-20, fodder crops occupied 6307ha.

16. Green manure crops

Green manure crops, mostly legume plants, are grown for incorporation into the soil in the green state for enriching soil fertility and organic matter status. Both exotic and introduced species are used for this purpose. In this category, 10 crops have been listed. Green manure plants include sun hemp (*Crotalaria juncos*), dhaincha (*Sesbania aculeata*), sesbania (*Sesbania speciosa*), and Kolinji or wild indigo (*Tephrosia purpurea*). Some green leaf manure crops are subabul (*Leucaena leucocephala*) and gliricidia (*Gliricidia sepium*). In 2019-20, the area under green manure crops was 19,712 ha.

17. Cover crops

Cover cropping is the practice of growing a spreading crop, often leguminous, to cover the topsoil especially in between widely spaced tree crops. It is a good technique for reducing inputs such as fertilizers and cropping operations while protecting the soil against the onslaught of rain and consequent erosion. The vegetative cover provided by the cover crops act as a barrier to flow of water, and the binding action of roots reduces the nutrient loss due to leaching and similar means. The cover crops popular in Kerala are calopo (*Calopogonium mucunoides*), puero (*Pueraria phraseologies*), centro (*Centrosema pubescens*), and mucuna (*Mucuna bracteata*).

18. Essential oil yielding plants

The crops included under this group yield essential oils. All these crops are with aroma, and therefore, sometimes mentioned as *aromatic crops*. Seven essential oil yielding crops have been listed. Lemon grass is the most widely cultivated crop in Kerala. Sandal wood is also included here. Vetiver (*Chrysopogon zizanioides*) has multiple uses in addition to its primary use for the extraction of essential oil from roots. It is a good soil binder, and therefore, ofte used in soil conservation works. Vetiver roots are also extensively used in desert coolers.

19. Cut flowers

Cut flowers are extensively used for flower arrangements and for making garlands and bouquets. There are innumerable plants that are grown as ornamental plants in gardens and as house plants in Kerala. However, not many are grown for cut flowers. Jasmine and rose are the traditional cut flowers in Kerala. However, highly valued orchids, anthuriam, and gerbera are also cultivated. In Table 2, twenty ornamental plants grown for cut flowers have been listed. Please note that in the list, seven are orchids belonging to the genera of *Cattleya, Oncidium, Dendrobium, Mokara*, *Phalaenopsis, Arachnis*, and *Vanda.* Modern roses donot have a typical

species name as most of them are hybrids and hybrid derivatives, and therefore, put as *Rosa* spp. Rosarians usually use the common classification of cultivars as hybrid teas, floribundas, grandifloras, polyanthas, climbers, and miniatures. Most of the celebrated cut flower roses are from the group, hybrid teas.

Table 2. Cultivated crops of Kerala

Sl. No	Common name	Malayalam name	Botanical name	Family
	1. Cereals and millets			
1	Barnyard millet	Kuthiravali	*Echinohloa frumentacea*	Poaceae
2	Finger millet	Ragi	*Eleusine coracana*	Poaceae
3	Foxtail millet	Thina	*Setaria italica*	Poaceae
4	Kodo millet	Varagu	*Paspalum scorbiculatum*	Poaceae
5	Little millet	Chama	*Panicum sumatrense*	Poaceae
6	Maize	Makka cholam	*Zea mays*	Poaceae
7	Pearl millet	Kambam	*Pennisetum glaucum*	Poaceae
8	Proso millet	Pani varaku	*Panicum miliaceum*	Poaceae
9	Rice	Nellu	*Oryza sativa*	Poaceae
10	Sorghum	Mani cholam	*Sorghum bicolor*	Poaceae
11	Wheat (Emmer)	Gothambu (Rava)	*Triticum dicoccum*	Poaceae
	2. Pseudo cereals			
1	Chia	Chia	*Salvinia hispanica*	Lamiaceae
2	Grain amaranth	Cheera ari	*Amaranthus caudatus*	Amaranthaceae
3	Grain amaranth	Pori cheera	*Amaranthus hypochondriacus*	Amaranthaceae
4	Quinoa	Quinoa	*Chenopodium quinoa*	Amaranthaceae
	3. Pulses			
1	Black gram	Uzhunnu	*Vigna mungo*	Fabaceae
2	Chick pea	Cheru kadala	*Cicer arietinum*	Fabaceae
3	Cowpea	Mampayar	*Vigna unguiculata*	Fabaceae
4	Green gram	Cherupayar	*Vigna radiata*	Fabaceae
5	Horse gram	Muthira	*Macrotyloma uniflorum*	Fabaceae
6	Lima bean	Butter beans	*Phaseolus lunatus*	Fabaceae
7	Moth bean	Moth payar	*Vigna aconitifolia*	Fabaceae
8	Red gram	Thuvarappayar	*Cajanus cajan*	Fabaceae
9	Rice bean	Arippayar	*Vigna umbellata*	Fabaceae
10	Dry peas	Pattani	*Pisum sativum* var. *arvense*	Fabaceae
	4. Oil seeds			
1	Brown mustard	Cherukaduku	*Brassica juncia*	Brassicaceae
2	Coconut	Nalikeram	*Cocos nucifera*	Arecaceae
3	Sesame	Ellu	*Sesamum indicum*	Pedaliaceae
4	Groundnut	Nilakkadala	*Arachis hypogaea*	Fabaceae
5	Castor	Avanakku	*Ricinus communis*	Euphorbiaceae
6	Oil palm	Ennappana	*Elaeis guineensis*	Arecaceae
7	Soybean	Soya payar	*Glycine max*	Fabaceae
8	Sunflower	Soorya kanthi	*Helianthus annus*	Asteraceae
	5. Sugars and starches			
1	Indian date	Eentha pana	*Phoenix sylvestris*	Arecaceae
2	Palmyrah palm	Nonku pana	*Borasses flabellifer*	Arecaceae
3	Queen sago	Eenthu	*Cycas circinalis*	Cycadaceae

4	Stevia	Madhura thulasi	*Stevia rebaudiana*	Asteraceae
5	Sugarcane	Karimbu	*Saccharum officainarum*	Poaceae
6	Talipot palm	Kudappana	*Corypha umbraculifera*	Arecaceae
7	Toddy palm	Choonda pana	*Caryota urens*	Arecaceae
8	Wight's sago palm	Kattu thengu	*Arenga wightii*	Arecaceae
	6. Tuber crops			
1	Aerial yam	Adathappu	*Dioscorea bulbifera*	Dioscoreaceae
2	Black turmeric	Karimanjal	*Curcuma caesia*	Zingiberaceae
3	Blue arrow root	Neela koova	*Curcuma aeruginosa*	Zingiberaceae
4	Blue taro	Neela chembu	*Xanthosoma violaceum*	Araceae
5	Chinese potato	Koorka	*Coleus rotundifolius*	Lamiaceae
6	Dasheen	Kolambu chembu	*Colocasia esculenta* var. *esculenta*	Araceae
7	Indian arrow root	Nadan koova	*Curcuma angustifolia*	Zingiberaceae
8	Elephant foot yam	Chena	*Amorphophallus paeonii-folius*	Araceae
9	Five leaf yam	Nooron	*Dioscorea pentaphylla*	Dioscoreaceae
10	Giant alocasia	Maran chembu	*Alocasia indica*	Araceae
11	Greater yam	Kachil	*Dioscorea alata*	Dioscoreaceae
12	Indian yam	Vettila kizhnagu	*Dioscorea oppositifolia*	Dioscoreaceae
13	Intoxicating yam	Poodakizhangu	*Dioscorea hispida*	Dioscoreaceae
14	Lesser yam	Cheru kizhangu	*Dioscorea esculenta*	Dioscoreaceae
15	Potato	Urula kizhangu	*Solanum tuberosum*	Solanaceae
16	Queensland arrow root	Madhura koova	*Canna edulis*	Cannaceae
17	Sweet potato	Cheenikizhangu	*Ipomoea batatas*	Convolvulaceae
18	Tannia	Seema chembu	*Xanthosoma sagittifolium*	Araceae
19	Tapioca	Kappa	*Manihot esculenta*	Euphorbiaceae
20	Taro	Cheru chembu	*Colocasia esculenta* var. *antiquorum*	Araceae
21	Indian Arrow root	Vella koova	*Maranta arundinacea*	Marantaceae
22	White yam	African kachil	*Dioscorea rotundata*	Dioscoreaceae
23	Yacon	Yacon	*Smallanthus sonchifolius*	Asteraceae
24	Yam bean	Payaru kachil	*Pachyrhizus erosus*	Fabaceae
	7. Vegetables			
1	African egg plant	African vazhuthana	*Solanum macrocarpon*	Solanaceae
2	African okra	Mara venda	*Abelmoschus caillei*	Malvaceae
3	Agathi	Agathicheera	*Sesbania grandiflora*	Fabaceae
4	Amaranth	Cheera	*Amaranthus tricolor*	Amaranthaceae
5	Ash gourd	Kumbalam	*Benincasa hispida*	Cucurbitaceae
6	Bell pepper	Capsicum	*Capsicum annum* var. *grossum*	Solanaceae
7	Bird chilly	Kanthari	*Capsicum frutescens*	Solanaceae
8	Bitter gourd	Paval	*Momordica charantia*	Cucurbitaceae
9	Bonnet pepper	Karanam potti	*Capsicum chinense*	Solanaceae
10	Bottle gourd	Churakka	*Lagenaria siceraria*	Cucurbitaceae
11	Bread fruit	Seemachakka	*Artocarpus altilis*	Moraceae
12	Brinjal	Vazhuthana	*Solanum melongena*	Solanaceae
13	Cabbage tree	Souhrada cheera	*Pisonia grandis*	Nyctaginaceae
14	Chayamansa	Mexican cheera	*Cnidoscolus aconitifolius*	Euphorbiaceae
15	Chekkurmanis	Madhura cheera	*Sauropus androgynous*	Euphorbiaceae
16	Clove bean	Nithya vazhuthana	*Ipomoea muricata*	Convolvulaceae

17	Cluster beans	Kothamara	*Cyamopsis tetragonoloba*	Fabaceae
18	Cranberry hibiscus	Puli venda	*Hibiscus acetosella*	Malvaceae
19	Curry leaf	Kari veppila	*Murraya koenigii*	Rutaceae
20	Drumstick	Muringa	*Moringa oleifera*	Moringaceae
21	Dwarf copperleaf	Ponnamkanni	*Alternanthera sessilis*	Amaranthaceae
22	Gac	Gac	*Momordica cochinchinensis*	Cucurbitaceae
23	Giant granadilla	Akasha vellari	*Passiflora quadrangularis*	Passiflorceae
24	Green basella	Valli cheera	*Basella alba*	Basellaceae
25	Green chilli	Pacha mulaku	*Capsicum annuum*	Solanaceae
26	Horned cucumber	Mullan kakkiri	*Cucumis metulifer*	Cucurbitaceae
27	Indian bean	Amara payar	*Lablab purpureus*	Fabaceae
28	Indian snap melon	Pottu vellari	*Cucumis melo var. momordica*	Cucurbitaceae
29	Jack bean	Kathi payar	*Canavalia ensiformis*	Fabaceae
30	Little gourd	Koval	*Coccinia grandis*	Cucurbitaceae
31	Musk melon	Thaikumbalam	*Cucumis melo*	Cucurbitaceae
32	Okra	Venda	*Abelmoschus esculentus*	Malvaceae
33	Oriental pickling melon	Kani vellari	*Cucumis melo* var. *conomon*	Cucurbitaceae
34	Peruvian pepper	Peru mulaku	*Capsicum baccatum*	Solanaceae
35	Pumpkin	Mathan	*Cucurbita moschata*	Cucurbitaceae
36	Red basella	Valli cheera	*Basella rubra*	Basellaceae
37	Red pumpkin	Vellari mathan	*Cucurbita maxima*	Cucurbitaceae
38	Ridge gourd	Peechanga	*Luffa acutangula*	Cucurbitaceae
39	Roselle	Mathipuli	*Hibiscus subdariffa*	Malvaceae
40	Runner bean	Runner bean	*Phaseolus coccineus*	Fabaceae
41	Salad cucumber	Salad vellari	*Cucumis sativus*	Cucurbitaceae
42	Smooth gourd	Enilla peechinga	*Luffa cylindrica*	Cucurbitaceae
43	Snake gourd	Padavalam	*Trichosanthes cucumerina*	Cucurbitaceae
44	Spiny gourd	Mullan paval	*Momordicha dioica*	Cucurbitaceae
45	Spleen amaranth	Pacha cheera	*Amaranthus dubius*	Amaranthaceae
46	Summer squash	Zuchini	*Cucurbita pepo*	Cucurbitaceae
47	Sword bean	Valaripayar	*Canavalia gladiata*	Fabaceae
48	Tahitian spinach	Cheerachembu	*Xanthosoma brasiliense*	Araceae
49	Teasle gourd	Ven paval	*Momordica subangulata*	Cucurbitaceae
50	Tomato	Thakkali	*Solanum lycopersicum*	Solanaceae
51	Velvet beans	Velvet payar	*Mucuna pruriens* var. *utilis*	Fabaceae
52	Water leaf	Sambar cheera	*Talinum triangulare*	Portulacaceae
53	Water melon	Thanni mathan	*Citrullus lanatus*	Cucurbitaceae
54	Water spinach	Neer cheera	*Ipomoea aquatica*	Convolvulacee
55	Winged bean	Chathura payar	*Psophocarpus tetragonolobus*	Fabaceae
56	Yard long bean	Kuruthola payar	*V.unguiculata* subsp.*sesquipedalis*	Fabaceae
	Cool season vegetables			
1	Beet root	Beet root	*Beta vulgaris*	Chenopodiaceae
2	Broccoli	Broccoli	*Brassica olerace* var. *italica*	Brassicaceae
3	Brussels sprout	Brussels sprout	*B. oleracea* var. *gemmifera*	Brassicaceae

4	Cabbage	Muttakose	*Brassica oleracea* var. *capitata*	Brassicaceae
5	Carrot	Carrot	*Daucus carota*	Apiaceae
6	Cauliflower	Cauliflower	*Brassica oleracea* var. *botrytis*	Brassicaceae
7	Celery	Celery	*Apium graveolens*	Apiaceae
8	Chow-chow	Mysore mathan	*Sechium edule*	Cucurbitaceae
9	French beans	Beans	*Phaseolus vulgaris*	Fabaceae
10	Green peas	Green peas	*Pisum sativum*	Fabaceae
11	Kale	Kale	*Brassica olerace* var. *sabellica*	Brassicaceae
12	Lettuce	Lettuce	*Lactuca sativa*	Asteraceae
13	Onion	Sabola	*Allium cepa*	Amaryllidaceae
14	Radish	Mullangi	*Raphanus sativus*	Brassicaceae
15	Shallot	Chuvannulli	*Allium cepa* var. *aggregtum*	Amaryllidaceae
16	Spinach	Spinach	*Spinacea oleraceae*	Amaranthaceae
17	Turnip	Seema mullangi	*Brassica rapa*	Brassicaceae
	8. Fruits and nuts			
1	Abiu	Abiu	*Pouteria caimito*	Sapotaceae
2	Acai palm	Akai berry	*Euterpe oleracea*	Arecaceae
3	Achachairu	Achacha pazham	*Garcinia humilis*	Clusiaceae
4	Acid lime	Cheru narakam	*Citrus aurantifolia*	Rutaceae
5	Araza	Araza	*Eugenia stipitata*	Myrtaceae
6	Atemoya	Athimoya	*Annona x atemoya*	Annonaceae
7	Banana & plantain	Vazha	*Musa* spp.	Musaceae
8	Ber	Elantha	*Ziziphus mauritiana*	Rhamnaceae
9	Bilimbi	Bilimbippuli	*Averrhoa bilimbi*	Oxalidaceae
10	Black sapote	Black sapota	*Diospyros nigra*	Ebenaceae
11	Brazilian guava	Munthiri pera	*Psidium guineense*	Myrtaceae
12	Bumese grape	Burma munthiri	*Baccaurea ramiflora*	Phyllanthaceae
13	Bush orange	Kutti orange	*Citrus mitis*	Rutaceae
14	Cape goose berry	Njottanodian	*Physalis peruviana*	Solanaceae
15	Carabao lime	Vadukapuli	*Citrus pennivesiculata*	Rutaceae
16	Carambola	Chathurappuli	*Averrhoa carambola*	Oxalidaceae
17	Cashew	Kashuvandi	*Anacardium occidentale*	Anacardiaceae
18	Cat eye plant	Malarkay maram	*Syzygium zeylanicum*	Myrtaceae
19	Chempadak	Chempadak	*Artocarpus integer*	Moraceae
20	Cherimoya	Mexican atha	*Annona cherimola*	Annonaceae
21	Cherry mango-steen	Beraba	*Garcinia intermedia*	Clusiaceae
22	Chop choppa	Chop choppa	*Garcinia kydia*	Clusiaceae
23	Chupa chupa	Chupa chupa	*Quararibea cordata*	Malvaceae
24	Citron	Ganapathi narakam	*Citrus medica*	Rutaceae
25	Cluster fig	Cluster athi	*Ficus racemosa*	Moraceae
26	Common fig	Sheemayathi	*Ficus carica*	Moraceae
27	Cupuassu	Cupuassu	*Theobroma grandiflorum*	Malvaceae
28	Custard apple	Atha chakka	*Annona reticulata*	Annonaceae
29	Dragon fruit	Vella dragon	*Selenicereus undatus*	Cactaceae
30	Durian	Durian	*Durio zibethinus*	Malvaceae
31	Egg fruit	Mutta pazham	*Pouteria campechiana*	Sapotaceae
32	Elephant ear fig	Valiya athi	*Ficus auriculata*	Moraceae

33	Guava	Perakka	*Psidium guajava*	Myrtaceae
34	Hog plum	Ambazham	*Spondias pinnata*	Anacardiaceae
35	Icecream plant	Icecream pazham	*Inga edulis*	Fabaceae
36	Indian coffee plum	Loobi	*Flacourtia jangomas*	Flacourtiaceae
37	Indian date palm	Eentha pana	*Phoenix sylvestris*	Arecaceae
38	Indian gooseberry	Nellikka	*Phyllanthus emblica*	Phyllanthaceae
39	Indian oleaster	Ankola pazham	*Elaeagnus conferta*	Elaeagnaceae
40	Indian olive	Kara	*Elaeocarpus serratus*	Elaecarpaceae
41	Indian plum	Rukam	*Flacourtia rukam*	Flacourtiaceae
42	Jabuticaba	Mara munthiri	*Plinia cauliflora*	Myrtaceae
43	Jack fruit	Chakka	*Artocarpus heterophyllus*	Moraceae
44	Jamun	Njaval	*Syzygium cumini*	Myrtaceae
45	Java apple	Mezhuku champa	*Syzygium samarangense*	Myrtaceae
46	Karonda cherry	Karonda	*Carissa carandas*	Apocynaceae
47	Kokum	Raja puli	*Garcinia indica*	Clusiaceae
48	Lemon	Odichu kuthi	*Citrus limon*	Rutaceae
49	Lindley's aporosa	Vetti	*Aporosa cardiosperma*	Phyllanthaceae
50	Longan	Longan	*Dimocarpus longan*	Sapindaceae
51	Lovi-lovi	lovelovi	*Flacourtia inermis*	Flacourtiaceae
52	Malabar chest nut	Pachira	*Pachira aquatica*	Malvaceae
53	Malay apple	Perakka champa	*Syzygium malaccenis*	Myrtaceae
54	Mamey sapote	Mammi sapota	*Pouteria sapota*	Sapotaceae
55	Mango	Manga	*Mangifera indica*	Anacardiaceae
56	Mangosteen	Mangosteen	*Garcinia mangostana*	Clusiaceae
57	Manila tamarind	Kodukkapuli	*Pithecellobium dulce*	Fabaceae
58	Maprang	Maprang	*Bouea macrophylla*	Anacardiaceae
59	Marang	Marang	*Artocarpus odoratissimus*	Moraceae
60	Matoa	Matoa	*Pometia pinnata*	Sapindaceae
61	Miracle fruit	Miracle fruit	*Synsepalum dulcificum*	Sapotaceae
62	Mootty fruit	Mootty pazham	*Baccaurea courtallensis*	Phyllanthaceae
63	Mysore gamboge	Monthanpuli	*Garcinia xanthochymus*	Clusiaceae
64	Noni	Noni	*Morinda citrifolia*	Rubiaceae
65	Papaya	Papaya	*Carica papaya*	Caricaceae
66	Passion fruit	Passion fruit	*Passiflora edulis*	Passifloraceae
67	Peanut butter fruit	Bunchosia	*Bunchosia glandulifera*	Malpighiaceae
68	Phalsa	Chadachi	*Grewia asiatica*	Malvaceae
69	Pineapple	Kaithachakka	*Ananas comosus*	Bromeliaceae
70	Pomelo	Kampili narakam	*Citrus maxima*	Rutaceae
71	Pulasan	Pulasan	*Nephelium ramboutan-ake*	Sapindaceae
72	Rambai	Rambai	*Baccaurea motleyana*	Phyllanthaceae
73	Rambutan	Rambutan	*Nephelium lappaceum*	Sapindaceae
74	Red pitaya	Chuvappu dragon	*Selenicereus costaricen-sis*	Cactaceae
75	Rollinia	Rollinia	*Rollinia deliciosa*	Annonaceae
76	Rose apple	Champa	*Syzygium jambos*	Myrtaceae
77	Salak	Snake fruit	*Salacca zalacca*	Arecaceae
78	Santol	Santol	*Sandoricum koetjape*	Meliaceae
79	Sapota	Sapota	*Manilkara zapota*	Sapotaceae
80	Seashore mango-steen	Puli mangosteen	*Garcinia hombroniana*	Clusiaceae
81	Singapore holly	Singapore holly	*Malpighia coccigera*	Malpighiaceae

82	Sour orange	Puli orange	*Citrus aurantium*	Rutaceae
83	Sour-sop	Mullatha	*Annona muricata*	Annonaceae
84	Star apple	Star apple	*Chrysophyllum cainito*	Sapotaceae
85	Star gooseberry	Arinelli	*Phyllanthus acidus*	Euphorbiaceae
86	Strawberry guava	Strawberrry pera	*Psidium cattleianum*	Myrtaceae
87	Surinam cherry	Surinam cherry	*Eugenia uniflora*	Myrtaceae
88	Sweet-sop	Seetha pazham	*Annona squamosa*	Annonaceae
89	Tropical apricot	Tropical apricot	*Dovyalis abyssinica*	Salicaceae
90	Velvet apple	Velvet apple	*Diospyros discolor*	Ebenaceae
91	Watery rose apple	Panineer champa	*Syzygium aqueum*	Myrtaceae
92	West Indian cherry	West Indian cherry	*Malphigia emarginata*	Malpighiace
93	White sapote	Vella sapota	*Casimiroa edulis*	Rutaceae
94	Wood apple	Vilankai	*Limonia acidissima*	Rutaceae
95	Yellow mombin	Madhura ambazham	*Spondias mombin*	Anacardiaceae
96	Yellow pitaya	Manja dragon	*Selenicereus megalanthus*	Cactaceae
	Subtropical fruits			
1	Apple	Apple	*Malus domestica*	Rosaceae
2	Apricot	Apricot	*Prunus armeniaca*	Rosaceae
3	Asian pear	Sabarjilli	*Pyrus pyrifolia*	Rosaceae
4	Avocado	Venna pazham	*Persea americana*	Lauraceae
5	Banana passion fruit	Taxo	*Passiflora mollissima*	Passifloraceae
6	Blackberry	black berry	*Rubus* spp	Rosaceae
7	Grape fruit	Munthiri naranga	*Citrus paradisi*	Rutaceae
8	Grapes	Munthiri	*Vitis vinifera*	Vitaceae
9	Japanese plum	Japan plum	*Prunus salicinia*	Rosaceae
10	Kumquat	Israel orange	*Citrus japonica*	Rutaceae
11	Langsat	Langsat	*Lansium parasiticum*	Meliaceae
12	Litchi	Litchi	*Litchi sinensis*	Sapindaceae
13	Loquat	Loquat	*Eriobotrya japonica*	Rosaceae
14	Macadamia nut	Macadamia nut	*Macadamia integrifolia*	Proteaceae
15	Mandarin Orange	Orange	*Citrus reticulata*	Rutaceae
16	Peach	Peach	*Prunus persica*	Rosaceae
17	Pepino	Pepino	*Solanum muricatum*	Solanaceae
18	Persimmon	Persimmon	*Diospyros kaki*	Ebenaceae
19	Pomegranate	Mathalanaranga	*Punica granatum*	Punicaceae
20	Straw berry	Straw berry	*Fragaria ananassa*	Rosaceae
21	Sweet orange	Musambi	*Citrus X sinensis*	Rutaceae
22	Tree tomato	Mara thakkali	*Solanum betaceum*	Solanaceae
	9. Spices & Condiments			
1	African coriander	African malli	*Eryngium foetidum*	Apiaceae
2	Allspice	Sarva sugandhi	*Pimenta dioica*	Myrtaceae
3	Basmathi plant	Rambha	*Pandanus amaryllifolius*	Pandanaceae
4	Camboge	Kudampuli	*Garcinia gummi-gutta*	Clusiaceae
5	Cardamom	Elam	*Elettaria cardamomum*	Zingiberaceae
6	Cinnamon	Karuvapatta	*Cinnamomum zeylanicum*	Lauraceae
7	Clove	Grambu	*Syzygium aromaticum*	Myrtaceae
8	Coriander	Kothamalli	*Coriandrum sativum*	Apiaceae
9	Cumin	Jeerakam	*Cuminum cyminum*	Apiaceae
10	Dry chilly	Vattal mulaku	*Capsicum annum*	Solanaceae

11	Fennel	Perumjeerakam	*Foeniculum vulgare*	Apiaceae
12	Garlic	Veluthulli	*Allium sativum*	Amaryllidaceae
13	Ginger	Inchi	*Zingiber officinale*	Zingiberaceae
14	Mango ginger	Manga inchi	*Curcuma amada*	Zingiberaceae
15	Nutmeg	Jathikka	*Myristica fragrans*	Myristicaceae
16	Pepper	Kurumulaku	*Piper nigrum*	Piperaceae
17	Spear mint	Puthina	*Mentha spicata*	Lamiaceae
18	Table mustard	Kaduku	*Brassica nigra*	Brassicaceae
19	Tamarind	Valan puli	*Tamarindus indicus*	Fabaceae
20	Turmeric	Manjal	*Curcuma longa*	Zingiberaceae
21	Vanilla	Vanilla	*Vanilla planifolia*	Orchidaceae
	10. Beverages			
1	Arabica coffee	Arabica kappi	*Coffea arabica*	Rubiaceae
2	Cacao	Cocoa	*Theobroma cacao*	Malvaceae
3	Liberian coffee	Liberian kappi	*Coffea liberica*	Rubiaceae
4	Robusta coffee	Robusta kappi	*Coffea robusta*	Rubiaceae
5	Tea	Theyila	*Camellia sinensis*	Theaceae
	11. Stimulants			
1	Arecanut	Kamuku	*Areca catechu*	Arecaceae
2	Betel vine	Vettila	*Piper betle*	Piperaceae
3	Tobacco	Pukayila	*Nicotiana tabacum*	Solanaceae
	12. Green manure crops			
1	Avaram senna	Avaram poo	*Senna auriculata*	Fabaceae
2	Common sesban	Kedangu	*Sesbania sesban*	Fabaceae
3	Crotalaria	Kilukki	*Crotalaria mucronata*	Fabaceae
4	Daincha	Daincha	*Sesbania aculeata*	Fabaceae
5	Gliricidia	Seemakonna	*Gliricidia sepium*	Fabaceae
6	Indigo	Neelayamari	*Indigofera tinctoria*	Fabaceae
7	Sesbania	Sesbania	*Sesbania rostrata*	Fabaceae
8	Shevri	Shevri	*Sesbaia aegyptica*	Fabaceae
9	Sunn hemp	Chanambu	*Crotalaria juncea*	Fabaceae
10	Wild indigo	Kozhinjil	*Tephrosia purpurea*	Fabaceae
	13. Cover crops			
1	Calopo	Calopo	*Calopogonium mucunoi-des*	Fabaceae
2	Centro	Centro	*Centrosema pubescens*	Fabaceae
3	Mucuna	Mucuna	*Mucuna bracteata*	Fabaceae
4	Peuro	Thotta payar	*Pueraria phaseoloides*	Fabaceae
	14. Fodder crops			
1	Azolla	Azolla	*Azolla pinnata*	Salviniaceae
2	Bermuda grass	Karuka	*Cynodon dactylon*	Poaceae
3	Buffel grass	Kozhukkatta pullu	*Cenchrus ciliaris*	Poaceae
4	Calliandra	Kalli vaka	*Calliandra calothyrsus*	Fabaceae
5	Caribbean stylo	Caribbean stylo	*Stylosanthes hamata*	Fabaceae
6	Carpet grass	Paravathani pullu	*Axonopus compressus*	Poaceae
7	Cocks foot	Poocha pullu	*Dactylis glomerata*	Poaceae
8	Common stylo	Sadharana stylo	*Stylosanthes guianensis*	Fabaceae
9	Congo signal	Congo signal	*Brachiaria ruziziensis*	Poaceae
10	Dheenanath grass	Poochavalan pullu	*Pennisetum pedicellatum*	Poaceae
11	Foddder sorghum	Theetta cholam	*Sorghum bicolor*	Poaceae
12	Fodder bajra	Fodder bajra	*Pennisetum glaucum*	Poaceae

13	Fodder cowpea	Theetta payar	*Vigna unguiculata*	Poaceae
14	Fodder maize	Makka cholam	*Zea mays*	Poaceae
15	Gamba grass	Gamba pullu	*Andropogon gayanus*	Poaceae
16	Green leaf desmodium	Pacha desmodium	*Desmodium intortum*	Fabaceae
17	Golden timothy	Setaria	*Setaria sphacelata*	Poaceae
18	Guatemala grass	Guatemala pullu	*Tripsacum laxum*	Poaceae
19	Guinea grass	Kuthira pullu	*Panicum maximum*	Poaceae
20	Hedge lucerne	Veli vaka	*Desmanthus virgatus*	Fabaceae
21	Humidicola	Humidicola	*Brachiaria humidicola*	Poaceae
22	Hybrid napier	Sankara napier	*P. glaucum X P. purpureum*	Poaceae
23	Kangaru grass	Potha pullu	*Themeda cymbaria*	Poaceae
24	Kikuyu grass	Kikuyu grass	*Pennisetum clandestinum*	Poaceae
25	Molasses grass	Sharkkara pullu	*Melinis minutiflora*	Poaceae
26	Napier	Napier pullu	*Pennisetum purpureum*	Poaceae
27	Palisade grass	Palisade pullu	*Brachiaria brizantha*	Poaceae
28	Para grass	Para pullu	*Brachiaria mutica*	Poaceae
29	Perennial horse grass	Kattu muthira	*Macrotyloma axillare*	Fabaceae
30	Pinto pea nut	Pintoi	*Arachis pintoi*	Fabaceae
31	Rice bean	Arippayar	*Vigna umbellate*	Fabaceae
32	Rhodes grass	Rhodess pullu	*Chloris gayana*	Poaceae
33	Rye grass	Rai pullu	*Lolium perenne*	Poaceae
34	Silver leaf	Velli desmodium	*Desmodium uncinatum*	Fabaceae
35	Shrubby stylo	Kutti stylo	*Stylosanthes scabra*	Fabaceae
36	Signal	Signal	*Brachiaria decumbens*	Poaceae
37	Siratro	Siratro	*Macroptilium atropurpureum*	Fabaceae
38	St. Augustine grass	Eruma pullu	*Stenotaphrum secundatum*	Poaceae
39	Subabul	Peeli vaka	*Leucaena leucocephala*	Fabaceae
40	Teosinte	Teosinte	*Zea mexicana*	Poaceae
41	Townville stylo	Humilis stylo	*Stylosanthus humilis*	Fabaceae
42	White clover	White clover	*Trifolium repens*	Fabaceae
	15. Fibre crops			
1	Cotton	Paruthi	*Gossypium hirsutum*	Malvaceae
2	Tree cotton	Paruthi	*Gossypium arboreum*	Malvaceae
3	Jute mallow	Chanam	*Corchorus olitorius*	Malvaceae
4	Kenaf	Pulichi	*Hibiscus cannabinus*	Malvaceae
5	Silk cotton tree	Panjimaram	*Ceiba pentandra*	Malvaceae
6	White jute	Chanam	*Corchorus capsularis*	Malvaceae
	16. Rubber crops			
1	Rubber	Rubber	*Hevea brasiliensis*	Euphorbiaceae
	17. Essential oil yielding plants			
1	Citronella	Citronella	*Cymbopogon nardus*	Poaceae
2	Eucalyptus	Eucalyptus	*Eucalyptus citriodora*	Myrtaceae
3	Lemon grass	Inchippullu	*Cymbopogon flexuosus*	Poaceae
4	Palamarosa	Palmarosa	*Cymbopogon martinii* var. *motia*	Poaceae
5	Sandal wood	Chandanam	*Santalum album*	Santalaceae
6	Vetiver	Ramacham	*Chrysopogon zizanioides*	Poaceae

7	Ylang-ylang	Kanangamaram	*Cananga odorata*	Annonaceae
	18. Cut flowers			
1	African Marigold	Chendumalli	*Tagetes erecta*	Asteraceae
2	Anthurium	Anthurium	*Anthurium andreanum*	Araceae
3	Arabian jasmine	Kudamulla	*Jasminum sambac*	Oleaceae
4	Cattleya orchid	Cattleya	*Cattleya* spp	Orchidaceae
5	China aster	Aster	*Callistephus chinensis*	Asteraceae
6	Common jasmine	Mulla	*Jasminum auriculatum*	Oleaceae
7	Dancing-lady orchid	Onicidium	*Oncidium* spp	Orchidaceae
8	Dendrobium orchid	Dendrobium	*Dendrobium* spp.	Orchidaceae
9	Firecracker flower	Kanakambaram	*Crossandra infundibuli-formis*	Acanthaceae\
10	French marigold	Marigold	*Tagetes patula*	Asteraceae
11	Gladiolus	Gladiolus	*Gladiolus* spp	Iridaceae
12	Lotus	Thamara	*Nelumbo nucifera*	Nelumbonaceae
13	Mokara orchid	Mokara	*Mokara* spp	Orchidceae
14	Moth orchid	Phalaenopsis	*Phalaenopsis* spp	Orchidaceae
15	Rose	Rosa poovu	*Rosa* spp.	Rosaceae
16	Royal jasmine	Pitchi	*Jasminum grandiflorum*	Oleaceae
17	Scorpion orchid	Arachnis	*Arachnis* spp	Orchidaceae
18	Star jasmine	Kurukuthimulla	*Jasminum multiflorum*	Oleaceae
19	Tube rose	Tube rose	*Poliantha tuberosa*	Asparagaceae
20	Vanda orchid	Vanda	*Vanda* spp	Orchidaceae
	19. Cut foliage plants			
1	Asparagus fern	Evergreen	*Asparagus plumosus*	Asparagaceae
2	Bird of paradise	Bird of paradise	*Strelitzia reginae*	Strelitziaceae
3	Boston fern	Boston fern	*Nephrolepis exaltata*	Nephrolepida-ceae
4	Lether leaf	Lether leaf	*Rumohra adiantiformis*	Dryopteridace-ae
5	Lucky bamboo	Lucky bamboo	*Dracaena sanderiana*	Asparagaceae
6	Massangeana	Massangeana	*D. fragrans 'Massangea-na'*	Asparagaceae
7	Monstera	Monstera	*Monstera deliciosa*	Araceae
8	Red star	Red star	*Cordyline australis*	Asparagaceae
9	Red-edged dracaena	Marginata	*Dracaena marginata*	Asparagaceae
10	Schefflera	Schefflera	*Schefflera arboricola*	Araliaceae
11	Song of India	Song of India	*D. reflexa 'Song of India'*	Asparagaceae
12	Song of Jamaica	Song of Jamaica	*D. reflexa' Song of Jamaica'*	Asparagaceae
13	Ti plant	Mahathma	*Cordyline fruticosa*	Asparagaceae
14	Victoria	Victoria	*D. fragrans 'Victoria'*	Asparagaceae
	20. Medicinal plants (cultivated only)			
1	Adhatoda	Adalodakam	*Justicia adhatoda*	Acanthaceae
2	Aromatic ginger	Kacholam	*Kaempferia galanga*	Zingiberaceae
3	Aromatic turmeric	Kasthuri manjal	*Curcuma aromatica*	Zingiberaceae
4	Ashwagandha	Amukkuram	*Withania somnifera*	Solanaceae
5	Asoka	Asokam	*Saraca asoca*	Fabaceae
6	Ayyappana	Ayyappana	*Ayapana triplinervis*	Asteraceae

7	Balloon vine	Uzhinja	*Cardiospermum helicacabum*	Sapindaceae
8	Beddomei	Chittadalodakam	*Justicia beddomei*	Acanthaceae
9	Black catechu	Karingali	*Senegalia catechu*	Fabaceae
10	Black musale	Nilappana	*Curculigo orchiodes*	Orchidaceae
11	Black nightshade	Mani thakkali	*Solanum nigrum*	Solanaceae
12	Chinese chaste tree	Karinochi	*Vitex negundo*	Lamiaceae
13	Cinchona	Cinchona	*Cinchona officinalis*	Rubiaceae
14	Common rue	Arutha	*Ruta graveolens*	Rutaceae
15	Conch flower creeper	Shamku puzhpam	*Clitorea ternatea*	Fabaceae
16	Dyer's Oleander	Dantappala	*Wrightia tinctoria*	Apocynaceae
17	Holostemma	Adapathiyan	*Holostemma adakodien*	Asclepiadoideae
18	Holy basil	Krishna thulasi	*Ocimum tenuiflorum*	Lamiaceae
19	Indian aloe	Kattar vazha	*Aloe vera*	Asphodelaceae
20	Indian bael	Koovalam	*Aegle marmalos*	Rutaceae
21	Indian borage	Pani koorkka	*Coleus ambonicus*	Lamiaceae
22	Indian ipecac	Vallippala	*Tylophora indica*	Apocynaceae
23	Indian Sarasparilla	Naruneendi	*Hemidesmus indicus*	Apocynaceae
24	Iruveli	Iruveli	*Coleus zeylanicus*	Lamiaceae
25	Jeevakom	Jeevakom	*Seidenfia rheedii*	Orchidaceae
26	Long pepper	Thippali	*Piper longum*	Piperaceae
27	Milk yam	Pal muthukku	*Ipomoea mauritiana*	Convolvulaceae
28	Neem	Veppu	*Azadirachta indica*	Meliaceae
29	Nux-vomica	Kanjiram	*Strychnos nux-vomica*	Loganiaceae
30	Pajanelia	Payyani	*Pajanelia longifolia*	Bignoniaceae
31	Peacock ginger	Chenganeer kizhangu	*Kaempferia rotunda*	Zingiberaceae
32	Penny wort	Kudangal	*Centella asiatica*	Apiaceae
33	Plumbago	Chethikoduveli	*Plumbago indica*	Plumbaginaceae
34	Pointed gourd	Kattu padavalam	*Trichosanthes dioica*	Cucurbitaceae
35	Red ginger	Chuvanna inchi	*Alpinia purpurata*	Zingiberaceae
36	Safed musale	Safed musale	*Chlorophytum borivilianum*	Asparagaceae
37	Sappan wood	Patimugham	*Biancaea sappan*	Fabaceae
38	Sarivan	Orila	*Desmodium gangeticum*	Fabaceae
39	Shathavari	Shathavari	*Asparagus racemosus*	Asparagaceae
40	Siamese ginger	Chittaratha	*Alpinia calcarata*	Zingiberaceae
41	Sida hemp	Kurumthotti	*Sida alnifolia*	Malvaceae
42	Stone breaker	Keezharnelli	*Phyllanthus fraternus*	Phyllanthaceae
43	Tinospora	Chittamruthu	*Tinospora codifolia*	Menispermaceae
44	Trellis vine	Velipparuthy	*Pergularia daemia*	Apocynaceae
45	Water hyssop	Brahmi	*Bacopa monnieriri*	Plantaginaceae
	21. Miscellaneous uses			
1	Ceara rubber	Mara kappa	*Manihot glaziovii*	Euphorbiaceae
2	Dadap	Mullilla murikku	*Erythrina subumbrans*	Fabaceae
3	Garuga	Karayam	*Garuga pinnata*	Burseraceae
4	Golden shower	Kanikkonna	*Cassia fistula*	Fabaceae
5	Henna	Mailanji	*Lawsonia inermis*	Lythraceae

6	Indian beech	Ung	*Pongamia pinnata*	Fabaceae
7	Indian Coral tree	Mullumurikku	*Erythrina variegata*	Fabaceae
8	Jamaican cherry	Jamaican cherry	*Muntingia calabura*	Muntingiaceae
9	Lipstick plant	Kurangan mailanji	*Bixa orellana*	Bixaceae
10	Large indigo	Mara neelum	*Indigofera zollingeriana*	Fabaceae
11	Mulberry	Mulberry	*Morus alba*	Moraceae
12	Physic nut	Appa	*Jatropha curcas*	Euphorbiaceae
13	Screw pine	Kaitha	*Pandanus odorifer*	Pandanaceae
14	Turkey berry	Aanachunda	*Solanum torvum*	Solanaceae
15	Shoe flower	Chemparuthy	*Hibiscus rosa-sinensis*	Malvaceae
16	Silver oak	Silver oak	*Grevillea robusta*	Proteaceae
17	Tree of heaven	Pongalyam	*Ailanthus excelsa*	Simaroubaceae
18	Wild jack	Anjili	*Artocarpus hirsutus*	Moraceae

20. Cut foliage plants

Along with the popularity of cut flowers, cut foliage of certain showy ornamental plants is also in great demand. It has good export market too. Dracaena is in great demand for this purpose. *D. fragrans* 'Massangeana', *D. reflexa* 'Song of India', *D. reflexa'* Song of Jamaica', *D. fragrans* 'Victoria', Ti plant (*Cordyline fruticosa),* Monstera *(Monstera deliciosa),* Lether leaf (*Rumohra adiantiformis),* Bird of paradise (*Strelitzia reginae*), Schefflera (*Schefflera arboricola),* Boston fern (*Nephrolepis exaltata*) are some of the most popular cut foliage in demand. Under this group, 14 crops have been listed. Xanadu (*Philodendron xanadu*) is also sometimes cultivated but not listed here.

21. Crops with miscellaneous uses

The crops put under miscellaneous (18 nos) are not with typical uses. Some are used as shade trees, standards, and hedge plants. Many of such plants have more than one use. For example, shoe flower has at least four uses; border plant, ornamental plant, natural shampoo, and food products. Jamaican cherry (*Muntingia calabura*) is a shade plant, but its fruits are edible. Wild jack (Anjili), in addition to giving timber and tasty fruits, can also act as a good standard for black pepper. Turkey berry (*Solanum torvum*) is used as a vegetable, root stock for grafting egg plant, and has medicinal uses too.

Conclusion

Homestead farming system is a remarkable feature of agriculture in Kerala, which integrates home with many useful crops belonging to the groups such as fruit plants, vegetables, tuber crops, spice crops, and fodder crops along with farm animals and poultry in a small area of land. Homesteads are havens of rich agrobiodiversity, where one could see an assortment of crops in typical multiple cropping or mixed farming style. Although most parts of Kerala lies in the humid tropical region, certain parts especially the high ranges enjoys mild cool climate. Idukki and Wayanad districts, Ponmudi in Thiruvananthapuram district, and Nelliyampathy in Palakkad district are typical high ranges, where subtropical fruits and cool season vegetables are grown. The areas like Vattavada and Kanthalloor in Idukki are home to several temperate fruits and vegetables such as apple, peach, plum, persimmon, cabbage, cauliflower, and the like.

The survey of cultivated crops in Kerala and the review revealed that a total of 452 crops belonging to 82 families are being grown in Kerala. Among these, 256 crops have edible uses (cereals and millets, pseudo cereals, pulses, oil seeds, tuber crops, sugars and starches, fruits and nuts, and vegetables). A total of 118 fruits and nuts have been recorded including 22 subtropical fruits. The list is not exhaustive as attempts are going on for introducing new crops, especially fruits. The list of crops would act as a check list for all those interested to study the diversity of cultivated crops in Kerala. In Kerala, there are only four crops— coconut, rubber, rice, and banana (including plantain), which have an area above one lakh hectares. Crops occupying more than 10,000ha are 17 only. The maximum area is under coconut (1) followed

by rubber (2) and rice (3). Other crops in the order of rank based on area occupied are banana and plantain (4), areca nut (5), jack fruit (6), coffee (7), black pepper (8), mango (9), cassava (10), cashew nut (11), cardamom (12), tea (13), nutmeg (14), papaya (15), drumstick (16), and cocoa (17).

A disturbing trend noticed is indiscriminate introduction of new crops, probably because of the hype created by media and the awards such holders of exotic crops get from various agencies. The flourishing nursery business is also a reason for this trend. The phenomenon of new introduction has its own risk. In most cases, introductions take place bypassing quarantine regulations. The potential weedy status of the alien plants and the pests and diseases they harbour must be assessed before introduction. Farmers should be aware of the potential risks involved. Plant enthusiasts and city dwellers should be aware about the true nature of big claims by nursery business people on various health and medicinal benefits of new introductions.

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