

SPECIES DIVERSITY, UTILIZATION AND CONSERVATION IN HOME GARDENS OF SOME RESIDENTIAL AREAS, COIMBATORE, INDIA.**Jamuna, S., R. Subhasree, K. Karthika, S. Paulsamy* and K. Thenmozhi.**

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ABSTRACT

The present study was aimed at documenting species composition, utilization and conservation of plant species growing in home gardens of 10 residential areas of Coimbatore city, India. Household interviews and home garden surveys revealed that all the 109 plant species included in 60 families included have some economic uses or with ornamental significance. Higher number of species was herbs followed by shrubs, trees, climbers, succulent herbs, vines and sub-shrubs. The families viz., Asteraceae, Apocynaceae and Acanthaceae contributed higher number of plant species than the other families to the home gardens. The species namely, *Celosia cristata*, *Chrysanthemum odoratum* and *Ocimum basilicum* have registered 50% frequency among the home gardens sampled which indicates that these species have distributed and maintained in comparatively higher number of home gardens. The home garden species are mainly under the categories of vegetables, fruits, ornamentals, economic important species and medicinal. These results further report revealed that homegardens satisfy various household needs like food, ornamentals, medicines, building material, religious and ceremonial uses.

Keywords: Home gardens, species diversity, species usage, frequency, use value.

1. INTRODUCTION

Home garden is generally accepted to be economically efficient, ecologically sound and biologically sustainable agroforestry system (Fernandez and Nair, 1986). It also serves as sink of carbon, thereby, playing an ecological role in the current global climate change scenario (Saha *et al.*, 2009). Home garden maintained in many places not only to meet out the need of day to day life but also to provide ecological security to some extent. Seasonal gardens in many residential areas of developing countries offer adequate economical return to the people (Eliotcoleman, 2000). Home gardens have recently been recognized for their potential for biodiversity conservation (Raheem *et al.*, 2008; Kabir and Webb, 2008) and for their social and cultural significance (Buchmann, 2009; Rowe, 2009). Increasing attentions have been focused on the potential of home garden to harbor genetic diversity, which is a key component of conservation efforts associated with population management (Hollingsworth *et al.*, 2005; Lengkeek *et al.*, 2006; Miller and Schaal, 2006).

Coimbatore is the leading industrial city in southern India, endowed with huge human population of 3,458,045. The industrial areas, educational institutions and residential areas are maintaining home gardens almost in all parts of the

city. In addition to several industries like textile mills, boundaries etc. residential areas are well designed in terms of maintaining home gardens and according to availability of the land area, the residents developed and established home gardens. People of upper economic and educated maintained their home gardens mainly with many ornamental plants and some plants of red listed categories also. Despite the well establishment of home gardens no taxonomical and ecological studies have been made so far in Coimbatore city. To address this lacuna, the present study was aimed to document the flora of the home garden and to categorize the plants into medicinal/other economical important species at different locations in Coimbatore city.

2. MATERIALS AND METHODS**2.1. Study site**

A total number of 10 home gardens with different sizes located in places viz., Ganapathy, Race course, Onampalayam, Avinashi, Cheran nagar, Saravanampatti, G.N. Mills, Thudiyalur, Vadavaalli and Vinayagapuram were selected for present study.

2.2. Species analysis

The home gardens selected were explored for the plant species for the information on habit or life form, medicinal other economic uses, parts used. Family-wise contribution of species has also been

enumerated. The degree of distribution of various plant species among the home gardens was determined as per the following formula:

$$\text{Frequency (\%)} = \frac{\text{Number of home gardens in which the species present}}{\text{Total number of home gardens sampled}} \times 100$$

2.3. Species usage patterns in home gardens

The medicinal and other economic uses of the plant species present in the home gardens of sampling places were documented on the basis of personal interview with the respective gardeners and the owners of the residential homes and by literature. The red listed and endemic species were enlisted according to Ahmedullah and Nair (1987).

3. RESULTS AND DISCUSSION

For the present study, all over the city of Coimbatore, 10 home gardens in 10 different residential areas have been selected to enumerate the species taxonomically and to evaluate ecologically (Table 1 and Fig. 1). The sizes of the home gardens sampled were also varied much between ca. 25 m² and 225 m². The species richness noted to be varied between the home gardens studied. The number of species was not in accordance with the size of the home gardens studied in Coimbatore city. Studies of home gardens in Mexico (Rico Gray *et al.*, 1991) and Indonesia (Abdoella, 2006) indicated that the number of species or individuals is not related to home garden size.

The higher species richness of 32 was present in the home gardens of Ganapathy followed by 30 in Cheran Nagar and Vinayagapuram residential areas each. On the other hand, the lower species richness of 3 was noted in the residential area of Vadavalli. Altogether, 109 plant species belongs to different life-forms were noted to be present in the studied home gardens. Kumar and Nair (2004) aptly regarded home gardens with high species richness above 20 'as the glorious examples of species diversity in cultivated and managed plant communities.

The variation in life-form among the species noted in the home garden of Coimbatore city was mostly herbs (49.54%) followed by shrubs (22.02%), trees (18.35%), climbers (3.67%), succulent herbs, vines and sub-shrub species (1.83%). This may be due to the need and individual option. The most grown herbs in the gardens are mainly for the purpose of supplying of requirements to their day to day life as vegetables, greens and medicinal plants.

In addition to higher species diversity, the diversity of families was noted to be most noteworthy (Table 2). A total number of 60 families with the contribution 109 species were present in the home gardens. The family, Asteraceae contributed the higher number of 7 species (11.67%) followed by the family, Apocynaceae with 6 species (10%), Acanthaceae with 5 species (8.33%), Moraceae, Solanaceae and Fabaceae with 4 species each (6.67%) and Araceae, Amaranthaceae, Myrtaceae, Asparagaceae, Rubiaceae and Malvaceae with 3 species each (5%) to the communities of home gardens. The remaining families have contributed 1 or 2 species only to home garden communities. The higher number of species in the families of Asteraceae, Apocynaceae and Acanthaceae indicates the diverse utility of the plant resources particularly the preferences towards medicinal uses. The present findings of 109 plant species belong to various life-form categories with different utilities indicate the biological richness of home gardens in Coimbatore city (Kumar *et al.*, 1994). The high floristic diversity is perhaps the reflection of the potential of home gardens to serve as repositories of genetic diversity as well. Kabir and Webb (2008) also reported the predominance of herbs and trees in the home gardens of south-western Bangladesh.

The degree of distribution of the various enumerated plant species was very low and it was ranging between 10 and 50% only (Table 1). The species namely, *Celosia cristata*, *Chrysanthemum odoratum* and *Ocimum basilicum* have registered 50% frequency which indicates that these species have distributed comparatively in higher number of home gardens (Fig. 2). The other species have recorded below 50% frequency only and hence they have restricted in distribution in few home gardens only. The overall distribution level indicates that each home garden owner has their own preference over the species. Pandey *et al.* (2006) also reported the lower distribution level of many home garden plants in South Andaman and he explained that the selective cultivation of species with the home gardens is mainly due to the utility value of the species.

The total number of individuals maintained for the constituent species in the home gardens was widely varied (Table 1 and Figs. 3 and 4). Few species like *Calliandra cyanometroides*, *Canna indica*, *Catharanthus roseus*, *Chrysanthemum odoratum*, *Cosmos bipinnatus* and *Coriandrum sativum* were registered with higher density when compared to other species (Fig. 3). The endemic plant species, *Saraca indica* was represented by only one

individual at Vinayagapuram residential area. Similarly, the species such as *Artocarpus heterophyllus*, *Callistemon citrinus*, *Cereus pterognus*, *Hamelia patens*, *Mangifera indica*, *Momordica charantia*, *Ravenala madagascariensis*, *Robinia pseudoacacia*, *Salvinia officinalis*, *Scindapsus variegata*, *Saraca indica* and *Thuja mysorensis* have also been

represented by only one individual in very less number (Fig. 4). It has been recognized that most of the mentioned above are economically important. The maintenance of this species with higher standing crop individuals in the home gardens may be due to economic security provided by these species to the respective home.

Table 1. Number of individuals of constituent plant species and their frequency in the sampled home gardens of sampling places in Coimbatore city.

S.No	Species	Habit	Home gardens*										Frequency (%)
			1	2	3	4	5	6	7	8	9	10	
1	<i>Acalypha wilkesiana</i> hort.	Shrub	5	8	-	-	4	-	-	-	-	-	30
2	<i>Adenium obesum</i> (Forsk.) Roem. et Schult.	Shrub	1	-	3	-	4	-	-	-	6	-	40
3	<i>Anthurium spathiphyllum</i> Schott	Herb	7	-	-	-	-	5	-	6	-	-	30
4	<i>Allamanda cathartica</i> L.	Shrub	3	-	-	-	-	1	-	-	-	-	20
5	<i>Aloe vera</i> (L.) Burm.f.	Succulent	-	-	-	-	-	-	5	-	2	-	20
6	<i>Antigonon leptopus</i> Hook & Arn	herb	-	-	-	-	-	-	17	-	-	25	20
7	<i>Aphelandra squarrosa</i> Nees.	Vine	-	-	-	-	-	-	-	-	-	6	10
8	<i>Aralia</i> sp. L	Herb	-	-	-	-	-	-	9	-	-	-	10
9	<i>Arctotis hirsuta</i> (Harv.) Beauverd	Herb	-	-	12	-	-	-	-	-	6	8	30
10	<i>Araucaria excelsa</i> R.Br	Tree	-	-	-	2	-	5	-	-	-	-	20
11	<i>Achyranthes aspera</i> L.	Herb	-	-	-	-	23	-	-	-	-	-	10
12	<i>A. caudatus</i> L.	Herb	-	-	-	-	-	-	-	-	-	24	10
13	<i>Azardica indica</i> A. Juss	Tree	1	-	-	-	-	-	-	-	1	-	20
14	<i>Artocarpus heterophyllus</i> Frost.	Tree	1	-	1	-	-	-	1	-	-	-	30
15	<i>Basella rubra</i> L.	Vine	9	-	-	-	-	-	-	-	-	-	10
16	<i>Bougainvillea glabra</i> Choisy	Creepers	2	-	-	-	3	-	-	-	-	-	20
17	<i>Callistemon citrinus</i> (Curtis) Skeels	Shrub	-	-	-	-	-	1	-	-	-	-	10
18	<i>Calliandra cyanometroides</i> Bedd	Herb	-	-	-	-	30	11	-	16	10	-	40
19	<i>Calathea</i> sp. R.Br	Herb	-	-	-	-	-	5	-	-	-	-	10
20	<i>Canna indica</i> L.	Herb	-	-	-	-	15	-	-	21	10	5	40
21	<i>Capsicum annum</i> L.	Shrub	-	3	-	-	-	-	-	-	2	-	20
22	<i>Catharanthus roseus</i> Linn.	Sub shrub	18	-	-	-	12	-	-	15	-	10	40
23	<i>Celosia cristata</i> L.	Shrub	2	-	1	3	-	-	-	5	2	-	50
24	<i>Cereus pterogonus</i> Lem.	Herb	-	-	-	-	-	-	-	1	-	-	10
25	<i>Cestrum nocturnum</i> L.	Herb	-	-	-	-	-	-	29	-	-	-	10
26	<i>Chlorophytum variegatum</i> Ker	Herb	4	-	-	7	-	-	-	10	2	-	40
27	<i>Chrysanthemum carinatum</i> L	Herb	-	-	3	-	-	-	-	7	-	-	20
28	<i>C. grandiflorum</i> L.	Herb	-	21	-	-	-	-	-	-	-	-	10
29	<i>C. odoratum</i> L.	Herb	70	-	41	55	63	-	-	-	84	-	50
30	<i>Clitoria ternatea</i> L.	Herb	-	-	-	-	-	25	-	-	-	-	10
31	<i>Coleus aromaticus</i> Benth	Herb	-	20	-	6	9	-	-	-	-	-	30
32	<i>Cordyline stricta</i> L.	Herb	-	-	-	6	-	-	-	-	-	-	10
33	<i>Cosmos bipinnatus</i> Cav	Herb	63	-	-	-	-	-	-	-	-	82	20
34	<i>Crassula</i> sp.L.	Herb	-	-	5	-	-	8	-	-	-	-	20
35	<i>Crossandra infundibuliformis</i> L Salib	Herb	18	-	10	-	-	-	-	-	7	-	30
36	<i>Cucumis pepo</i> DC.	Climber	-	-	-	-	-	3	-	-	-	-	10
37	<i>Curcuma longa</i> L.	Herb	2	-	5	-	-	-	-	-	-	-	20
38	<i>Calotropis gigantea</i> R.Br.	Shrub	-	-	-	-	-	-	2	-	-	-	10
39	<i>Carica papaya</i> L.	Tree	-	-	-	-	1	-	-	1	-	-	20
40	<i>Coriandrum sativum</i> Linn.	Herb	35	-	-	-	-	19	-	-	28	-	30
41	<i>Citrus lemon</i> L.	Tree	1	-	-	-	3	-	5	-	-	-	30
42	<i>Cardiospermum halicacabum</i> L	Herb	-	-	-	-	5	-	-	-	-	-	10
43	<i>Cycas siamensis</i> Miq	Tree	1	2	1	-	-	1	6	-	-	-	50
44	<i>Dracaena</i> sp. Lam	Shrub	-	-	-	-	5	-	2	-	-	-	20
45	<i>Duranta repens</i> L.	Shrub	-	-	-	-	-	-	4	-	-	6	20
46	<i>Damascus carota</i> Nayeem Ket	Herb	4	-	-	-	-	-	2	-	-	-	20
47	<i>Ficus benghalensis</i> Linn.	Tree	-	-	-	-	-	1	1	-	-	-	20
48	<i>F. benjamina</i> Linn.	Tree	1	-	2	-	-	-	-	-	-	-	20
49	<i>F. microspora</i> Wight	Tree	-	-	4	-	-	3	-	-	-	-	20

50	<i>Geranium domesticum</i> Roxb.	Herb	-	-	-	-	2	5	6	-	-	30	
51	<i>G. peltatum</i> Roxb	Herb	-	-	-	-	-	-	5	-	-	10	
52	<i>Grevillea robusta</i> A. Cunn. ex R. Br	Shrub	2	-	-	-	-	-	-	-	-	10	
53	<i>Hamelia patens</i> Jacq	Shrub	-	-	-	-	-	-	1	-	-	10	
54	<i>Hibiscus rosa sinensis</i> L.	Shrub	-	-	-	6	-	-	8	-	9	30	
55	<i>H. mutabilis</i> L.	Shrub	-	8	-	-	4	6	-	2	-	40	
56	<i>H. syriacus</i> L.	Shrub	2	-	-	-	-	-	-	-	2	20	
57	<i>Hydrangea macrophylla</i> (Thunb.) Ser.	Shrub	-	-	-	-	-	-	-	2	-	10	
58	<i>Inga cyanocetroides</i> Linn.	Shrub	4	-	2	-	1	-	-	3	-	40	
59	<i>Ixora coccinea</i> L.	Shrub	1	-	-	-	4	4	-	-	-	30	
60	<i>Jacquemontia pentantha</i> Choisy	Herb	-	-	-	-	37	-	-	-	-	10	
61	<i>Jasminum angustifolium</i> Vahl	Herb	-	-	-	-	-	3	-	2	-	20	
62	<i>J. grandiflorum</i> L	Herb	-	-	-	-	-	2	1	1	-	40	
63	<i>J. sambac</i> Ait	Herb	-	-	-	-	2	-	-	-	-	20	
64	<i>Jatropha peltata</i> Wight	Herb	-	-	-	-	-	-	-	-	2	10	
65	<i>Kalanchoe fentchokoi</i> Adans	Herb	-	-	10	-	-	-	-	-	14	20	
66	<i>Knoxia</i> sp. L.	Herb	-	-	-	-	-	-	20	16	-	20	
67	<i>Lablab purpureus</i> (L) Sweet	Vine	-	-	3	-	-	-	1	2	4	40	
68	<i>Lantana viscosa</i> L.	Shrub	1	-	-	-	-	-	-	1	-	20	
69	<i>Lawsonia inermis</i> L.	Tree	-	-	-	-	-	-	-	1	-	20	
70	<i>Madhuca longifolia</i> J. Konig J.F.Macbr.	Tree	-	-	-	-	-	-	-	2	1	30	
71	<i>Mangifera indica</i> L.	Tree	-	-	-	-	-	-	-	-	1	10	
72	<i>Miranda leucophyllum</i> Harts	Tree	7	-	-	-	-	-	-	-	-	10	
73	<i>Momordica charantia</i> L.	Herb	-	-	-	1	-	-	-	-	-	10	
74	<i>Moringa oleifera</i> Lam	Tree	-	-	-	-	2	-	-	-	-	10	
75	<i>Murraya paniculata</i> L.	Herb	-	-	-	-	4	-	-	2	-	20	
76	<i>Musa paradisiaca</i> L.	Tree	-	-	-	-	-	1	4	5	-	30	
77	<i>Nephrolepis</i> sp. Schot	Herb	-	-	-	-	-	-	-	-	5	10	
78	<i>N. tuberosa</i> Bory ex Willd	Herb	-	-	1	-	-	-	-	-	6	20	
79	<i>Nerium oleander</i> Linn.	Shrub	-	-	-	-	-	-	3	-	2	20	
80	<i>Ocimum basilicum</i> Linn.	Herb	-	-	-	5	4	4	3	2	-	50	
81	<i>Oxalis radicata</i> Linn.	Herb	-	-	-	-	-	-	-	-	42	10	
82	<i>O. corniculata</i> Linn.	Herb	-	-	-	37	-	-	-	-	-	10	
83	<i>Phyllanthus emblica</i> Linn.	Tree	-	-	-	-	1	-	1	-	1	30	
84	<i>Pistia stratiotes</i> Linn.	Succulent herb	-	-	-	-	-	-	10	-	-	22	20
85	<i>Plumbago auriculata</i> Lam	Herb	-	-	3	-	-	-	-	10	3	1	40
86	<i>Plumeria rubra</i> Linn.	Shrub	2	-	-	-	1	-	-	-	-	-	20
87	<i>Punica granatum</i> Linn.	Sub shrub	-	-	-	3	2	-	1	-	-	3	40
88	<i>Piper betle</i> Linn.	Creepers	-	-	-	-	-	-	-	-	15	10	20
89	<i>Ravenala madagascariensis</i> Sonn	Herb	-	-	1	-	-	-	-	-	-	-	10
90	<i>Robinia pseudoacacia</i> L.	Herb	-	-	-	-	-	1	-	-	-	-	10
91	<i>Tiarella grandiflora</i> Roxb	Herb	1	-	-	-	-	-	-	-	-	-	10
92	<i>Rosa</i> sp. W.	Shrub	1	-	4	-	-	-	-	-	3	1	40
93	<i>Salvinia officinalis</i> L.	Herb	-	-	-	-	-	-	-	-	1	-	10
94	<i>Sansevieria roxburghiana</i> Schult	Herb	-	-	-	-	-	-	-	-	-	2	10
95	<i>Scindapsus variegata</i> (Hayata) Kanehira	Creepers	1	-	-	-	-	-	-	-	-	-	10
96	<i>S. melongena</i> Pr.	Herb	-	-	-	-	1	-	3	-	2	-	30
97	<i>S. lycopersicum</i> Linn.	Herb	-	-	-	5	-	-	-	-	-	-	10
98	<i>Saraca indica</i> Linn.	Tree	-	-	-	-	-	-	-	-	-	1	10
99	<i>Tagetes erecta</i> B.	Herb	-	-	-	-	-	1	-	-	2	3	30
100	<i>Tradescantia discolor</i> S.W	Herb	-	-	-	-	10	-	-	-	-	-	10
101	<i>Thuja occidentalis</i> L.	Shrub	-	-	-	-	1	-	-	1	-	1	30
102	<i>T. mysorensis</i> T. and Roxb	Shrub	1	-	-	-	-	-	-	-	-	-	10
103	<i>Tabernaemontana divaricata</i> R.Br. ex Koem. & Schult.	Shrub	4	-	-	-	-	5	1	1	-	-	40
104	<i>Tecoma grandis</i> L.f	Tree	-	-	-	-	1	2	-	-	-	2	30
105	<i>Terminalia catappa</i> Linn.	Tree	-	-	-	-	-	1	-	-	-	1	20
106	<i>Taxus wallichiana</i> Linn	Tree	-	-	-	-	2	1	-	-	-	1	30
107	<i>Ursinia cerevisiae</i> (Thunb.) N.E.Br	Herb	-	-	-	-	1	-	-	-	2	1	30
108	<i>Zephyranthes carinata</i> Herb	Herb	-	-	-	-	20	12	-	-	-	-	20
109	<i>Zinnia grandiflora</i> Linn.	Herb	-	-	-	6	-	-	2	-	4	-	30

*1 - Ganapathy; 2 - Race course; 3 - Onampalayam; 4 - Avinashi; 5 - Cheran nagar; 6 - Saravanampatti; 7 - G.N. Mills; 8 - Thudiyalur; 9 - Vadavaalli; 10 - Vinayagapuram.



Fig. 1. The sampled home gardens of Coimbatore city.



Fig. 2. The species of higher degree of distribution among the home gardens.



Fig. 3. Some species of relatively high density.



Fig. 4. Certain species of relatively low density.

Table 2. Family, useful part, medicinal and other economic uses of various plant species in the home gardens of Coimbatore city.

S. No.	Species	Family	Parts used	Medicinal/other economic uses
1	<i>Acalypha wilkesiana</i>	Acanthaceae	Leaf	The extract of the flower inhibits the ovarian function and stimulate the uterine. Roots are used in the treatment of diabetes, antipyretic, abortifacient, demulcent, lessens inflammation and heat of the body; useful to relieve chest pain.
2	<i>Adenium obesum</i>	Apocynaceae	Bark and sap	The plant sap and bark are used as remedy for bone dislocation, rheumatism, sprains, paralysis, swellings, wounds and skin infections.
3	<i>Anthurium spathiphyllum</i>	Araceae	Whole plant	Cleans indoor air of many environmental contaminants, including benzene, formaldehyde and other pollutants.
4	<i>Allamanda cathartica</i>	Apocynaceae	Flower	Flower has been used to treat liver tumors, jaundice, splenomegaly and malaria.
5	<i>Aloe vera</i>	Liliaceae	Leaf	Aloe has been marketed as a remedy for coughs, wounds, ulcers, gastritis, diabetes, cancer, headaches, arthritis, immune-system deficiencies, and many other conditions when taken internally. The lower leaf is sliced open, the gel obtained can be applied on the affected area of the skin.
6	<i>Antigonon leptopus</i>	Polygonaceae	Leaf, bark and seed	The leaves and barks are protective against bronchial asthma and other allergic disorders. Barks and seeds are astringent and are given in piles and diarrhoea.
7	<i>Aphelandra squarrosa</i>	Acanthaceae	-	Ornamental plant.
8	<i>Aralia sp.</i>	Araliaceae	-	Ornamental plant.
9	<i>Arctotis hirsuta</i>	Acanthaceae	-	Ornamental plant.
10	<i>Araucaria excelsa</i>	Araucariaceae	Leaf	It reduces the bacterial contaminants.
11	<i>Achyranthes aspera</i>	Amaranthaceae	Leaf and seed	It is used to improve appetite and to cure various types of gastric disorders. It is useful in haemorrhoids, leaves and seeds are emetic, hydrophobia, carminative, resolve swelling, digestive and expel phlegm.
12	<i>A. caudatus</i>	Amaranthaceae	Leaf, stem and root	The roots are used to cure kidney stones. The leaves used to cure cuts, leprosy, boils, burns, fever and decoction of the stem used in jaundice.
13	<i>Artocarpus heterophyllus</i>	Meliaceae	Whole plant	Leaves, bark, flowers, fruits, seed, gum, oil and neem cake are used to have anti-allergenic, antidermatic, antifeedent, antifungal, anti-inflammatory, antipyorrhoeic, antiscabic, cardiotoxic, diuretic, insecticidal, larvicidal, nematicidal, spermicidal and other biological activities.
14	<i>Azadirachta indica</i>	Moraceae	Leaf and fruit	The leaves are useful in fever, ulcers, boils wounds, skin diseases, anti-diarrhoeal, analgesic and as immuno modulator. The ripe fruits are sweet cooling, laxative, aphrodisiac, and tonic. The seeds used for are sweet, diuretic, aphrodisiac and constipation.
15	<i>Basella rubra</i>	Basellaceae	Root	Decoction of the root relieves bilious vomiting. Spinach extracts has beneficial effects such as chemo and central nervous system protection, anticancer and antiaging function.
16	<i>Bougainvillea glabra</i>	Nyctaginaceae	Flower	The leaves used for a variety of disorders such as diarrhoea, and to reduce stomach ulcers, cough, sore throat, hepatitis, a decoction of dried stems and flower used as treatment for low blood pressure.
17	<i>Callistemon citrinus</i>	Myrtaceae	Leaf	It is used for treating hemorrhoids.
18	<i>Calliandra cyanometroides</i>	Myrtaceae	-	Ornamental plant.
19	<i>Calathea sp.</i>	Marantaceae	-	Ornamental plant.
20	<i>Canna indica</i>	Cannaceae	Root and seed.	The root decoction is used for the treatment of fever, dropsy, and dyspepsia. Seed juice is used to relieve ear aches.
21	<i>Capsicum annum</i>	Solanaceae	Fruit	It is used as carminative, an appetizer and a stomachic. Externally, it is used as a counter irritant and also in the treatment of rheumatism, lumbago and neuralgia.
22	<i>Catharanthus roseus</i>	Apocynaceae	Whole plant	Minimizing the adverse effects of chemotherapy, carcinogenic agents and prolonging longevity types possesses known antibacterial, antifungal, antidiabetic and antiviral activities.
23	<i>Celosia cristata</i>	Amaranthaceae	Leaf and flower	It is used in the treatment of diarrhoea, piles, bleeding nose, disinfectant, inflammation, haematological and gynaecologic disorders.
24	<i>Cereus pterogonus</i>	Cactaceae	-	Ornamental plant.
25	<i>Cestrum nocturnum</i>	Solanaceae	Leaf	Leaves are used for their pharmacological significance in burns and swellings. It is also used for treating epilepsy and as stupefying charm medicine. It is used to prevent malaria.
26	<i>Chlorophytum variegatum</i>	Liliaceae	-	Ornamental plant.
27	<i>Chrysanthemum</i>	Asteraceae	Flower	The leaves are used medicinally to cure influenza symptoms, liver and

	<i>carinatum</i>			menstrual disorders and have antiinflammatory and antispasmodic effects.
28	<i>C. grandiflorum</i>	Asteraceae	Leaf	It is used for anticancer activity. Flowers are used for antihypertensive, hypertrophic scar fibroblast inhibiting, antidepressive, serotonin antagonist, anticancer, antispasmodic, antioxidative and antimicrobial activities roselle can prevent cancer and lower blood pressure as well as improve the digestive system in human
29	<i>C. odoratum</i>	Asteraceae	Flower	The herb is effective in curing fever and acts as asthma and bronchitis etc. The extract gives neuropharmacological value. A paste of the whole plant can be applied over the infected area and decoction of the plants is very effective in cleaning the wound.
30	<i>Clitoria ternatea</i>	Fabaceae	Whole plant	The leaves are used for the treatment of cough, throat infection and nasal congestion.
31	<i>Coleus aromaticus</i>	Lamiaceae	Leaf	It is used to treat dysentery and skin diseases. It breaks fever and to assuage headache. The leaves consumed as vegetable.
32	<i>Cordyline stricta</i>	Asparagaceae	Leaf	Leaves are used for fever, flue, cough, asthma, digestive troubles, piles, diabetes, urinary diseases, male sexual diseases, gynecological diseases, joints pain/rheumatic pains and inflammation, ear diseases, tooth problems, cuts and wounds, skin diseases, cooling agents and miscellaneous uses.
33	<i>Cosmos bipinnatus</i>	Asteraceae	Flower and leaf	Ornamental plant.
34	<i>Crassula sp.</i>	Crassulaceae	-	In the treatment of infectious diseases while simultaneously mitigating many of the side effects.
35	<i>Crossandra infundibuliformis</i>	Acanthaceae	Leaf and latex	Seeds are used as a diuretic. Leaves are used as a painkiller, a treatment for nausea, and a boost to haemoglobin content of the blood.
36	<i>Cucumis pepo</i>	Cucurbitaceae	Leaf, fruit and seed.	The fruit is used for cooling and astringent to the bowels, increases appetite, cures leprosy and purifies the blood.
37	<i>Curcuma longa</i>	Zingiberaceae	Rhizome	A fresh juice is commonly used in many skin conditions, including eczema, chicken pox, shingles, allergy and scabies. The active compound curcumin have antiinflammatory, antioxidant, antitumour, antibacterial and antiviral activities.
38	<i>Calotropis gigantea</i>	Asclepiadaceae	Leaf and latex	The powdered root is used to treat bronchitis, asthma, leprosy, eczema, elephantiasis while the latex is used to treat vertigo, baldness, hair loss, toothache, intermittent fevers, rheumatoid/joint swellings and paralysis.
39	<i>Carica papaya</i>	Caricaceae	Leaf, fruit and root	It increase appetite, ease menstrual pain, meat tenderizer and relieve nausea
40	<i>Coriandrum sativum</i>	Apiaceae	Seed, root and leaf	The seeds were included in a host of prescriptions for fever, diarrhoea, vomiting, indigestion as in stomach and carminative. Leaves are given for biliousness, intestinal irritations, heartburn, thirst and nausea. Volatile oil is carminative.
41	<i>Citrus lemon</i>	Rutaceae	Fruit and leaf	It has also been found useful in the treatment of hepatobiliar, dyskinesia, oxiurasis, varicose veins, haemorrhoids, phlebitis and urolithiasis.
42	<i>Cardiospermum halicacabum</i>	Sapindaceae	Leaf and fruit	The tender, young shoots are used as a diuretic, stomachic and rubefacient. It is used in rheumatism, lumbago, nervous diseases and as a demulcent in arthritis and in dropsy.
43	<i>Cycas siamensis</i>	Cycadaceae	-	Ornamental plant.
44	<i>Dracaena sp.</i>	Asparagaceae	Fruit	The fruits are used in the treatment of malarial and intestinal worms.
45	<i>Duranta repens</i>	Verbenaceae	Leaf and fruit	The roots are stimulant for indolent ulcer. Different parts of the carrot have been used in medicine for the treatment of kidney dysfunction, asthma, dropsy, inflammation, leprosy, worm troubles, etc.
46	<i>Damascus carota</i>	Apiaceae	Leaf and latex	The latex for a depilatory, pain relief, antibacterial and emetic. Remedies for skin, warts and toothache. Regarding safety and efficacy in pregnancy and lactation is lacking
47	<i>Ficus benghalensis</i>	Moraceae	Leaf	It is used for the treatment of skin diseases and enlargement of liver.
48	<i>F. benjamina</i>	Moraceae	Leaf, bark and root	The treatment of certain skin disorders, stomachic, hypotensive and antidysentery. Leaf, bark and fruits are used as antimicrobial, antitumor, antiinflammatory, antinociceptive, antipyretic and cytotoxic activity.
49	<i>F. microspora</i>	Moraceae	Leaf and bark	It has been used for intestinal problems, wounds and respiratory ailment. Oil is considered a relaxant in aroma therapy and in recent years it is used as respiratory.
50	<i>Geranium domesticum</i>	Geraniaceae	Seed and leaf	Ornamental plant.
51	<i>G. peltatum</i>	Geraniaceae	Flower	It is used to treat athlete's foot, skin lesions, rashes, insect bites, nervous shock, inflammation, rheumatism, headache, asthma, and dysentery.

52	<i>Grevillea robusta</i>	Proteaceae	-	Ornamental plant. It regulates menstruation and stimulate blood circulation. The flower extract has been traditionally used for liver disorders, high blood pressure and as an aphrodisiac. Young leaves and flowers are used in case of headache.
53	<i>Hamelia patens</i>	Rubiaceae	Leaf and flower	
54	<i>Hibiscus rosinensis</i>	Malvaceae	Flower, root and leaf	They are used in antiinflammatory.
55	<i>H. mutabilis</i>	Malvaceae	Leaf, flower and seed	The leaves are diuretic, expectorant and stomachic. Decoction of the flowers is used for ophthalmic and stomachic. It is also used in the treatment of itch and other skin diseases.
56	<i>H. syriacus</i>	Malvaceae	Leaf and flower	It cures skin diseases.
57	<i>Hydrangea macrophylla</i>	Hydrangeaceae	-	Ornamental plant.
58	<i>Inga cyanometroides</i>	Fabaceae	Leaf	It is used for hepatic disorder, cancer, microbial infection, antioxidant, pain, inflammation. The flowers were used for the treatment of cancer, leucorrhoea, dysentery, dysmenorrhoea, haemoptysis and hypertension.
59	<i>Ixora coccinea</i>	Rubiaceae	Leaf, root and flower	The leaves are used as an emetic in cases of poisoning. The roots are bitter, acrid and are useful for external application in ringworm and herpes infestations and are recommended for ophthalmopathy, ulcerative stomatitis, leprosy, pruritus and wounds.
60	<i>Jacquemontia pentantha</i>	Convolvulaceae	-	Ornamental plant.
61	<i>Jasminum angustifolium</i>	Oleaceae	Leaf and root	Leaves are used in the treatment of leprosy, skin disease, ulcers, wounds and corns.
62	<i>J. grandiflorum</i>	Oleaceae	Leaf and root	Leaves are used in the treatment of leprosy, skin disease ulcers wounds and corns.
63	<i>Jatropha peltata</i>	Oleaceae	Leaf, flower and root	The plant is used for cooling, skin disorders, leprosy, ulcers, in cases of insanity, weakness of sight and affections of mouth and opium for gangrenous ulcers of the gums.
64	<i>Jasminum sambac</i>	Euphorbiaceae	Leaf	It is used to treat gastric ulcer and allied stomach ailments and malarial disease.
65	<i>Kalanchoe fentchokoi</i>	Rubiaceae	-	Ornamental plant.
66	<i>Knoxia sp.</i>	Juncaceae	-	Ornamental plant.
67	<i>Lablab purpureus</i>	Fabaceae	Leaf	It has been used an antioxidant, anticancer, antiviral and antiinflammatory activities.
68	<i>Lantana viscosa</i>	Verbenaceae	Leaf	The leaves are used to treat rheumatism, gout, hemorrhoids, fractures and snake bites and also in the treatments of anesthetic and smooth muscle relaxant antidiabetic, antiulcer, antiinflammatory and antimicrobial.
69	<i>Lawsonia inermis</i>	Myrtaceae	Stem bark, root and leaf	Henna leaves, flowers, seeds, stem bark and roots are used in traditional medicine to treat a variety of ailments as rheumatoid arthritis, headache, ulcers, diarrhoea, leprosy fever, leucorrhoea, diabetes, cardiac disease, hepatoprotective and colouring agent.
70	<i>Madhuca longifolia</i>	Sapotaceae	Fruit and latex	The flowers are used as tonic, analgesic and diuretic, used as cooling agent, tonic, aphrodisiac, astringent, demulcent and for the treatment of helminthes, acute and chronic tonsillitis, bronchitis. Madhuka can be used to treat gastro intestinal ulcers.
71	<i>Mangifera indica</i>	Anacardiaceae	Fruit and leaf	Fruit is proposed as nutritional supplement (antioxidant) and an antiinflammatory, analgesic and immunomodulatory treatment to prevent disease progress or increase the patient's quality of life in gastric and dermatological disorders, AIDS, cancer and asthma. Root bark is a bitter aromatic and used for diarrhea and leucorrhoea.
72	<i>Miranda leucophyllum</i>	Scrophulariaceae	-	Ornamental plant.
73	<i>Momordica charantia</i>	Cucurbitaceae	Leaf, Fruit and root	Leaves are used for ulcers and as a bitter digestive aid for intestinal gas, bloating, stomachache and sluggish digestion. Fruit pulp, leaf juice and seeds are used for antihelminthic. Leaf act as galactagogue. Roots are used for astringent.
74	<i>Murraya paniculata</i>	Moringaceae	Leaf and fruit	The leaves and fruit possesses antiinflammatory, antimicrobial, antioxidant and anticancer activity and also used for cardiovascular, hepatoprotective, antiulcer, diuretic, antirolithiatic and antihelminthic activities.
75	<i>Musa paradisiaca</i>	Rutaceae	Leaf and root bark	Their root bark is used as an anodyne or local anesthetic for the treatment of gout, contusion and bone ache.
76	<i>Moringa oleifera</i>	Musaceae	Whole plant	Unripe bananas and plantain fruits are astringent, and used to treat diarrhea. The leaves are used for cough and bronchitis. The roots can

				arrest hemoptysis and posses strongly astringent and anthelmintic properties.
77	<i>Nephrolepis</i> sp.	Nephrolepidaceae	-	Ornamental plant.
78	<i>N. tuberosa</i>	Nephrolepidaceae	Whole plant	Used as healing agents in inflammation, leucorrhoea, piles and as antidote. It possesses antiviral, antibacterial, antiparasitic, antiinflammatory, antiulcer and antioxidant activity and used as diuretic.
79	<i>Nerium oleander</i>	Apocynaceae	Flower and leaf	The flowers are used as blood purifier and also used in the treatment of jaundice, diabetes, cancer, inflammation and eye disorders.
80	<i>Ocimum basilicum</i>	Lamiaceae	Leaf	It cures cold, cough and having high medicinal value.
81	<i>Oxalis radicos</i>	Oxalidaceae	-	The leaves cure dysentery, diarrhea and skin disease
82	<i>O. corniculata</i>	Oxalidaceae	Leaf and flower	It is used to cure blood pressure high cholesterol hardening of the arteries atherosclerosis, pain and swelling of the pancreas and pancreatitis cancer. Leaves are applied to sore eyes.
83	<i>Phyllanthus emblica</i>	Euphorbiaceae	Fruit and leaf	Juice of the plant is useful in eye and ear diseases. Leaves are considered antiseptic, antitubercular, antidysenteric and anthelmintic and also used in eczema, leprosy, piles, ulcers, syphilis, cough and asthma. It is also used as a poultice in hemorrhoid.
84	<i>Pistia stratiotes</i>	Araceae	Leaf	The root juice is used for gastric acidity before each meal for a weak. The latex has been used for the treatment of itches, swellings and fevers, inflammations, arthritis and constipation. In the Guinas medicines are produced from root and bark and used for the treatment of skin eruptions and abscesses, dysentery, herpes, syphilis, cough and as a purgative.
85	<i>Plumbago auriculata</i>	Plumbaginaceae	Root and leaf	The fruits are used in the treatment and prevention of cancer, cardiovascular disease, diabetes, dental problems, erectile dysfunction, bacterial infections, antibiotic resistance and ultraviolet radiation induced skin damage.
86	<i>Plumeria rubra</i>	Apocynaceae	Root, bark and latex	Fruits are used in the treatment of diabetes and kidney stone problems, arteriosclerosis, diabetic nephropathy, diabetic retinopathy in addition to the control of blood glucose level.
87	<i>Punica granatum</i>	Punicaceae	Fruit	It cures cold and cough.
88	<i>Piper betle</i>	Piperaceae	Leaf	Leaves are used for metrorrhagia, hemoptysis, large intestine hemorrhage, rheumatic arthritis and gynecologic disease.
89	<i>Ravenala madagascariensis</i>	Strelitziaceae	Leaf	Leaves are used to cure skin diseases and scabies.
90	<i>Robinia pseudoacacia</i>	Fabaceae	Leaf	Ornamental plant.
91	<i>Tiarella grandiflora</i>	Brassicaceae	-	It has been used for maintaining health, boosting immune system function and remission of cancer.
92	<i>Rosa sp</i>	Rosaceae	Flower	The leaf sap is applied directly to sores, cuts and grazes and it include treatment for abdominal pains, ear ache, diarrhea and hemorrhoids.
93	<i>Salvinia officinalis</i>	Lamiaceae	Leaf	Paste of leaves can be applied to relieve pains. Seeds act as expectorant in cough and asthma. The roots are expectorant and diuretic, useful in the treatment of catarrhal fever, coughs, asthma and chest pain.
94	<i>Sansevieria roxburghiana</i>	Asparagaceae	Flower	Ornamental plant.
95	<i>Scindapsus variegata</i>	Araceae	-	Decoction of leaf is used to cure diabetes, leprosy, gonorrhoea, cholera, bronchitis, dysentery, asthenia and haemorrhoids.
96	<i>S. melongena</i>	Solanaceae	Fruit and leaf	It is used in women related problems, such as leucorrhoea, menorrhagia, dysfunctional uterine bleeding and bleeding hemorrhoids.
97	<i>S. lycopersicum .</i>	Solanaceae	Fruit	It cures the diseases of eyes cold conjunctivitis, cough, bleeding piles and ulcers bronchitis.
98	<i>Saraca indica</i>	Caesalpiaceae	Leaf	It is used for anticancer.
99	<i>Tagetes erecta</i>	Asteraceae	Flower	Ornamental plant.
100	<i>Tradescantia discolor</i>	Commelinaceae	-	The essential oil within the plant has been used for cleansers, disinfectants, hair reparations, insecticides, liniment, room sprays and soft soaps.
101	<i>Thuja occidentalis</i>	Cupressaceae	Leaf	Ornamental plant.
102	<i>T. mysorensis</i>	Acanthaceae	-	Ornamental plant.
103	<i>Tabernaemontana divaricata</i>	Apocynaceae	Leaf	Ornamental plant.
104	<i>Tecoma grandis</i>	Bignoniaceae	Flower	The leaves were widely used as medicine for dermatosis and hepatitis. Leaves and fruits have anticancer, antioxidant, anti HIV, antiinflammatory, anti diabetic and hepatoprotective activities.
105	<i>Terminalia catappa</i>	Combretaceae	Fruit	It has unique property of preventing the growth of cancerous cells, and being used in the treatment of breast and ovarian cancer.
106	<i>Taxus wallichiana</i>	Taxaceae	Leaf and	The stem bark is used as a anticancer. This species is also used as fuel

107	<i>Ursinia cerevisiae</i>	Asteraceae	bark	wood by the local communities.
	<i>Zephyranthes</i>		Leaf	Used for the treatment of vermifuge and astringent.
108	<i>carinata</i>	Amaryllidaceae	Flower	Ornamental plant.
109	<i>Zinnia grandiflora</i>	Asteraceae	-	Ornamental plant

Among the 109 species enlisted in the studied home gardens, the economic importance including the medicinal uses of the various plant species present in the sampled home gardens is depicted in Table 2. In the account of 109 species, 86 (78.90%) were recognized as medicinally important and 23 (21.10%) as ornamentals. The medicinal uses of the plant species are multidimensional. A greater number of 20 species are used to treat skin diseases and a sizeable number of 12 species are prescribed for anticancer activities. In addition, 11 species have been known for antidiabetic properties and 2 species each for gynecological disorders and for the treatment of dysentery respectively. Interestingly it has been noted that the 2 species namely *Tecoma grandis* and *Mangifera indica* are having antiviral property suggested for AIDS patients. The results of present study exhibited a considerable array of plant species in the home gardens of Coimbatore city with different medicinal and other economic uses. Presently many home gardens show a shift from subsistence oriented agriculture to market (Peyre *et al.*, 2006).

4. CONCLUSION

In conclusion, home gardens in Coimbatore city appear to be supplementary agricultural production systems, which are managed and controlled by household members. Involvement of family members in home gardening activities empowers them to become self-reliant and simultaneously making a contribution to household food security. In addition, the home gardens can save species from the risk of extinction and thus, home gardens can be considered as a tool for conservation of medicinal plants.

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