

Multipurpose Plant Species and Their Importance in Home Gardens of Shager City, Oromia Regional State, Ethiopia

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Abstract

Home gardens are small cultivated areas around residential areas that provide food, income, and maintain ecological stability. The objective of this study was to identify multiple-use plants, their features, and uses in home gardens in Shager City. Using multistage sampling, six sub-cities were selected, with one district from each, and two *kebeles* per district, for a total of 180 systematically selected households. Data on plant features were collected through structured interviews, and specimens were gathered via plot demarcation and inventory. Preference ranking of multiple-use plants was conducted through a focus group discussion with selected households. Results showed 215 plant species (75 families), of which 66 (30.69%) had multiple uses across 11 categories, mostly trees in their growth forms. Most multiple-use plants (65.15%) were exotic in origin, and 86.36% were perennial in life cycle. *Ensete ventricosum*, *Ruta chalepensis*, and *Rosmarinus officinalis* were most frequently recorded, while *Vernonia amygdalina*, *Buddleja polystachya*, and *Eucalyptus globulus* were the most preferred multiple-use plant species. Home gardens are found to be a repository of diverse plant species with multiple functions. Growing multipurpose plants helps gardeners harvest diverse products from small areas, supporting food security, health, and ecological stability. Emphasizing such cultivation aids policymakers, environmentalists, biodiversity experts, and urban agriculturalists in effective resource use.

Key words: Home garden, Multiple use, Shager City

Introduction

Home gardens are the cultivation of a small portion of land around residential areas, encompassing vegetables, herbs, ornamental, medicinal, and fruit plants, and sometimes livestock, which serve as a complementary source of food, income, and sustainable livelihoods (Charachimwe & Mangwende, 2019). They are farming systems that involve the deliberate management of a blend of annual and perennial crops, mainly with family labor. Home gardens play a significant role in providing subsistence food and income to family members and in serving as important habitats for wild flora and fauna through a multi-strata structure (Alemu *et al.*, 2019).

Home gardening is an economically comprehensive and culturally established farming system practiced worldwide since ancient times. It optimizes the use of nature's resources (Amenu, 2017). Home gardens could contribute about 35% of households' total annual income (Regassa, 2016). Home garden agroforestry is a versatile method essential for conserving biodiversity, varying livelihoods, and sustaining land ecosystem services (Weldebirhan *et al.*, 2023). Home gardens represent resilient traditional food systems, providing households with basic necessities and ceremonial or religious resources (Edo *et al.*, 2024).

Home gardens are places that serve as intergenerational learning spaces where communities inherit culture-related home garden management practices and plant use, to the coming generation (Yinebeb *et al.*, 2022). Engaging in gardening enhances health by boosting immunity and lowering inflammation, and also improves cognitive function (Lentoor, 2024).

Home gardening reconnects gardeners with soil microbiota, regulating endocrine responses, and improving air quality. Psychologically, gardening fosters mindfulness, emotional stability, and social interconnection, reducing stress, anxiety, and depression (Vuong *et al.*, 2025). Home gardens are holistic services providing time-tested viable farming

strategies for sustainable development in urban and rural settings, as well as in developed and developing countries, by addressing multiple aspects of sustainability (Chakravarty *et al.*, 2017)

Statement of the problem

The globe is being challenged in the 21st century mainly by anthropogenic problems such as climate change, high energy consumption, waste generation, and urbanization. Among the problems, Urbanization was identified as the top challenge to be addressed. The main problems of urbanization are the inability to ensure food security in urban areas (Sasana *et al.*, 2019). Cities in Africa are estimated to host about 60% of the population of the continent in 2050, and in connection with this, urban areas are expected to exhibit higher surface temperature than their surrounding rural areas, resulting in urban heat islands (Li & Stringer, 2022). Findings confirm that, across wide areas of sub-Saharan African countries, particularly in Ethiopia, the demand and supply of food are becoming increasingly limited due to rapid population growth and the consequential decline in arable land (Biruk & Tesfaye, 2019). Hence, Ethiopia is suffering from food insecurity in both rural and urban areas (Abebe, 2024; Borku *et al.*, 2024).

Access to health services in Ethiopia is limited by insufficient infrastructure and economic hardship (Tsega *et al.*, 2025). Consequently, about three-fourths of community members use traditional plant-based medicine for basic health care because herbal medicines are accessible and familiar (Shama *et al.*, 2021). Traditional home gardens, managed by families, contain diverse plant species, have complex structures, and serve multiple purposes. Using medicinal plants in home remedies for ailments is a key function of these gardens (Bajpai *et al.*, 2013).

Home gardens make substantial contributions to the economy, community, and ecosystem health, as well as to the maintenance of culture and indigenous knowledge. However, studies of home gardens in Ethiopia are scarce (Yinebeb *et al.*, 2022; Edo *et al.*, 2024). Even the studies focus on only a few areas of geographic representation and study elements. Such studies are not conducted around Shager City. The study of multipurpose plant species, a promising contribution of home garden, is not yet common and thus necessitated this study.

The study focuses on identifying multipurpose plants and their main feature in home gardens of Shager City. Identifying these plants enables efficient use of resources such as space, water, and human labor. Multipurpose plants offer several uses from a single plant. Information on their status and use helps policymakers and planners promote cultivation, food security, health, and ecological stability in urban environments.

Objectives of the study

The objective of this study is to analyse the floristic composition of home gardens, and identify multiple-use plants along with their features and multiple uses in home gardens of Shager City.

Materials and methods

Study Area: Shager City is a newly restructured city with 12 sub-cities and 36 districts. In terms of location, Shager City is located in the Oromia regional State, surrounding Addis Ababa (Finfinnee), the capital city of Ethiopia, in all directions. The city is among the fastest-growing in Ethiopia (Debele & Negussie, 2023) The City has an area of 160,892.8 hectares and a population of 1,657,228 (in 2022). The city's average annual temperature is 16.5 °C, and rainfall is estimated at 1,265 mm (Oromia Regional State Administrative Office report, 2024).

Sampling procedures: The study used a multistage sampling method. Six of the twelve sub-cities in Shager City were purposively selected to achieve diverse socioeconomic representation. From each sub-city, one district and, within each district, two *kebeles* were also purposively chosen. About 15 households were systematically selected from each kebele, for a total of approximately 180 households (Semu, 2018).

Methods of data collection and analysis: Plant feature data were collected from sampled plots, while information on household use of plants was gathered through structured interviews. Specimens were collected using plot demarcation and a comprehensive plant inventory. These specimens were submitted to the National Herbarium of Addis Ababa University for scientific name identification, utilizing the Flora of Ethiopia and Eritrea (Volumes 1–8) (Legesse *et al.*, 2016). A city-level a structured interview-based ranking, involving 10 selected members from diverse backgrounds, was conducted to rank the most frequently used multiple-use plant species. Data analysis was performed using SPSS version 25.

Results

Floristic composition of home garden in Shager City

The survey result revealed that the home garden of Shager City comprises 215 plant species within 169 genera and 75 families. Among these, multiple-use plants account for 66 species (30.69% of recorded species). Ornamental plants comprised 94 species (43.72%). Food plants comprised 31 species (14.42%), whereas medicinal plants accounted for 17 (7.91%). Shade, cleaning, culturally, and animal fodder plants collectively represent approximately 7 species (3.26%).

Features of multiple use plants in home gardens of Shager City

Among the identified 66 multiple-use plant Species, trees accounted for the largest growth form, comprising 39.34%, followed by herbs at 34.85%. Shrubs account for 18.18%. About 7.63% were succulents and climbers. Regarding their geographic origin, 65.15% are exotic, 28.79% are native, and about 6.06% are endemic to Ethiopia (Table 1). Regarding their life cycle, about 86.36% are perennial, and the remaining 13.64% are annual

Main uses of multipurpose plants in home gardens of Shager City

Multiple-use plant species are plants identified to provide more than one use category simultaneously. The plants found to provide Food, Ornamental, Medicine, Spices, Fodder, Fuel, Construction, Cosmetics, Shade, Cleaning, and Cultural uses (Table 1).

Table 1. List of multipurpose plants in home gardens of Shager City

Scientific name	Genus name	Family name	Local name	Growth form	Geographic Origin	Uses of the plants
<i>Acacia abyssinica</i>	Acacia	Fabaceae	Qoree waaccuu	Tree	Native	Sh,Fu
<i>Acacia melanoxylon</i> R.Br.	Acacia	Fabaceae	Muka qawwee	Tree	Exotic	Or,Sh,Fu
<i>Acacia negrii</i> Pic.-Serm.	Acacia	Fabaceae	Qoree adii	Tree	Endemic	Sh,Cu
<i>Allium cepa</i> L.	Allium	Alliaceae	Qullubbii diimaa	Herb	Exotic	Fo,Sp
<i>Allium sativum</i> .L	Allium	Alliaceae	Qullubbii Adii	Herb	Exotic	Fo,Me,S p,Cu,
<i>Aloe arborescens</i> Mill.	Aloe	Asphodelaceae	Argiisa	Succulent	Exotic	Or,Me
<i>Aloe gilbertii</i> T. Reynolds ex Sebsebe & Brandham	Aloe	Asphodelaceae	Argiisa	Succulent	Endemic	Or,Me,C S
<i>Aloe vera</i> (L.) Burm f.	Aloe	Asphodelaceae	Argiisa	Succulent	Exotic	Me,Or
<i>Artemisia absinthium</i> L.	Artemisia	Asteraceae	Arrittaa	Herb	Exotic	Cu, Me
<i>Arundo donax</i> L.	Arundo	Poaceae	Shanbaqqoo	Herb	Exotic	Fe,Or
<i>Asclepias fascicularis</i> Decne	Asclepias	Apocynaceae	Aannannoo	Herb	Exotic	Me, Cu
<i>Asparagus africanus</i> Lam.	Asparagus	Asparagaceae	Sariitii	Shrub	Native	Or,Me
<i>Azadirachta indica</i> A.Juss.	Azadirachta	Meliaceae		Tree	Exotic	Fd,Or,Sh
<i>Bersama abyssinica</i> Fresen.	Bersama	Meliaceae		Tree	Native	Sh,Me
<i>Buddleja polystachya</i> Fresen	Buddleja	Scrophulariaceae	Adaaddii	Tree	Native	Cu,Fu,Cl

<i>Calpurnia aurea</i> (Ait.) Benth	Calpurnia	Fabaceae	Ceekaa	Shrub	Native	Or,Me
<i>Capsicum annuum</i> L.	Capsicum	Solanaceae	Corqaa	Herb	Exotic	Fo,Sp,Me
<i>Capsicum chinense</i> Jacq.	Capsicum	Solanaceae	Corqaa	Herb	Exotic	Sp,Me
<i>Casuarina equisetifolia</i>	Casuarina	Casuarinaceae	Shawshawwee	Tree	Exotic	Fu,Or,
<i>Catha edulis</i> (Vahl.) Forssk. ex Endl.	Catha	Celastraceae	Jimaa	Shrub	Native	Cu,St,
<i>Citrus sinensis</i> (L.Osbeck)	Citrus	Rutaceae	Burtukaana	Tree	Exotic	Cu,Fo
<i>Citrus limon</i> (L.)	Citrus	Rutaceae	Loomii	Shrub	Exotic	Cu,Fo
<i>Coleus amboinicus</i> (Lour.) A.J.Paton	Coleus	Lamiaceae		Herb	Exotic	Or,Me
<i>Cordia africana</i> Lam.	Cardia	Boraginaceae.	waddeessa	Tree	Native	Me,Fu,cu
<i>Coriandrum sativum</i> L	Coriandrum	Apiaceae	Dinbilaala	Herb	Exotic	Sp,Me
<i>Croton macrostachyus</i> Hochst. ex Del.	croton	Euphorbiaceae	Bakkanniisa	Tree	Native	Me,Sh
<i>Cucurbita pepo</i> L	Cucurbita	Cucurbitaceae	Dubbaa	Herb	Exotic	Fo,Me
<i>Cupressus lusitanica</i> Mill.	Cupressus	Cupressaceae	Gaattiraa	Tree	Exotic	Or,Co,Sh, Fu
<i>Cymbopogon citratus</i> (L.)	Cymbopogon	Poaceae	Xajjisaara	Herb	Exotic	Or,Cu,Me
<i>Cyperus artenifolius</i> (L.)	Cyprus	Cyperaceae	Qeexamaa	Herb	Exotic	Cu,Or
<i>Dahlia pinnata</i>	Dahlia	Asteraceae	Abaaboo dinnichaa	Shrub	Exotic	Or,Fo
<i>Dracaena steudneri</i> Engl.	Dracaena	Asparagaceae	Itsephaxoos	Tree	Native	Or,Cu,Me
<i>Drimiopsis maculata</i> (Jacq.) Jessop	Drimiopsis	Asparagaceae		Herb	Exotic	Or,Me
<i>Ensete ventricosum</i> (Welw.) Cheesman	Ensete	Musaceae	Koobaa	Herb	Native	Or, Fo
<i>Erythrina abyssinica</i> Lam.	Erythrina	Fabaceae	Qonxir	Tree	Native	Sh,Me,Or
<i>Eucalyptus camaldulensis</i> Dehnh	Eucalyptus	Myrtaceae		Tree	Exotic	Fu, Co, Me
<i>Eucalyptus globules</i> Labill	Eucalyptus	Myrtaceae	Bargamoo Adii	Tree	Exotic	Fu,Me,Co
<i>Euphorbia abyssinica</i> J.F. Gmel.	Euphorbia	Euphorbiaceae	Adaammii	Succulent	Native	Fe,Me
<i>Euphorbia milii</i>	Euphorbia	Euphorbiaceae		Shrub	Exotic	Or,Me
<i>Grevillea robusta</i> A. Cunn. ex R. Br.	Grevillea	Proteaceae	Giraaviiliyaa	Tree	Exotic	Fu,Or,Co
<i>Hagenia abyssinica</i> Willd.	Hagenia	Rosaceae	Heexoo	Tree	Native	Or, Me, Sh, Sh,Or
<i>Jacaranda mimosifolia</i> D. Don	Jacaranda	Bignoniaceae		Tree	Exotic	Sh,Or
<i>Juniperus procera</i> Hochst.ex,Endl.	Juniperus	Cupressaceae	Gaattiraa	Tree	Native	Fu,Co
<i>Laggera tomentosa</i> Sch. Bip. ex Oliv. et Hiern	Laggera	Asteraceae	Kasee	Shrub	Endemic	Me,Cl,Cu
<i>Lepidium sativum</i> L.	Lepidium	Brassicaceae	Feexoo	Herb	Exotic	Me, Cu

<i>Leucaena leucocephala</i> (Lam.) de Wit	Leucaena	Fabaceae	Qoree diimaa	Tree	Exotic	Sh, Fd, Fu
<i>Leucas martinicensis</i> (Jacq.) R.Br.	Leucas	Lamiaceae	Ras kimir	Herb	Exotic	Me, Cu
<i>Linum usitatissimum</i> (Flax)	Linum	Linaceae	Talbaa	Herb	Exotic	Fo, Sp, Me
<i>Lippia adoensis</i> Hochst.	Lippia	Verbanaceae	Kusaayee	Shrub	Endemic	Sp, Me
<i>Ocimum basilicum</i> L.	Ocimum	Lamiaceae	Bassobilaa	Herb	Exotic	Me, Sp, Fo
<i>Olea capensis</i> subsp. hochstetteri	Olea	Oleaceae	Ejersa	Tree	Native	Me, Cu
<i>Olea europae</i> subsp. cuspidata	Olea	Oleaceae	Ejersa	Tree	Native	Fu, Sh
<i>Phoenix dactylifera</i> (L.)	Phoenix	Arecaceae	Teemirii	Tree	Exotic	Fo, Me
<i>Podocarpus falcatus</i> (Thunb.) Mirb.	Podocarpus	Podocarpaceae	Birbirsaa	Tree	Native	Sh, Or
<i>Populus nigra</i> L.	Populus	Salicaceae	Muka kibriittii	Tree	Exotic	Fu, Fe, Or
<i>Punica granatum</i> L.	Punica	Punicaceae	Rumman	Tree	Exotic	Fo, Me
<i>Rosa abyssinica</i>	Rosa	Rosaceae	Goraa	Shrub	Native	Or, Fe
<i>Rosa</i> spp.	Rosa	Rosaceae	Tsigereda	Shrub	Exotic	Or, Fe, Or, Me, Sp, Cs
<i>Rosmarinus officinalis</i> L.	Rosmarinus	Lamiaceae	Rozmariino	Herb	Exotic	Or, Me, Sp, Cs
<i>Rottboellia cochinchinensis</i> (Lour.) Clayton	Rottboellia	Poaceae	Qacaa	Herb	Exotic	Or, Fd
<i>Ruta chalepensis</i> L.	Ruta	Rutaceae	Xenaddaami	Herb	Exotic	Me, Sp, i
<i>Salix mucronata</i>	Salix	Salicaceae	Alaltuu	Shrub	Exotic	Cl, Or
<i>Sesbania sesban</i> (L.) Merr.	Sesbania	Fabaceae	Giraangiree	Tree	Exotic	Sh, Fo
<i>Solanum lycopersicum</i> L.	Solanum	Solanaceae	Timaatima	Herb	Exotic	Sp, Fo
<i>Tanacetum parthenium</i> (L.) Sch.Bip	Tanacetum	Asteraceae		Herb	Exotic	Or, Me
<i>Vernonia amygdalina</i> Del.	vernonia	Asteraceae	Eebicha	Shrub	Native	Cu, Me, Fd, Fu
<i>Vitis vinifera</i> L.	Vitis	Vitaceae	Waynii	Climber	Exotic	Fo, Cu

Note: Note: Fo-Food, Or-ornamental, Me-medicinal, Sp-spices, Fd-fodder, Cs-cosmetics, Fu-

fuel, Co-construction, Sh-shade, Cl-cleaning and Cu-cultural

Most frequent species of multiple plants in home gardens of Shager City

Ensete ventricosum, *Ruta chalepensis*, *Rosmarinus officinalis*, and *Vernonia amygdalina* were the most frequently recorded plant species in the home gardens of Shager City (Fig. 1).

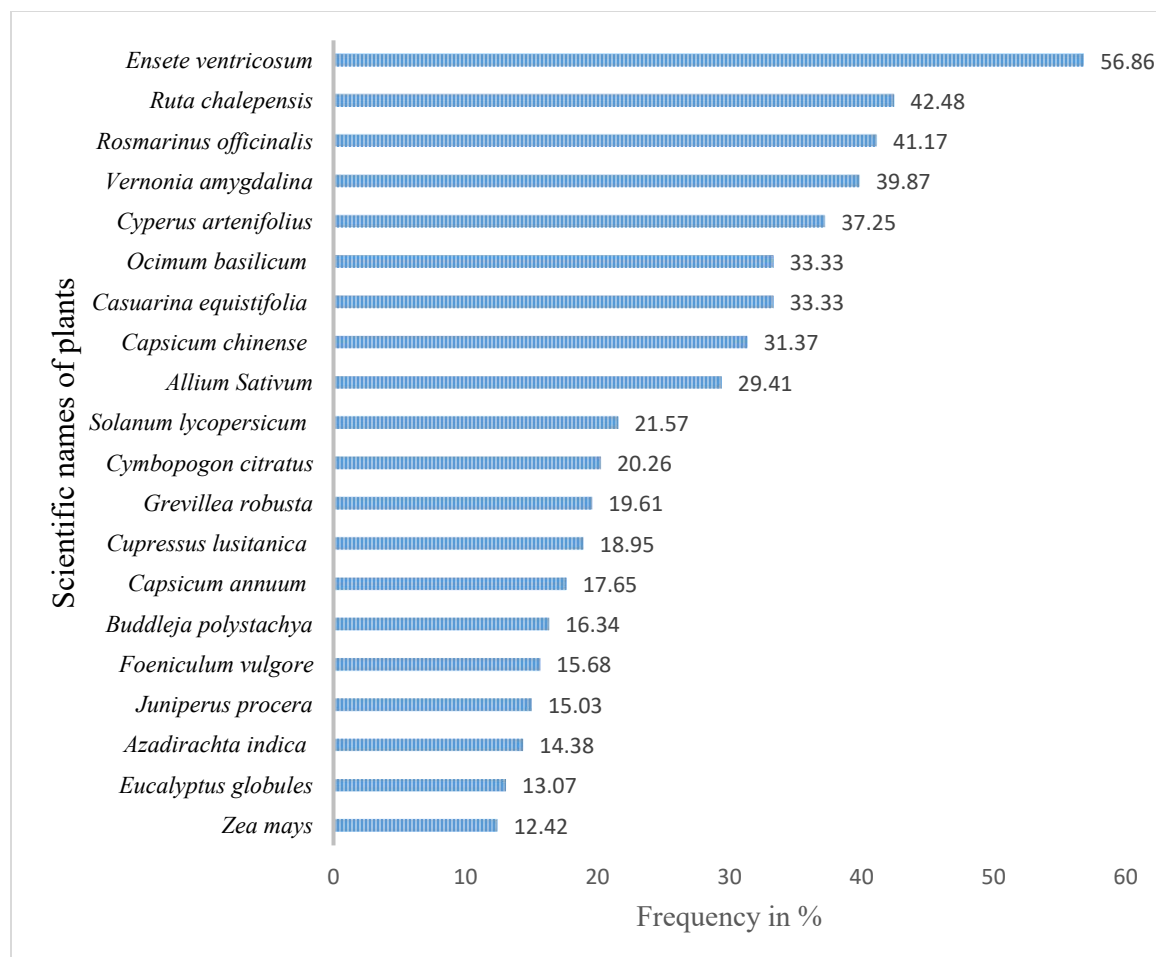


Fig 1. Frequency of most common multiple-use plants in home gardens of Shager City

Preference ranking of most frequent multipurpose plants

According to the preference ranking from the questionnaire-based preference ranking, plants such as *Vernonia amygdalina*, *Buddleja polystachya*, and *Eucalyptus globulus* are among the most preferred plants (Table 2).

Table 2. Preference ranking of most frequent multiple use plants in home gardens of Shager City

Scientific name	Uses and score											Total Score	Rank
	Fo	Or	Me	Sp	Fd	Cs	Fu	Co	Sh	Cl	Cu		
<i>Vernonia amygdalina</i>	-	57	77	-	91	-	56	23	68	75	69	516	1
<i>Buddleja polystachya</i>	-	71	36	-	73	-	57	-	61	75	72	445	2
<i>Eucalyptus globules</i>	-	61	88	-	-	-	91	98	60	-	40	438	3
<i>Allium sativum</i>	39	31	97	93	36	45	-	-	-	15	66	422	4
<i>Ensete ventricosum</i>	30	90	-	-	85	-	10	-	57	51	74	397	5
<i>Rosmarinus officinalis</i>	44	30	63	89	17	67	-	-	-	-	49	359	6
<i>Ocimum basilicum</i>	37	26	85	96	32	-	-	-	-	-	81	357	7

<i>Ruta chalepensis</i>	-	40	85	95	-	-	-	-	-	53	75	348	8
<i>Capsicum chinense</i>	78	66	82	48	-	-	-	-	-	-	52	326	9
<i>Casuarina equisetifolia</i>	-	96	-	-	-	-	73	64	72	-	-	305	10
<i>Capsicum annum</i>	80	26	86	52	-	-	-	-	-	-	60	304	11
<i>Juniperus procera</i>	-	81	-	-	-	-	67	87	66	-	-	301	12
<i>Grevillea robusta</i>	-	85	-	-	-	-	91	56	67	-	-	299	13\
<i>Cymbopogon citratus</i>	-	73	48	-	36	35	-	-	-	-	94	286	14
<i>Cupressus lusitanica</i>	-	92	-	-	-	-	67	61	47	-	-	267	15
<i>Foeniculum vulgore</i>	-	43	92	38	-	-	-	-	-	-	90	263	16
<i>Cyperus artemifolius</i>	-	94	-	-	61	-	-	-	-	-	90	245	17
<i>Solanum lycopersicum</i>	94	37	-	40	25	-	-	-	-	-	-	196	18

Note: Fo-Food, Or-ornamental, Me-medicinal, Sp-spices, Fd-fodder, Cs-cosmetics, Fu-fuel, Co-

construction, Sh-shade, Cl-cleaning and Cu-cultural.

Source: Own anlysis,2025

Discussion

Home gardens are agricultural systems with diverse plant species, unlike monocultures (Jilo *et al.*, 2021). For example, home gardens could encompass 258 species, such as those in Hawassa City (Regassa, 2016), 238 species in Gozamin rural district (Yinebeb *et al.*, 2022), and 78 species in Kombolcha town, Ethiopia (Semu, 2018). The floristic composition and proportions of plant use types in these gardens vary, depending on the community's use preferences and available biophysical input resources. In Shager City, among 215 plants, about 30.69% were multipurpose, second only to decorative plants. Notably, multipurpose plants in small home gardens provide communities with year-round food sources, such as fruits, vegetables, spices, medicinal plants, and cultural plants. As a result, these plants supply families with essential nutrients to support health and provide herbal medicines to treat common ailments, particularly for lower-income community members. They also reduce environmental pollution and urban heat Iceland. Hence, home gardens, particularly those encompassing multiple-use plants, are integrated with multiple service-providing centers for the community.

The availability of such basic, complementary livelihood service-providing plants with multiple-use features around residential areas saves time and energy that would otherwise be spent searching for different livelihood essentials. In addition, the proximity of the access reduces contamination and pollution during transportation from the production site to the point of consumption. Furthermore, cultivating such plants in home gardens helps conserve biodiversity and indigenous knowledge. It is an enabling opportunity for gardeners to use natural resources efficiently and sustainably. As a result, it ensures human well-being and ecological stability.

Trees were found to be the predominant growth form among the multipurpose plant species identified from the home gardens of Shager City, accounting for 39.34%. (Table 1). This could be attributed to the fact that trees such as *Acacia melanoxylon*, with wider canopies, can serve an ornamental role and provide shade for humans, animals, and lower plants. The plant is also used as a source of fuel due to its rapid growth and ability to produce large amounts of biomass in a very short time. The plant's shallow root system allows it to grow in harmony with other plants. Similarly, native trees like *Hagenia abyssinica* are planted for their ornamental, medicinal, and Shade values. Gardeners grow lower-growing plants such as shrubs, herbs, and succulents based on available space and family members' preferences, using their portability as an opportunity.

A large percentage (65.15%) of the multipurpose plants are found to be exotic in origin, suggesting that home gardens serve as a trial ground for the domestication of useful exotic plants. The presence of endemic plants such as *Lippia adoensis*, *Aloe gilbertii*, *Acacia negrii*, and *Laggera tomentosa* in home gardens reflects the potential of home gardens for well-adapted, culturally recognized, and ecologically stable biodiversity conservation. The predominant perennial life cycle (86.36%) of multipurpose plants in Shager City's home gardens enables year-round harvests. These plants reduce maintenance labor and input. Since they are planted once, they serve for many years. This approach also conserves natural resources by maintaining a stable ecosystem and enables sustainable harvesting.

Multi-purpose plants provide multiple benefits at once. About eleven use categories have been identified in the survey of home gardens in Shager City (Table 1). The use categories identified are food, ornamental, medicine, spices, fodder, fuel, construction, cosmetics, shade, cleaning, and cultural uses. *Allium sativum* serves as food, a medicinal, a spice, and a cultural plant among the community. Similarly, gardeners plant *Azadirachta indica* for its fodder, ornamental, and shade roles, and *Vernonia amygdalina* for its cultural, medicinal, fodder, and fuel contributions.

This finding aligns with the Gozamin District in Northwest Ethiopia, which shows that home garden compositions serve multiple functions. The finding revealed that *Cordia africana* provides fodder, food, medicine, construction material, and social services, and similarly *Vernonia amygdalina* is planted for its fodder, medicine, social role, construction material, and fuel (Yinebeb *et al.*, 2022). The finding implies the productivity potential of home gardens using locally available resources and family labour, in an integrated means with economic, social, and environmental sustainability.

According to the survey results, multipurpose plant species are not evenly distributed across the assessed home gardens. Plant species such as *Ensete ventricosum*, *Ruta chalepensis*, and *Rosmarinus officinalis* were recorded in 56.86%, 42.48%, and 41.17% of the assessed home gardens, respectively. The prevalence of some plants over others could be attributed to their strong attachment to the community's livelihood and their ability to survive in a wide range of environmental conditions. Previous findings indicate that certain plants, such as *Ensete ventricosum*, are highly valued because they can provide up to 25 different purposes for the community and the environment. This versatility likely contributes to the widespread presence of these plants in home gardens throughout various regions of Ethiopia (Kebebew, 2018; Legesse, 2018; Fanjana, 2020).

According to the results of focus group discussions, which ranked multiple-use plants in Shager City home gardens using 11 use categories as criteria, *Vernonia amygdalina* ranked highest for ornamentation, medicine, fodder, fuel, construction, shade, cleaning, and cultural significance. *Buddleja polystachya* ranked second in ornamental, medicine, fodder, fuel, shade, cleaning, and cultural uses. *Eucalyptus globules* ranked third in terms of medicinal, fuel, construction, cultural, and ornamental significance. These ranking results suggest that communities' preferences for tree growth forms extend even to small urban home gardens. Based on this, identifying preferred multipurpose plants could serve as an effective strategy for prioritizing biodiversity conservation and sustaining diverse products from resilient home gardens to support human and ecological well-being.

Conclusion and Recommendations

Home gardens are traditional, knowledge-based, plant-rich agricultural systems typically managed by family members and characterized by the cultivation of multifunctional plants on small plots near residences. In Shager City, these gardens contain approximately 66 multiple-use plant species spanning 11 use categories, thereby addressing a wide range of community needs. Cultivating multipurpose plants is an efficient strategy for maximizing yields and conserving natural resources in these systems. The presence of such plants enhances household resilience by improving food security, generating income, increasing healthcare access, and supporting ecological sustainability and stability. The prevalence of specific plant species is shaped by community preferences and their adaptability to local environmental conditions. Therefore, prioritizing the cultivation of multipurpose plants allows policymakers, environmental advocates, biodiversity conservationists, and urban agriculturalists to support gardeners in achieving higher yields while advancing both ecological and human well-being.

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