Home gardens for nutritional and primary health security of rural poor of South Kerala

Ijinu TP, Anish N, Shiju H, George V & Pushpangadan* P

Amity Institute for Herbal & Biotech Products Development, Peroorkada PO, Thiruvananthapuram, Kerala, India-695 005
Email: palpuprakulam@yahoo.co.in

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The present study comprises of field trips in different rural localities of Kollam and Thiruvananthapuram districts of Kerala. Information regarding the occurrence of plant species, their local names, parts used, formulations and vegetable preparations through interviews and discussions held with elderly persons of rural communities were recorded. The plant specimens were identified and herbarium sheets prepared for all the species. From the information documented and also from literature data, 9 vegetable plants having high nutrient value were selected. 16 medicinal plants which are used to prepare primary health care remedies, suitable for cultivation and raising in home gardens were also selected. Quality seeds/planting materials were collected from Kerala Agricultural University (KAU) and supplied to selected rural families of each Gramapanchayat for raising home gardens. Awareness programmes on healthy living, balanced diet, hygiene, maintaining clean environment, rain water harvesting and conservation of biodiversity in association with Grama panchayat officials and selected Self Help Groups were conducted in these districts.

Keywords: Traditional knowledge, Home garden, Nutritional and health security, Kollam, Thiruvananthapuram

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Food insecurity, malnutrition and healthcare are the major problems faced by most of the developing countries in the world. The concept of food security should be broadened to make it holistic so as to mean “every individual has the physical, economic and environmental access to a balanced diet that includes the necessary macro and micro-nutrients and safe drinking water, sanitation, environmental hygiene, primary health care and education so as to lead a healthy and productive life”1. Home gardens play an important role in fulfilling dietary and nutritional needs. Home gardening can contribute to household food security by providing households with direct access to food that can be harvested, prepared and consumed by household members, often on a daily basis2. These gardens are not only important sources of food, fodder, fuel, medicines, spices and household income in many countries around the world, but are also an important means for in situ conservation of a wide range of plant genetic resources. The medicinal plants and vegetable plants are an important source of income. Their sale and barter contribute to the economic development of rural communities and support modern industrial development.

India ranks 94th in the Global Hunger Index of 119 countries. The National Family Health Suevey 2005-06 (NFHS - 03), highlights some very disturbing truths about the prevailing situation in the country: 56 % of the women are anaemic; 30 % of new born babies are of low birth weight (LBW); and 47 % of the children are under weight. Iodine deficiency disorders, vitamin A and vitamine B deficiency are fairly rampant3.

According to the World Health Organization (WHO) approximately 80% of world’s population relies on traditional medicine to fulfill their daily health needs4-6. In India, it is reported that 2500 plant species are used by traditional healers7. Among the rural poor, home gardens play a strategic role to improve food production and household nutrition. Traditional home gardens continue representing a key micronutrient source for rural communities and, thus

*Corresponding author
offer exceptional opportunities for food-based approaches to prevent micro nutrient malnutrition\textsuperscript{8,9}. Herbs and traditional medicines are being extensively used for healthcare in almost all the countries. Even in the industrialized society, rising cost of prescription drugs and ensuing side effects of treatment, make it highly attractive to use the traditional medicine particularly for minor ailments. Traditional vegetables are a common household food in most of the Keralite families living in rural areas. The majority of the local people cannot always produce and eat exotic vegetables due to unavailability of seeds and/or high production costs associated with exotic vegetables. Therefore, they depend on traditional vegetables as a regular side dish or sauce accompanying the staple foods. The staple foods provide calories needed for the body energy but are very low in other nutrients, while traditional vegetables have high nutritive value. Traditional vegetables and medicinal plants are often adapted to low chemical input agriculture, they have the added benefit of being free from chemicals and pesticides.

A household is food secure if it can reliably gain access to food in sufficient quantity and quality for all household members to enjoy a healthy and active life\textsuperscript{10}. Nutrition security is as concerned with the utilization of the food obtained by a household as it is with access to this food\textsuperscript{11}. Women were considered key to the development of the home garden. In many societies women are mainly responsible for food and health care within the family. They preserve knowledge about cultivation practices that are suited to the local environment, about local species and how they are prepared for use in traditional dishes or for other purposes.

**Objectives**

In this study, the vegetables and medicinal plants examined are termed ‘traditional’. By traditional we mean indigenous or exotic species which, due to long use, have become part of the culture of a community. The main objectives are:

1. Identification and documentation of traditional vegetables and traditional medicinal plants in South Kerala and implementation of home gardens in 40 rural villages of 2 districts namely Kollam and Thiruvananthapuram.
2. Knowledge empowerment of rural poor with special focus on women/house wives about the importance of raising home gardens for nutritional supplements and primary healthcare.
3. To promote organic farming of vegetables (including green vegetables) and fruits.
4. To promote marketing of surplus vegetables and medicinal plants after appropriate value addition.

**Methodology**

Kollam and Thiruvananthapuram are the two nearby southern districts of Kerala state. Thiruvananthapuram is located at Geographical coordinates 8.5°N 76.9°E on the West coast, near the southern tip of mainland India. The district stretches along the Arabian sea on the West, Kollam district lies on the North with Tirunelveli and Kanyakumari districts of Tamil Nadu on the East and South, respectively. The Geographical coordinates for Kollam are 9.28° N 76.28° E. The district is bound on the North by Alappuzha district, North east by the Pathanamthitta district, East by Tirunelveli district of Tamil Nadu, South by Thiruvananthapuram district and on the West by the Arabian sea (Fig.1).

The methodology for this study included both quantitative and qualitative components based on household surveys and focus group meetings. Collection of baseline data on diet and nutritional status, home gardening, consumption of vegetables and fruits both cultivated or seasonally collected from wild as well as the primary health status were surveyed using questionnaires and open interviews accompanied by rural family members and also from the earlier recorded documents. The information collected from the field surveys was documented. Scientific names of traditional medicinal and vegetable plants were identified and compared with authentic publications. From these data we have selected the best vegetable and medicinal plants...
which are more suitable for cultivation and raising in home gardens.

Quality seeds/planting materials were supplied. Conducted awareness programmes on healthy living, balanced diet, hygiene, maintaining clean environment and rain water harvesting and conservation of biodiversity and selection of Self Help Groups (SHG).

**Results and discussion**

The data collected by using data sheets and questionnaires from the field surveys were analysed, digitized and arranged Panchayat wise. About 1863 information on 258 species of medicinal/food plants belongings to 68 families were collected. The photographs and consents of informants were also taken for future references. The plants specimens were identified with the help of local flora and herbarium sheets prepared for all the species, authenticated and deposited in AIHBPD herbarium. From these documentation study and literature data, we have selected 9 vegetable plants (Amaranthus viridis, Abelmoschus esculentus, Phaseolus vulgaris, Capsicum annum, Cucurbita maxima, Benincasa hispida, Cucumis sativus, Momordica charantia, Solanum melongana) having high nutrient value and 16 medicinal plants (Andrographis paniculata, Asparagus racemosus, Justicia adhatoda, Coleus amboinicus, Vitex negundo, Aloe vera, Saraca asoca, Justicia gendarussa, Piper longum, Curcuma aromatica, Kaempferia galanga, Alpinia calcarata, Eupatorium triplinerve, Azadirachta indica, Murraya koenigii, Zingiber officinale) which are used to prepare primary health care remedies. Among these plants some have both medicinal and nutritional value. The selected vegetable plants with their scientific names, family name, common names, parts used and their nutritional value are enumerated in Table 1.

Quality seeds/planting materials were collected from Kerala Agricultural University (KAU) and were supplied to selected rural families of each Gramapanchayats and helped them for raising home gardens. Awareness programmes, training and workshops were organized in each Gramapanchayats with the help of subject experts in association with Gramapanchayat officials and Self Help Groups. The training programme covered various aspects such as identification of the plants, cultivation and harvesting, organic farming, methods of administration, healthy living, balanced diet, maintaining clean environment, hygiene, rain water harvesting and conservation of biodiversity. As a part of this home garden campaign, a hand book entitled “Users guide to plants for nutritional and primary health security” was published. This guide gives detailed information on vegetable preparations and plant based healthcare remedies and their dosage, administration, etc.

From the documentation study we have noticed that vegetables are usually prepared in the form of curry and ‘thoran’ (dry vegetable preparation) and in the case of medicinal plants, there are several methods by which the people prepare the medicines. Sometimes the different part of the plant (leaves, roots, seeds, stem, bark, flower) and sometimes the whole plant is being crushed and the expressed juice is used as medicine and sometimes decoction, powder or seed oil is used as medicine. It is also found that a single plant may be used for curing more than one ailment, eg; Andrographis paniculata for fever, diabetes, Asparagus racemosus for lactation, postnatal care, urinary problems, leucorrhea, stomach ache/dysentery, Justicia adhatoda for fever, cough, rheumatism, blood pressure, earache, Coleus amboinicus for asthma, fever, skin disease, post-natal care, stomachache, body pain, Piper longum for anaemia, fever, aphrodisiac, etc. The medicinal plants used for the treatment of various ailments/disorders have been enumerated below with their scientific and local names, family name, habit, place & date of collection, herbarium number in parenthesis, plant part used, quantity and mode of application, informant etc. Photographs of Some medicinal / food plants are included.

*Aloe vera* L., Liliaceae, Indian aloe, Barbados aloe, Burn plant (Eng.), gheekumari, guar patha, ghikanvar (H.), kumari, grithakumari, grithakanya (San.) kattarvazha (Mal.), chirukuttali, sothu kathazai, angani (Tam.), kalabanda, chinna kalabanda (Tel.).

**Asthma:** Fresh leaves of *A. vera*, *Ocimum tenuiflorum*, *Justicia adhatoda* and seeds of *Coriandrum sativum*, *Cuminum cyminum* and stem bark of *Moringa oleifera* are prepared in the form of decoction. 10 ml of the decoction is administered orally for 7 days.

Informant: K.Vasudevan, Kulathupuzha Grama Panchayat, Kollam.

**Skin disease:** Expressed juice is taken from slightly heated leaves. ½ Ounce of juice is taken twice daily for 7 days.

Informant: Chandrahasan, Kulasekharpuram Grama Panchayat, Kollam.
Table 1—Selected vegetable plants for home garden

<table>
<thead>
<tr>
<th>No.</th>
<th>Vegetable plants</th>
<th>Nutritional value</th>
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<tbody>
<tr>
<td>1.</td>
<td><em>Amaranthus viridis</em> L. (<em>Amaranthaceae</em>) Green amaranth, Pigweed, Slender amaranth (Eng.), <em>jangali chaulai</em>, <em>chaauriya</em>, <em>choroiya</em> (H.), <em>tanduliya</em> (San.), <em>cheera</em>, <em>kuppacheera</em>, <em>vellakeera</em> (Mal.), <em>vakucakkirai</em>, <em>kuppai-k-kirai</em> (Tam.), <em>chilaka-thotakoora</em> (Tel.)</td>
<td>Carbohydrates, fats, proteins, vitamin A, vitamin B1 (thiamine), vitamin B2 (riboflavin), vitamin B3 (niacin), vitamin B5 (pantothenic acid), vitamin B6 (pyridoxine), vitamin B9 (folate) vitamin C, potassium, phosphorus, magnesium, calcium, iron, zinc, manganese, sodium, copper, selenium, etc.</td>
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<td>2.</td>
<td><em>Abelmoschus esculentus</em> (L.) Moench. (<em>Malvaceae</em>) Ladies Finger, Okra (Eng.), <em>bandakai</em>, <em>bhidri</em> (H.), <em>tindisa</em> (San.), <em>venda</em>, <em>ventakkaya</em> (Mal.), <em>vendaikkaay</em> (Tam.), <em>bendakaya</em>, <em>Bendi</em> (Tel.)</td>
<td>Carbohydrates (dietary fiber), fats, proteins, vitamin A, vitamin B1 (thiamine), vitamin B2 (riboflavin), vitamin B3 (niacin), vitamin B5 (pantothenic acid), vitamin B6 (pyridoxine), vitamin B9 (folate), vitamin C, vitamin E, vitamin K, potassium, phosphorus, magnesium, calcium, iron, sodium, zinc, copper, manganese, selenium, etc.</td>
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<td>3.</td>
<td><em>Phaseolus vulgaris</em> L. (<em>Fabaceae</em>) Common Bean, Kidney Bean (Eng.), <em>biins</em>, <em>rajam</em> (H.), <em>payar</em> (Mal.), <em>chikku dukaaya</em> (Tel.)</td>
<td>Carbohydrates (sugar, dietary fiber), fats, proteins, vitamin A, vitamin B1 (thiamine), vitamin B2 (riboflavin), vitamin B3 (niacin), vitamin B5 (pantothenic acid), vitamin B6 (pyridoxine), vitamin B9 (folate), vitamin C, Vitamin E, Vitamin K, potassium, phosphorus, magnesium, calcium, iron, sodium, zinc, copper, manganese, selenium, etc.</td>
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<td>4.</td>
<td><em>Capsicum annuum</em> L. (<em>Solanaceae</em>) Chilli Pepper (Eng.), <em>deghi mirch</em> (H.), <em>brihatkatuveera</em>, <em>raktamaricha</em> (San.), <em>mulaku</em> (Mal.), <em>kodimilagai</em> (Tam.), <em>pacchi</em>, <em>mirapakaya</em> (Tel.)</td>
<td>Carbohydrates (starch, dietary fiber), fats, proteins, vitamin A, vitamin B1 (thiamine), vitamin B2 (riboflavin), vitamin B3 (niacin), vitamin B5 (pantothenic acid), vitamin B6 (pyridoxine), vitamin B9 (folate), vitamin C, Vitamin E, Vitamin K, potassium, phosphorus, magnesium, calcium, iron, sodium, zinc, copper, manganese, selenium, etc.</td>
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<td>5.</td>
<td><em>Cucurbita maxima</em> Duch. Ex Lam. (<em>Cucurbitaceae</em>) Winter Squash, Pumpkin (Eng.), <em>vilayati kaddu</em> (H.), <em>gudayogaphala</em>, <em>dadhiphala</em> (San.), <em>mathan</em> (Mal.), <em>posani</em> (Tam.), <em>gummadi</em>, <em>gummadi kayi</em> (Tel.)</td>
<td>Carbohydrates (sugar, dietary fiber), fats, proteins, vitamin A, vitamin B1 (thiamine), vitamin B2 (riboflavin), vitamin B3 (niacin), vitamin B5 (pantothenic acid), vitamin B6 (pyridoxine), vitamin B9 (folate), vitamin C, Vitamin E, Vitamin K, potassium, phosphorus, magnesium, calcium, iron, sodium, zinc, copper, manganese, selenium, etc.</td>
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<td>6.</td>
<td><em>Benincasa hispida</em> (Thunb.) Cogn. (<em>Cucurbitaceae</em>) Winter Melon (<em>Eng.</em>), <em>petha</em>, <em>pethaa</em> (H.), <em>brihatphala</em>, <em>ghrnavasa</em> (San.), <em>Kumbalanga</em> (Mal.), <em>Poosanikai</em> (Tam.), <em>Boodida</em>, <em>Gummadi Kaya</em> (Tel.)</td>
<td>Carbohydrates (starch, dietary fiber), fats, proteins, vitamin A, vitamin B1 (thiamine), vitamin B2 (riboflavin), vitamin B3 (niacin), vitamin B5 (pantothenic acid), vitamin B6 (pyridoxine), vitamin B9 (folate), vitamin C, Vitamin E, Vitamin K, potassium, phosphorus, magnesium, calcium, iron, sodium, zinc, copper, manganese, selenium, etc.</td>
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<td>7.</td>
<td><em>Cucumis sativus</em> L. (<em>Cucurbitaceae</em>) Cucumber (Eng.), <em>Khira</em> (H.), <em>bahuphala</em>, <em>kandalu</em>, <em>kantakilata</em> (San.), <em>Vellari</em> (Mal.), <em>Kakkirikai</em>, <em>pippinkay</em>, <em>vellarikkay</em> (Tam.), <em>Keera</em>, <em>dosakaya</em> (Tel.)</td>
<td>Carbohydrates (sugar, dietary fiber), fats, proteins, vitamin A, vitamin B1 (thiamine), vitamin B2 (riboflavin), vitamin B3 (niacin), vitamin B5 (pantothenic acid), vitamin B6 (pyridoxine), vitamin B9 (folate), C, vitamin E, Vitamin K, potassium, phosphorus, magnesium, calcium, iron, sodium, zinc, copper, manganese, selenium, etc.</td>
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Table 1—Selected vegetable plants for home garden—Contd

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<td>8.</td>
<td><em>Momordica charantia</em> L. (Cucurbitaceae) Bitter gourd, Balsam Pear (Eng.), <em>karela, ita Karela</em> (H.), <em>karavellam</em> (San.), <em>pavakka</em> (Mal.), <em>pavakkai</em> (Tam.), <em>kakara kaya</em> (Tel.), Part Used: Fruit</td>
<td>Carbohydrates (sugar, dietary fiber), fats (saturated, mono unsaturated and poly unsaturated), proteins, vitamin A, vitamin B1 (thiamin), vitamin B2 (riboflavin), vitamin B3 (niacin), vitamin B6 (pyridoxine), vitamin B9 (folate), vitamin B12 (cobalamin), vitamin C, vitamin E, vitamin K, potassium, phosphorus, magnesium, calcium, iron, sodium, zinc, copper, manganese, selenium, etc.</td>
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<td>9.</td>
<td><em>Solanum melongena</em> L. (Solanaceae) Brinjal, Egg Plant (Eng.), <em>baingan</em> (H.), <em>brhati</em> (San.), <em>vazhuthina</em> (Mal.), <em>kathirikai, cakarupakam, catilaki</em> (Tam.), <em>Vankaya, verri vanga</em> (Tel.), Part Used: Fruit</td>
<td>Carbohydrates (sugar, dietary fiber), fats, proteins, vitamin A, vitamin B1 (thiamin), vitamin B2 (riboflavin), vitamin B3 (niacin), vitamin B5 (pantothenic acid), vitamin B6 (pyridoxine), vitamin B9 (folate), vitamin C, Vitamin E, Vitamin K, potassium, phosphorus, magnesium, calcium, iron, sodium, zinc, copper, manganese, selenium, etc. (USDA, 2009)</td>
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Hair growth: Fresh leaves of *A. vera, Lawsonia inermis, Ocimum tenuiflorum, Vernonioa cinerea, Eclipta prostrata* are boiled in coconut oil (*Cocos nucifera*). This medicated oil is applied externally over the scalp before daily bath.

Informant: Padminiamma T, Vilappil Grama Panchayat, Thiruvananthapuram.

Rheumatism: Fresh leaves of *A. vera* and *Justicia adhatoda* are prepared in the form of fine paste. This paste is mixed well and applied externally over the body.

Informant: Sreeraman K, Paravur Grama Panchayat, Kollam.

Chest pain: Expressed juice of fresh leaves is mixed with egg white and administered orally.


*Alpinia calcarata* Rosc., Zingiberaceae, Cardamon ginger, Indian ginger, Snap ginger (Eng.), *kulanjan* (H.), *rasna* (San.), *chittaratha, aratha* (Mal.). Post-natal care

1) Fresh plant parts (equal quantity) of *A. calcarata* (rhizome), *Murraya koenigii* (leaves), *Zingiber officinale* (rhizome), *Moringa oleifera* (leaves), *Erythrina variegata* (leaves) and *Centella asiatica* (whole plant) are prepared in the form of fine paste. 2 gm of the paste in one glass of water administered orally for a week once daily.

Informant: P.K.Gopalakrishna Pillai, Kulasekharapuram Grama Panchayat, Kollam.

2) Rhizome of *A. calcarata*, leaves of *Leucas aspera*, stem bark of *Erythrina variegata*, rhizome of *Zingiber officinale*, bulb of *Allium sativum, Allium cepa*, tender leaves of *Cocos nucifera* and seeds of *Cuminum cyminum, Elettaria cardamomum, Trigonella foenum-graecum*, are boiled with sufficient quantity of jaggery till it become a semi solid form (*Lehya*). This *lehya* is taken twice daily for a week.

Informant: Ponnappan, Kulasekharapuram Grama Panchayat, Kollam.

Stomach ache: Fresh plant parts of *A. calcarata* (rhizome), *Allium sativum* (bulb), *Zingiber officinale* (rhizome), *Moringa oleifera* (stem bark) and *Piper nigrum* (seeds) are partially ground and boiled with water. 10 ml of this decoction is taken for 3 days twice daily.

Informant: Ponnappan, Kulasekharapuram Grama Panchayat, Kollam.

*Andrographis paniculata* (Burm. f.) Wall. ex Nees., Acanthaceae, Creat, kariyat (Eng.), *kalpanath, kalmegh, kirayat* (H.), *bhunimbah, kalamegha, kirata, kiratatikath, mahatikta, yavatikta* (San.), *kriyathu, nilavepu* (Mal.), *nila-vembu, shiratkuch-chi* (Tam.), *nelavemu, karivaemu, nelavaemu, velavemu* (Tel.). Fever

1) Fresh leaves of *A. paniculata* along with *Justicia adhatoda, Ocimum tenuiflorum, O. americanum* and seeds of *Cuminum cyminum* are prepared in the form of decoction. Two tea spoons of decoction is taken twice daily for three days.

2) Fresh leaves of A. paniculata, Justicia adhatoda, Azadirachta indica, Aegle marmelos are sliced and boiled in water till it becomes ¼th of its volume. To this one teaspoon full lemon juice (Citrus limon) is added. Ten ml of this preparation is taken thrice daily for 3-4 days.

Informant: Raveendran Nair V, Vilappil Grama Panchayat, Thiruvananthapuram.

Diabetes: Paste prepared from fresh tender aerial tender parts of A. paniculata is mixed with cow’s milk and taken early in the morning in empty stomach.

Informant: Thankamma, Kunnathur Grama Panchayat, Thiruvananthapuram.

Jaundice: Whole plant is ground and the paste is taken in sufficient quantity of water.

Informant: Raveendran Nair V, Vilappil Grama Panchayat, Thiruvananthapuram.

Artocarpus hirsutus Lam., Moraceae, Aini, ainanmaram, Wild jack (Eng.), vadahar (H.), lakucah, panasah (San.), ayani, anjili, ayini plavu (Mal.), aiyinipila, anjili (Tam.), adavi panasa (Tel.).

Skin diseases: Fresh seeds are boiled in water and kept in a container for a day. The oil appearing on the top is collected. Water content of the oil is removed by repeated boiling. This oil is applied externally on the affected parts.

Informant: Sarojini J, Vilappil Grama Panchayat, Thiruvananthapuram.

Asparagus racemosus Willd., Liliaceae, Indian asparagus, Sataver white, Sataver yellow, Wild asparagus (Eng.), sahansarmuli, sahanspal, satavar, satawari, satmuli, sootmooli (H.), challagadda, hiranyasringi, satavari, shataavari, shatavari (San.), chatavali, satavali, satavari, sataveri (Mal.), catavari, kadamoolam, kilavari, sadavari, sadha valli, satthaavari, shadavaree, thanni vuttaan kali, tuvippurtu (Tam.).

Lactation

1) Fresh tuber of A. racemosus, rhizome of Maranta arundinacea and fruit of Musa paradisiaca are dried, powdered and boiled in melted jaggery till it becomes a semi solid ‘lehya’. Take this lehya for 7 days, twice daily.

Informant: Janamma, Paravur Grama Panchayat, Kollam.

2) Fresh tuber is ground and mixed in one glass of cow’s milk and taken twice daily.

Informant: Janamma, Paravur Grama Panchayat, Kollam.

Post-natal care: Expressed juice of A. racemosus (tuber) along with Strobilanthes ciliatus (root), Curculigo orchoides (rhizome), Elephantopus scaber (root), Muringa oleifera (stem bark) and Eclipta prostrata (whole plant) are boiled with melted jaggery and prepared in the form of ‘lehya’. This ‘lehya’ is taken twice daily for a week.

Informant: K.Vasudevan, Kulathupuzha Grama Panchayat, Kollam.

Urinary problems: Fresh cleaned tuber is partially ground and boiled in sufficient quantity of cow’s milk and taken at bed time.

Informant: Thankappan Pillai, Paravur Grama Panchayat, Kollam.

Leucorrhoea: Expressed juice of fresh tuber is mixed with equal quantity of cow’s milk and boiled. Take one glass in the early morning in empty stomach.

Informant: N. Kunjikrishna Pillai, Thrikkadavoor Grama Panchayat, Kollam.

Stomachache/Dysentery: The fresh tubers are chewed and eaten.

Informant: Bhavaiamma, Vilappil Grama Panchayat, Thiruvananthapuram.

Food for recuperating patients: Fresh tuber of A. racemosus along with fresh rhizome of Maranta arundinacea are prepared in the form of ‘lehya’ by adding ghee and honey and taken orally.

Informant: Aravindakshan P, Vilappil Grama Panchayat, Thiruvananthapuram.

Averrhoa bilimbi L., Averrhoaceae, Bilimbi, Cucumber tree (Eng.), belumbu, bilimbi (H.), karmaraka, karamaranga, siralam, krama, amlee, karukha (San.), ilimbi, ilumbanpuli, bilimbi, chilimbi, irumban puli, chemmeen puli, keerichakka (Mal.), pulima (Tam.) gommareku (Tel.).

Blood pressure: Fruits of A. bilimbi along with fruits of Capsicum frutescens are prepared in the form of chutney and taken as a side dish.

Informant: Shanmughan, Kulasekharapuram Grama Panchayat, Kollam.

Azadirachta indica A. Juss., Meliaceae, Neem, Neem tree, Indian cedar, Indian-lilac, Margosa (Eng.), balnimb, neem, nim, nind (H.), nimba, pichumarda, arishta (San.), veppu, aaruyaveppu, kaippaveppu (Mal.), aruhundi, kaduppagal, kaingi, vembu veppam, nimbamu, nim-banu, taruka, veepachtettu, vempa, veppa, veppa (Tam.), nimbanuv, veppa, yeppa, yapa, yapachattu, taruka, vemu (Tel.).
Skin Diseases
1) Fresh leaves of *A. indica* and rhizome of *Curcuma longa* are ground and made in the form of small gooseberry sized balls. One ball is taken orally thrice a day for 7 days.
Informant: Raveendran Nair V, Vilappil Grama Panchayat, Thiruvananthapuram.
2) Fresh leaves are ground and the paste is applied externally.
Informant: Karunakaran Thanmi, Kulasekharapuram Grama Panchayat, Kollam.

Chicken pox
1) Fresh leaves are ground and the paste is applied externally.
Informant: Thankappan Pillai, Paravur Grama Panchayat, Kollam.
2) The leaf extract is mixed with one glass of cow’s milk and taken orally at night for 21 days.
Informant: Lasar M, Kulathupuzha Grama Panchayat, Kollam.

Immunity enhancing
1) Fresh leaves are ground and the paste is taken orally especially in the month of April for enhancing immunity.
Informant: Jnanaseelan, Kulathupuzha Grama Panchayat, Kollam.
2) Fresh leaves are soaked in water for 12 h and taken orally in early morning.
Informant: Ahammad Kunju, Thrikkaruva Grama Panchayat, Kollam.

Fever
1) Fresh leaves of *A. indica*, *Justicia adhatoda*, *Ocimum americanum*, *O. tenuiflorum* and *Vitex negundo* are prepared in the form of paste and 30 ml decoction is mixed with sufficient quantity of jaggery and taken once daily.
Informant: Ganapathi Pillai, Paravur Grama Panchayat, Kollam.
2) Fresh leaves of *A. indica*, *Andrographis paniculata*, *Justicia adhatoda* and *Aegle marmelos* are sliced, boiled and concentrated. Add little expressed juice of lemon (*Citrus limon*) and take 10 ml thrice a day for 3-4 days.
Informant: Ahammad Kunju, Thrikkaruva Grama Panchayat, Kollam.

Ulcer: Expressed juice of fresh leaves are mixed with one glass of cow’s milk and taken orally at bed time for 21 days.
Informant: Johnson, Kulathupuzha Grama Panchayat, Kollam.

Jaundice
1) Fresh leaves (5 nos.) of *A. indica*, *Cynodon dactylon*, *Ricinus communis*, seeds of *Piper nigrum* and bulbs of *Allium sativum* are ground and prepared in the form of paste. Taken thrice daily for 7 days.
Informant: Ahammad Kunju, Thrikkaruva Grama Panchayat, Kollam.
2) Fresh leaves are ground and made in the form of small balls (Gooseberry size) and taken one ball once daily for 7 days.
Informant: Padminiamma T, Vilappil Grama Panchayat, Thiruvananthapuram.

Diabetes
1) Step-1 Fresh ground leaves of *Aegle marmelos* are made in the form of small balls (Gooseberry size) and taken once a day for first one week.
Step- 2 Fresh ground leaves of *A. indica* are made in the form of small ball and taken once a day for second and third weeks.
Step- 3 Fresh fruits of *Momordica charantia* is ground and made in the form of small balls and taken once a day for fourth week.
Informant: Jnanaseelan, Kulathupuzha Grama Panchayat, Kollam.
2) Fresh leaves of *A. indica* and fresh rhizome of *Curcuma longa* are ground and taken twice daily for 7 days.
Informant: Padminiamma T, Vilappil Grama Panchayat, Thiruvananthapuram.

Azima tetracantha Lam., Salvadoraceae, Divi-divi tree, Needle bush, Mistletoe, Berrythorn (Eng.), *kanta-gur-kamai*, *kantagarkimai* (H.), *kundali*, *trikantajata* (San.), *yashenku*, *sankukuppi*, *changan* (Mal.), *sangilai*, *anji*, *isangu*, *kandagachangam*, *kanniram*, *karavelasangam*, *kolachangu*, *kulandai*, *mujangu*, *mulluchangu*, *nallasangan-chedi*, *canku*, *cankan kuppi ilai* (Tam.), *puttu*, *tella-upi*, *tellavuppi*, *telluppi*, *uppara*, *tella uppi*, *mundla kampa*, *thellavuppi*, *thelluppi* (Tel.).

Chest pain: Fresh leaves are prepared in the form of paste and taken as such.
Informant: Johnson, Kulathupuzha Grama Panchayat, Kollam.

Body pain: Fresh leaves are boiled in sufficient quantity of water and jaggery till it become semi solid form (*Lehya*) and taken orally.
Informant: Ahammad Kunju, Thrikkaruva Grama Panchayat, Kollam.

*Boerhavia diffusa* L., Nyctaginaceae, Red spiderling, Spreading hogweed, Wineflower (Eng.), *vishkhapara,*
santha, gahadpurna, lal punarnava, snathikari (H.), bhauma, kathilla, nilapunarnava, raktapushpa, var sabhu, sopha ni, vrs civa (San.), thazhuthama, thavizhama (Mal.), mukkurattai, sarani, sattaranai, cenatika, katalikaceti, puri tiyam, tiri veccuta, varusapu (Tam.), atikamamidi, attatamamidi, punarnava, ambati madu, attukamaamidi, yerra galijeru (Tel.).

Diabetes: Fresh aerial parts of *Boerhavia diffusa* L. are sliced and prepared in the form of ‘thoran’ (a vegetable preparation) along with grated coconut (dried endosperm of *Cocos nucifera*), *Capsicum annuum* (fruit), *Allium cepa* (bulb), and sufficient quantity of salt and water.

Informant: Dasan G N, Thrikkadavoor, Kollam.

Kidney stone: Fresh leaves are prepared in the form of vegetable preparation (thoran) and taken as a side dish.


Body pain: Fresh roots are prepared in the form of decoction and taken twice daily for one week.

Informant: N. Kunjikrishna Pillai, Thrikkadavoor Grama Panchayat, Kollam.

Urinary problems: Fresh leaves are cleaned, sliced and boiled, taken as a drink.


Pre-natal care: Fresh leaves are ground and expressed juice is taken orally.

Informant: Sumangala, Kulasekhaparam Grama Panchayat, Kollam.

*Clerodendrum infortunatum* L., Verbenaceae, Hill glory bower (Eng.), bhat, bhat, titabhart (H.), bhandira, sitha neyaka, barhinaparni (San.), oruveran, peravelam, vattaperavelam, peruku (Mal.), parugilai, perugilai, vattakanni (Tam.), kondathakali, bokkudu, dudhika, bogadu cinna, bogadu cinna busi, saraswati-yaku, gurrapu kattiyaku, bokkada (Tel.).

Fistula: Cleaned fresh roots of *C. infortunatum* and seeds of *Cuminum cyminum* are prepared in the form of decoction by boiling with melted jaggery and ghee. Taken twice daily for one month.

Informant: Chellappan C, Thrikkadavoor Grama Panchayat, Kollam.

Post-natal care

1) Fresh roots of *C. infortunatum* and fresh rhizome of *Zingiber officinale* are ground partially with sufficient quantity of powdered rice and boiled in melted jaggery and coconut oil till it becomes a semisolid form (*Lehya*) and taken orally.

Informant: Sumangala, Kulasekhaparam Grama Panchayat, Kollam.

2) Fresh roots of *C. infortunatum*, *Biophytum sensitivum* (whole plant) and *Vernonia cinerea* (whole plant) are prepared in the form of decoction and taken orally.

Informant: Janamma, Paravur Grama Panchayat, Kollam.

Psoriasis: Fresh leaves are boiled in the water, cooled and used for bath, twice daily.

Informant: Sarasamma T, Vilappil Grama Panchayat, Thiruvananthapuram.

*Colesus amboinicus* Lour., Lamiaceae, Country borage, Indian borage, Indian-mint, Broadleaf thyme (Eng.), patta ajwain, patharcur, pathorchur (H.), parnayavani, karpurvalli, pashanbhed (san.), njavara, panikoorakka, chempalaka (Mal.), karpuravalli (Tam.), sugandhavalkam, karpoo r valli, karuvaeru, vanu aaku (Tel.).

Asthma: The fresh leaves of *C. amboinicus*, *Justicia adhatoda* and *Ocimum tenuiflorum* are crushed and one tea spoon of expressed juice is mixed with equal quantity of honey and taken three times daily for 7 days.

Informant Name: Chellappan C, Thrikkadavoor Grama Panchayat, Kollam.

Fever

1) Leaves of *C. amboinicus*, *Ocimum tenuiflorum*, *Tinospora cordifolia*, seeds of *Piper nigrum* and dried rhizome of *Zingiber officinale* are ground and made in the form of decoction. Take 10 ml of decoction, twice daily for three days.

Informant: Ganapathi Pillai, Paravur Grama Panchayat, Kollam.

2) Expressed juice from the fresh leaves of *C. amboinicus* and *Ocimum tenuiflorum* in equal quantity is mixed with honey and taken.

Informant: Sarojini J, Vilappil Grama Panchayat, Thiruvananthapuram.

3) The fresh leaves are crushed and 10 ml of expressed juice is taken three times daily for 3 days.

Informant: Dasan G N, Thrikkadavoor Grama Panchayat, Kollam.
Skin disease: Fresh leaves are slightly heated and ground to take expressed juice. Add a pinch of powdered seeds of *Cuminum cyminum* and taken with one tea spoon honey.

Informant: Lasar M, Kulathupuzha Grama Panchayat, Kollam.

Post-natal care: Fresh leaves of *C. amboinicus*, seeds of *Elettaria cardamomum*, *Cuminum cyminum*, and *Trigonella foenum-graecum* are roasted in a pan and prepared in the form of powder. 20g of powder is taken with sufficient quantity of jaggery twice daily.

Informant: Sumangala, Kulasekharapuram Grama Panchayat, Kollam.

Stomachache: Fresh leaves are prepared in the form of paste and taken orally.

Informant: Chellappan C, Thrikkadavoor Grama Panchayat, Kollam.

Body pain: Fresh leaves of *C. amboinicus* and grated coconut (*Cocos nucifera*) and sufficient quantity of rice (*Oryza sativa*) are cooked in the form porridge and taken orally.

Informant: Sreeraman K, Paravur Grama Panchayat, Kollam.

*Commiphora caudata* (Wight & Arn.) Engl., Burseraceae, Hill mango (Eng.), *ikkata, ikkada* (San.), *kilimaram, idinjil, kizhuvam* (Mal.), *kilvai, malamkiluvai, pachakiluvai* (Tam.), *kondaregu, kondamamidi, mettamamidi, konda-ragi* (Tel.).

Fracture: Fresh leaves (30 leaves) are ground to a paste and taken in water with sufficient quantity of sugar candy.

Informant: Balakumar M, Kulasekharapuram Grama Panchayat, Kollam.

*Curcuma aromatica* Salisb., Zingiberaceae, Aromatic turmeric, *Curcuma*, Wild turmeric, Yellow zedoary (Eng.), *jangali haldi, jangli-haldi, banhaldi, banharidra, anbe-halad* (H.), *vana-meshika* (San.), *kasthuri manjal, kattumanjal* (Mal.), *kasturi-manjal* (Tam.), *kasturi-pasupu* (Tel.).

Scabies: Same quantity of fresh *C. aromatica* (rhizome), * Ocimum tenuiflorum* (leaves), *Aegle marmelos* (leaves) and *Tectona grandis* (stem bark) are prepared in the form of paste and applied externally over the whole body.

Informant: Dasan G N, Thrikkadavoor Grama Panchayat, Kollam.

Skin disease: Fresh rhizome are ground and applied externally over the affected part of the body.

Informant: Balakumar M, Kulasekharapuram Grama Panchayat, Kollam.

*Cyclea peltata* (Poir.) Hook. f. & Thoms., Menispermacae, Para Root (Eng.), *patha* (H.), *pashanabheda* (San.), *padakizhangu, padathali, padavalii* (Mal.), *pommcwutai, malaitani, vattattiruppi, patakkilanku, para, malaitangi* (Tam.), *patatige, paattathige* (Tel.).

Burns: Fresh tuber is prepared in the form of paste, boiled in coconut milk (*Cocos nucifera*) and applied over the affected part.

Informant: Lakshmikutti Amma, Paravur Grama Panchayat, Kollam.

*Cyperus rotundus* var. *rotundus* L., Cyperaceae, Nut grass (Eng.), *motha, mutha, nagarmotha* (H.), *abda, abhrabheda, ambhothara, ambuda kasheru, krodeshtha, kuru, kurubilva, kurvinda, kutannat, megha, mesa, musta, mustaka, payoda, rajkasera, valya, varahi* (San.), *muthanga, kuzhimuthanga* (Mal.), *kora, kilangu, muthakasu, pathalumul, korai-kizangu, tunga-gaddai* (Tam.), *bhadramuste, shakhatungaveru, tunga-muste, kaivarthaka muste* (Tel.).

Stomachache: Fresh tuber is prepared in the form of paste and taken orally with sufficient quantity of cow’s milk.

Informant: Chellappan C, Thrikkadavoor Grama Panchayat, Kollam.

Intestinal worms: Fresh tuber is boiled in cow’s milk and taken as such.

Informant: Lakshmikutti Amma, Paravur Grama Panchayat, Kollam.

*Datura metel* L., Solanaceae, Thorn Apple, Devil’s Trumpet (Eng.), *safed dhatura* (H.), *bhrranta, dhattura, kankanrya, kitava, krishnapushpa, krishnomatta, kruradhattura, kruradhurtu, maatul, madakara, madana, mahamohi, mahasatha, matula, mohana, rajadhattura, sashiva, unmohin, visharati, vrshabhavanavarallabha* (San.), *ummam, neelaummathu, karuthummam* (Mal.), *adukkumattai, madulam, ummattai, vellaiyummatai, vellummatai, emanaamam, vellaiyummati, atukkumattai* (Tam.), *tellavummetta, ummetha, tella-ummetha, erri-ummitta* (Tel.).

Asthma: Dried flowers rolled in a dry leaf like a cigarette and smoke once a day for a week.

Informant: Balakumar M, Kulasekharapuram Grama Panchayat, Kollam.

*Desmodium gangeticum* (Linn.) DC., Fabaceae, Ticktree (Eng.), *sarivan, dhruva, dirghamuli, pivari, shalparni, salpani* (H.), *amsnamati, dirghapatra, shalparni* (San.), *kodil, vellaiyummatai, vellaiyummati, atukkumattai* (Tam.), *tellavummetta, ummetha, tella-ummetha, erri-ummitta* (Tel.).
ekamula, guha, kitavinashini, kumuda, nishchala, parni, patini, pivari, prsnparni, prthapkarni, salaparni, saliparni, saliparnini, sarvanukarini, saunya, shalani, shalaparni, shalidala, shaliparni, shaliparnini, shalipatri, shophaghni, shothaghni, shubhaprika, shhira, subhagam, sudala, sudha, suparni, suparnika, supatri, surupa, tanvi, triparni, vasumanti, vataghni, vidari, vidariganda, trika (San.), orila, pullati (Mal.), orila, pulladi, pullati, sirupulladi, moovilai, civamatu (Tam.), gitanaram, kolakuponna, kolakuporna, nallanelapariki, peddantirinta, kola panna, kaul munna, nalla-nelapanki, getanaramu, nallanelapariki, peddaantintha, githanaram, peddanthirinta (Tel.).

Rheumatism: Roots of Desmodium gangeticum, Pseudarthria viscida, Sida acuta, Oroxylum indicum, Cassia glauca, are ground and prepared in the form of decoction and taken 10 ml twice daily for 41 days.

Informant: Johnson, Kulathupuzha Grama Panchayat, Kollam.

Post natal care: Roots of Desmodium gangeticum, Pseudarthria viscida, Solanum anguivi var. anguivi, Tribulus terrestris, Oroxylum indicum, Aegle marmelos, Stereospermum chelonoides, Aerva lanata, Gmelina arborea and Solanum giganteum (in equal quantity) are prepared in the form of decoction and taken orally 3 ounce daily for 3 months.

Informant: Jainamma, Thrikkadavoor Grama Panchayat, Kollam.

Stomatichke: Fresh tender leaves (3 nos.) are taken as such in empty stomach.

Informant: Padmasree J, Kunnathur Grama Panchayat, Kollam.

Leucorrhoea: Fresh roots are prepared in the form of decoction and taken orally for 14 days thrice daily.

Informant: Jnanaseelan, Kulathupuzha Grama Panchayat, Kollam.

Sprains: Fresh roots are prepared in the form of paste and applied over the affected parts.

Informant: Ahammad Kunju, Thrikkaruva Grama Panchayat, Kollam.

Hemidesmus indicus (L.) R. Br., Asclepiadaceae, Indian sarsaparilla, east indiand sarsaparilla (Eng.), anantamul, dudli, kapuri, sugandi pala (H.), aasphota, ananta, anantamul, anantamula, gopa, gopakanya, gopama, gopangana, krishodari, krnamul, lata, nagajivha, pratanika, raktasariva, sanariva, sariba, svetasariva, syama, utpalasariva (San.), kizhanna, nannari, nannari-kizhanna, naru-nindi, naru-ninti, runaruni, runarurini, paravalli, naroonendee, narunindi (Mal.), arakkam, aritinviyachi, arunianam, kumanasuru, kiritvinavalli, nannari, partodi, saribam (Tam.), adavippatitige, gadsugandhi, muttavapulagamu, nallasugandhipala, pala-chukkam-deru, pala-sugandhi, tellasugandhipala, adavippathige, gadi, muthavapulagamu, nalla sugandhipala (Tel.).

Blood purification: Fresh roots are made in the form of decoction and taken orally.

Informant: Appukuttan Panickar, Kulathupuzha Grama Panchayat, Kollam.

Hedyotis herbacea L., Rubiaceae, Slender oldenlandia (Eng.), paper bhed (H.), Chayaparapatika, Kshudraparpata (San.), parpadakapullu, nonganampullu, monganampullu (Mal.), nonnamampullu (Tam.), chiriveru, thella nela vaemu, verri nelvaemu (Tel.).

Scabies: Fresh leaves are boiled in sufficient quantity of water and used for bathing.

Informant: Sreeraman K, Paravur Grama Panchayat, Kollam.

Hybanthus enneaspermus (L.) F. V. Muell., Violaceae, Spade flower, Pink ladies Slipper (Eng.), ratan purush, ratanpurus (H.), padmacarini (San.), orilathamara (Mal.), oritaltamarai, kkanaitam, ilatcumirestam, irattanapurus, kuttittamarai, oritalvacanam, patumai (Tam.), ratna purusha,
Red eye disease: Fresh leaves are ground and 2 drops of expressed juice is applied in eye.
Informant: Babu Chettiyar, Thrikkadavoor Grama Panchayat, Kollam.

*Justicia adhatoda* L., Acanthaceae, Adhatoda, Adulsa, Malabar nut, Pavettia, Vasa, Vasaka (Eng.), arusha – adulasa, arusha, adulasa, adosa (H.), attarusha, uroos, vasica (San.), adalodakam (Mal.), adatodey elley, adatoda, adathodai (Tam.), adda saramu, adda-sarap (Tel.).

**Fever**
1) The fresh leaves of *J. adhatoda*, *Andrographis paniculata*, *Azadirachta indica* and *Aegle marmelos* are sliced and boiled in water in the form of decoction. Taken 10 ml of decoction with 2 ml of fruit juice of *Citrus limon*, thrice daily for 3-4 days.
Informant: A.G.Varghese, Kulathupuzha Grama Panchayat, Kollam.

2) Fresh leaves of *J. adhatoda*, *Ocimum tenuiflorum*, seeds of *Piper nigrum* and rhizome of *Zingiber officinale* are prepared in the form of decoction by adding sufficient quantity of melted jaggery and taken 10 ml once daily for 2-3 days.

3) Fresh leaves are ground and 5 gm of expressed juice is taken thrice daily.
Informant: A.G.Varghese, Kulathupuzha Grama Panchayat, Kollam.

**Asthma/breathing trouble**
1) Dried fresh leaves of *J. adhatoda*, dried spike of *P. longum* and dried seeds of *P. nigrum* are powdered and one teaspoon of this powder is taken with honey.
Informant: Padmasree J, Kunnathur Grama Panchayat, Kollam.

2) Fresh leaves of *J. adhatoda*, *bulb of A. cepa* and seeds of *C. cymimum* are crushed and juice is taken along with sufficient quantity of honey.
Informant: Dasan G N, Thrikkadavoor Grama Panchayat, Kollam.

3) Fresh leaves are slightly heated, crushed and taken 10 ml of expressed juice three times daily for 3-4 days.
Informant: Appukuttan Panickar, Kulathupuzha Grama Panchayat, Kollam.

**Cough**
1) Fresh leaves of *J. adhatoda*, *Murraya koenigii* (leaves), *Piper nigrum* (seeds), *Zingiber officinale* (rhizome) and *Glycyrrhiza glabra* (root) are boiled with sufficient quantity of water and melted jaggery till it become a semi solid form (lehya). Take 5 gm of lehya thrice daily for a week.
Informant: Babuji G, Thrikkaruvu Grama Panchayat, Kollam.

2) Steamed fresh leaves are and ground and 10 ml of expressed juice is taken twice daily for 3 days.

**Rheumatism**
1) Fresh leaves of *J. adhatoda* are ground and expressed juice is mixed with fresh juice of *Aloe vera* leaves and applied externally over the body.
Informant: Omana S, Thrikkaruva Grama Panchayat, Kollam.

2) Fresh leaves of *J. adhatoda* and *Calotropis gigantea* are boiled with water and take bath using this water.
Informant: Dinamani M, Thrikkaruva Grama Panchayat, Kollam.

3) Fresh leaves are ground and expressed juice is mixed with egg white and taken once daily in early morning.

**Blood pressure:** Fresh leaves are ground and expressed juice is taken with sufficient quantity of butter milk in empty stomach for 7 days.
Informant: Babuji G, Thrikkaruva Grama Panchayat, Kollam.

*Justicia gendarussa* Burm. f., Acanthaceae, Daun rusa, Gandarusa, willow-leaved justicia, Warer willow (Eng.), nilinirgundi, udisambhalu, adusa, bakas, basa, nili nirgunthi, vasha, kala bashimb (H.), bhutakeshi, gandharasa, indrani, kapika, krishnanirgundi (San.), vathamkolli (Mal.), karunochi, vadaikkutti, cintuvari, ilainocci (Tam.), addasaramu, gandharasamu, nalla-noch-chili, nalla-vavili (Tel.).

**Inflammations:** Fresh leaves are made into a paste and applied externally over the affected part.
Informant: Appukuttan Panickar, Kulathupuzha Grama Panchayat, Kollam.

**Body pain:** Fresh leaves of *J. gendarussa*, *Vitex negundo*, *Clerodendrum infortunatum*, *Citrus lemon*, *Calotropis gigantea*, *Erythrina variegata*, *Artocarpus heterophyllus* and *Piper betle* are wrapped in a fresh piece of cloth (kizhi) and boiled in Neem oil.
Applied this ‘kizhi’ all over the body.
Informant: Thressiamma M, Kulathupuzha Grama Panchayat, Kollam.

*Kaempferia galanga* L., Zingiberaceae, Common resurrection Lily, Galanga, Aromatic ginger, Sand ginger, Lesser galangal (Eng.), *abhuyicampa, chandramula, sidhoul* (H.), *kaccolam, kacholum, kaccolam, katcolam, pulankilanku, kaccoli k-kilanku, kachhola kilangu, kachulakalanga, katsjula kelengu* (Tam.), *candramula, chandramoola, kachoram, sime-kich-chilik* (Tel.).

**Dysentery:** Expressed juice of *K. galanga* (tuber), *Allium cepa* (bulb), *Capsicum annuum* (fruit), *Moringa oleifera* (stem bark) *Citrus limon* (fruit juice) and powdered seed of *Myristica fragrans* are mixed well and 10 ml of juice is taken thrice daily for 3 days.
Informant: A.G.Varghese, Kulathupuzha Grama Panchayat, Kollam.

**Fever:** Fresh tuber is ground and expressed juice is taken.
Informant: Sarojini J, Vilappil Grama Panchayat, Thiruvananthapuram.

**Intestinal worms:** Fresh tuber is prepared in the form of paste and 5 g of paste is taken in sufficient quantity of water.

*Lablab purpureus* (L.) Sweet., Fabaceae, Egyptian bean, Hyacinth bean, Indian bean, Lablab, Indian butter bean (Eng.), *sem, ballar, bhatvas, shimi* (H.), *nispavah* (San.), *amara, mochakotta* (Mal.), *avarai* (Tam.), *annapa, anumulu* (Tel.).

**Diabetes:** Fresh seeds are boiled in sufficient quantity of water and taken three times daily.
Informant: M.L.Alex, Kulathupuzha Grama Panchayat, Kollam.

*Limnophila aromatica* (Lam.) Merr., Scrophulariaceae, Rice paddy herb (Eng.), *kutra* (H.), *amragandhah* (San.) *manganari* (Mal.), *mankainari* (Tam.).

**Jaundice:** Fresh tuber is prepared in the form of paste and taken with butter milk, twice daily.
Informant: Sobhana Sajeev, Kulathupuzha Grama Panchayat, Kollam.

*Morinda reticulata* Gamble, Rubiaceae, Mapoon bush (Eng.), *Neyvalli* (Mal.).

**Post-natal care**
1) Fresh whole plant is prepared in the form of paste and boiled with sufficient quantity of melted jaggery till it becomes a semi solid form (lehya) and taken.
Informant: Parvathy amma, Thrikkadavoor Grama Panchayat, Kollam.

2) Expressed juice of *M. reticulata* (leaves), *Spilanthes ciliates* (leaves), *Vitex negundo* (leaves) and *Asparagus racemosus* (tuber) in equal quantity are mixed with coconut milk (*C. nucifera*) and sufficient quantity of ghee and boiled till it become a semisolid form (Lehya). Take 10 gm of ‘lehya’ twice daily.
Informant: Janamma, Paravur Grama Panchayat, Kollam.

**Blood purification:** Fresh aerial parts of *M. reticulata* are crushed and expressed juice is collected. This juice is cooked with sufficient quantity of rice in the form of medicated porridge and eaten.
Informant: Thankappan Pillai, Thrikkadavoor Grama Panchayat, Kollam.

**Leucorrhoea:** Fresh leaves of *M. reticulata* and *Cissampelos pareira* are ground and collect expressed juice. This juice is mixed with sliced fruit of *Benincasa hispida* and sufficient quantity of jaggery, boiled to concentrate and taken orally.
Informant: Sreedharan C, Kulathupuzha Grama Panchayat, Kollam.

**Back pain:** Whole plant is crushed and expressed juice is collected. The juice is mixed with sufficient quantity of coconut milk (*C. nucifera*) and jaggery. Boiled to concentrate and taken orally.
Informant: Thankamma, Kunnathur Grama Panchayat, Kollam.

*Murraya koenigii* (L.) Spreng., Rutaceae, Curry Leaf Plant, Curry Leaf tree, Curry leaves, Sweet nim (Eng.), *barsanga, bursunga, gandhela, kadipatha, kari patta, karii pattaa, karipatta, kathnim, katneem, katnim, kitha neem, meetha neem* (H.), *alakavhaya, chhardighna* (San.), *kariveppu, kariveppila* (Mal.), *kariveppilai, karuvembu* (Tam.), *karepaku, karepeku* (Tel.).

**Blood pressure**
1) Fresh leaves are ground and paste is taken with sufficient quantity of butter milk.
Informant: Omana S, Thrikkaruva Grama Panchayat, Kollam.
2) Fresh leaves of *M. koenigii*, *Tamarindus indica*, *Citrus limon* and seeds of *Piper nigrum* are ground and the paste is taken with a pinch of salt.
Informant: Yesudas J, Vilappil Grama Panchayat, Thiruvananthapuram.

Leucorrhoea: Fresh leaves are prepared in the form of paste and taken orally with sufficient quantity of fresh water.
Informant: Sobhana Sajeev, Kulathupuzha Grama Panchayat, Kollam.

Cholesterol: Fresh leaves are ground and taken orally with sufficient quantity of butter milk.
Informant: Yesudas J, Vilappil Grama Panchayat, Kollam.

Anemia: Fresh leaves are crushed and expressed juice of *Premna latifolia* is taken orally.
Informant: A.Gamaliel, Vilappil Grama Panchayat, Kollam.

Dysentery: Fresh leaves are prepared in the form of paste. 2 g of paste is taken with sufficient quantity of rice (*oryza sativa*).
Informant: Subhadra amma, Kunnathur Grama Panchayat, Thiruvananthapuram.

Aphrodisiac: Dried spike of *P. longum* and dried fruit of *Emblica officinalis* are powdered and taken.
Informant: Babuji G, Thrikkaruva Grama Panchayat, Kollam.

Piles: Fresh tuber is cleaned and soaked in lime for a week and prepared in the form of paste. 2 g of paste is taken with sufficient quantity of cow’s milk.
Informant: Subhadra amma, Kunnathur Grama Panchayat, Thiruvananthapuram.

Toothache: Fresh inflorescence are partially ground and applied in affected teeth.
Informant: Babuji G, Thrikkaruva Grama Panchayat, Kollam.

Anemia: Dried spike of *P. longum*, seeds of *Cuminum cyminum* are powdered and mixed with expressed juice of fresh leaves of *Phyllanthus amarus*. This preparation is taken with honey, twice daily.
Informant: Leena B, Kunnathur Grama Panchayat, Kollam.

Asthma
1) Dried spike of *P. longum* and dried fruit of *Emblica officinalis* are powdered and taken.
Informant: Babuji G, Thrikkaruva Grama Panchayat, Kollam.

2) Dried spike of *P. longum*, seeds of *P. nigrum* and dried leaves of *Justicia adhatoda* are powdered. One tea-spoon of powder is taken with sugar candy, twice daily.
Informant: A.Gamaliel, Vilappil Grama Panchayat, Kollam.
Body ache: Fresh leaves are boiled in water and bathe daily once by using this water.
Informant: Yesudas J, Vilappil Grama Panchayat, Thiruvananthapuram.

*Rotula aquatica* Lour., Boraginaceae, Aquatic rotula (Eng.), *pasanabheda* (H.), *pasanabhedah* (San.), *kallurvanchi* (Mal.), *seppunerinji* (Tam.), *pasanabheda* (Tel.).

Diabetes: Aerial parts of fresh fronds are prepared in the form of decoction and taken in empty stomach.
Informant: Sobhana Sajeev, Kulathupuzha Grama Panchayat, Kollam.

*Ruta graveolens* L., Rutaceae, Common rue, Garden rue, Herb of Grace, Herbygrass, Meadow rue, Ruda, Rue, Weinkraut (Eng.), *satari, sadab, saturi* (H.), *brahmi, guchhapatra* (San.) *arootha, sathappu* (Mal.), *aruvadam, arvada* (Tam.) *aruda, sadapa, sadapaka* (Tel.).

Indigestion: Fresh leaves are prepared in the form of chutney and eaten as a side dish.
Informant: Thankappan Pillai, Thrikkadavoor Grama Panchayat, Kollam.

Jaundice: Fresh leaves are crushed and 10 ml of juice is taken with honey in early morning.
Informant: Omana S, Thrikkaruva Grama Panchayat, Kollam.

Cough: Dried and powdered rhizome is taken with sufficient quantity of honey for 7 days, twice daily.
Informant: M.L.Alex, Kulathupuzha Grama Panchayat, Kollam.

*Solanum giganteum* Jacq., Solanaceae, African holly (Eng.), *putharichunda, cheruchunda* (Mal.), *paintilikakkoti, paintilikam* (Tam.)

Fever: Fresh root/whole plant is partially ground. To this sufficient quantity of water and melted jaggery are added and boiled till the volume reduces to ¼ th. This decoction is taken twice daily for a week.
Informant: A.Gamaliel, Vilappil Grama Panchayat, Thiruvananthapuram.

*Trachyspermum ammi* (L.) Sprague., Apiaceae, Ajowan Caraway, Bishops Weed, Ajwan, Falsely lovage seeds, Carum, Lovage, Omum (Eng.), *ajvain, ajyan, ajvayan, ajowanj, ajwain* (H.), *ajamoda, ajanmodika* (San.) *ayamodakam, omam* (Mal.), *omam, omum* (Tam.), *omaan, vanu* (Tel.).

Stomachache: Fresh seeds are boiled with sufficient quantity of water and administered orally.
Informant: M.L.Alex, Kulathupuzha Grama Panchayat, Thiruvananthapuram.

*Tragia involucrata* L., Euphorbiaceae, Climbing Nettle, Indian Stinging Nettle, Canchorie root-plant (Eng.), *barhanta, pit parni* (H.), *doostparisha, duralabha, duspracha* (San.), *choriyananam,*
cherukodithuva, kodithumba (Mal.), ambu, cherukanjuru, erumaikkanjori (Tam.), chinadulogondi, chinnadulagondi, cinugantatiga (Tel.).

Cough: Dried leaves are powdered well. 2 g of powder is taken with 1 spoon of honey.
Informant: Thankamma, Kunnathur Grama Panchayat, Kollam.

Tylophora indica (N. Burm.) Merr., Asclepiadaceae, Indian Ipecac, Indian Ipecacuahna, Country Ipecac (Eng.), antamul, jangli pikvam (H.), arkaparni, lataksiri, shwasaghti (San.) vallipala (Mal.), naippalai, nanjaruppan (Tam.), kakapala, tellayadala (Tel.).

Asthma: Fresh leaves are ground and juice is taken orally with sufficient quantity of honey.
Informant: Sarasamma T, Vilappil Grama Panchayat, Thiruvananthapuram.

Psoriasis: Whole plant is dried and boiled with sufficient quantity of coconut oil. This medicated oil is applied over the skin.
Informant: Nesan D, Vilappil Grama Panchayat, Thiruvananthapuram.

Vitex negundo L., Verbenaceae, Chinese Chaste Tree, Chinese Chastetree, Five-Leaf Chastetree, Huang Ping, Negundo Chastetree, Indian Privet (Eng.), sambhalu, indrani, nadi-kant, nir-gunthi, ni-sindhu, sindhuvaara, nilpushpi, nirgundi (H.), indrani, nilanirgundi (San.), karinochi, indrani, nochi, vellanochi, vennochi (Mal.), nallanocci, nirk кудни, nirкуndи (Tam.), nalla-vavili, nallavavili (Tel.).

Anemia: Fresh leaves of V. negundo are crushed well and cooked with rice (Oriza sativa) and jaggery in the form of porridge and taken orally after meals.

Body pain
1) Fresh leaves taken in a ‘kizhi’ and dipped in boiled water and applied the steam over the body.
Informant: Babuji G, Thrikkaruva Grama Panchayat, Kollam.
2) Sliced fresh leaves are mixed with rice (seeds of Oriza sativa) and cooked in the form of porridge and taken orally as such.
Informant: Dasan G N, Thrikkadavoor Grama Panchayat, Kollam.

Rheumatism
1) Expressed juice from the fresh leaves of V. negundo and Spilanthes ciliatus are mixed with powdered rice (seeds of Oriza sativa) and jaggery, cooked and taken orally.
Informant: Sreeraman K, Paravur Grama Panchayat, Kollam.
2) Fresh leaves of V. negundo, Moringa oleifera, Tamarindus indica, Ricinus communis are boiled with sufficient quantity of coconut oil. This medicated oil is applied over the body.
Informant: Dinamani M, Thrikkaruva Grama Panchayat, Kollam.

Post natal care: Fresh leaves of V. negundo, Spilanthes ciliatus, Morinda reticulata and tuber of Asparagus racemosus are crushed. The expressed juice is mixed with coconut milk (Cocos nucifera) and sufficient quantity of ghee and boiled till it became a semisolid form (Lehya). Lehya is taken twice daily for 2 weeks.

Zingiber officinale Rosc., Zingiberaceae, Canton, Canton Ginger, Common Ginger, Cooking Ginger, Culinary Ginger, Edible Ginger, Spice Ginger, Stem Ginger (Eng.), adi, adrak, adrakada, sonth (H.), ardraka (San.), inchi, chukku, sringiveram (Mal.), inji (Tam.), allamu, sonthi (Tel.).

Fever
1) Fresh rhizome of Z. officinale, leaves of Artocarpus heterophyllus, Ocimum tenuiflorum, leaf midrib of Cocos nucifera and seeds of Coffea arabica are prepared in the form of decoction. 10 ml of decoction is taken three times daily for three days.
Informant: Lakshmikutti Amma, Paravur Grama Panchayat, Kollam.

2) Rhizome of Z. officinale, leaves of Ocimum tenuiflorum and seeds of Piper nigrum are prepared in the form of decoction. 5 ml of decoction is taken with jaggery three times daily for four days.
Informant: Radhamani R, Kunnathur Grama Panchayat, Kollam.

Cough: Fresh rhizome of Z. officinale along with Justicia adhatoda (leaves), Murraya koenigii (leaves), Piper nigrum (seeds) and Glycyrrhiza glabra (root) are prepared in the form of ‘Lehya’ and taken orally.
Informant: Thankappan Pillai, Thrikkadavoor Grama Panchayat, Kollam.

Stomachache
1) Fresh plant parts of Z. officinale (rhizome), Alpinia calcarata (rhizome), Allium sativum (bulb), Moringa oleifera (stem bark) and Piper nigrum (seeds) are crushed, boiled with water and taken as a drink.
Informant: Raji Madhu, Kunnathur Grama Panchayat, Kollam.

2) Rhizome of *Z. officinale*, stem bark of *Moringa oleifera* and Bulb of *Allium sativum* are crushed and expressed juice is collected. This juice is slightly heated and 2 tea spoon of juice is taken with sufficient quantity of honey.

Informant: Rajan P, Vilappil Grama Panchayat, Thiruvananthapuram.

*Ziziphus oenoplia* (L.) Mill., Rhamnaceae, Jackal Jujube, Small-Fruited Jujube, Wild Jujube (Eng.), *izhanthai, makai, makkay, kakkay* (H.), *karkandhauh* (San.), *thodali, cheriya alantha, cheruthudali, churi, churimullu, kottapazham, kottavalli, mulli, mullichedi, tudalimullu, vanthodali* (Mal.), *paraki* (Tam.), *paringi* (Tel.).

Jaundice: Fresh roots are prepared in the form of paste. The paste is taken with sufficient quantity of cow’s milk for a week, once daily in empty stomach. Bathe 5 times in fresh water after the medicine.


Conclusion

Home garden is one of the key intervention strategies that aims to minimize food shortage provide supplementary food, primary healthcare security and be a source of nutrition. Based on this study, 9 vegetable plants and 16 medicinal plants were selected for cultivating in the home gardens. Samples were procured for further detailed investigation. The study also provides some information regarding the nutritional status of the rural people of the Kollam and Thiruvananthapuram districts. As a result of the contact programmes and seminars knowledge empowerment of rural women and house wives on the nutritional qualities and medicinal properties of plant genetic resources in their locality could be achieved.

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