

ETHNOBOTANY OF TEA GARDEN WORKERS

13.1 Introduction

The association of man with plants is an age-old process. Also the relationship between man and environment in general has never been static and is changing continuously. But this is not the case with tribal/ aboriginal communities the world over. The life, culture and traditions of these communities have remained almost undisturbed and static for hundreds of years and often it is said that they are the living archaeological museums of ancient traditions and cultural heritage of a nation.

The Indian subcontinent is inhabited by over 53 million tribal people belonging to over 550 such communities [like *Santal, Munda, Oraon, Naga, Momba, Karbis, Saora, Sarasia, Irulus, Chenchus, Kharia, Baigas, Bando* etc. with some degenerated communities like *Ongae, Great Andamanies, Jarawa, Sentinelese, Shompen, Toda, Toto, Asur, Birhore, Lodha* etc.] that come under 227 linguistic groups (Rao 1996). They inhabit varied geographic and climatic zones of the country and are living in complete harmony with the nature. Tribals constitute about 7.7 % of India's total population and utilize about 10,000 plant species for healthcare, food and other material requirements (Jain 1991; Pushpangadan 1994). They can utilize the resources without disturbing the delicate balance of the ecosystem. Tribal people thus mostly remained as stable societies and are unaffected by the social, cultural, material and economic evolutions that are taking place in the civilized societies. But this peaceful coexistence of

the tribal-society has been violently shaken in the recent past by the interference in their habitats by so called civilized outsiders. India is very rich for its 16 agro-climatic zones and its old heritage of ancient civilization with old and obsolete literatures like Vedas, Quaran, Puran, Sanhitas, Neghuntas, Nidans, Epics (Ramayana, Mahabharata), archaeological remains and sacred groves and is a virgin field for ethnobotanical studies in various aspects to get first hand information on inter-disciplinary and intra-disciplinary subjects. However, the subject is newer to science in India; multidisciplinary in nature and unique in many ways.

The tribal people, when they are living very close to nature they have acquired and accumulated the knowledge about the use of plants growing around them. Many of these plants are not known to the outside world. After proper scrutiny this rich knowledge could benefit the mankind in many ways. The inroads of civilization are presently posing problems and imminent danger as well, for this rich and varied expertise and it is likely that this will be lost to humanity for all time to come. The habitats where the tribal lived and the environment in which the folklore evolved on the uses of wild plants are fast disappearing due to interference of outside world. Similarly with the advancement of civilization, human life became more and more complicated and consequently the plants around human beings have been put more to use in various ways (Seitel 2001).

People in the pre-historic times used plants quite intuitively for the fulfillments of basic needs. Such as food, clothing, shelter, tools and even for the cure of many of their bodily disorders. The medicinal plants played a very important role from times immemorial among the illiterates to highly civilized men and women in the folklores, superstitions, traditions, various rituals, witchcraft and chanting of mantras connected with healing of diseases, and also repelling the influence of evil spirits. This man-plant relationship can be classified into two groups viz. (a) abstract and (b) concrete. The abstract relationship includes faith in good and bad power of plants, taboos, sacred plants, worship and folklore. On the other hand, the concrete relationship includes mainly the

material use such as food, medicines, house building, agricultural implements and operations, other domestic uses etc (Jain 2004).

13.2 Definitions

The term **ethnobotany** was first coined by Harshberger (1885) one of the pioneers of American economic botany. Robbins *et al* (1916) gave the broad definition of the area of ethnobotany that includes investigation and evaluation of the knowledge of all phases of life amongst the primitive societies and the effects of the plant environment upon life, customs, beliefs and history of the tribal people. Jones (1941) gave a concise definition of ethnobotany as the study of interrelationship of primitive men and plants. According to Jones (1941), ethnobotany is "the study of the relationship which exists between people of primitive societies and their plant environment". According to Keng (1974) "the science of ethnobotany is concerned with the relationship between man and vegetation as well as the influence, man has had on the vegetation". Ethnobotany has been defined as a multidisciplinary study involving the relationship between plant and the aboriginal people, some knowledge of anthropology of the region and a fair familiarity with the flora and vegetation of the area (Rao 1981). Its importance has been realized chiefly in respect of the varied economic uses of the plants among the primitive human societies. It brings to light numerous little known or unknown uses of plants, some of which have potential for wider usage (Rao 1981). In comparison to economic botany, ethnobotany is not only limited up to accumulation of information from a particular locality or group of people but also includes the transfer of authentic information from one sector to the other with critical scientific as well as economic evaluation for wider application (Bhattarai 1991). Wickens (1993) distinguished ethnobotany from economic botany by considering ethnobotany as "the study of useful plants prior to their commercial exploitation and eventual domestication".

The word "*Ethno*" in English came from Greek word "*ethnokos*," meaning the human race and "botany," or plant science. Thus, ethnobotany can be defined as the relationship of plant life with human beings.

13.3 History of Ethnobotanical Studies

The history of use of plants in medicine can be traced back to pre-Rigvedic times. The preparation and use of medicines from plants have been mentioned in the 'Rigveda', the earliest scripture and the oldest repository of human knowledge (4500 – 1600 BC). The Vedic Aryans were familiar with about 100 medicinal plants. Later, in 'Ayurveda', a part of 'Atharvaveda', various uses of plants including the medicinal properties are given. This was followed by contributions like 'Charak Samhita' (1000 – 800 BC), 'Sushruta Samhita' (800 – 700 BC) and Vagbhatta's 'Ashtanga Hridaya'. Later on, a number of books on Ayurveda and medicinal plants were written by erudite scholars like Bhikshu, Patanjali, Nagarju, Chakradatta, Bangasen (500 – 100 BC). 'Vriksha Ayurveda' by Parashara gives detailed characteristics of vegetable drugs including habitat, soil for growth, season of collection, duration of efficacy and method of storage (Mitra & Jain 1991).

The earliest organized worker on this aspect was Francisco Hernandez (1570 – 1575) who studied the flora and fauna of Mexico in relation to man (De 1968). The compilation of Indian medicinal plants started in the early century. Sir William Jones's 'Catalogue of Medicinal Plants' (1799), Fleming's 'Catalogue of Medicinal Plants' (1810), Ainslie's 'Materia Medica of Hindoosthan' (1813), Roxburgh's 'Flora Indica' (1820 – 1832) and Royle's 'An essay on the antiquity of Hindu medicine' (1837) dealt mainly with plants and drugs of established indigenous systems of Indian medicine. O'Shaughnessy's 'The Bengal Dispensatory' (1811) is the first book dealing exclusively with the properties and uses of medicinal plants.

Irvine (1847), Strachey (1852) and Boissier (1867) contributed significantly in the study of indigenous drugs of India in 'Pharmacopoeia of India'; Waring (1868) has given a new dimension to the studies of medicinal plants. Modeen's 'Supplement to Pharmacopoeia of India' (1869) and Fleckiger and Hanbury's (1870) 'Pharmacographia' added new information. Dutta's 'Materia Medica of the Hindus' (1877), Dymock's 'Vegetable Materia Medica of Western India' (1883) and contributions of Khori (1887) and Dey (1896) are valuable contributions related to medicinal plant products. Waring

(1897) contributed to the folk medicine through his '*Bazar Medicine and Common Medicinal Plants of India*'.

The **Siddha** system of medicine is considered as a branch of **Ayurveda** with advancement in respect of a few selected medicinal plants and was evolved by Sadhus (sages) in South India. The **Unani** system of medicine is supposed to be a contemporary of Siddha type of medicinal system developed by Muslim physicians during the Mohammedans rule. The allopathic medicine originated in Europe and became dominant in India with the establishment of British Empire.

Barrow (1990) worked on the ethnobotany of Coanhill, Spruce (1908) worked on tribes of Andes and Amazon regarding the knowledge of using rubber plants. Safford (1915 – 1917) studied narcotic and stimulant plants of Haiti and Aztec region. In North America, considerable amount of work was done among the Red Indians. In South America, some work was done in Peru. The major contributions of Schultes (1941, 1956, 1960, 1963, 1967, 1987 a.b. 1988, 1990, 1992, 1993, 1996), who is considered as Father of modern Ethnobotany, include its various aspects like wild edibles, narcotic drugs, psychoactive plants, hallucinogens etc. The other specialized branches of ethnobotany are archaeo-ethnobotany, ethno-agriculture, ethno-ecology, ethnopharmacology, etc.

The remarkable progress of Hindu medicine from Vedic to the period of Tantras and Siddhas declined with the invasions of Greeks, Scythians, Huns, Moghuls and Europeans. However, with the establishment of British rule in India, there was further intermingling and also introduction of some new medicinal plants. Organised study and research in ethnobotany with emphasis on tribal medicine and culture are of recent origin. Ethnobotanical explorations with special reference to tribal/ folklore medicine were carried out by a number of investigators round the world.

In India much works on Ethnobotany have been accumulated and researches in the field are gaining momentum which is evident from the literature piling up at rapid rate. Fuch (1908) studied the Korkus of Vindhya Hills; Guha (1930) studied Garo tribe from Assam region, while Dastur (1951) contributed to the medicinal plants of India and Pakistan. Elwin (1955) worked on the religious aspects of Indian tribes. Gupta (1960) enumerated 101 useful and medicinal plants of Nainital in Kumaon Himalaya, Jain

(1963a,b) studied Madia tribe from Bastar region of Madhya Pradesh. The contributions of Jain and his co-workers (1965, 1967, 1971, 1987) worked on plants used for various purposes. Dr. S.K. Jain, former Director of Botanical Survey of India, is also credited for the establishment of the *Society of Ethnobotanists* and its official journal *Ethnobotany*.

Janardhanan (1963) enumerated the medicinal plants of *Khed taluka* of Pune district and provided information regarding their use and mode of administration. Contributions of Gupta (1963) on Chotanagpur plateau; Jain and Tarafder (1963) on native plant remedies for snakebite among the tribal people of central India etc. are noteworthy contributions. The wild food plants used by tribes like Madia, Halba, Gond were noted by Jain (1964). Dhar *et al* (1968-88) screened Indian medicinal plants for antimicrobial activity. Preliminary screening of 202 plant species for alkaloids, saponins and steroids was done by Maiti (1968). Kapoor *et al* (1969) surveyed Indian medicinal plants for various secondary metabolites. Malhotra & Moorthy (1973) recorded useful and medicinal plants from Chandrapur district. Das & Mandal (2002) and Das *et al* (2006) enumerated the Medicinal Plants of Darjiling area.

Venkatram *et al* (1975) reported the identity and therapeutic claims of 'Sanjeevinee' with miraculous panaceal properties and sold in certain parts of Karnataka and Maharashtra. Vartak & Datar (1975) enumerated wild edibles of Karnala Bird Sanctuary. Gadgil & Vartak (1976) studied the sacred grooves of Western Ghats, Dan *et al* (1978) did phytochemical screening of plants from Indian Botanic Garden, Brahmam & Saxena (1978) conducted survey of plants from Orissa for tannins, saponins, flavonoids and alkaloids. Tiwari *et al* (1978, 1980) contributed on the primitive tribes of Eastern Ghats and their medicinal folk lore. Similarly, Bedi (1978) worked on Ratanmahal Hills of Gujarat, the area predominantly inhabited by Bhils. Kumar *et al* (1980) supplemented information on Garo tribe of Meghalaya and Maheshwari *et al* (1980) on Tharus of Uttar Pradesh. Joshi *et al* (1980) studied the ethnobotany of Gujarat with reference to folk medicine used by Dang tribe. Daniel (1980) analysed 150 plants of Gujarat forests for alkaloids, saponins and tannins. He has also screened 200 and more plants for the presence of economically important natural products.

Singh & Pande (1980) reported plants used by tribes of Eastern Rajasthan, Pal (1980) collected plants used in veterinary medicine by the tribes of Bihar, Orissa and West Bengal. Kamble & Pradhan (1980) collected medicinal plants used by the Korku tribe in Akola district of Maharashtra state. Sharma & Kulkarni (1980) studied sacred grooves of Kolhapur district. Thakre (1980, 1983), studied the common medicinal plants against bacteria. Ramchandran & Nair (1981) reported the traditional uses of 138 species belonging to 199 genera and 52 families by the *Irulas* of Tamil Nadu. Vartak & Gadgil (1981) studied sacred grooves along Western Maharashtra and Goa. Tripathi & Rastogi (1981) have illustrated the effects of flavonoids in biology and medicine and recommended the flavonoids isolated from seeds of *Rhamnus infectoria* for use in ophthalmology. Shah *et al* (1981) enumerated the ethnobotanical notes on 133 plants belonging to 54 families from Saurashtra in Gujarat. Kamboj and Dhawan (1982) reported antifertility and abortifacient herbal drugs used by primitive societies of India. Shah *et al* (1983) recorded medicinal plants from Dahanu forest region of Maharashtra state. Tarafder (1983a, 1984a) listed plants used by tribal people for antifertility, abortion and conception. Bhargava (1983) studied different tribes of Andaman and Nicobar Islands. Sen *et al* (1983) have done ethnobotanical study of Kuchla (*Strychnos nux-vomica*) and Gunjatkar & Vartak (1983) studied fish tail plant (*Caryota urens*). Jain & Puri (1984) explored the ethnobotanical properties of 100 plants of Jausar-Bawar hills of Uttar Pradesh. Hemadri & Rao (1984) described 17 plants exclusively used in the treatment of jaundice by the tribal people of Dandakaranya. Yoganarsimhan *et al* (1984) described 210 plant species belonging to 79 families of Andaman and Nicobar Islands. Pushpangadan & Atal (1984) described ethnomedico-botanical investigation of 79 species used by tribal people of Western Ghats in Kerala. Sharma & Malhotra (1984) studied some tribal areas of Maharashtra state. Rai & Bhujel (2002) studied the ethnobotany in Darjiling Hills region. Rai *et al* (1998) studied the ethnobotany in the fringe areas of Darjiling and Sikkim and has reported a large number of plants of wide range of uses among different groups of tribes. Jana & Chouhan (1999, 2000), Sinha & Chauhan (1997), Hajra & Chakraborty (1981), Dash & Chauhan (2002) among others have studied the ethnobotany of Sikkim.

Nilegaonkar *et al* (1985) analysed 13 species of wild edibles used by tribal people of Pune and Ahmadnagar districts and found that the protein value of wild leafy vegetables are higher than that of conventional leafy vegetables. Atique *et al* (1985) did ethnobotanical study of cluster fig (*Ficus racemosa*). Shah and Gopal (1985) studied Bhil, Gharasia and Dubla tribes of North Gujarat. Sharma and Vyas (1985) reported the medicinal importance of ferns used by the tribes of Rajashtan. Lal *et al* (1985) described ethnobotanical uses of lichens. Ramashankar and Khare (1986) studied phytochemistry of *Adiantum coudatum* and *Cheilanthus farinosa* and revealed the presence of alkaloids, steroids and flavonoids in those. Irawati *et al* (1986) cultured corms of *Amorphophallus companulatus* on Murashige and Skoog's medium. Saxena and Vyas (1986), tested seeds of *Nigella sativa*, *Argemone mexicana*, *Brassica juncea* and other ethnomedicinal plants for their antimicrobial activities against human pathogenic fungi. Jain *et al*, (1987) described the method of oil extraction from moul (*Bassia latifolia*) seeds.

13.3 Ethnobotanical Studies in India

The history to development of ethnobiology is as old as human civilization. The scientific evaluation of the subject is very recent and with application of the knowledge of social anthropology, ecology, pharmacology, archaeology and a few other disciplines, the scope of the subject has widened greatly. The history of ethnobotanical study in India is about four centuries old when Garcia da Orta (1563) published his *Oscologuis* giving an account of the indigenous plants of India, but without using the term ethnobotany. Organized ethnobotanical work in India started with the publications by Janaki Ammal (1956) and Jain (1963). These investigations formed the foundations of modern ethnobotany and also prompted a large number of research workers from different parts of the country. The '*All India Coordinated Research Project of Ethnobiology*' involving several centres viz. Botanical Survey of India, National Botanical Research Institute, Regional Research Laboratories and some Universities launched in 1980s by the Ministry of Environment and Forests, Government of India, acted as a booster for many young workers to initiate ethnobiological researches in the country. Traditional medicinal plants are the main focus in these studies. As has already been mentioned that there are about 53 million tribal people belonging to over 550 tribal communities are living in India (Rao

1996). Only limited number of tribes has retained their original culture. The increase in the population level in tribal communities, their migration to other places in search of food, welfare schemes for the tribal communities floated by State and Central Government and impact of civilization, etc. have all collectively changed the lifestyle and age-old culture of the tribal people in several parts of the country. The cumulative effect of these activities is detrimental where the culture of the aboriginals and invaluable knowledge of medicinal and other useful plants are threatened. In order to protect ethnobiology, the traditional cultures and also the forests and other types of vegetation which nourishes the culture should be conserved.

All systems of traditional Indian medicine had their roots, in one way or the other, in folk medicines and household remedies. Whereas, some those earliest remedies and prescriptions became widespread and were subjected to certain refinements, revisions and improvements through practices by trained medicine men and thus got incorporated in organized system of medicine. But a major bulk of old medicines remained endemic to certain regions or people in the country. Due to lack of communication of intermingling and breeding of ideas and varying ways of life, many of these earlier remedies survived only by words from generation to generation. These are being practiced particularly in remote rural areas and tribal societies. The lack or absence of acculturation has in many instances, helped in preservation of this knowledge almost in original form (Jain 1981). Approximately 85% of the rural population of India depends upon wild verities of plants for the treatment of various diseases they are suffering. But unfortunately, due to rapid spread of the facilities of civilization and acculturation tribal environment, cultures, their faith and belief are rapidly changing with a downward trend. The indiscriminate exploitation and destruction of forest, spread of harmful chemicals, introduction of alien species and over exploitation of natural resources, a number of taxa have already been disappeared and others are awaiting a similar fate, even before we became aware of their existence. It is therefore, important to preserve the oral folklore on plants and plant resources before it is lost.

13.4 Importance of Studying Ethnobotany

Ethnobotany represents best avenues for screening new economic plants for food, medicine, etc. as well as for gene pool source for the development of agricultural and medicinal crops. For this purpose, a close collaboration is required among agriculturist, phytochemists, pharmacologists, nutritionists and ethnobotanists. This will not only lead to the discovery of new economic plants but also result in better understanding the relationship between primitive societies and modern science. However, the significance of Ethnobotany is multifaceted and multi-dimensional in nature. The following may be included under its coverage (Goel 2006):

- (a) Man-plant interaction in human society.
- (b) Historical understanding based on existing human culture.
- (c) Genetic pool for resistant crops and for development of hybrid plant species.
- (d) Scientific investigation of herbal practices exists among different ethnic communities and tribal groups to discover new medicinal plant species, new area of knowledge, treatment, therapies and drug development.
- (e) Development of traditional technologies with scientific imputes for the benefit of artisan classes and for sustainable utilization of natural resources.

13.5 Sacred Groves

Tribal people have their own way of conservation. They are aware of the importance and level of their dependence on forests. Sometimes patches of forests are preserved on religious ground and are referred as *Devrai* or *Dev Rahati* or *Gram Than* or *Jaherthan*, etc. (i.e. sacred groves). These sacred groves remain free from human interferences due to religious beliefs or in the name of God! There are over 230 such groves found in Maharashtra (Gadgil & Vartak 1981). A sacred grove is a patch of vegetation associated with some deity. These are protected through the grace of deity. Thus, removal of any plant material (even a piece of dead wood) or killing any animal from sacred grove is a sin. Tribal people believe that breaking the law may result in serious illness or even to death (Gadgil & Vartak 1973, 1974, 1975, 1981; Gadgil & Chandran 1992; Godbole 1996; Dash & Chouhan 2002).

13.6 Drugs from Ethnic Formulations

In Indian premier institutions like the Central Drug Research Institute (CDRI), Central Institute of Medical and Aromatic Plants (CIMAP), Regional Research Laboratory, Jammu (RRL) and Tropical Botanic Garden and Research Institute (TBGRI) are working on medicinal plants. These institutions are engaged in gathering the information from different tribal pockets in India. They are evaluating the efficacy of drugs by photochemical and biological testing. Recently TBGRI is equipped with cryobank facility where medicinal plants are cryopreserved. The medicinal plant conservation park (MPCP) is also being developed at TBGRI, where about 450 medicinal plants are being conserved (TBGRI News 1995).

Remedies in traditional medicine consist of formula prepared from various natural substances, animals and vegetables. The vegetable remedies account for about 90% of these. Great importance is attached to the proper preparation of all herbal drugs, which are considered ineffective unless pre-treated in a prescribed manner. These herbal remedies are either swallowed, rubbed into scarification, poured into wounds, boiled and inhaled as fumes, splashed on to eyes, smoked in pipes or snuffed as snuff.

This system of medicine which is the only easy and accessible health care system for most of the population in rural areas needs to be evaluated scientifically, given due recognition and developed so as to improve its efficacy and safety. The chemical constituents of most of the herbs used by traditional healers are still unknown. It is, therefore, of paramount importance to know the chemical components of every reported herb and to make permanent records of the knowledge from the 'medicine men' before they all pass away. India has a vast reservoir of nearly 400,000 practitioners of *Ayurveda*, *Siddha*, *Unani* etc. whose services could not be adequately utilized in the health care delivery systems. The proper use of medicinal plants is a necessity and not a luxury. The use of medicinal plants in traditional medicines finds its natural expression and further development in primary health care. In China for example medicinal plants are an integral part of the formal health system and are utilized in about 40% of cases at the primary care level. It is often claimed and widely believed that remedies of natural origin are harmless and carry no risk to the consumer.

Drugs are derived from a number of sources in a number of ways. As it is already mentioned that the earliest drugs were plant extracts followed by pure natural compounds of known structures. This then followed the domination of completely synthetic chemical drugs. But, in recent years people are becoming conscious of the increased potency and harmful effects of synthetic drugs. Disillusioned with synthetic western medicine, more and more people are now realizing that natural medicine is better and we are now trying to return to the fold of traditional herbal systems. The World Health Organization (WHO) also admitted that it will not be possible or even desirable to replace this herbal medicine with western techniques, which leads to a revival of interest in wild medicinal plants. This 'green wave' (Tyler 1986) is likely to gain momentum in the years to come. The immense possibilities of these systems in achieving the proclaimed goal of "Health for all by 2000 AD" as enshrined in the Alma-Ata declaration are now being realized by the international community. They are now groomed as sources of alternative medicine, even though it is difficult to find agreement as to how these systems being synonymous with local medicine based on local resources, can best be utilized on a global basis (Farnsworth 1984).

Secondary metabolites produced by spermatophytes are commercially used as biologically active compound. It is estimated that only 5 – 15% of world's existing species have been surveyed for biological active compounds so far. It is because of limited financial and technical resources available, the developing countries of the world do not have a clear picture of the biodiversity and the richness of their natural resources. This is alarming in view of the current rate of extinction of tropical forests which contains most of the world's plant species. If the current trend of destruction of tropical forest habitats continues at its present rate, phytochemists may have only a few decades remaining to survey the chemical constituents of a large part of the plant kingdom for potentially useful compounds. This prompted interest in the tropical forest, where biological diversity is at the highest and indigenous population have a unique knowledge about the plant and its medicinal properties.

In the deluge of modernism, valuable and time-tested ethnobiological knowledge connected with agriculture, folk-medicine, etc. is fast disappearing. Although there are many examples of such information forming the source of modern medicine, technique etc. such knowledge provided by natives is generally ignored. As a result this rich and useful source of information has almost died up. Before this is completely lost to civilization, efforts to record such information and to preserve the gene pool should be taken up on an emergency basis (Manilal 1992).

The best recent example is the novel information provided by *Kani* tribe from Agastyamalai hills in Western Ghats, Kerala pertaining to antifatigue properties from the fruits of *Tricopus zeylanicus* ssp. *travancoricus* ('Aryogyapacha') lead to the development of an anti-fatigue drug named as *Jeevani* at Tropical Botanic Garden and Research Institute (TBGRI), Thiruvananthapuram (Kerala). Kanis chew these tiny fruits as instant source of energy and anti-fatigue agent when they climb hilly slopes carrying heavy head-loads. Laboratory tests confirmed its immuno-enhancing properties. Intake of fruits relieves fatigue, protects liver and boosts the immune system of body (Pushpangadan 2002; Pushpangadan *et al* 1997).

13.7 The Present Work

In view of these considerations and increasing necessity and importance of ethnobotanical research for human welfare, the present study in two Tea Gardens of Terai of West Bengal has been taken up. A considerable proportion of Tea Garden workers are tribal people in general, Santhals and Oraons in particular and this offers excellent scope for ethnobotanical investigations in the area. The aims of the present investigation include:

1. Collection of baseline qualitative data through focused botanical exploration. This includes documentation, preservation and vouchering of ethnobotanically useful plant specimens.
2. To prepare inventories on the varied plants used by different tribal communities for various purposes related to their social and survival strategies.
3. Focus attention on importance of proper conservation of biological diversity.

4. To understand the people's way of conserving biodiversity; etc.

The result of the survey can be classified into: (i) Wild Edible Plants; (ii) *Jhārā* preparation; (iii) Fodder Plants; (iv) Medicinal & Aromatic Plants; (v) Dye Yielding Plants; (vi) Religious Plants; etc.

13.8 Wild Edible Plants

Before learning the techniques of cultivation man was completely dependent on wild plants for their vegetable food. The trend is still continuing. People living in urban areas also like some wild plants in their daily menu. It is needless to narrate again the living standard of Tea Garden workers and certainly they will look for wild edible plants of their locality. For this purpose they may move outside the Tea Garden area where much more species of wild plants are growing in abundance. Table 13.1 recorded such plants used by Tea Garden workers in Terai and Table 13.2 for gardens in Darjiling hill region.

Table 13.1: List of plants used as food by Tea garden workers in Terai Region of Darjiling in West Bengal.

[**Abbreviations used:** G = Gungaram T.E., H = Hansqua T.E., K = Kamalpur T.E., M = Matigara T.E., Mo = Mohurgong & Gulma T.E., NK = Not Known, Bk = Bark, Brw = Brewing, Fl = Flower, Fr = Fruit, Infl = Inflorescence, Lf = Leaf, Rt = Root, Rhz = Rhizome, Sd = Seed, Sht = Shoot, St = Stem, Tg = Twig, Wd = Wood, WP = Whole Plant, Yng = Young]

Sl. No.	Plants [Families]	Local Name	Gardens where recorded	Parts Used	Mode of use
01	<i>Acmella calva</i> [Asteraceae]	Jangjurbi	G, H, K, M, Mo	Yng Tg	Green vegetable
02	<i>Adenanthera pavonina</i> [Mimosaceae]	Reti	G, H, K, M, Mo	Fr	Vegetable
03	<i>Aegle marmelos</i> [Rutaceae]	Bael, Bel	G, H, K, M, Mo	Ripe Fr	Raw
04	<i>Alocasia macrorrhiza</i> [Araceae]	Mankachhu	G, H, K, M, Mo	Lf, St	Vegetable
05	<i>Alternanthera paronichioides</i> [Amaranthaceae]	Sanchi	G, H, K, M, Mo	Sht	Green vegetable
06	<i>Alternanthera sessilis</i> [Amaranthaceae]	Gudru saag, Nunia saag	G, H, K, M, Mo	Yng Sht	Green vegetable
07	<i>Amaranthus lividus</i> [Amaranthaceae]	Lal bhaji	G, H, K, M, Mo	Yng Sht	Green vegetable
08	<i>Amaranthus spinosus</i> [Amaranthaceae]	Kata bhaji	G, H, K, M, Mo	Yng Sht	Green vegetable
09	<i>Amaranthus viridis</i> [Amaranthaceae]	Khudi bhaji	G, H, K, M, Mo	Yng Sht	Green vegetable

	[Commelinaceae]		M, Mo		
37	<i>Costus speciosus</i> [Zingiberaceae]	Kemuk, Betlawre	G, H, K, M, Mo	Yng Lf	Green vegetable
38	<i>Crotalaria juncea</i> [Fabaceae]	Sanaiful	G, H, K, M, Mo	Yng Sht	Green vegetable
39	<i>Cyanthillium cinereum</i> [Asteraceae]	Chhepra, Jurbula	G, H, K, M, Mo	Semi- tuberous Rt	Brewing
40	<i>Deeringia amaranthoides</i> [Amaranthaceae]	Chhonra- chhunri saag	G, H, K, M, Mo	Yng Sht	Green vegetable
41	<i>Dillenia indica</i> [Dilleniaceae]	Chalta	G, H, K, M, Mo	Persistent calyx	Vegetable
42	<i>Dioscorea alata</i> [Dioscoreaceae]	Arukanda, Nappakand a, Gethikanda , Toral	G, H, K, M, Mo	Rhz	Vegetable
43	<i>Dioscorea bulbifera</i> [Dioscoreaceae]	Bantarul	G, H, K, M, Mo	Rhz	Vegetable
44	<i>Diplazium esculentum</i> [Athyriaceae]	Dhenki saag, Kukri saag	G, H, K, M, Mo	Yng frond	Green vegetable
45	<i>Dryopteris filix-mas</i> [Dryopteridaceae]		G, H, K, M, Mo	Yng frond	Green vegetable
46	<i>Enydra fluctuans</i> [Asteraceae]	Hinche saag	G, H, K, M, Mo	Yng Sht	Green vegetable
47	<i>Ficus hispida</i> [Moraceae]	Dumur, Koksa	G, H, K, M, Mo	Lf, Fr	Green vegetable
48	<i>Glinus oppositifolius</i> [Caryophyllaceae]	Gima saag, Deila saag	G, H, K, M, Mo	WP	Green vegetable
49	<i>Hygrophila auriculata</i> [Acanthaceae]	Kulekhara	G, H, K, M, Mo	Yng Sht	Green vegetable
50	<i>Ipomoea aquatica</i> [Convolvulaceae]	Kalmi saag	G, H, K, M, Mo	Yng Sht	Green vegetable
51	<i>Lantana camara</i> [Verbenaceae]	Kuttush, Putush kata	G, H, K, M, Mo	Fr, Bk	Raw
52	<i>Leucas indica</i> [Lamiaceae]	Guma saag	G, H, K, M, Mo	Fl, Sht	Green vegetable
53	<i>Luffa aegyptiaca</i> [Cucurbitaceae]	Gomra, Dhundhul	G, H, K, M, Mo	Leafy Tg, Fr	Vegetable
54	<i>Malva verticillata</i> [Malvaceae]	Laffa saag	G, H, K, M, Mo	Sht	Green vegetable
55	<i>Marsilea minuta</i> [Marsileaceae]	Susni	G, H, K, M, Mo	Lf	Green vegetable
56	<i>Melastoma malabathricum</i> [Melastomataceae]	Datrangi	G, H, K, M, Mo	Ripe Fr	Raw
57	<i>Melochia corchorifolia</i> [Sterculiaceae]		G, H, K, M, Mo	Yng Sht	Green vegetable
58	<i>Mentha arvensis</i> [Lamiaceae]	Pudina	G, H, K, M, Mo	WP, Lf	Aromatic food additive
59	<i>Mimusops elangi</i> [Sapotaceae]	Bakul	G, H, K, M, Mo	Ripe Fr	Raw
60	<i>Momordica dioica</i>	Chetheli,	G, H, K,	Green Fr	Fruit vegetable

10	<i>Ammania baccifera</i> [Lythraceae]	Amber	G, H, K, M, Mo	Lf	Green vegetable
11	<i>Amorphophallus paeoniifolius</i> [Araceae]	Bon-Oll	G, H, K, M, Mo	Tuber, Lf	Green vegetable
12	<i>Annona reticulata</i> [Annonaceae]	Nona	G, H, K, M, Mo	Ripe Fr	Raw
13	<i>Annona squamosa</i> [Annonaceae]	Ata	G, H, K, M, Mo	Ripe Fr	Raw
14	<i>Artocarpus lacucha</i> [Moraceae]	Dahua, Dewa, Borhar	G, H, K, M, Mo	Ripe Fr	Raw
15	<i>Artocarpus heterophyllus</i> [Moraceae]	Kathar, Kanthal	G, H, K, M, Mo	Lf, Fr, Sd	Brewing, Fruit vegetable
16	<i>Azadirachta indica</i> [Meliaceae]	Neem	G, H, K, M, Mo	Lf, Fr, Bk	Bitter vegetable
17	<i>Bacopa monierii</i> [Scrophulariaceae]	Brahmi	G, H, K, M, Mo	Yng Sht	Green vegetable
18	<i>Bauhinia purpurea</i> [Caesalpiniaceae]	Kochnar, Koirala	G, H, K, M, Mo	Fl bud	Vegetable
19	<i>Bauhinia variegata</i> [Caesalpiniaceae]	Tanki	G, H, K, M, Mo	Fl bud	Vegetable
20	<i>Boerhavia coccinea</i> [Nyctaginaceae]	Khapra saag	G, H, K, M, Mo	WP	Vegetable
21	<i>Brassica campestris</i> [Brassicaceae]	Sarisa	G, H, K, M, Mo	Lf, Sd	Green vegetable, condiment
22	<i>Brassica juncea</i> [Brassicaceae]	Rye saag	G, H, K, M, Mo	Yng Sht	Vegetable
23	<i>Cajanus cajan</i> [Fabaceae]	Arhar	G, H, K, M, Mo	Sd	Fd
24	<i>Camellia sinensis</i> [Theaceae]	Chia, Chha	G, H, K, M, Mo	Fl, Lf	Cooked. Beverage
25	<i>Cassia occidentalis</i> [Caesalpiniaceae]	Tapray, Kalkasunda	G, H, K, M, Mo	Lf	Green vegetable
26	<i>Cassia tora</i> [Caesalpiniaceae]	Chhoto chakar	G, H, K, M, Mo	Lf	Green vegetable
27	<i>Catunaregam longispina</i> [Rubiaceae]	Maidalu, Kankra Jat	G, H, K, M, Mo	Lf	Green vegetable
28	<i>Centella asiatica</i> [Apiaceae]	Beng saag	G, H, K, M, Mo	WP	Green vegetable
29	<i>Chenopodium album</i> [Chenopodiaceae]	Bhatua saag	G, H, K, M, Mo	Yng Sht	Green vegetable
30	<i>Citrus medica</i> [Rutaceae]	Nimbu	G, H, K, M, Mo	Fr	Raw
31	<i>Citrus grandis</i> [Rutaceae]	Bimbira	G, H, K, M, Mo	Fr	Raw
32	<i>Clerodendrum viscosum</i> [Verbenaceae]	Ghato, Vhauti	G, H, K, M, Mo	Yng Lf	Brewing, vegetable
33	<i>Coccinia grandis</i> [Cucurbitaceae]	Janglikundr , Telakuch	G, H, K, M, Mo	Leafy Tg, Fr,	Green vegetable, Brewing
34	<i>Coix lachryma-jobi</i> [Poaceae]	Ghanrey mala	G, H, K, M, Mo	Mature grains	Like wheat
35	<i>Colocasia esculenta</i> [Araceae]	Kalo kachhu	G, H, K, M, Mo	Lf, Rhz	Green vegetable
36	<i>Commelina benghalensis</i>	Kana saag	G, H, K,	Yng Sht	Green vegetable



	[Cucurbitaceae]	Ban karela	M, Mo		
61	<i>Mussaenda roxburghii</i> [Rubiaceae]	Katmatiya, Dhobi Kat	G, H, K, M, Mo	Yng Sht	Brewing, Green vegetable
62	<i>Neolamarckia cadamba</i> [Rubiaceae]	Kadam	G, H, K, M, Mo	Ripe Fr	Raw
63	<i>Oldenlandia corymbosa</i> [Rubiaceae]	Atisar, Khetpapra	G, H, K, M, Mo	WP	Green vegetable
64	<i>Oldenlandia diffusa</i> [Rubiaceae]	Atisar	G, H, K, M, Mo	WP	Green vegetable
65	<i>Oroxylum indicum</i> [Bignoniaceae]	Totola, Taloyar, Dakdewa	G, H, K, M, Mo	Bk	Brewing
66	<i>Oxalis corniculata</i> [Oxalidaceae]	Khatta saag, Amruli saag, Amarching ari	G, H, K, M, Mo	WP	Green vegetable
67	<i>Oxalis corymbosa</i> [Oxalidaceae]	Pani kandi	G, H, K, M, Mo	Bulb	Vegetable
68	<i>Paederia foetida</i> [Rubiaceae]	Padrilarang , Gandha- bhadali	G, H, K, M, Mo	Lf	Green vegetable
69	<i>Persicaria hydropiper</i> [Polygonaceae]	Kusurpota, Sukurpota	G, H, K, M, Mo	Lf	Green vegetable
70	<i>Plumbago zeylanica</i> [Plumbaginaceae]	Chetoar, Chitawar	G, H, K, M, Mo	Leafy Tg	Brewing
71	<i>Polygonum plebeium</i> [Polygonaceae]	Chimti saag	G, H, K, M, Mo	WP	Green vegetable
72	<i>Portulaca oleracea</i> [Portulacaceae]	NK	G, H, K, M, Mo	WP	Green vegetable
73	<i>Pteridium aquilium</i> [Pteridiaceae]		G, H, K, M, Mo	Yng frond	Green vegetable
74	<i>Rauvolfia serpentina</i> [Apocynaceae]	Nagbeli	G, H, K, M, Mo	Bk of Rt, Rt	Brewing
75	<i>Scoparia dulcis</i> [Scrophulariaceae]	Atibala, Mitha, Jangli Dhania, Ghuma, Darchetow ar	G, H, K, M, Mo	Leafy Tg	Brewing
76	<i>Sesbania grandiflora</i> [Fabaceae]	Bagphul, Bokphul	G, H, K, M, Mo	Fl	Vegetable
77	<i>Sesbania sesban</i> [Fabaceae]	Jayanti	G, H, K, M, Mo	Leafy Tg	Green vegetable
78	<i>Solanum nigrum</i> [Solanaceae]	Pako saag	G, H, K, M, Mo	Yng Tg, ripe Fr	Green vegetable; raw by children
79	<i>Solanum torvum</i> [Solanaceae]	Goth Begun, Pako saag	G, H, K, M, Mo	Yng Fr	Fruit vegetable
80	<i>Stephania glabra</i> [Menispermaceae]	Inderparhi, Parhi, Karaiya	G, H, K, M, Mo	Rt Tuber	Brewing

81	<i>Stephania japonica</i> [Menispermaceae]	Inderparhi, Parhi, Karaiya	G, H, K, M, Mo	Rt Tuber	Brewing
82	<i>Trichosanthes lepiniana</i> [Cucurbitaceae]	Kowa tumbil	G, H, K, M, Mo	Yng Fr	Fruit vegetable
83	<i>Wattakaka volubilis</i> [Asclepiadaceae]	Chhit larang	G, H, K, M, Mo	St Bk	Brw
84	<i>Wedelia montana</i> [Asteraceae]	Bhringaraj	G, H, K, M, Mo	Leafy Tg	Green vegetable
85	<i>Zizyphus mauritiana</i> [Rhamnaceae]	Baer, Kul	G, H, K, M, Mo	Fr	Raw

Table 13.2: List of plants used as food by Tea garden workers in Darjiling Hills of West Bengal.

[**Abbreviations used:** Mk = Makaibari T.E., S = Soom T.E., T = Tamsong T.E., NK = Not Known Bk = Bark, Brw = Brewing, Fl = Flower, Fr = Fruit, Infl = Inflorescence, Lf = Leaf, Rt = Root, Rhz = Rhizome, Sd = Seed, Sht = Shoot, St = Stem, Tg = Twig, Wd = Wood, WP = Whole Plant, Yng = Young]

Sl. No.	Plants [Families]	Local Name	Gardens where recorded	Parts Used	Mode of use
01	<i>Acacia catechu</i> [Mimosaceae]	Khayer	Mk, S, T	Dryed resin (Khayer)	Chewing with betel leaf
02	<i>Aconogonum molle</i> [Polygonaceae]	Thotne	Mk, S, T	Soft St	Raw & cooked
03	<i>Actinidia strigosa</i> [Actinidiaceae]		Mk, S, T	Fr	Raw; brewing
04	<i>Ambroma augusta</i> [Sterculiaceae]	Sano kapasi	Mk, S, T	Sd	Edible
05	<i>Antidesma acidum</i> [Euphorbiaceae]	Archal	Mk, S, T	Lf, green & ripe Fr	Cooked or raw
06	<i>Ardisia solanacea</i> [Myrsinaceae]	Damai phal	Mk, S, T	Ripe Fr	Raw
07	<i>Artocarpus heterophyllus</i> [Moraceae]	Rukh katahar, Kathal	Mk, S, T	Fr, Sd	Cooked, raw
08	<i>Bauhinia purpurea</i> [Caesalpiniaceae]	Taki	Mk, S, T	Yng Sht, bud, Fl	Cooked as vegetable
09	<i>Bauhinia variegata</i> [Caesalpiniaceae]	Koiralo	Mk, S, T	Yng Sht, bud, Fl	Cooked as vegetable
10	<i>Berginia ciliata</i> [Saxifragaceae]	Pakhan bet	Mk, S, T	Fl	Pickles
11	<i>Brassica juncea</i> [Brassicaceae]	Rayo saag	Mk, S, T	Tender Lf & Sht	Green vegetable, Gundruk (a fermented food) from dried and mature leaves
12	<i>Calamus erectus</i> [Arecaceae]	Bet	Mk, S, T	Ripe Fr	Raw
13	<i>Canna edulis</i> [Cannaceae]	Phul tarul	Mk, S, T	Rhz	Cooked
14	<i>Cardamine hirsute</i> [Brassicaceae]		Mk, S, T	Sht	Green vegetable
15	<i>Carica papaya</i> [Caricaceae]	Mewa	Mk, S, T	Yng & ripe Fr	Coookes & raw
16	<i>Chenopodium album</i>	Bhatua saag	Mk, S, T	Sht	Green vegetable

	[Chenopodiaceae]				
17	<i>Cinnamomum bejolghota</i> [Lauraceae]	Bhale sinkowli	Mk, S, T	Bk of St & Rt	Flavouring spices
18	<i>Cinnamomum tamala</i> [Lauraceae]	Tejpatta	Mk, S, T	Bk, Lf	Flavouring spices
19	<i>Citrus aurantium</i> [Rutaceae]	Suntala	Mk, S, T	Ripe Fr	Raw
20	<i>Citrus maxima</i> [Rutaceae]	Sankatra	Mk, S, T		Raw
21	<i>Choerospondias axillaria</i> [Anacardiaceae]	Lapsi	Mk, S, T	Ripe & green Fr	Raw, pickles
22	<i>Coriandrum sativum</i> [Apiaceae]	Dhaniya	Mk, S, T	Lf, Infl, Fr	Salads, sauces and pickles and spice
23	<i>Costus speciosus</i> [Zingiberaceae]	Bet lauree	Mk, S, T	Rhz	Cooked
24	<i>Deeringia amaranthoides</i> [Amaranthaceae]	Bakri sag	Mk, S, T	Yng Lf, Sht	Green vegetable
25	<i>Dillenia indica</i> [Dilleniaceae]	Panchphal, Mechiaphal	Mk, S, T	Pseudocarp	Cooked
26	<i>Dioscorea belophylla</i> [Dioscoreaceae]	Ghita torul	Mk, S, T	Yam	Cooked
27	<i>Dioscorea pentaphylla</i> [Dioscoreaceae]	Rani bhyagur	Mk, S, T	Yam	Cooked
28	<i>Diplazium esculentum</i> [Athyriaceae]	Ningro	Mk, S, T	Young fronds	Green vegetable
29	<i>Elaeocarpus lancaefolius</i> [Elaeocarpaceae]	Bhadrasey	Mk, S, T	Fr	Raw
30	<i>Emblica officinale</i> [Euphorbiaceae]	Amloki	Mk, S, T	Fr	Raw
31	<i>Eryngium foetidum</i> [Apiaceae]	Bhote dhania	Mk, S, T	Lf	Flavouring spices, salads, sauces
32	<i>Fagopyrum debotrys</i> [Polygonacea]	Fapar	Mk, S, T	Sht	Green vegetable
33	<i>Ficus benghalensis</i> [Moraceae]	Bor	Mk, S, T	Ripe fig	Raw
34	<i>Ficus benjamina</i> [Moraceae]	Kabra	Mk, S, T	Yng Sht, Lf bud	Cooked & raw
35	<i>Heracleum nepalense</i> [Apiaceae]	Chimping	Mk, S, T	Fr	Pickles, aromatic spice
36	<i>Houttuynia cordata</i> [Saururaceae]	Gandey jhar	Mk, S, T	Yng Sht	Green vegetable
37	<i>Litsea cubeba</i> [Lauraceae]	Siltimbur	Mk, S, T	Fr	Raw, pickles
38	<i>Luffa aegyptiaca</i> [Cucurbitaceae]	Ghiroula, Dhundal	Mk, S, T	Immature Fr	Fruit vegetable
39	<i>Manihot esculenta</i> [Euphorbiaceae]	Simal tarul, Tapioca	Mk, S, T	Tuberous Rt	Sauces, pickles, morcha for brewing. Sometimes staple diet
40	<i>Morus australis</i> [Moraceae]	Sano kimbu	Mk, S, T	Ripe Fr	Raw
41	<i>Mucuna pruriens</i> [Fabaceae]	Hiunde simi	Mk, S, T	Sd	Substitute of dal (pulses)
42	<i>Musa balbisiana</i> [Musaceae]	Ban-kera	Mk, S, T	Infl, green & ripe Fr, stem inside Lf sheaths	Vegetable; ripe fruits taken raw
43	<i>Nasturtium officinale</i> [Brassicaceae]	Simrayo	Mk, S, T	Sht	Green vegetable
44	<i>Oroxylum indicum</i>	Totala	Mk, S, T	Fl	Vegetable

	[Bignoniaceae]				
45	<i>Ostodes paniculata</i> [Euphorbiaceae]	Bepari	Mk, S, T	Lf	Roti Prepared in leaves add special flavour and taste during different festivals in Nepalese
46	<i>Oxalis corniculata</i> [Oxalidaceae]	Chariamilo	Mk, S, T	WP	Green vegetable (sour)
47	<i>Pandanus nepalensis</i> [Pandanaaceae]	NK	Mk, S, T	Ripe Fr	Raw
48	<i>Passiflora edulis</i> [Passifloraceae]	Garendal	Mk, S, T	Ripe Fr	Raw
49	<i>Persicaria chinensis</i> [Polygonaceae]			Yng Sht	Raw
50	<i>Phlogacanthus thyrsoformis</i> [Acanthaceae]	Rambasak, Chuwa	Mk, S, T	Young infl	Vegetable
51	<i>Piper chava</i> [Piperaceae]	Chava paan	Mk, S, T	Lf	Mastigatory
52	<i>Prunus cerasoides</i> [Rosaceae]	Painyun	Mk, S, T	Ripe Fr	Raw
53	<i>Psidium guajava</i> [Myrtaceae]	Ambak	Mk, S, T	Ripe Fr	Raw
54	<i>Punica granatum</i> [Punicaceae]	Darim, Anar	Mk, S, T	Ripe Fr	Raw
55	<i>Raphanus sativus</i> [Brassicaceae]	Mula	Mk, S, T	Fresh root tuber, Lf	Vegetable. <i>Sinki</i> a traditional fermented food prepared from matured dry leaves and dried root tuber
56	<i>Rumex nepalensis</i> [Polygonaceae]	Halhale	Mk, S, T	Lf	Green vegetable
57	<i>Stellaria media</i> [Caryophyllaceae]		Mk, S, T	Sht	Green vegetable
58	<i>Terminalia bellirica</i> [Combretaceae]	Barra	Mk, S, T	Fr kernel, cotyledons	Raw
59	<i>Terminalia chebula</i> [Combretaceae]	Harra	Mk, S, T	Fr kernel	Raw
60	<i>Tetradium fraxinifolium</i> [Rutaceae]	Khanakpa	Mk, S, T	Fr	Pickles
61	<i>Toddalia asiatica</i> [Rutaceae]	Singane kanra	Mk, S, T	Ripe Fr	Raw
62	<i>Trichosanthes lepiniana</i> [Cucurbitaceae]	Indraynee, Indrenee	Mk, S, T	Sd	Roasted
63	<i>Urtica ardens</i> [Urticaceae]	Sisnu, Ghariya sisnu	Mk, S, T	Yng infl	Cooked
64	<i>Urtica dioca</i> [Urticaceae]	Patle sisnu	Mk, S, T	Yng infl	Cooked
65	<i>Urtica parviflora</i> [Urticaceae]	Sisnu	Mk, S, T	Yng infl	Cooked
66	<i>Zanthoxylum nitidum</i> [Rutaceae]	Parpare Timbur	Mk, S, T	Fr	Raw, pickles, sauces
67	<i>Zanthoxylum oxyphyllum</i> [Rutaceae]	Bhainsi Timbur	Mk, S, T	Fr	Raw, pickles, sauces
68	<i>Zingiber officinalis</i> [Zingiberaceae]	Aduwa	Mk, S, T	Rhz	Sauces, pickles, spices, flavouring agen
69	<i>Zizyphus mauritiana</i> [Rhamnaceae]	Baer	Mk, S, T	Fr	Raw, pickles

The present survey recorded the use of 85 species of plants as food by the Tea Garden workers in five Tea Estates. Of these only four are pteridophytes (covering four genera and families), and seven are monocots (covering three families). 74 species of dicotyledons are represented by 39 families. - - In hill Tea Gardens comparatively lesser number of 69 species has been recorded to eat by Tea Garden workers. These include only one species of fern, eight species of monocotyledons and the remaining 60 species are dicotyledonous. At the family level, there are one pteridophytic, five monocotyledonous and 31 dicotyledonous taxa.

Morphological diversity among the edible parts of the recorded plants is also quite interesting. Almost all normal morphological organs are edible, starting from root, passing through stem, leaf, inflorescence, flower, fruit and seed and a number of modified organs.

Man's hunger did not spare even the poisonous plants. Seeds of *Trichosanthes lepiniana* are poisonous, but there are species preparations for this also. Quite a good number of nettle species are available [*Girardinia diversifolia*, *Laportea interrupta*, *Laportea terminalis*, *Urtica ardens*, *Urtica dioica*, *Urtica parviflora* etc] and, interestingly, most of these are edible.

For habit groups, all types like tree, shrub, climber, annual and perennial herbs, epiphytes etc are in this list.

They make some special preparation also. Common fermented foods like *Sinki* and *Gundruk* using locally available plants and use those during period of scarcity. Brewing cereals for alcoholic drinks they need to prepare 'morcha' or 'Rani Dabai', the starter mixtures, for which also they are having definite prescription of plants. The method of preparation of *Jhara* or *Harhia* has also been studied in detail and has been presented here within this chapter.

13.9 Jhârâ Preparation by Oraon Community (Ghosh & Das 2004)

13.9.1 What is Jhârâ?

'Jhârâ' or 'Hârhiâ' – the rice beer is extremely popular among the tribal people especially in the eastern states of India. Santhals, Oraons, Mundas and similar other groups of people living over wide areas in India, mainly in difficult country terrains. These tough but poor-people generally live in forest villages and maintain a large number of traditional cultural practices. After whole day's struggle for the collection of livelihood they need some entertainment at night and for that their basic requirement is an alcoholic drink. So, they drink rice beer in good amount and start enjoying with their traditional musical instruments, songs and dances. It is also consumed during all of their festivals,

marriages and other ceremonies regularly (Roy 1947). The rice beer is called as '*Jhārā*' by Oraons and '*Hārhiā*' by Santhals.

It is almost impossible to determine when these tribal people started preparing rice beer but certainly it is a good improvisation of natural and direct fermentation of boiled rice when kept for a few hours soaked in water. The main point of modification is the addition of a specially formulated starter mixture in the boiled rice.

13.9.2 The Survey Area

The survey was made during 2003 – 2004 mainly among the Oraons and Santhals working in tea gardens in Darjiling Terai. Workers mainly from two Tea Gardens were selected for the purpose (i) *Gungaram Tea Estate* and (ii) *Hansqua Tea Estate*. Both the gardens are situated in the slightly undulating land of Darjiling-Terai and with a very good size of tribal work-force. For the present work, quite a few visits have been made to these two Tea Gardens and developed nice rapport with them using contact persons.

13.9.3 Stages in *Jhārā* Preparation

While *Hārhiā* is consumed by almost all of them, including children, it is prepared in a good proportion of the tribal families in Terai and Duars. However, only a few people produce it for sale. During the basic interaction with these people about the method of brewing '*Jhārā*' or '*Hārhiā*', a good number of questions come to the mind including (i) nature of the basic ingredients and modifiers, (ii) actual method of preparation, (iii) method of storage, (iv) related social rites, and certainly (v) the underlying science behind the method. The rice beer is called as '*Jhārā*' by Oraons and '*Hārhiā*' by Santhals. The starter preparation in the form of flat white tablets is known as *Rānu Dābāi* among the tribals in Terai-Duars and is sold openly in local markets.

The entire process of the survey can be divided into three parts: (i) survey for the identification of basic ingredients among a large section of tribal Tea Garden workers, (ii) observing the method of preparation of starter mixture and (iii) filling of the fermenter and diluting the fermented product.

- I. **Identification of Ingredients:** A good number of people from the Oraon and Santhal communities engaged in the preparation and marketing of *Rānu Dābāi* and/or *Hārhiā* were interviewed quite informally. They were also asked to spot the useful plants in field and the recorded informations include (i) vernacular name, (ii) useful part, (iii) purpose of use and (iv) the amount used. Collected voucher specimens will be deposited in the NBU-Herbarium.
- II. **Method of Preparation:** The Tigga family in Hansqua Tea Estate, Mr. Subodh Tigga and his wife Mrs. Jharjo Tigga are known to produce best quality *Rānu Dābāi* in the area. They agreed to prepare it in front of us. The entire process of its preparation has been recorded and photographed on 18th January 2004 at their residence.

Other people provided valuable information include Mr. Sudarsan Kumar Tirki, Anna Kujur, Solani Kujur, Johan Kujur (Oraons), Surya Sauriya, Jyoti Kumari Ekka, Mashi Prakash Ekka (Santhals), Dildhare Baraik (Baraik), and others.

13.9.4 Useful plants and their parts

The number of plants used in the process varies considerably from person to person. All the recorded plants have been presented here. Interestingly, while the Tigga family accepted that all these plants can be used but they use only some of these. Apart from this, all other information found to be almost same with all the resource persons.

1. *Oryza sativa* L. [Poaceae; vern. *Chaule, Chawor*]: the machine dehusked raw rice grains are preferred to produce the main bulk of the starter mixture; rarely parboiled grains are also used; paddy straw is used as insulator [Chandrâ et AP Das 0555].
2. *Coccinia grandis* (L.) Voigt [Cucurbitaceae; vern. *Jangli Kundri*]: the elongated and constricted tuberous roots are very important constituent; its use develops sweetness [Chandrâ et AP Das 0035].
3. *Vernonia cinerea* (L.) Lessing [Asteraceae; vern. *Chhepra, Jurbula*]: the whole plant including its fleshy and semi-tuberous roots is used; it also produces sweetness [Chandrâ et AP Das 0010].
4. *Clerodendrum viscosum* Ventenat [Verbenaceae; vern. *Ghato*]: terminal young and soft leaves are used; it produces a bitter taste [Chandrâ et AP Das 0006].
5. *Plumbago zeylanica* L. [Plumbaginaceae; vern. *Chetoar, Chitawar*]: leafy branches are used; it is a process enhancer [Chandrâ et AP Das 0100].
6. *Stephania japonica* (Thunberg) Miers [Menispermaceae; vern. *Inderparhi, Parhi, Karaiya*]: root or tuberous root; as preservative if intended to store for a longer period [Chandrâ et AP Das 0145].
7. *Stephania glabra* (Roxburgh) Miers [Menispermaceae; vern. *Inderparhi, Parhi, Karaiya*]: same as *S. japonica* [Chandrâ et AP Das 0380].
8. *Oroxylum indicum* (L.) Benthham ex Kurz [Bignoniaceae; vern. *Totola, Taloyar, Dakdewa*]: bark; adds a bitter taste [Chandrâ et AP Das 0107].
9. *Mussaenda roxburghii* Hook.f. [Rubiaceae; vern. *Katmatiya*]: roots; develops sweetness and yellowish tint in the liquor [Chandrâ et AP Das 0265].
10. *Scoparia dulcis* L. [Scrophulariaceae; vern. *Barier, Mitha, Jangli Dhamia, Ghuma, Dar-chetowar*]: leafy twigs; to improve the sweetness [Chandrâ et AP Das 069].
11. *Rauvolfia serpentina* (L.) Benthham ex Kurz [Apocynaceae; vern. *Nagbeli*]: bark of roots; develops a bitter taste [Chandrâ et AP Das 0556].
12. *Artocarpus heterophyllus* Lamarck [Moraceae; vern. *Kathar, Kanthal*]: leaves; improves sweetness and produce a yellowish tint in the liquor [Chandrâ et AP Das 0303].
13. *Wattakaka volubilis* (L.f.) Stapf (= *Dregea volubilis* (L.f.) Benthham ex Hook.f.) [Asclepiadaceae; vern. *Chhit Larang*]: bark of stem; develops a bitter taste [Chandrâ et AP Das 0264].

In addition, few old *Rānu Dābāi* tablets are also added to the preparation.

Out of the recorded thirteen species of plants five [i.e. *Oryza sativa*, *Coccinia grandis*, *Plumbago zeylanica*, *Vernonia cinerea* and *Clerodendrum viscosum*] are must for the preparation of a good quality of starter mixture. Powdered grains (*gundā*) of *Oryza sativa* form the medium and bulk of the product. If the roots of *Rauvolfia serpentina* is available in sufficient quantity then it will replace *Coccinia grandis*.

However, sometimes, in emergency they use only the bark of *Wattakaka volubilis*. This plant is rare but most of the other plants are easily available in the locality.

Except the above mentioned five plants, the uses of other plants depend on the likings of the users and availability. These plants are taste or colour or smell enhancers. Use of a species of *Stephania* improves the storage quality of *Rānu Dābāi*. But, its use is very rare as the rate of consumption is very high and only few people are expert in good quality starter production.

Instead of measuring the weight of any plant materials they use an arbitrary amount which they have learnt from their experience. Again, the proportion of different plants varies according to the preferences of the manufacturer.

During demonstration the Tigga family started with 10 kg of rice. The weight of other four plants used by them are (i) roots of *Coccinia grandis*: c. 500 g; (ii) tips of *Clerodendrum viscosum*: c. 300 g; (iii) whole plant of *Vernonia cinerea*: c. 350 g and (iv) twigs of *Plumbago zeylanica* c. 250 g. Tiggas generally do not use other plants. But, the enquiry revealed that c. 300 g of *Rauvolfia serpentina* roots can replace *Coccinia grandis* roots. And, the remaining other plants are used in much less quantity i.e. 50 – 100 g only for 10 kg of rice. About 1 kg of the bark of *Wattakaka volubilis* is used if *Rānu Dābāi* made only with this plant.

13.9.5 The Method of Collection

1. Rice Grain: As most of these Tea Garden workers do not have land for paddy cultivation, they purchase low-priced raw-rice (rarely parboiled) from the market. It may not be of good quality but need to be free from insect infestation.

2. Plants: Oraons and Santhals collect these plants fresh from their surrounding locality. Generally, they do not use dried or preserved plants. Only the bark of *Wattakaka volubilis* is sometimes stored after drying. After collection, plants or plant parts are washed properly and spread under open sun for some time to remove the surface water. Except the dried bark of *Wattakaka volubilis*, other plants are not available in the market and except *Plumbago zeylanica* and *Rauvolfia serpentina* which are sometimes grown in their premises, all others are collected from the wild.

13.9.6 Preparation of *Rānu Dābāi*

Six distinct stages can be recognized in the process:

i. Washing of Rice and Storing of Wash-water: After cleaning the rice grains on a 'Soop', (a flat traditional utensil generally made of sliced bamboo) it is now taken in a vessel (made of clay/ metal/ PVC) for washing. Clean water (from dug-well/ tube-well) is poured in it, stirred and decanted. The decanted wash-water is preserved in a bucket for future use.

ii. Mixing and Grinding: It is done with a traditional wooden husking machine called 'Dhiki'. At first all freshly collected plant materials (i.e. except rice grains) are chopped and grounded properly and taken out on a 'Soop'. Rice grains are then put in the pit of

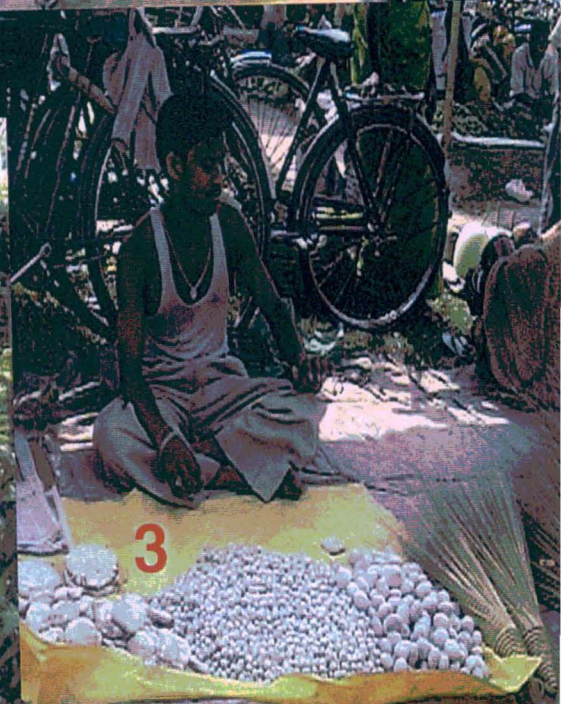


PLATE XVI: Ethnobotany: *Hariâ/ Jharâ* preparation:

1. All ingredients (except rice) assembled on a *Soop* (note the presence of chili & charcoal)
2. Drying *Ranu Dabai* under Sun after incubation
3. *Ranu Dabai* on sale in the market
4. Fermentation of rice is over (liquid visible on one side of the container is the *Hariâ*).
5. *Hariâ* is for sale
6. Oraons enjoying after consuming *Jharâ*.

Dhiki and when partially powdered a few (3 – 4 large tablets for 10 kg of rice) old *Rānu Dābāi* tablets are added. And after some time the plant paste is also added to it and allowed to mix properly. When the rice grains are properly powdered and mixed with plant paste, it is then taken out on a sieve (*Chakni*) and the coarse part is returned to the *Dhiki*. After completing the sieving, woody and fibrous materials are rejected.

iii. Tablet Preparation: The powdered material (*gūndā*) is now taken in a large vessel (*Dikchi*) and made into paste using the previously stored rice wash-water. The paste become slightly greenish-white and emits the smell of mixed herbage.

Clean gunny-bags are then spread on the floor under shade or inside the rooms. There is no dice for preparing the tablets but are completely hand-made. The standard size is 4.5 – 7 cm in diameter, which is arranged in rows on the gunny where these are kept for 40 – 60 minutes. Here the tablets loose some amount of water and become little tough. Some people produce very small tablets of around 1.5 – 2 cm in diameter or rarely some giant tablets of 14 – 15 cm in diameter.

iv. Incubation: It is done inside a large basket (*Dhakiya*) made of sliced bamboo. Clean and dry straw is spread on the bottom of the basket and some tablets are kept on it. These are then covered with straw and another layer of tablets are kept on it. The process is repeated until the basket is full. And then, a larger amount of straw is added at the top. The entire set is now covered with polythene sheet and/or gunny and stored in a dark and warm place. Depending on the ambient temperature, the incubation period varies from 2 – 3 days in warm season and 4 – 6 days in winter. The inside temperature will rise considerably (*bukhar*) and the set will start emitting pungent *Hārhiā*-like smell. During this a layer of cottony mycelia will develop on the tablets. The fungal mycelia may produce a mat of black sporangia in damp weather or if stored for a slightly longer period.

v. Drying: Now, the tablets will be taken out of the basket and will be kept in single layer on large sized circular flat bamboo basket called ‘*dāgrā*’ and get dried under the sun for 7 – 8 days. Now the *Rānu Dābāi* is ready for storing and for use.

The average size and weight of these dry tablets are presented in Table 1.

Table 13.3. Average size and dry weight of marketed *Rānu Dābāi* in Terai of Darjiling.

Average diameter in cm	Average thickness in cm	Average weights in g
14.5	0.8	112.79
6.00	0.65	24.28
1.5	1.5	1.67

vi. Storing: Dried *Rānu Dābāi* is kept in small bamboo baskets and stored in a dry place. These can be stored upto one year.

13.9.7 Preparation of *Jhārā*

It is not necessary that only the starter mixture (*Rānu Dābāi*) manufacturers will prepare *Jhārā* or *Hārhiā*. Other people purchase these tablets and produce *Jhārā* for domestic consumption and/or for sale. The process is having following steps:

- i. **Boiling of rice:** generally low priced raw rice grains are taken, washed properly and boiled in water so that it need not to be decanted when the grains will be very soft.
- ii. **Adding Starter Mixture:** it is generally done in a metallic or earthen container (the fermenter) with a wide bottom to facilitate the proper spreading of the boiled rice. *Rānu Dābāi*, at the rate of one large-sized (or 6 – 8 small) tablet per kilogram of rice is taken, powdered on a clean surface and then mix the same with the cooked rice on a *Soop*. After proper mixing it is then transferred to the fermenter. A little amount of water is also added to this mixture.
- iii. **Incubation:** the lid for the fermenter is placed properly and the entire set is covered to keep it warm. The total incubation period varies from 3 – 5 days depending on the ambient temperature. When the fermented stock will produce a strong alcoholic smell then it is ready for use.
- iv. **Diluting the Fermented Stock:** The fermented stock is then diluted with drinking water at the rate of 5 litre per kilogram of rice.

And, now the *Jhārā* or *Hārhiā* is ready for consumption.

13.9.8 The Safety Rites

Though the practice of only one rite has been observed during the entire process but they maintain it very seriously. They always keep ‘one or few dry chillies and a piece of charcoal’ on the raw materials and on products of different steps of the entire process. They believe that it will keep all the evil forces away which may damage the product or deteriorate its quality.

13.10 Fodder Plants

Man domesticated many animals in their own interest. They keep herbivores like cows, buffelows, horses, donkeys, goats, sheeps, pigs, elephants, etc along with themselves in their own habitat. For maintaining these animals they need a good amount of fodder which they need to collect mostly from the nearby vegetation. Also, they grow some plants like *Ficus hookeriana*, *Artocarpus heterophyllus*, *Artocarpus lacucha*, *Brassaiopsi hainla*, *Sauraja nepalensis*, etc. near their houses or settlements. It is very difficult to record all the fodder plants available in the area as majority of the plants are browsed by one or the other herbivorous animal. The present record

is from the fresh stock of collected fodder from the natural habitat and in consultation with the persons engaged in the collection of fodder. They

Table 13.4: List of plants used as fodder by Tea garden workers in Darjiling Hills and Terai in West Bengal.

[Abbreviations used: G = Gungaram T.E., H = Hansqua T.E., K = Kamalpur T.E., M = Matigara T.E., Mo = Mohurgong & Gulma T.E., Mk = Makaibari T.E., S = Soom T.E., T = Tamsong T.E., NK = Not Known]

Sl. No.	Plants	Local Name	T.E. where recorded	Edible plant parts
01.	<i>Acmella calva</i> [Asteraceae]	Kalijhar	G, H, Mo, Mk, T	Whole plant for pigs
02.	<i>Aconogonum molle</i> [Polygonaceae]	Thotney	Mk, S, T	Shoot
03.	<i>Alstonia scholaris</i> [Apocynaceae]	Chhatiwan	G, H, K, Mo, Mk	Leaves for pigs
04.	<i>Alternanthera sessilis</i> [Amaranthaceae]	Gudru saag, Nunia saag	G, H, K, M	Shoot
05.	<i>Amaranthus viridis</i> [Amaranthaceae]	Khudi bhaji	G, H, K	Shoot
06.	<i>Annona reticulata</i> [Annonaceae]	Nona	G, H, M, Mo	Leaves
07.	<i>Annona squamosa</i> [Annonaceae]	Ata	G, H, K, M, Mo	Leaves
08.	<i>Artocarpus heterophyllus</i> [Moraceae]	Kathar, Kanthal	G, H, M, Mo, Mk	Leaves
09.	<i>Artocarpus lacucha</i> [Moraceae]	Dahua, Dewa	G, Mo, Mk	Leaves
10.	<i>Axonopus compressus</i> [Poaceae]	Chepti	G, H, K, M, Mo, Mk, S, T	Entire shoot
11.	<i>Bambusa spp.</i> [Poaceae]	Bansh	G, H, K, M, Mo, Mk, S, T	Leaves
12.	<i>Bauhinia purpurea</i> [Caesalpiniaceae]	Kochnar, Taki	G, H, K, M, Mo, Mk	Leaves
13.	<i>Bauhinia variegata</i> [Caesalpiniaceae]	Koiralo	G, H, K, Mo, Mk, T	Leafy shoot
14.	<i>Bidens pilosa</i> [Asteraceae]	Kuro	G, H, Mo, Mk, S, T	Whole plants for pigs
15.	<i>Bischofia javanica</i> [Bischofiaceae]	Kainjal	G, H, K	Fruits by monkeys
16.	<i>Boehmeria macrophylla</i> [Urticaceae]	Kamli	Mk, S, T	Leaves
17.	<i>Boehmeria rugulosa</i> [Urticaceae]	Daar	G, Mo, Mk, T	Foliage
18.	<i>Brassaiopsi hainla</i> [Araliaceae]		Mk, S, T	Foliage
19.	<i>Canna edulis</i> [Cannaceae]	Phul tarul	G, H, K, M, Mo, Mk, S, T	Whole plant
20.	<i>Coix lachryma-jobi</i> [Poaceae]	Ghanrey mala	H, K, M, Mo, Mk, S	Whole plant
21.	<i>Commelina benghalensis</i> [Commelinaceae]	Kanchira, Kana sag	G, H, K, Mk	Whole plant

22.	<i>Cynodon dactylon</i> [Poaceae]	Dubo, Dubba	G, H, K, M, Mo, Mk, S, T	Whole plant
23.	<i>Dillenia indica</i> [Dilleniaceae]	Panchphal, Mechiaphal	G, H, K, Mo, Mk	Foliage
24.	<i>Dillenia pentagyna</i> [Dilleniaceae]	Tantari	G, H, K, Mo, Mk	Leaves
25.	<i>Dioscorea alata</i> [Dioscoreaceae]	Arukanda, Nappakanda, Gethikanda, Torul	G, H, K, Mk, S	Rhizome
26.	<i>Ehretia acuminata</i> [Ehretiaceae]	NK	G, H, K, M,	Leaves; Fruits by monkeys
27.	<i>Eleusine indica</i> [Poaceae]	Nun-marua, Suyarmerewa	G, H, K, M, Mk	Whole plant
28.	<i>Equisetum debile</i> [Equisetaceae]		G, , Mo, Mk, S, T	Whole plant
29.	<i>Ficus benghalensis</i> [Moraceae]	Bar, Bot	G, H, K, M, Mo, Mk	Leaves
30.	<i>Ficus benjamina</i> [Moraceae]	Kabra	G, H, K, Mo, Mk	Foliage
31.	<i>Ficus hispida</i> [Moraceae]	Dumur, Khasray	G, H, Mo, Mk, T	Leaves
32.	<i>Ficus hookeriana</i> [Moraceae]	NK	Mk, S, T	Leaves
33.	<i>Ficus neriifolia</i> [Moraceae]	Dudhilo	Mk, S, T	Leaves
34.	<i>Ficus religiosa</i> [Moraceae]	Pipal	G, H, Mk	Leaves
35.	<i>Girardinia diversifolia</i> [Urticaceae]	Vangre Sishnu	Mk, S, T	Leaves after boiling
36.	<i>Imperata cylindrica</i> [Poaceae]	Siru	G, H, K, M, Mo, Mk, S, T	Leaves
37.	<i>Litsea glutinosa</i> [Lauraceae]	Meda, Kawala	H, K, Mo, Mk	Leaves
38.	<i>Mangifera indica</i> [Anacardiaceae]	Aam	G, H, K, M, Mo, Mk	Leaves
39.	<i>Mikania micrantha</i> [Asteraceae]	Mikenia, Badmash larang	G, H, K, M, Mo, Mk, S, T	Whole plant
40.	<i>Murraya paniculata</i> [Rutaceae]	Bajradanthi	G, H, K, Mk	Foliage
41.	<i>Morus macroura</i> [Moraceae]	Kimbu, Bola	Mk, S	Leaves
42.	<i>Musa bulbisiana</i> [Musaceae]	Kera, Kela	G, H, K, M, Mo, Mk, S, T	Leaves, pseudostem
43.	<i>Oroxylum indicum</i> [Bignoniaceae]	Totala	G, H, K, M, Mo, Mk, S, T	Foliage
44.	<i>Oryza sativa</i> [Poaceae]	Chaule, Chawor	G, H, K, M, Mo, Mk, S, T	Grains, straw
45.	<i>Persicaria chinensis</i> [Polygonaceae]	NK	G, H, Mo, Mk, S, T	Whole plant
46.	<i>Rumex nepalensis</i> [Polygonaceae]	Halhalay	Mk, S, T	Leaves, inflorescence
47.	<i>Sauraja nepalensis</i> [Saurajaceae]	Gagun	Mo, Mk, S, T	Leaves
48.	<i>Setaria palmifolia</i> [Poaceae]	Bashpata, Dhotisara	G, H, K, Mo, Mk, S, T	Whole plant
49.	<i>Streblus asper</i> [Moraceae]	Kakshi	G, H, K	Leaves for goates

50	<i>Syzygium cumini</i> [Myrtaceae]	Jamuna	G, H, K	Leaves
51	<i>Tetradium fraxinifolium</i> [Rutaceae]	Khanakpa	Mk, S, T	Leaves
52	<i>Thysanolaena latifolia</i> [Poaceae]	Phul jharu, Amliso	G, H, K, Mo, Mk	Whole plant
53	<i>Tinospora cordifolia</i> [Menispermaceae]	Gurjo lahara	G, H, K	Succulent stem, improves lactation
54	<i>Trema orientalis</i> [Ulmaceae]	Khas-khasia	G, H, K, Mk	Leaves
55	<i>Trifolium repens</i> [Fabaceae]	NK	Mk, S, T	Whole plant
56	<i>Urtica dioica</i> [Urticaceae]	Sishnu	Mk, S, T	Leaves after boiling
57	<i>Urtica parviflora</i> [Urticaceae]	Sishnu	Mk, S, T	Leaves after boiling

Through this exercise, as much as 57 species of plants has been recorded which were represented by 46 genera, one pteridophytic family, four monocotyledonous families and 22 dicotyledonous families. These include plants of almost all habit groups and wide variety of morphological organs of plants. These include some poisonous plants like species of *Girardinia*, *Urtica* etc. Nettles are boiled with water and common salt before serving those to the cattles. These plants are actually very good fodders and increase milk output. Some naturalized exotic plants like *Axonopus compressus*, *Trifolium repens*, *Annona reticulate*, *Annona squamosa*, *Canna edulis*, *Mikania scandens* etc are good fodders and local people regularly collect first two of these plants specially for the lactating cows.

13.11 Medicinal & Aromatic Plants

From the Ethnobotanical survey among the workers in eight Tea Gardens of the region a large number of Medicinal and Aromatic Plants has been recorded. Table 13.5 recorded the information from five Terai gardens [*Gungaram Tea Estate*, *Hansqua Tea Estate*, *Kamalpur Tea Estate*, *Matigara Tea Estate* and *Mohugong & Gulma Tea Estate*] and Table 13.6 recorded information from hills Tea Gardens [*Makaibari Tea Estate*, *Soom Tea Estate* and *Tamsong Tea Estate*].

Table 13.5: Medicinal & aromatic plants used by the workers in Terai Tea Gardens in Darjiling.

[**Abbreviations used:** G = Gungaram T.E., H = Hansqua T.E., K = Kamalpur T.E., M = Matigara T.E., Mo = Mohurgong & Gulma T.E., Bk = Bark, Fl = Flower, Fr = Fruit, Lf = Leaf, Rt = Root, Rhz = Rhizome, Sd = Seed, Sht = Shoot, St = Stem, Tg = Twig, WP = Whole Plant, Yng = Young]

Sl. No.	Plants [Families]	Local Name	T.E. where recorded	Parts Used	Purpose of use
01.	<i>Acacia catechu</i> [Mimosaceae]	Khair	G, H, K, M, Mo	Bk, Rt	Leucorrhoea, chest pain, menstrual complaints, diarrhea, gonorrhoea, bronchitis, facilitate child

					birth, astringent, toothache, dysentery, mouth sores, asthma
02.	<i>Achyranthes aspera</i> [Amaranthaceae]	Chitchithii	G, H, K, M, Mo	Lf,Rt, Sd	Bites of poisonous insects, wasps, bees; diarrhea, haemorrhoids, cough, abortion; Bleeding piles
03.	<i>Achyranthes bidentata</i> [Amaranthaceae]	Chitchithii	G, H, K, M, Mo	Rt	Abortion
04.	<i>Acmella calva</i> [Asteraceae]	Jangjurbi, Jurbula, Jariphul	G, H, K, M, Mo	Whole plant, Capitula	Dysentery, scabies, throat infection, purgative, tongue paralysis; toothache
05.	<i>Acorus calamus</i> [Acoraceae]	Boch, Bojo, Ghorbaj	G, H, K, M, Mo	Rz	Respiratory troubles, antipyretic, fever; increases memory,
06.	<i>Adiantum capellsveneris</i> [Adiantaceae]	Unew	G, H, K, M, Mo	Lf	Strangury, dysentery, blood, diseases, ulcers, erysipelas, epileptic fits. Treating irregular menstruation
07.	<i>Aegle marmelos</i> [Rutaceae]	Bael, Bel	G, H, K, M, Mo	Lf, Fr	Digestive disorders, astringent, dysentery, diarrhea, eye trouble, cholera, fever, gastric trouble, constipation, diabetes, abdominal pain, urinary trouble, heart palpitation, ophthalmia, piles, restorative, laxative
08.	<i>Ageratum conyzoides</i> [Asteraceae]	Ilamay jhar, Dochunti	G, H, K, M, Mo	Lf	Diarrhoea , dysentery, intestinal colic with flatulence; rheumatism, fever; leaves & salt to prevent tetanus, leprosy & other cutaneous disease; eye lotion, antilithic; cuts , wounds, sores; prevent stone formation
09.	<i>Ageratum houstonianum</i> [Asteraceae]	Bhusuri pata	G, H, K, M, Mo	Lf	Etching problem in rainy season, fever and cough
10.	<i>Albizia lebbek</i> [Mimosaceae]	NK	G, H, K, M, Mo	Sd, Bk	Diarrhea, dysentery, eye complaints, piles, gonorrhoea, ulcer
11.	<i>Albizia odoratissima</i> [Mimosaceae]	NK	G, H, K, M, Mo	Bk	Intermittent fever
12.	<i>Aloe barbadensis</i> [Liliaceae]	Ghiukumari	G, H, K, M, Mo	Lf	Dyspepsia, piles, eczema, dysentery, constipation, diarrhea, brain tonic, menstrual suppressions
13.	<i>Alstonia scholaris</i> [Apocynaceae]	Chhatim, Chhatiwan	G, H, K, M, Mo	Ltx, Wd, Bk	Fever, malaria, ulcers, diarrhea, sinusitis, leprosy, strengthens teeth; tumours, rheumatic pains, sores, toothach, ear drop; rheumatism, wounds;

					snake & scorpion bites, febrifuge in treating malaria, ulcers; pain during pregnancy & clearing blood, bodyache, worms, indigestion, appetizer
14.	<i>Alternanthera peronichoides</i> [Amaranthaceae]	Sanchi	G, H, K, M, Mo	Sht	Fever, galactagogue
15.	<i>Ammannia baccifera</i> [Lythraceae]	Amber	G, H, K, M, Mo	Lf	Rheumatic pain, fevers, skin diseases, appetizer, laxative, stomachic, blood problems, aphrodisiac, strangury
16.	<i>Amorphophallus paeoniifolius</i> [Araceae]	Ban-ol	G, H, K, M, Mo	Rhz, Lf	Appetizer
17.	<i>Ananus comosus</i> [Bromeliaceae]	Anaras, Bhui Kathar	G, H, K, M, Mo	Fr, Lf	Menstruation, urinary & digestive problems, worms, nervous exhaustion
19.	<i>Andrographis paniculata</i> [Acanthaceae]	Kalomegh	G, H, K, M, Mo	Lf	Dysentery, dyspepsia, bronchitis, diabetes, itches, influenza, liver trouble, jaundice, piles, deworming, constipation, fever
20.	<i>Anona reticulata</i> [Annonaceae]	Nona	G, H, K, M, Mo	Bk, Lf, Fr	Blood complaints, fever, dysentery, tonic and maturant
21.	<i>Annona squamosa</i> [Annonaceae]	Ata	G, H, K, M, Mo	Lf, ripe Fr	Drastic purgative, tumours, dysentery, depression, spinal disease, boils
22.	<i>Argemone mexicana</i> [Papaveraceae]	Siyalkanta	G, H, K, M, Mo	Rt, Sd, latex	skin diseases, piles, emetic, laxative, expectorant, warts, demulcent, cough, asthma, eczema, itching, antiviral, anthelmintic, tumours, cancer
23.	<i>Artemisia indica</i> [Asteraceae]	Titepati	G, H, K, M, Mo	Lf	Ulcers, inflammations, intestinal worms, lack of appetite, leprosy, fever
14.	<i>Artocarpus lacucha</i> [Moraceae]	Dahua, Dewa, Borhar	G, H, K, M, Mo	Latex	Pneumonia in children, worm, dysentery, externally on mumps
25.	<i>Averrhoa carambola</i> [Averrhoaceae]	Kamranga	G, H, K, M, Mo	Fr	Jaundice
26.	<i>Azadirachta indica</i> [Asteraceae]	Neem	G, H, K, M, Mo	Lf, Fr, Bk, oil	Vomiting, Burning sensation, fever, ophthalmia, skin disease, leprosy, piles, jaundice, blood sugar, cough, asthma, toothache, ulcers, urinary diseases
27.	<i>Bacopa monnieri</i> [Scrophulariaceae]	Brahmi	G, H, K, M, Mo	Leafy Tg	Brain tonic, nervine tonic, asthma, tonsil, epilepsy, hoarseness, improves memory
28.	<i>Bambusa</i> sp. [Poaceae]	Bans	G, H, K, M, Mo	water inside	Nocturnal bed wet and nocturia

				stem	
29.	<i>Bauhinia purpurea</i> [Caesalpiniaceae]	Koirala	G, H, K, M, Mo	Bk	Astringent, smallpox, rheumatism, dropsy, bone fracture, stomachic
30.	<i>Bauhinia variegata</i> [Caesalpiniaceae]	Tanki	G, H, K, M, Mo	Lf, Bk	Piles, dysentery, leprosy, indigestion, ulcer, obesity, syphilis, tumours, constipation, depurative, vulnerary, antiinflammatory
31.	<i>Biophytum sensitivum</i> [Oxalidaceae]	Rani Lajjabati	G, H, K, M, Mo	WP	Urinary calculi, snake bite, asthma, wounds, hyperdipsia in bilious fever, gonorrhoea
32.	<i>Bischofia javanica</i> [Euphorbiaceae]	Kainjal	G, H, K, M, Mo	Bk	Antipyretic
33.	<i>Boerhavia coccinea</i> [Nyctaginaceae]	Punamava	G, H, K, M, Mo	WP, Rt	Decoration of plant is beneficial in oedema, dropsy. Root in Jaundice, ascities
34.	<i>Bombax ceiba</i> [Bombacaceae]	Simal	G, H, K, M, Mo	Gum, Fl	Aphrodisiac, cholera, stimulant, nerve tonic, haemorrhage, asthma, leprosy, digestive disorder, anemia, chickenpox, leucorea
35.	<i>Bridelia retusa</i> [Euphorbiaceae]	Gayo	G, H, K, M, Mo	Lf, Rt	Diarrhoea, gargle, astringent, rheumatism
36.	<i>Cajanus cajan</i> [Fabaceae]	Arhar	G, H, K, M, Mo	Sd, Lf	Nutritious; jaundice
37.	<i>Callicarpa arborea</i> [Verbenaceae]	Gwelo	G, H, K, M, Mo	Bk, St	Skin diseases, gastric complaints, fever, masticatory, scorpion bite, pneumonia
38.	<i>Calotropis gigantea</i> [Asclepiadaceae]	Akoyan, Akunda, Aank	G, H, K, M, Mo	Ltx, Lf, Rt	Cardiac asthma, headache
39.	<i>Camellia sinensis</i> [Theaceae]	Chia, Chha	G, H, K, M, Mo	Lf, Rt	Food poisoning, vomiting, eyesores, conjunctivitis, sun burns; mumps
40.	<i>Cannabis sativa</i> [Cannabaceae]	Bhengri, Bhang	G, H, K, M, Mo	Lf, Fl	Sedative; Veterinary problems
41.	<i>Cardamine hirsuta</i> [Brassicaceae]	Baurai	G, H, K, M, Mo	WP	Cough & cold
42.	<i>Cassia alata</i> [Caesalpiniaceae]	Thuletapre, Baro chakar	G, H, K, M, Mo	Sd, Lf	Wounds, cuts, itching problems, arthritis and other pains
43.	<i>Cassia fistula</i> [Caesalpiniaceae]	Sonalu, badarlathi	G, H, K, M, Mo	Rt, Lf, bud, Fr pulp	Strong purgative, skin diseases, leprosy, jaundice, tuberculous, syphilis, abdominal pain, high blood pressure, epilepsy, constipation of TB patient , asthma, antifertility, antiseptic

44.	<i>Cassia occidentalis</i> [Caesalpiniaceae]	Tapray, Kalkasunda	G, H, K, M, Mo	Rt, Lf	Ringworm, scorpion sting, elephantiasis; aphrodisiac, hiccough, alesecteric, asthma, eyesore, typhoid, haematuria, rheumatism, hemoglobin disorder, hysteria, diuretic, inflammation of rectum; purgative, skin diseases, antiperiodic
45.	<i>Cassia sophera</i> [Caesalpiniaceae]	Tapray, Chhoto Kalkasunda	G, H, K, M, Mo	Lf, St, Fl	A substitute of <i>Cassia occidentalis</i>
46.	<i>Cassia tora</i> [Caesalpiniaceae]	Chhoto chakar, Chakra sag	G, H, K, M, Mo	Lf	Dried leaf powder used in soup to reduce body pain
47.	<i>Catharanthus roseus</i> [Apocynaceae]	Nayantara	G, H, K, M, Mo	Lf, Fl	Leukemia, diabetes
48.	<i>Centella asiatica</i> [Apiaceae]	Thankuni, Beng saag	G, H, K, M, Mo	Lf, WP	Indigestion, dysentery, fever, stomach trouble, fatigue, bloodless, ulcer of mouth, weakness, loss of memory, cough, leprosy, excessive sweats, jaundice, constipation
49.	<i>Chenopodium album</i> [Chenopodiaceae]	Bhatua saag	G, H, K, M, Mo	Yng Sht	Dysentery, amaenia, parasites, Hook worm & Round Worm
50.	<i>Chenopodium ambrosoides</i> [Chenopodiaceae]	Chandan beto	G, H, K, M, Mo	WP	Parasites - hook worm, round worm
51.	<i>Chromolaena odoratum</i> [Asteraceae]	Assamia	G, H, K, M, Mo	Lf	Cough
52.	<i>Cinnamomum tamala</i> [Lauraceae]	Tejpata	G, H, K, M, Mo	Bk, Lf	Gonorrhoea, diarrhoea, cough
53.	<i>Cissus quadrangularis</i> [Vitaceae]	Harjore	G, H, K, M, Mo	St	Bowel complaints, wounds, burns, scurvy, asthma, fracture of bone, dysentery
54.	<i>Citrus medica</i> [Rutaceae]	Nimbu, lebu, bimbira	G, H, K, M, Mo	Rt, Fr	anthelmintic, diarrhoea, dysentery, stomach problems; boiled fruit juice for cattle food poisoning
55.	<i>Cleome rutidosperma</i> [Cleomaceae]	Torel	G, H, K, M, Mo	WP	Jaundice, blood purifier
56.	<i>Clerodendrum indicum</i> [Verbenaceae]	Brahmajasti	G, H, K, M, Mo	Lf, Rt	Asthma, cold, cough, worm, remittent fever, venereal disease, rheumatism
57.	<i>Clerodendrum viscosum</i> [Verbenaceae]	Ghato, Vhauti	G, H, K, M, Mo	Lf, Rt, Fr	Worms, fever, colic pain, aphrodisiac, antipyretic, burning sensation, biliousness, anthelmintic, , foul odour, leucoderma blood diseases; dysentery; hasten suppuration of boils & abscesses; cough and

					cold, contraceptive; skin diseases, itching; veterinary problems
58.	<i>Clitoria ternatea</i> [Fabaceae]	Aparajita	G, H, K, M, Mo	Sd	Brain tonic
59.	<i>Coix lachryma-jobi</i> [Poaceae]	Ghanrey mala	G, H, K, M, Mo	Rt	Anthelmintic, wormifuge
60.	<i>Colocasia esculenta</i> [Araceae]	Kalo kachhu	G, H, K, M, Mo	Lf	Cough, wounds
61.	<i>Commelina benghalensis</i> [Commelinaceae]	Kanchira, Kana saag	G, H, K, M, Mo	WP	leprosy, dropsy, rheumatic pain, ringworm, eczema; Juice is an antidote to snake bite
62.	<i>Costus speciosus</i> [Costaceae]	Kemuk	G, H, K, M, Mo	Rz	Cough, cold, fever, skin diseases
63.	<i>Crassocephalum crepidioides</i> [Asteraceae]		G, H, K, M, Mo	Lf	Cuts and wounds
64.	<i>Crotalaria retusa</i> [Fabaceae]	Atasi	G, H, K, M, Mo	WP	Astringent, digestive, expectorant, febrifuge, dyspepsia, leprosy
65.	<i>Curculigo orchioides</i> [Hypoxidaceae]	Kalo musali, Talmuli	G, H, K, M, Mo	WP	Aphrodisiac, appetizer, diseases of blood, bronchitis, indigestion, diarrhoea, gonorrhoea, joint pains, jaundice, asthma
66.	<i>Curcuma amada</i> [Zingiberaceae]	Amada, Jangli hardi	G, H, K, M, Mo	Rz	Digestion trouble, diabetes, asthma, ulcer on panis, sprains, bronchitis, cough
67.	<i>Curcuma aromatica / caesia</i> [Zingiberaceae]	Bon hardi, Kalo Haldi	G, H, K, M, Mo	Rz	Aromatic, carminative, stimulant, rheumatic pain, sprains, anemia, weakness
68.	<i>Curcuma longa</i> [Zingiberaceae]	Hardi	G, H, K, M, Mo	Rz	Stomachic, antiperiodic, antirheumatic, antiseptic, carminative, auralmintic
69.	<i>Curcuma zedoaria</i> [Zingiberaceae]	Pila hardi	G, H, K, M, Mo	Rz	Food poisoning, jaundice, blood purifier, dropsy, skin diseases
70.	<i>Cuscuta reflexa</i> [Cuscutaceae]	Banda larong, Amar lata, Swarnalata	G, H, K, M, Mo	WP	Skin diseases, jaundice, diabetes
71.	<i>Cymbopogon nardus</i> [Poaceae]	Citronella ghash	G, H, K, M, Mo	Lf	Leprosy, insecticidal
72.	<i>Cynodon dactylon</i> [Poaceae]	Dubo, Dubba	G, H, K, M, Mo	Leafy Sht	Leucorrhoea, wounds, cuts, leprosy, fever, dysentery, vomiting, skin diseases, bodyache
73.	<i>Cyperus rotundus</i> [Cyperaceae]	Mutha	G, H, K, M, Mo	Rt stock	Dysentery, wounds, epilepsy, loss of appetites, weight loss, from digestive troubles in new born babies, gas, colic, gripes, diarrhea, constipation, intestinal worms
74.	<i>Dalbergia sissoo</i> [Fabaceae]	Sishu	G, H, K,	Lf, Sd	Gonorrhoea, dysentery,

			M, Mo		skin disease, leprosy
75.	<i>Datura metel</i> [Solanaceae]	Dhutura	G, H, K, M, Mo	Sd, Lf, Rt	Diarrhea, antipyretic, sores, antiseptic, insanity, cuts, wounds
76.	<i>Datura stramonium</i> [Solanaceae]	Dhutura	G, H, K, M, Mo	Sd, Lf	Pain, fever, dog's bite, worms, dysentery, asthma
77.	<i>Desmodium triflorum</i> [Fabaceae]	Kodialia	G, H, K, M, Mo	Lf	Wounds, abscesses, indolent sores and itch, cough in children
78.	<i>Dillenia indica</i> [Dilleniaceae]	Panchphal, Chalta		Fr	Dyspepsia, bronchitis, expectorant, arthritis, laxative, appetizer
79.	<i>Dioscorea alata</i> [Dioscoreaceae]	Arukanda, Gethikanda, Toral	G, H, K, M, Mo	Rz	Medicinal
80.	<i>Dioscorea deltoidea</i> [Dioscoreaceae]	Githa lahara, Tarul, Ban tarul, Kukkur tarul, nappakanda	H	Rt tuber	Birth control, fever, improving sex hormone, rheumatism, rheumatic fevers, arthritis, eye & ear troubles, breast cancer, monopause problems, uterine bleeding; anemia during pregnancy
81.	<i>Dioscorea pentaphylla</i> [Dioscoreaceae]	Bhegur	G, H, K, M, Mo	Rz	Gastric disorders, pains, contraceptive, allergic fevers. Veterinary problems
82.	<i>Drymaria cordata</i> ssp. <i>diandra</i> [Caryophyllaceae]	Abijalo	G, H, K, M, Mo	WP	Nasal congestion
83.	<i>Eclipta prostrata</i> [Asteraceae]	Keshut	G, H, K, M, Mo	Leafy Tg, Rt	Jaundice, fever, skin diseases, asthma, bronchitis, hair colour, black spots on face
84.	<i>Elephantopus scaber</i> [Asteraceae]	Gajalata	G, H, K, M, Mo	Rt, Lf, Fl	Diarrhoea, bronchitis
85.	<i>Eleusine indica</i> [Poaceae]	Nunmarua, Suyarmerewa	G, H, K, M, Mo	WP	Stomachache; Veterinary problems
86.	<i>Embllica officinalis</i> [Euphorbiaceae]	Amloki, Aonla, Amala	H, K, M, G	Fr	Fever, vomiting, acidity, leucorrhoea, diabetes, bronchitis, asthma, anemia, constipation, dropsy, liver problem, dysentery, piles, headache, inflammation, urinary discharge
87.	<i>Enydra fluctuans</i> [Asteraceae]	Hinche saag	G, H, K, M, Mo	Yng Sht	Med
88.	<i>Equisetum debile</i> [Equisetaceae]	NK	G, H, K, M, Mo	Under-ground St	Vet
89.	<i>Equisetum diffusum</i> [Equisetaceae]	Kurkury jhar	G, H, K, M, Mo	Leafy Sht	Urinary trouble, yellow fever, coolant in gonorrhoea, bedwets in children
90.	<i>Erythrina stricta</i> [Fabaceae]	Phaledo, Madar	G, H, K, M, Mo	Yng Lf	Injury like twisting of limbs in cattle

91.	<i>Euphorbia hirta</i> [Euphorbiaceae]	NK	G, H, K, M, Mo	WP	Dysentery, colic pain; destroy warts; chronic bronchial affection, chiefly in children, worms, asthma, often in gonorrhoea
92.	<i>Euphorbia royleana</i> [Euphorbiaceae]	Sheonri, Sulu	G, H, K, M, Mo	St	Cathartic, anthelmintic, weakness
93.	<i>Euphorbia tirucalii</i> [Euphorbiaceae]	NK		St	Parasites, hook worm, round worm
94.	<i>Ficus benghalensis</i> [Moraceae]	Bar, Bot	G, H, K, M, Mo	Ltx	Latex used for male disease
95.	<i>Ficus hispida</i> [Moraceae]	Khasrey	G, H, K, M, Mo	Bk, Fr	Purgative, emetic galactagogue, facilitate calf-laying, ulcer
96.	<i>Ficus religiosa</i> [Moraceae]	Pipla	G, H, K, M, Mo	Bk	Sores, burns
97.	<i>Gmelina arborea</i> [Verbenaceae]	Gamari	G, H, K, M, Mo	Rt, Lf, Bk, Fl	Antiseptic, bone fracture, blood purifier, cholera, diarrhea, dyspepsia, dropsy, rheumatism, syphilis, small pox, cough, indigestion, seminal weakness
98.	<i>Hedyotis scandens</i> [Rubiaceae]	Bohri / Pinase lahara	G, H, K, M, Mo	Lf, Rt	Eye disease / troubles following childbirth; sprain, jaundice, tape worm
99.	<i>Heliotropium indicum</i> [Boraginaceae]	Hatisunr	G, H, K, M, Mo	Lf	Fever, ulcer, local inflammations, eye diseases, blood purifier
100	<i>Holarrhena pubescens</i> [Apocynaceae]	Khirra	G, H, K, M, Mo	Bk	Dysentery
101	<i>Hydrocotyle sibthorpioides</i> [Apiaceae]	Chhoto Beng Saag	G, H, K, M, Mo	WP	Med
102	<i>Hygrophila auriculata</i> [Acanthaceae]	Kulekhara	G, H, K, M, Mo	Yng Sht	Urinary affections, dropsy; diarrhoea, aphrodisiac, dropsy, gonorrhoea; emulcent, refrigerant, tonic, jaundice, urinary infections, anemia
103	<i>Hypericum japonicum</i> [Hypericaceae]	Simay jhar	G, H, K, M, Mo	WP	Used externally on inflammation
104	<i>Ichnocarpus frutescens</i> [Apocynaceae]	Dudhi lahara, Shyanulata	G, H, K, M, Mo	Rt, St, Lf	Cooling, aphrodisiac, thirst, vomiting, fevers, bilious; atropy, bleeding gums, convulsions, measles, night blindness
105	<i>Imperata cylindrica</i> [Poaceae]	Siru	G, H, K, M, Mo	Rhz	Med
106	<i>Ipomoea aquatica</i> [Convolvulaceae]	Kalmi saag	G, H, K, M, Mo	Yng Sht	Insomnia
107	<i>Ipomoea batatas</i> [Convolvulaceae]	Misti Alu, Ranga Alu	G, H, K, M, Mo	Lf, tuber, Rt	Scorpion sting, laxative
108	<i>Jasminum sambac</i> [Oleaceae]	Chameli	G, H, K, M, Mo	Lf, Fl	Med

109	<i>Jatropha curcas</i> [Euphorbiaceae]	Arendi	G, H, K, M, Mo	Fr, Sd	Oil in arthritis, chronic dysentery, fistula, urinary discharges, anaemia, purgative, skin diseases
110	<i>Justicia adhatoda</i> [Acanthaceae]	Baksa, Paksa pata	G, H, K, M, Mo	Lf, Sht with Fl	Bronchitis, cooling & purifier of blood, cold, cough, asthma, piles, diarrhea, dysentery, pox, ophthalmia, TB, acidity, indigestion, worm, heart disease
111	<i>Justicia gendarussa</i> [Acanthaceae]	Jagatmadan	G, H, K, M, Mo	WP	Haemostasis, blood dysentery, facial paralysis, internal haemorrhages, emetic, febrifuge
112	<i>Kalanchoe pinnata</i> [Crassulaceae]	Patharkuchi	G, H, K, M, Mo	Lf	Diabetes, cold, cough, stomach trouble, insect bites, diarrhea, vomiting, dysentery, inflammation
113	<i>Lagerstroemia reginae</i> [Lythraceae]	Jarul	G, H, K, M, Mo	Rt, Bk, Sd	Astringent, purgative, narcotic
114	<i>Lannea coromandelica</i> [Anacardiaceae]	Dabdabey, Ludhhi, Jiya	G, H, K, M, Mo	Bk	Dysentery, diarrhea, sores, swellings, chlorela, hydrocil, stomachache
115	<i>Lantana camara</i> [Verbenaceae]	Kuttush, Putush kata	G, H, K, M, Mo	Fr, Bk	Ulcerous wounds
116	<i>Leucas indica</i> [Lamiaceae]	Guma saag, Dandakalas	G, H, K, M, Mo	Fl, Sht	Stomach problems, cuts, snake bites, cold, rheumatism, headache, old sores
117	<i>Litsea glutinosa</i> [Lauraceae]	Meda, Kawala	G, H, K, M, Mo	Lf, Bk	Bone fracture
118	<i>Macaranga indica</i> [Euphorbiaceae]	Malata	G, H, K, M, Mo	Latex	Wounds
119	<i>Mallotus philippensis</i> [Euphorbiaceae]	Sindurey	G, H, K, M, Mo	Rt, Fr, Sd	Anthelmintic, carminative, appetizer, rheumatism, dysentery, boils, tonic, skin disease, constipation, ulcer
120	<i>Malvaviscus arboreus</i> [Malvaceae]	Jaba ful, Lanka-jaba	G, H, K, M, Mo	Bud	Male disease
121	<i>Mangifera indica</i> [Anacardiaceae]	Aam	G, H, K, M, Mo	Bk, Sd	Diarrhea, dysentery, haemorrhage
122	<i>Maranta arundinacea</i> [Marantaceae]	Arrowroot	G, H, K, M, Mo	Rhz	Astringent, refrigerant, tonic, aphrodisiac, dysentery, bronchitis, main ingredients in biscuits, cakes, puddings jellies and face powder
123	<i>Marsilea minuta</i> [Marsileaceae]	Susni	G, H, K, M, Mo	Lf	Brain tonic
124	<i>Mazus japonica</i> [Scrophulariaceae]	Atisar	G, H, K, M, Mo	WP	Cholera
125	<i>Melastoma malabathricum</i> [Melastomataceae]	Datrangi	G, H, K, M, Mo	Yng Sht, Bk, Rt	Pneumonia, children's fever, wounds, skin diseases

126	<i>Mentha arvensis</i> & <i>M. piperata</i> [Lamiaceae]	Pudina	G, H, K, M, Mo	WP	Indigestion, vomiting, diabetes, cold, cough, stomach trouble, stimulant, deodorant, antiseptic, carminative
127	<i>Mesua ferrea</i> [Clusiaceae]	Nageswar, Nagkesor	G, H, K, M, Mo	Fr, Fl, Sd, oil	Hiccough, halitosis, leprosy, dermatopathy, pruritus, haemoptysis, cephalagia; vitiated condition of skin disease; male & female sexual diseases
128	<i>Michelia champaca</i> [Magnoliaceae]	Chanp	G, H, K, M, Mo	Bk, Rt, Fl	Antifertility, inflammation, cholera, asthma, bronchitis, menstrual complaints, dysentery, fever, astringent, menorrhoea, mucus, sores, ulcers, boils, stimulant
129	<i>Mimosa pudica</i> [Mimosaceae]	Bohari jhar, Lajwanti	G, H, K, M, Mo	WP, Lf, Rt	Dysentery, "Kapha", biliousness, leprosy, dysentery, vaginal and uterine complaints, inflammation, burning sensation, fatigue, asthma, leucoderma, blood disease, iron deficiency, toothache
130	<i>Mimusops elangi</i> [Sapotaceae]	Bakul	G, H, K, M, Mo	Bk, Fl	Strangury, disease of gum & teeth, blood diseases, Symptom strong fever, headache, pain in the neck, spermatorrhoea
131	<i>Mirabilis jalapa</i> [Nyctaginaceae]	Jahajuhin, Krishna kali, Sandha- maloti	G, H, K, M, Mo	Lf, Rt	Strong purgative; stomachache, urticaria, aphradisiac
132	<i>Momordica charantia</i> [Cucurbitaceae]	Karela, uchhe	G, H, K, M, Mo	Unripe & ripe Fr, Lf	Diabetes, biliousness, blood diseases, anemia, strongly purgative, ulcers, colitis, appetizer, induces menstruation, antipyretic, liver problems, aphordisiac, anthelmintic
133	<i>Momordica dioica</i> [Cucurbitaceae]	Chetheli, Ban karela	G, H, K, M, Mo	Rt, Fr, Lf	Bleeding piles, high fever, snake bite, scorpion sting, antiseptic, blood diseases, asthma, ulcers, leprosy, bronchitis, heart troubles, urinary discharges, hiccup, aphordisiac, anthelmintic piles
134	<i>Morinda angustifolia</i> [Rubiaceae]	Hardi kat	G, H, K, M, Mo	Rt	Pruritus of toes, menstruation problems
135	<i>Moringa oleifera</i> [Moringaceae]	Sagna	G, H, K, M, Mo	Lf, Rt, Fl, Fr	Small pox
136	<i>Morus alba</i> [Moraceae]	Tunt	G, H, K,	Bk, Lf,	Throat sore, fever, heart,

			M, Mo	Fr	spleen, arthritis
137	<i>Mucuna pruriens</i> [Fabaceae]	Alkusi, Kewach	G, H, K, M, Mo	Pods, Sd, Rt	Anthelmintic, leucorrhoea, paralysis, nerve tonic, diuretic, urinary troubles, dropsy
138	<i>Murraya koenigii</i> [Rutaceae]	Karipata	G, H, K, M, Mo	Rt, Lf, Fr	Dysentery, eruptions, vomiting, kidney pain, & as an astringent
139	<i>Musa bulbisiana</i> [Musaceae]	Kera, Kela	G, H, K, M, Mo	Rz	A piece of root tagged on big fingure of foot for fast delivery
140	<i>Mussaenda roxburghii</i> [Rubiaceae]	Katmatiya, Dhobi Kat	G, H, K, M, Mo	Rt, Yng Sht	Jaundice. Veterinary problems
141	<i>Neolamarckia cadamba</i> [Rubiaceae]	Kadam	G, H, K, M, Mo	Bk	Cholera, fever, dysentery, skin diseases, oral diseases, snake bite
142	<i>Nyctanthes arbor-tristis</i> [Verbenaceae]	Sefali	G, H, K, M, Mo	Bk, Lf, Sd	Fever, rheumatism, malaria fever, worm expectorant, bilious fever, scurfy affection of the scalp, cough, leaves edible to cure stomach problems
143	<i>Ocimum tenuiflorum</i> [Lamiaceae]	Tulsi	G, H, K, M, Mo	Lf	Dysentery, dyspepsia, urinary disorder, cold & cough, demulcent, antibacterial, malarial fever
144	<i>Oldenlandia corymbosa</i> [Rubiaceae]	Atisar, Khetpapra	G, H, K, M, Mo	WP	Cough, blood purification
145	<i>Oldenlandia diffusa</i> [Rubiaceae]	Atisar	G, H, K, M, Mo	WP	Cough, blood purification
146	<i>Opuntia dillenii</i> [Cactaceae]	Nagphana, Fanimansa	G, H, K, M, Mo	Fr, Lf	Gonorrhoea, whooping cough, expectorant, cough, purgative, ophthalmic,
147	<i>Oroxylum indicum</i> [Bignoniaceae]	Totola, Taloyar, Dakdewa	G, H, K, M, Mo	Rt, Sd, Bk, Fr	Fever, dysentery, diarrhea, epilepsy, miscarriage, piles, jaundice, smallpox, dyspepsia, rheumatism, vermifuge, cholera, astringent, dropsy, anti- inflammatory, wounds, rheumatoid arthritis
148	<i>Paederia foetida</i> [Rubiaceae]	Padrilarang, Gandha- bhadali	G, H, K, M, Mo	Lf, Rt, WP	Dysentery, piles; stomach problem, piles, fever, liver troubles
149	<i>Peperomia pellucida</i> [Piperaceae]	Luchipata	G, H, K, M, Mo	WP	Scorpion bites
150	<i>Percompylus glaucus</i> [Menispermaceae]	Pipalpati	G, H, K, M, Mo	Rt	Antidote to bites of poisonous snakes
151	<i>Persicaria chinensis</i> [Polygonaceae]	NK	G, H, K, M, Mo	Lf, Yng Sht	Med
152	<i>Phyla nodiflora</i> [Verbenaceae]	Bhuiokra	G, H, K, M, Mo	WP	Cuts and insects bites
153	<i>Phyllanthus amarus</i> [Euphorbiaceae]	Bhui amla	G, H, K, M, Mo	WP	Gastropathy, dropsy, diarrhoea, dysentery, fever, scabies, ulcers, wounds,

					jaundice
154	<i>Phyllanthus simplex</i> [Euphorbiaceae]	Bhui amla	G, H, K, M, Mo	WP	Mammary abscess, itch, sleepless children, gonorrhoea, hiccough, urinary trouble, asthma
155	<i>Phyllanthus urinaria</i> [Euphorbiaceae]	Bhui amla	G, H, K, M, Mo	WP	Gastropathy, dropsy, diarrhoea, dysentery, fever, scabies, ulcers, wounds, jaundice
156	<i>Piper longum</i> [Piperaceae]	Pipla	G, H, K, M, Mo	Rt, Fr	Fever, skin diseases, cold , cough, abortion, piles, sore throat, arthritis
157	<i>Plumbago zeylanica</i> [Plumbaginaceae]	Chetoar, Chitawar, Chita	G, H, K, M, Mo	Leafy Tg	Fever, piles, laxative, indigation, gastic ulcer, dysentery, cold, cough, bronchitis. Aerial part raped with cotton and tagged in neck of hydrocil patient
158	<i>Premna bengalensis</i> [Verbenaceae]	Baro sinduwer, Gineri	G, H, K, M, Mo	Leafy Tg	Removing insects of poultry birds
159	<i>Premna mucronata</i> [Verbenaceae]	Gineri	G, H, K, M, Mo	Bk, Fr	Eczema, throat pain, boils, febrifuge
160	<i>Premna obtusifolia</i> [Verbenaceae]	Gineri	G, H, K, M, Mo	Bk, Lf	Diuretic, dropsy, boils. Colic pain of cattle
161	<i>Psidium guajava</i> [Myrtaceae]	Amrud, Peyara	G, H, K, M, Mo	Yng Lf	Gum and teeth problems, pyorrhea
162	<i>Pupalia lappacea</i> [Amaranthaceae]	Chirchithii	G, H, K, M, Mo	Rt	Med
163	<i>Rauvolfia serpentina</i> [Apocynaceae]	Sarpagandha Nagbeli	G, H, K, M, Mo	Rt	High blood pressure, fever
164	<i>Ricinus communis</i> [Euphorbiaceae]	Rehri, Arandi	G, H, K, M, Mo	Rt, Sd, Lf, oil	Dysentery, neuralgia, colic, night blindness, ophthalmia, earache, small breast, less menstruation, less urine, burn, wound, leucoderma, headache, bone fracture, body pain
165	<i>Rumex trisetifer</i> [Polygonaceae]	NK	G, H, K, M, Mo	Lf, Yng Sht	Med
166	<i>Saccharum officinarum</i> [Poaceae]	Ikh, Ukhu	G, H, K, M, Mo	Cane	Burning during urination, diabetes; timely expulsion of placenta in cow
167	<i>Sansevieria trifasciata</i> [Dracaenaceae]	Sarpahara	G, H, K, M, Mo	Rhz	Piles
168	<i>Scoparia dulcis</i> [Scrophulariaceae]	Atibala,Barrier , Jangli Dhania, Ghuma, Chini- michhiri	G, H, K, M, Mo	Leafy Tg, Rt	Renal diseases, jaundice, antidiabetic, cough, cuts, bronchitis, fever, headache, toothache, kidney troubles, burning sensation,
169	<i>Sesbania grandiflora</i> [Fabaceae]	Bagphul	G, H, K, M, Mo	Rt, Bk, Lf, Fl, Fr	Anthelmintic, febrifuge, nyctalopia, cephalalgia, astringent, anaemia

170	<i>Sida acuta</i> [Malvaceae]	Bareiri, Balujhar, Berala	G, H, K, M, Mo	Rt	Fever, urinary discharge & digestion problem
171	<i>Sida cordifolia</i> [Malvaceae]	Bala, Swet berela	G, H, K, M, Mo	WP, Lf, Rt	Inflammation of muscular & skeletal systems, rheumatoid arthritis, osteoarthritis, dental pain, back ache
172	<i>Sida rhombifolia</i> [Malvaceae]	Bariari, Golpata, Pitberela	G, H, K, M, Mo	St, Lf	Sores, rheumatism, fever, haemophthisis, leucoderma, menorrhagia, boils, cough, cold, aphomia
173	<i>Smilax zeylanica</i> [Smilacaceae]	Kukurdaini, Kumarilata, Kumarika	G, H, K, M, Mo	Rt	Blood purification, dysentery, bronchitis
174	<i>Solanum indicum</i> [Solanaceae]	Brihati	G, H, K, M, Mo	Rt, Lf, Fr	Fever, cold, cough, asthma, epithalmia, improves taste & appetite
175	<i>Solanum nigrum</i> [Solanaceae]	Pakosag, Kakmachi	G, H, K, M, Mo	WP, Lf, Fl, Fr	Diuretic, laxative, sedative, antiseptic, antidysentric, expectorant, antipyretic
176	<i>Solanum torvum</i> [Solanaceae]	Goth begun	G, H, K, M, Mo	WP, Lf, Fr	Digestive, diuretic, liver enlargement, haemostatic
177	<i>Stephania glabra</i> [Menispermaceae]	Inderparhi, Parhi, Karaiya, Panhelo tamarke	G, H, K, M, Mo	Rt tuber	Hernia. Pot made of root tuber as a pot of drinking water of poultry will keep them free from epidemic diseases
178	<i>Stephania hernandiifolia</i> [Menispermaceae]	Nimukha	G, H, K, M, Mo	Lf, Fr, Sd	Skin diseases, malarial fever. Veterinary problems
179	<i>Streblus asper</i> [Moraceae]	Saorah	G, H, K, M, Mo	Lf	Skin ailments
180	<i>Tagetes patula</i> [Asteraceae]	Shaey patri	G, H, K, M, Mo	Lf, Fl,	Children's fever, tonsilitis, mouth sores, dysentery
181	<i>Tamarindus indica</i> [Caesalpiniaceae]	Tentul	G, H, K, M, Mo	Lf, Fr, Sd	Bleeding piles, pox, painful anuria, swelling for kidney problems, diabetes
182	<i>Terminalia arjuna</i> [Combretaceae]	Arjun	G, H, K, M, Mo	Bk, Lf	Diabetes, dysentery, pneumonia, leprosy, neuralgia, wounds
183	<i>Terminalia bellirica</i> [Combretaceae]	Barra, Bahera	G, H, K, M, Mo	Fr, Sd	Cough, bronchitis, diabetes, gastric problems, liver problems, asthma, leprosy, purgative, piles, muscular pain, catarrh, ophthalmia, leucoderma, inflammation
184	<i>Terminalia chebula</i> [Combretaceae]	Harra, Haritaki	G, H, K, M, Mo	Fr, Sd	Bronchitis, cold, eczema, constipation, dysentery, measles, sores, pneumonia, stomach complaints, spleen problem, piles, skin disease, aphonia, ophthalmia
185	<i>Tetrameles nudiflora</i> [Datisceae]	Mayna	G, H, K, M, Mo	Bk, Fr	Asthma, cough, rheumatic pain

186	<i>Thysanolaena latifolia</i> [Poaceae]	Phul jharu, Amliso	G, H, K, M, Mo	Rt	Mumps, brils, abscesses
187	<i>Tinospora cordifolia</i> [Menispermaceae]	Gurjo, Gulancha	G, H, K, M, Mo	Sht	Dyspepsia, fever, urinary diseases, dysentery, gaut, ulcers, jaundice, leprosy, stomach troubles
189	<i>Toona ciliata</i> [Meliaceae]	Toon	G, H, K, M, Mo	Bk, Lf	Fever, gastric troubles, dysentery, antiseptic
190	<i>Trema orientalis</i> [Ulmaceae]	Khaskhasia	G, H, K, M, Mo	Bk, Lf	Limb pain
191	<i>Trewia nudiflora</i> [Euphorbiaceae]	Pithali	G, H, K, M, Mo	Rt	Bile problems, rheumatism, swelling
192	<i>Trichosanthes dioca</i> [Cucurbitaceae]	Patuka, Patal	G, H, K, M, Mo	Lf, Fr	Liver tonic
193	<i>Trichosanthes lepiniana</i> [Cucurbitaceae]	Kowa tumbil	G, H, K, M, Mo	Rt, Yng Fr	Fever, abortion
194	<i>Urena lobata</i> [Malvaceae]	Ban okra	G, H, K, M, Mo	Rt, St, Fl	Expectorant, throat sore, aphthosis, diuretic
195	<i>Vallis solanacea</i> [Apocynaceae]	Harmali	G, H, K, M, Mo	Rt, Bk, letex	Sinus, ulcer due to fracture, sores, purgative, astringent
196	<i>Vetiveria zizanioides</i> [Poaceae]	Khaskhas	G, H, K, M, Mo	Rt, Lf	Stimulant, diaphoretic, stomachic, cooling, bitter astringent, blood diseases
197	<i>Vitex negundo</i> [Verbenaceae]	Sinduwer, Nisinda	G, H, K, M, Mo	Leafy Tg	Sciatica, asthma, fever, refreshment after delivery for baby & mother, eye inflammation, arthritis, leucoderma, bronchitis
198	<i>Wedelia montana</i> [Asteraceae]	Bhringaraj	G, H, K, M, Mo	Lf, WP	Hair growth in girls
199	<i>Youngia japonica</i> [Asteraceae]	NK	G, H, K, M, Mo	Sht	Fever and burning urination in children
200	<i>Zingiber officinalis</i> [Zingiberaceae]	Ada, Adua	G, H, K, M, Mo	Rhz	Cold, cough, fever, small pox, kidney troubles, hiccough, chronic dysentery
201	<i>Zizyphus mauritiana</i> [Rhamnaceae]	Baer, Kul	G, H, K, M, Mo	Lf, Bk, Fr	Conjunctivitis, dysentery

Table 13.6: Medicinal & aromatic plants used by the workers in Darjiling Hill Tea Gardens.

[Abbreviations used: Mk = Makaibari T.E., S = Soom T.E., T = Tamsong T.E., NK = Not Known, Bk = Bark, Fl = Flower, Infl = Inflorescence, Fr = Fruit, Lf = Leaf, Ltx = Latex, Rt = Root, Rhz = Rhizome, Sd = Seed, Sht = Shoot, St = Stem, Tg = Twig, Wd = Wood, WP = Whole Plant, Yng = Young]

Sl. No.	Plants [Families]	Local Name	Gardens	Parts Used	Purpose of use
1	<i>Acacia catechu</i> [Mimosaceae]	Khayer	Mk	Dryed resin	Bodyache, chronic body pain, fracture
2	<i>Achyranthes aspera</i> [Amaranthaceae]	Apang	Mk	Rt, WP	Toothache, snake bite, hydrophobia, hysteria, diuretic, purgative, diarrhoea, dysentery, piles, rheumatism
3	<i>Achyranthes bidentata</i> [Amaranthaceae]	Ankhlay Kuro	S, T	Lf	Rheumatism

4	<i>Acmella calva</i> [Asteraceae]	Kalijhar	Mk,S,T	Fresh Fl	Tonsillitis, mouth sores, toothache
5	<i>Aconogonum molle</i> [Polygonaceae]	Thotmay	S, T	Sht	Antidote
6	<i>Acorus calamus</i> [Acoraceae]	Bojo	Mk	Rt, Rhz	Dehydration; cough & cold, vomiting, flautulens, asthma, stomachache, skin diseases, prevents malaria. Sores & wounds of cattle and goats
7	<i>Adhatoda vasica</i> [Acanthaceae]	Basak	S	Lf	Cough & cold
8	<i>Adiantum capillus-veneris</i> [Adiantaceae]	Unew	Mk, S	Lf	Irregular menstruation; insects in chicken
9	<i>Ageratina adenophora</i> [Asteraceae]	Kalo Bonmara	Mk, S, T	Lf, Sht	Bleeding, cuts and wounds as antiseptic and blood clotting agent. Steam bath from aerial parts in case of jaundice, antedot
10	<i>Ageratum conyzoides</i> [Asteraceae]	Ilamay-jhar	Mk	Lf, Rt	Cuts & wounds, antiseptic, and blood clotting agent, styptic, antititanous, gall bladder stone
11	<i>Ageratum houstonianum</i> [Asteraceae]	Ilamay-jhar	Mk,S,T	Lf, Rt	Cuts and wounds as antiseptic, and blood clotting agent.
12	<i>Ajuga macrosperma</i> [Lamiaceae]		S,T	Yng Sht	Liver complaints, loss of appetite
13	<i>Aloe barbadensis</i> [Liliaceaea]	Ghur kumari	Mk	Lf	Wounds, burnings, carminative, digestic
14	<i>Aloe vera</i> [Liliaceae]	Ghew kumari	Mk	Lf	Burns & inflammation
15	<i>Alstonia scholaris</i> [Apocynaceae]	Chhatiyan	S, T	Rt, Bk, latex	Leprosy, skin diseases, ulcers, dysentery, malarial fever, snake bite, toothache, anthelmintic, vermifuge, stimulant after child birth, laxative, appetizer, astringent, antiperiodic, stimulates child birth. Bark as tonic for goats & pigs.
16	<i>Ambroma augusta</i> [Sterculiaceae]	Sano Kapasi	Mk,S	Rt, Lf	Menstrual disorders, snake bites
17	<i>Amomum subulatum</i> [Zingiberaceae]	Alaichi	Mk,S,T	Rt, Sd	Fever, stimulant, stomachic, aphrodisiac, gonorrhea patients. Asthma, bronchitis, piles; Kidney throat, urinary bladder and rectum disorder, carminative, diuretic, stimulant
18	<i>Ampelocissus barbata</i> [Vitaceae]	Jarila lahara	S, T	St	Sores & wounds, pneumonia, cataract. relieving cattle from ticks, mites, and other parasitic infections
19	<i>Andrographis paniculata</i> [Acanthaceae]	Kalmegh	Mk	Rt, Lf	Stomachic and blood purifier
20	<i>Annanus comosus</i> [Bromeliaceae]	Anaros	Mk	Fr	Yellow fever; improves appetite, digestion, reduce excessive gastric acid

21	<i>Antidesma acidum</i> [Euphorbiaceae]	Archal	Mk, S	St Bk, Lf, Sht	Pneumonia, sores, bruises, pruritus in toes, hydrosil, dysentery, diarrhoea
22	<i>Artemisia dubia</i> [Asteraceae]	Titepate	S, T	Lf, Sht	Giddiness, sinusitis, nausea, asthma, stomach troubles, loss of appetite, menstrual disorders, antihelmintic
23	<i>Artemisia vulgaris</i> [Asteraceae]	Titepate	Mk, S, T	Lf, Sht	Nasal Bleeding, congestion, blood vomiting, dysentery, urinary troubles, convulsions, hysteria, asthma, epilepsy, depression, measles, vermifuge, skin diseases, ulcers, antiseptic, febrifuge,
24	<i>Asparagus racemosus</i> [Asparagaceae]	Kurilo	Mk	Rt	Diabetes & tuberculosis
25	<i>Astilbe rivularis</i> [Saxifragaceae]	Buro okhati, Bansuari	T	Rhz	Tonsillitis, mouth sores, dysentery & diarrhoea
26	<i>Azadirachta indica</i> [Meliaceae]	Neem	Mk, S, T	Lf, Bk, Yng Sht	Ulcers, inflammations, eye troubles, intestinalworms, leprosy, fever, toxic manifestations, lack of apetite, sores & wounds etc
27	<i>Bauhinia purpurea</i> [Caesalpiniaceae]	Taki	Mk, T	St Bk	Dysentery
28	<i>Bauhinia variegata</i> [Caesalpiniaceae]	Koiralo	Mk	Fl, Bk, Rt	Blood dysentery, alterative, skin diseases, cough, bleeding piles, dyspepsia, flautulence, antidote to snake poison
29	<i>Begonia palmata</i> [Begoniaceae]	Mangar kajey	Mk	Lf	Antifungal, dysentery and diarrhea, an abortifacient
30	<i>Begonia picta</i> [Begoniaceae]	Mangar kanje	Mk, S, T		Piles, juvenile dysentery
31	<i>Berginia ciliata</i> [Saxifragaceae]	Pakhonbet	S, T	WP	Cough & cold, astringent, diuretic, aphrodisiac, body and joint pain, tonic, fever, boils, and ophthalmia
32	<i>Blumea balsamifera</i> [Asteraceae]	Gai tiharey	Mk	Lf, Rt	Skin parasites
33	<i>Boehmeria rugulosa</i> [Urticaceae]	Daar	Mk,	Juice of St Bk	Snake bites
34	<i>Bombax ceiba</i> [Bombacaceae]	Simal	Mk, S, T	Gum, Yng Sht	Dysentery, aphrodisiac, stimulant, gonorrhoea, piles, tonic in male impotency, diarrhoea. Tender part of plant as fodder for dysentery and diarrhoea to cattle
35	<i>Brassaiopsis hainla</i> [Araliaceae]	Kalo chuletro	Mk	Fl	Cough
36	<i>Brassica juncea</i> [Brassicaceae]	Rayo sag	Mk, S, T	Lf	Diarrhea, body pain, weakness
37	<i>Buddleja asiatica</i> [Buddlejaceae]	Bhimsen pati	S	Lf	Skin diseases. Prevents mite infestation of poultry birds
38	<i>Cajanus cajan</i> [Fabaceae]	Rahori dal	Mk	Fr	Yellow fever

39	<i>Caladium hortulanum</i> [Araceae]	Bet gera	Mk	Rt tuber	Deworming of man
40	<i>Calamus tenuis</i> [Arecaceae]	Bet	S	St	Liver ailments
41	<i>Callicarpa arborea</i> [Verbenaceae]	Bhati Guielo	Mk	Bk, Sht	Fever, carminative, heart & skin diseases, pneumonia, fever
42	<i>Calotropis gigantea</i> [Asclepiadaceae]	Akanda, Aak, Aank	Mk, S	Rt, latex	Analgesic, twisted ankle, bone dislocations. Fracture in cattle
43	<i>Camellia sinensis</i> [Theaceae]	Chia	Mk	Lf	Infection in GI tract, astringent, digestive, nerve-tonic, fever, insect stings, swellings, sunburns
44	<i>Canarium strictum</i> Burseraceae	Gokul dhup	Mk	Gum	Cough & diarrhoea of goats
45	<i>Cannabis sativa</i> [Cannabaceae]	Gnaja, Vang	Mk, S, T	Lf	Sedative, narcotic, stimulant, stomachic, antispasmodic, astringent, delirient, diuretic, hypnotic, catarrh, flatulence, haemorrhage, hydrophobia, dysentery; Digestion problems and pneumonia in cattle
46	<i>Capsicum frutescens</i> [Solanaceae]	Dallay Khursani	Mk, S, T	Fr	Gastric problems, tuberculosis, stimulant, tonic, carminative, muscle spasm, antiseptic, increases blood flow to the skin
47	<i>Cardamine hirsuta</i> [Brassicaceae]	Simraya	S, T	Sht	Jaundice, Low Blood Pressure
48	<i>Carica papaya</i> [Caricaceae]	Mewa	Mk	Fr, Sd	Jaundice, acidity, intestinal worms, liver disorders
49	<i>Cassia fistula</i> [Caesalpiniaceae]	Raj briksha	Mk	Fr, Sd, Fr pulp	Vomiting, diarrhea, pneumonia; pulp is a strong purgative
50	<i>Cassia occidentalis</i> [Caesalpiniaceae]	Thule- tapre	Mk, S, T	Lf, Rt, Sd	Cuts & wounds, diarrhoea, dysentery, cough, headache, purgative, antiperiodic, skin diseases, ringworm
51	<i>Cassia sophera</i> [Caesalpiniaceae]		S, T	Rt, Lf, Fr	Blood dysentery
52	<i>Catharanthus roseus</i> [Apocynaceae]	Nayantara	S, T	Rt, Fl, Lf	Diabetes, high blood pressure, anxiety, blood dysentery, ulcers, cough, cancer, menorrhagia, leukaemia.
53	<i>Centella asiatica</i> [Apiaceae]	Barma butty, Ghora tapray	S, T	Sd	Fever, asthma, bronchitis, leprosy, tonsillitis, diuretic, alterative tonic, dysentery, diarrhoea, mouth sores, cacaract
54	<i>Chenopodium album</i> [Chenopodiaceae]	Bethu Sak	Mk	Lf	Stomachache
55	<i>Chenopodium ambrosoides</i> [Chenopodiaceae]	NK	Mk, T	Sht	Tonic, antispasmodic, nervous breakdown
56	<i>Chromolaena odorata</i> [Asteraceae]	Banmara	Mk, T	Lf	Cuts & injuries as antiseptic & blood clotting agent
57	<i>Cinnamomum sp.</i> [Lauraceae]	Sin-kauli	Mk	Bk, Lf	Rheumatism, diarrhoea; digestion problem in cattle

58	<i>Cinnamomum tamala</i> [Lauraceae]	Tejpatta	Mk	Bk, Lf	Rheumatism, colic, diarrhea, gonorrhoea; suppression of lochia after child birth
59	<i>Cissampelos pariera</i> [Menispermaceae]	Batul patey	Mk	Rt, Lf	Piles, pain, cough, diarrhoea, dyspepsia, eruptions, dyspepsia, inflammations, enlarged spleen, kidney & heart troubles, snake bites
60	<i>Cissus quadrangularis</i> [Vitaceae]	Harjora	S, T	Lf	Piles, ulcers, constipation for bone fracture
61	<i>Citrus aurantium</i> [Rutaceae]	Kali jyamir, Suntala	Mk, S, T	Fr	Dysentery, diarrhoea, anaemia; tonic for pregnant mother
62	<i>Citrus medica</i> [Rutaceae]	Nimbu, Bimbira	Mk	Fr	Indigestion, vomiting, diarrhoea, antiscorbutic
63	<i>Citrus maxima</i> [Rutaceae]	Sankatra	Mk, T	Ripe Fr	Diarrhea
64	<i>Clematis buchananiana</i> [Ranunculaceae]	Pinasay Lahara	Mk	Rt, Lf	Headache, sinusitis, stomachache
65	<i>Clerodendrum serretum</i> [Verbenaceae]	Andekhi	Mk	Rt	Dysentery
66	<i>Clerodendrum viscosum</i> [Verbenaceae]	Bhant	S, T	Lf, Bk	Leucoderma, thirst, Burning sensation, skin diseases
67	<i>Clinopodium umbrosum</i> [Lamiaceae]		S, T	Fresh Lf	Burns
68	<i>Coffea arabica</i> [Rubiaceae]	Coffee	Mk	Beans	Heart functioning, stimulent, digestive, diuretic, headache, migrane, dierrhoea
69	<i>Colebrookea oppositifolia</i> [Lamiaceae]	Dhusrey	Mk	Rt, Lf	Pneumonia. To cattle for poor vision or blindness
70	<i>Coriandrum sativum</i> [Apiaceae]	Dhaniya	Mk, T	WP, Fr	Urinal troubles, body ache, cold
71	<i>Costus speciosus</i> [Costaceae]	Betlowre	S, T	Lf, Rt, St	Liver ailments, stomachache, UTI, VD, astringent, purgative, stimulant, burning urination, jaundice, juvenile diabetes
72	<i>Croton bonplandianus</i> [Euphorbiaceae]		Mk	Yng Sht	Bone fracture, cuts & wounds
73	<i>Curculigo capitulata</i> [Hypoxidaceae]	Dhoti sara	Mk, S, T	Bulb	Gastritis, stomach colic, pain, burns, cuts & wounds
74	<i>Curcuma aromatica</i> [Zingiberaceae]	Ban Haledo	Mk, S, T	Lf, Rhz	Apetiser, stomachache, diabetes, indigestion, yellow fever, anti-inflammatory, antiacterial, antioxidant, digestion
75	<i>Curcuma longa</i> [Zingiberaceae]	Hardi, Haldi	Mk, S, T	Rhz, Rt	Apetiser, leucoderma, blood diseases, cuts, urinary discharges, fever, dropsy. Paste in poultry fowl and cattle
76	<i>Cymbopogon citratus</i> [Poaceae]	Timburey jhar	Mk, S, T	Lf	Stomach, blood & skin problems, cramping pain, flautulence, leprosy, ringworm

77	<i>Cymbopogon nardus</i> [Poaceae]	Citronella	S, T	Lf	Leprosy, insecticidal
78	<i>Cynodon dactylon</i> [Poaceae]	Durba, Duo	Mk, S, T	Sht	Leprosy, dysentery, fever, vomiting, skin diseases, epilepsy, liver cirrhosis, indigestion, burning urination, piles, body swelling
79	<i>Datura fastuosa</i> [Solanaceae]	Dhatura	S, T	Sds, Lf	Pain, fever
80	<i>Datura metel</i> [Solanaceae]	Dhutura	Mk,S,T	Lf, Sd, Rt	Dog bite, neuralgia, rheumatic, swellings, sciatica, lumbago, insanity, fever, skin diseases, antiseptic
81	<i>Datura stramonium</i> [Solanaceae]	Seto Dhutura	Mk	Sd	insanity, fever, skin diseases, antiseptic, narcotic, sedative
82	<i>Datura suaveolens</i> [Solanaceae]	Dhatura, Ghantiful, Sanaiful	S, T	Sds, Lf	Pain, fever, arthritis, gout, other muscular pains
83	<i>Deeringia amaranthoides</i> [Amaranthaceae]	Bakri sag	Mk	Lf, Rt	Medicinal
84	<i>Dicliptera bupleuroides</i> [Acanthaceae]	NK	Mk,S,T	Fresh Lf	Snake bite
85	<i>Dillenia indica</i> [Dilleniaceae]	Panchfal, Mechiafal	Mk	Fr	Gastritis, fever, diarrhoea, urinary problems, colic pain. Indigestion, dysentery & fever in cattle
86	<i>Dioscorea belophylla</i> [Dioscoreaceae]	Ghita torul	Mk	Rhz	Medicinal
87	<i>Dioscorea bulbifera</i> [Dioscoreaceae]	Githa lahara	Mk	Rt stock	Cough of cattle, ulcers
88	<i>Dioscorea deltoidea</i> [Dioscoreaceae]	Bhagur	Mk	Rt stock	Fever of cattle, kills lice, contraceptive
89	<i>Dioscorea floribunda</i> [Dioscoreaceae]	Goltarul	Mk,T		Fever, contraceptive
90	<i>Dioscorea pentaphylla</i> [Dioscoreaceae]	Rani bhyagur, Bontarul	Mk	Rt stock	Stomach problems, fever, swellings, contraceptive, anthelmintic
91	<i>Dioscorea prazeri</i> [Dioscoreaceae]	Bontarul	S, T	Rt stock	Fever, stomach trouble, contraceptive
92	<i>Diplazium esculentum</i> [Athyriaceae]	Ningro	Mk	Yng fronds	Constipation
93	<i>Drymaria diandra</i> [Caryophyllaceae]	Abijalo	Mk, S, T	Sht	Diphtheria, nasal congestion, dog- bite, snake bit, hay fever, hay asthma, pneumonia, headache, conjunctivitis, throat pain
94	<i>Drymaria villosa</i> [Caryophyllaceae]	Abijalo	Mk,S,T		Fresh aerial parts tightened in a clean cotton cloth and heated for few minutes and strong fume inhaled to cure sinusitis, fever, cold, throat troubles, antiperiodic, cough, internal haemorrhage, dysentery

95	<i>Elettaria cardamomum</i> [Zingiberaceae]	Elachi	S, T	Sd	Asthma, bronchitis, piles; kidney, throat, urinary bladder & rectum disorders
96	<i>Elsholtzia blanda</i> [Lamiaceae]	Mirryjhar	S, T	WP	Allergy
97	<i>Emblica officinale</i> [Euphorbiaceae]	Amlaki	Mk, S, T	Fr, St	Piles, anaemia, eye inflammation, urinary discharge, diarrhoea, fever, cold, dyspepsia, haemorrhage, irritation of bladder
98	<i>Entada rheedii</i> [Fabaceae]	Pangra	Mk	Bk, Sd	Mumps, fracture in cattle, skin diseases, hair wash, pain after delivery, glandular swelling
99	<i>Equisetum debile</i> [Equisetaceae]	Kurkure jhar	Mk	Rt stock	Weakness, loss of appetite, anemia, urinary troubles, mouth sores, cuts, diabetes, gonorrhoea, stomach upset, urinary infection. Urinary problems to horses,
100	<i>Equisetum diffusum</i> [Equisetaceae]	Kurkury jhar	Mk, S, T	Sht	Urinary trouble, yellow fever, coolant in gonorrhoea, bedwets in children
101	<i>Erycibe paniculata</i> [Convolvulaceae]	Bhui champa	S, T	Lf	Accidental dislocation of bones
102	<i>Erythrina arborescence</i> [Fabaceae]	Faledo	Mk	Lf	Infected wounds of cattle; falling hairs of pigs
103	<i>Euphorbia pulcherrima</i> [Euphorbiaceae]	Lalupate, Ratopate	Mk	Latex	Pain in burnt area
104	<i>Euphorbia royleana</i> [Euphorbiaceae]	Shionni	Mk	Latex	Toothache, skin warts, food poisoning
105	<i>Evodia fraxinifolia</i> [Rutaceae]	Khanakpa	Mk, S, T	Fr	Gastric problems, typhoid
106	<i>Ficus benghalensis</i> [Moraceae]	Bor	Mk	Latex	Stomachich, gastritis, other stomach troubles
107	<i>Ficus religiosa</i> [Moraceae]	Pipol, Aswath	Mk	Bk	Vomiting, leucorrhoea, female sterility, cuts and wounds
108	<i>Girardinia diversifolia</i> [Urticaceae]	Vangre Sishnu	Mk, S, T	Yng sht, Rt, Infl	Hlgh Blood Pressure, bone fracture, joint dislocation, diabetes
109	<i>Gmelina arborea</i> [Verbenaceae]	Khamari, Gamari	Mk	Bk	Food poisoning, jaundice
110	<i>Gonostegia hirta</i> [Urticaceae]	Chiplay	Mk, S, T	Rt	Bone fracture & dislocation
111	<i>Hedychium spicatum</i> [Zingiberaceae]	Sara	Mk	Rhz, Rt	Stomach & liver troubles, burnt wounds, vomiting, diarrhoea, asthma, dysentery, headache, hair fall, rheumatism, snake bite
112	<i>Hedyotis scandens</i> [Rubiaceae]	Bakhra lahara	S, T	Rt	Vomiting, stomachache, gastritis, food poisoning, abortifacient
113	<i>Heliotropium indicum</i> [Boraginaceae]	Hatisura	S, T	Lf	Fever, ulcers, inflammation
114	<i>Hemiphragma heterophylla</i> [Scrophulariaceae]		S, T	Ripe Fr	Cough & cold

115	<i>Heracleum nepalense</i> [Apiaceae]	Chimping	S, T	Fr	typhoid, nausea, vomiting
116	<i>Heracleum wallichii</i> [Apiaceae]	Chimping	Mk, S, T	Fl, Fr, Rt	Fever, stomachache, swelling of hands & legs, diarrhoea
117	<i>Holarrhena pubescens</i> [Apocynaceae]	Khirra	Mk	St Bk	Piles, ulcers, intestinal worms
118	<i>Houttuynia cordata</i> [Saururaceae]	Gandey jhar	S, T	Lf, Sht	Anemia & tuberculosis
119	<i>Hydrocotyle himalaica</i> [Apiaceae]	Thankuni	S, T	Lf	Stomach problems
120	<i>Hypericum petulum</i> [Hypericaceae]	Urilo	S, T	Sd	Dog bites, urinary troubles, food poisoning, stimulant, wounds. Urinary troubles to cattle.
121	<i>Imperata cylindrica</i> [Poaceae]	Siru	Mk	Lf, Rhz	Parasites in stomach, kidney problems, anthelmintic, wormifuge. Young shoot given to mother cow to smooth expulsion of placenta
122	<i>Justicia adhatoda</i> [Acanthaceae]	Asuro	Mk, S	St, Bk, Lf	Gastritis, high blood pressure, diabetes, asthma, cough, fever, vomiting, gonorrhoea, leprosy
123	<i>Jatropha curcas</i> [Euphorbiaceae]	Hatikane	Mk	Plant extract	Cuts, wounds, burns, bad breathing, pyorrhoea. Seeds strong purgative, cause nausea, vomiting, burning in stomach
124	<i>Kaemferia rotunda</i> [Zingiberaceae]	Bhui champa	Mk	Rhz, WP	Accidental dislocation of bones, fracture, wounds, swellings, mumps, dropsy, gout, stomachic, rheumatism, in gastric troubles, remove blood clots, tumour, leucoderma
125	<i>Kalanchoe pinnata</i> [Crassulaceae]	Pathar kuchi	S, T	Lf	Diarrhoea, vomiting
126	<i>Lantana camara</i> [Verbenaceae]	Kaligare	Mk	Bk	Ulcerous wounds
127	<i>Laportea terminalis</i> [Urticaceae]	Patley Sishnu, Gharia sishnu	Mk, S, T	Yng sht	High Blood Pressure, bone fracture, joint dislocation, swelling, pneumonia, heart troubles
128	<i>Leucas indica</i> [Lamiaceae]	Danda kalas	S, T	Lf	Snake bites, appetiser
129	<i>Lindenbergia grandiflora</i> [Scrophulariaceae]		Mk	Fl	Cuts and wounds
130	<i>Litsea citrata</i> [Lauraceae]	Sil Timbur	Mk	Bk, Fr, Sd	Stomachache for gas, skin diseases, dimulcent, diuretic, rheumatism
131	<i>Litsea cubeba</i> [Lauraceae]	Siltimbur	T	Fr	Cholera, indigestion, stomach colic; vermifuge, food poisoning, stomach disorders
132	<i>Lobelia nummularia</i> [Lobeliaceae]	Lanka sanay	Mk, S	Arrial parts	Pneumonia & fever for children; dysentery, tonsillitis, externally on snakebite
133	<i>Luffa aegyptiaca</i> [Cucurbitaceae]	Ghiroula, Dhundal	Mk	Fr	Diarrhoea of cattle

134	<i>Lycopodium pseudoclavatum</i> [Lycopodiaceae]	Nagbelli	Mk, S, T	Sht, Lf	Pain, indigestion
135	<i>Lycopodium pseudoclavatum</i> [Lycopodiaceae]	Nagbeli	S, T	Spore s,	Diuretic, demulcent, anti septic, rheumatism, pulmonary disorders, kidney pain, uterus problems, dyspepsia, pain, hemorrhage after childbirth, emetic for children, scorbutic affections, indigestion
136	<i>Lyonia ovalifolia</i> [Ericaceae]	Ongeri	Mk	Rt	Children's prolonged fever
137	<i>Maesa chisia</i> [Myrsinaceae]	Bilaune	S, T	St Bk	Gastritis
138	<i>Mahonia nepaulensis</i> [Berberidaceae]	Chutro, Keshari	S, T	Bk	Eye pain, jaundice, fever, flatulence, blood purification, haemorrhage in piles, dysentery, urinary troubles, diuretic
139	<i>Malvaviscus arboreus</i> [Malvaceae]	Jabakusum	Mk	Nectar , Fl	Diabetes, sores, wounds on nose, ear, naval
140	<i>Melastoma malabathricum</i> [Melastomataceae]	Lajjaboti	S, T	Lf	Cough & cold
141	<i>Melissa parviflora</i> [Lamiaceae]	Gandhay jhar	S, T	WP	Brain tonic, antedote
142	<i>Mentha piperata</i> [Lamiaceae]	Padina	Mk, S, T	WP	Vomiting, stomachache, indigestion
143	<i>Mimosa himalayana</i> [Mimosaceae]	Arari kanra	Mk, T	Rt	Boils to discharge the pus
144	<i>Mimosa pudica</i> [Mimosaceae]	Bohari jhar, Lajjaboti	Mk, S, T	Rt, Lf	Iron deficiency, piles, urinary troubles, blood dysentery, toothache, anthelmintic
145	<i>Molinieria gracilis</i> [Hypoxidaceae]	Dhoti sara	S, T	Rt, Fr, Fl	Asthma, piles, jaundice
146	<i>Morinda angustifolia</i> [Rubiaceae]	Haledo	S, T	Rt	Stomach problems
147	<i>Moringa oleifera</i> [Moringaceae]	Sajana	Mk	Lf, Fl	hiccough, vomiting, influenza, eye diseases, diuretic, cholagogue, stimulent
148	<i>Murraya paniculata</i> [Rutaceae]	Bajra- danthi	Mk	St	Toothbrush, pyorrhea. Toothpick useful in toothache
149	<i>Morus australis</i> [Moraceae]	Sano kimbu	Mk, S, T	Rt	Anthelmintic, astringent, cooling, vermifuge, purgative, laxative, allays thirst and removes fever, throat inflammation, thickening of vocal cords, hoarse voice
150	<i>Morus macroura</i> [Moraceae]	Bon Kimbu	Mk	Lf	Antiseptic
151	<i>Mucuna pruriens</i> [Fabaceae]	Hiunde simi	S, T	Fl, Lf	Inflammation, burns, skin diseases
152	<i>Musa bulbisiana</i> [Musaceae]	Kera	S, T	Lf, Rt, Fl, Yng Fr	Cough & cold, ear diseases, bronchitis, astringent, diarrhoea, improves appetite
153	<i>Mussaenda macrophylla</i> [Rubiaceae]	Sitalu, Dhobini phool	Mk, T	Rt	Juvenile jaundice, burning urination

154	<i>Mussaenda roxburghii</i> [Rubiaceae]	Sitalu, Dhobini kath	Mk	Rt	Jaundice, burning urination
155	<i>Mussaenda treutleri</i> [Rubiaceae]	Sitalu, Dhobini kath	Mk, S	Rt	Jaundice, burning urination, common cough & cold
156	<i>Nasturtium officinale</i> [Brassicaceae]	Simrayo	Mk, S, T	Lf	Cough & cold, high blood pressure, tuberculosis, fever, bodyache, headache
157	<i>Neolamarckia cadamba</i> [Rubiaceae]	Kadam	Mk	Fr, St Bk	Wounds, diarrhoea
158	<i>Nephrolepis cordifolia</i> [Nephrolepidaceae]	Paniamla	S, T	Rt tuber	Diabetes, yellow fever, burning urination
159	<i>Nyctanthes arbortristis</i> [Verbenaceae]	Rudilo	Mk	Lf, Bk	Lice cleaning; expectorant, alterative, intermitant fever, rheumatism, loss of apeteite etc.
160	<i>Ocimum tenuiflorum</i> [Lamiaceae]	Kalo Tulsi	Mk, S, T	Lf	Cough & cold, expectorant, diaphoretic, antiperiodic, bronchitis, antifungal, genito- urinary system, influenza, asthma, bronchitis, fever, stomach colic of children, tonsillitis, mouth ulcers
161	<i>Oroxylum indicum</i> [Bignoniaceae]	Totola	Mk, S, T	Bk, Fl, Fr, Sd	Diabetes, carminative, laxative; piles, bronchitis, disrrhoea, dysentery, rheumatism, jaundice, food poisoning; mouth ulcers, tonsillitis, pneumonia
162	<i>Osbeckia nepalensis</i> [Melastomataceae]	Angeri	Mk, T	Yng Lf, Sht	pneumonia, fever, cold
163	<i>Oxalis corniculata</i> [Oxalidaceae]	Chari amilo	S, T	WP	Eye pain, ophthalmic infections, cooling agents, febrifuge, stomachic, intoxication, appetizer, dysentery, prolapsis of rectum, boils, diarrhoea
164	<i>Paederia foetida</i> [Rubiaceae]	Padee/ Biri Lahara	Mk, S, T	Rt, Lf	Piles, fever; stomach & liver troubles, heart troubles and abnormal palpitation
165	<i>Perilla frutescens</i> [Lamiaceae]	Silong	Mk	Lf	Children's pox, seafood poisoning
166	<i>Persicaria chinensis</i> [Polygonaceae]	Ratnowlo	Mk, S, T	Lf, Sht	Insect sting and sting of nettle plants.
167	<i>Persicaria microcephala</i> [Polygonaceae]	Ratnowlo	S, T	Lf, Sht	Insect and wasps sting
168	<i>Phlogacanthus thyrsoiflorus</i> [Acanthaceae]	Rambasak , Chua	Mk	Bk, Lf	Piles, liver cirrhosis, bronchial, antiseptic, whooping cough, menorrhagia
169	<i>Physalis peruviana</i> [Solanaceae]	Phak phake	Mk, S, T	Lf	Fever, pneumonia, cold for children, urinary troubles
170	<i>Pinus roxburghii</i> [Pinaceae]	Salla dhup, chirpine	S, T	Wood resin	Asthma, bronchitis, gonorrhoea
171	<i>Piper longum</i> [Piperaceae]	Pipul, Pipla,	S, T	Lf, Rt, Fr	Headache, common cold and prolong cough, asthma, hiccough,

		Jangli pipul			digestive, rheumatism, asthma, cough, abdominal enlargements, fever, leprosy, gonorrhoea, piles, spleen, skin diseases
172	<i>Piper peepuloides</i> [Piperaceae]	Rukh pipla	S, T	Ripe Fr	common cold and cough
173	<i>Plantago erosa</i> [Plantaginaceae]	Jibre jhar	S, T	WP	Antiseptic, amoebic & bacillary dysentery; cuts and bruises; tonsillitis
174	<i>Plumeria rubra</i> [Apocynaceae]	Rukh chuwa	Mk	Latex	Food poisoning
175	<i>Plumbago zeylanica</i> [Plumbaginaceae]	Chita, Sweto Chitu	Mk, S, T	Rt, Lf, St	Dysentery, piles, bronchitis, loss of appetite, boils, diarrhoea, piles; food poisoning, gastritis, stomach pain, scabies, eczema
176	<i>Pouzolzia zeylanica</i> [Urticaceae]	Chiplay	Mk	Rt	Bone fracture, joint dislocation, sprain
177	<i>Premna integrifolia</i> [Verbenaceae]	Ginari	Mk	Lf	Insecticide for chicken
178	<i>Prunus cerasoides</i> [Rosaceae]	Paiyun	S, T	Fr, St Bk	Stone, abortion; bodyache, chronic body pain of old people, bone fracture, joint dislocation
179	<i>Psidium guajava</i> [Myrtaceae]	Ambok	Mk	St Bk	Blood dysentery, diarrhoea, dysentery, anemia, bleeding teeth
180	<i>Punica granatum</i> [Punicaceae]	Darim, Anar	Mk	Bk, Fr	Dysentery, cooling and refrigerent, used in diarrhoea
181	<i>Pupalia atropurpurea</i> [Amaranthaceae]	Ulta kuro	Mk	Rt	Pneumonia
182	<i>Raphanus sativus</i> [Brassicaceae]	Mula	Mk, S, T	Rt tuber	Digestive, acidic stomach. Crushed seeds mixed with animal feed in indigestion and fermented root for food poisoning
183	<i>Rhododendron arboreum</i> [Ericaceae]	Lali Gurus	S, T	Fl	Dysentery, diarrhoea, dysentery, fish bone stuck in throat, bodyache, cold
184	<i>Rhus chinensis</i> [Anacardiaceae]	Bhakimlo	S, T	Ripe Fr	Diarrhoea, dysentery
185	<i>Rubia manjith</i> [Rubiaceae]	Majito	S, T	WP	Externally on scorpion sting and insect bites
186	<i>Rubus calycinus</i> [Rosaceae]	Bhui ainselu, Bin ainselu	T	Rt	Tonsillitis
187	<i>Rubus ellipticus</i> [Rosaceae]	Ainselu, Bhotay kanra	Mk, S, T	Yng Sht, Rt	Colic pain, tonsillitis, diarrhoea, dysentery
188	<i>Rubus lineatus</i> [Rosaceae]	Ghampe ainselu	T	Rt	Food poisoning and stomach pain
189	<i>Rumex nepalensis</i> [Polygonaceae]	Halhalay	S, T	Rt	Diarrhoea, stomch colic, skin diseases
190	<i>Rauvolfia serpentina</i> [Apocynaceae]	Sarpagand ha	S, T	Rt	High Blood Pressure, mental retardation, depression, tonic, narcotic, antidote for snake bite, insect stings. insomnia, nervous

					breakdown, violent insanity
191	<i>Rhus semialata</i> [Anacardiaceae]	Bhoki omilo	Mk	Lf, Bk	Immunisation. Deworming of cattle
192	<i>Rosa brunonii</i> [Rosaceae]	Boisey kara	Mk	Sht	Fracture in cattles
193	<i>Saccharum officinarum</i> [Poaceae]	Uku	Mk	St	Yellow fever
194	<i>Sapindus mukorossi</i> [Sapindaceae]	Ritha	Mk	Fr	Pneumonia
195	<i>Schima wallichii</i> [Theaceae]	Chilaune	Mk, S, T	St Bk, Fr	Stomach colic, gastritis, blood dysentery, softening cracked heel and sole; insect and scorpion sting; bark irritant and vermicide and used for gonorrhoea
196	<i>Scoparia dulcis</i> [Scrophulariaceae]	Patberela	S	Sht, Lf	Cough & cold, toothache; piles, diabetes
197	<i>Senesio scandens</i> [Asteraceae]	Pailey Lahara	Mk	Lf	Yellow fever
198	<i>Shorea robusta</i> [Dipterocarpaceae]	Sakhuwa	Mk	Resin	Diarrhoea, astringent, detergent, dysentery
199	<i>Sida acuta</i> [Malvaceae]	Khareto	Mk, T	St, Yng Sht	To discharge pus from boils, bone fracture
200	<i>Sida cordifolia</i> [Malvaceae]	Khoreto	Mk	Lf	Wounds which suppurate
201	<i>Skimmia arborescens</i> [Rutaceae]	Jamaray juwa	Mk	Fl	Diabetes
202	<i>Smilax ovalifolia</i> [Smilacaceae]	Kukurdaini, Datiwan	Mk	Lf, Rt	Apetizer, VD, rheumatic pain, gout, epilepsy, seminal weakness, tooth brush in pyorrhoea
203	<i>Solanum indicum</i> [Solanaceae]	Behi	Mk	Fr	Stomach problems, astringent, carminative, digestive, asthma, bronchitis, flatulence, heart trouble, toothache, vomiting
204	<i>Solanum nigrum</i> [Solanaceae]		Mk	Lf, Fr	Muscle pain, laxative, alterative, diuretic, vomiting, urinary discharge, hydrophobia
205	<i>Solanum torvum</i> [Solanaceae]	Ban bihi	Mk	Fr, Sd	Checking bleeding after delivery, jaundice, liver disorders
206	<i>Spinacea oleracea</i> [Chenopodiaceae]	Palangi Sak	Mk	WP	Cooling, antibacterial, UTI
207	<i>Spondius pinnata</i> [Anacardiaceae]	Amru, Amara	Mk	Bk, Fr, Lf	Piles, rheumatism, sore-throat, burning sensation, dysentery, earache, cough & cold
208	<i>Stephania hernandifolia</i> [Menispermaceae]	Tamarkey	Mk	Fr, Rt	Diabetes, astringent for fever, diarrhoea, urinary diseases, dyspepsia
209	<i>Stephania japonica</i> [Menispermaceae]	Inderparhi, Parhi, Karaiya, Tamarke	Mk, S, T	Rt tuber	Stomach pain, diabetes, diarrhoea, bodyache, fever, urinary diseases, boils, septic inflammatory parts. Tuberos root as pot of drinking water for poultry keep them free from epidemic diseases. Ulcer and diarrhea in cattle

210	<i>Sterculia villosa</i> [Sterculiaceae]	Odal	Mk	Gum, Rt	Amoebiosis, bone dislocation, fractures, throat infection, joint pains, stomach disorders
212	<i>Tagetes patula</i> [Asteraceae]	Saipatri phul	Mk, S, T	Lf, Fl	Fever, Pneumonia, ulcers, eye diseases, antiseptic in tonsillitis
213	<i>Taxus baccata</i> [Taxaceae]	Dhangre Salla	Mk	Aril, Lf, Bk	Carminative, expectorant, stomachic & tonic, ; asthma, bronchitis, epilepsy
214	<i>Tectaria coaduanata</i> [Tectariaceae]	Kali Oonew, Kaliningr o	Mk, S, T	Root- stock	Dysentery, cuts and wounds
215	<i>Terminalia alata</i> [Combretaceae]	Pakasaj	Mk,	WP	Anaemia, cholera, dysentery, fever, haematuria, sores, wounds, stomacheic
216	<i>Terminalia bellirica</i> [Combretaceae]	Bahera, Barra	S	Ripe Fr	Indigestion, tonsillitis and cough
217	<i>Terminalia chebula</i> [Combretaceae]	Harrha	Mk	Fr, Sd	Cough, apathy, asthma, bile trouble, bleeding, gum-ulcer, blood pressure, carious teeth, diarrhoea, enlarged spleen, flautulence, cardiac diseses, piles
218	<i>Terminalia myriocarpa</i> [Combretaceae]	Panisaj	Mk, S	St Bk	Substitute of tea for bodyache, fatigue
219	<i>Tetradium fraxinifolium</i> [Rutaceae]	Khanakpa	S, T	Fr, Lf	Gastritis, stomach colic, hepatic disorders, cholera, diarrhoea, vomiting. Stomach problems in cattle.
220	<i>Thysanolenia latifolia</i> [Poaceae]	Amliso, Kuchho	S	Yng Sht, Rt	Mumps, brils, abscesses, tonsillitis,
221	<i>Tinospora cordifolia</i> [Menispermaceae]	Gurjo lahara	S	St	Stomach problems, burning urination, diabetes, other urinary troubles, menstruation problems, febrifuge, gonorrhoea, rheumatic pain, kill and clean out harmful insects of skin and ears
222	<i>Toona ciliata</i> [Meliaceae]	Tooni	Mk	Bk	Astringent, ulcers, chronic dysentery
223	<i>Trichosanthes lepiniana</i> [Cucurbitaceae]	Indraynee, Indrene	Mk, S	Fr placen ta	Diabetes
224	<i>Trifolium repens</i> [Fabaceae]	Tinpate jhar	S	WP	Diabetes
225	<i>Urena lobata</i> [Malvaceae]	Bheray kuro, Kuray pat	Mk, S, T	Sd	Dog bites
226	<i>Urtica ardens</i> [Urticaceae]	Sishnu, Ghariya sishnu	Mk, S, T	Yng Sht, Infl	High blood pressure, piles
227	<i>Urtica dioica</i> [Urticaceae]	Patle Sishnu	S	Yng Sht, Infl,	High Blood Pressure, minor fracture, gout, heart diseases, swellings

				Rt	
228	<i>Urtica parviflora</i> [Urticaceae]	Sishnu	S, T	Yng Sht, Infl, Rt	High blood pressure, bone fracture, joint dislocation, sprain, tonic and clearing agent after childbirth
229	<i>Urtica mairei</i> [Urticaceae]	Sishnu	S	Rt, Lf	Fracture, High Blood Pressure
230	<i>Viburnum erubescens</i> [Caprifoliaceae]		T	Ripe Fr	Cough & cold
231	<i>Vitex negundo</i> [Verbenaceae]	Simali	S	Lf, Rt	Eye inflammation, asthma, bronchitis, leucoderma, jaundice, body swelling, cold, flu, pyorrhea, bone fracture
232	<i>Wrightia arborea</i> [Apocynaceae]	Aulae khirra	Mk	St, Rt Bk	Snake bite, scorpion stings, treatment of male sex organs, renal complaints, menstrual disorders, haemorrhage
233	<i>Zanthoxylum acanthopodium</i> [Rutaceae]	Bokay Timbur	S	Fr, Sht, Bk	Gastric problems, diarrhoea, asthma, cholera, cough & cold, headache, indigestion, piles, nervous debility, blood purifier, liver disorders
234	<i>Zanthoxylum alatum</i> [Rutaceae]	Bhalay Timbur	Mk, S	Fr	Indigestion, diarrhoea
235	<i>Zanthoxylum budrunga</i> [Rutaceae]	Timbur	S	Fr	Gastric problems
236	<i>Zanthoxylum nitidum</i> [Rutaceae]	Parpare timbur	Mk	Fr	Digestive, hepatic tonic or in gastritis
237	<i>Zanthoxylum oxyphyllum</i> [Rutaceae]	Bhainsi timbur	S, T	Fr	digestive and hepatic tonic or in gastritis
238	<i>Zingiber officinale</i> [Zingiberaceae]	Adhuwa	Mk, S, T	Rhz	Apetiser, cough & cold, influenza, carminative, circulatory stimulant, antiseptic, fever, nausea, intestinal infections
239	<i>Zizyphus mauritiana</i> [Rhamnaceae]	Baer	Mk	Bk	Diarrhea

Tea Garden workers from Terai have reported the use of 201 species of plants in their different practices of tackling ailments of man and their pets. These are coming under 161 genera and 78 families [Pteridophytic 3, Monocotyledonous 15 & Dicotyledonous 60]. All these plants are of diverse habit groups and are coming from different wide range habitat structures.

Tea Garden workers from Darjiling Hills reported to use a total of 239 species of medicinal and aromatic plants to use against the ailments of man and their domesticated herbivores. These plants are covering under 187 genera and 84 families [Pteridophytes 6, Gymnosperms 2, Monocotyledonous 13 & Dicotyledonous 63]. And, as for the Terai, these plants are of diverse habit groups and are coming from different wide range habitat structures, including exotics.

It is also important to note that all the reported plants are not growing in Tea Garden areas. A good proportion of them are collected from other vegetations or even from markets. Local practitioners of traditional medicine collect and preserve many of these plants in their house/dispensary. Sometimes they grow some plants in their gardens which they require in good amount but are not always available in nearby areas. It is also fact that for most of the traditional medicines freshly collected plant materials produce much better results. However, majority of these plants are available in the locality and even within Tea Garden areas.

These poor people suffer from wide variety of diseases and some of those are really serious. Not only that, they need medication for general health care and for contraception. A scan through application of these plants show the diversity of diseases they recognise and, eventually, they try to tackle with local natural resources. Common problems like cough and cold, indigestion, diarrhea, dysentery etc can be treated with a large number of plants. It is not that one particular plant will always give good result for all persons, but different plants are sometimes required to treat them which they select after keen observation of symptoms of individual patients.

Again, practitioners in Terai and in hills sometimes use different sets of plants, but, certainly there is exchange of knowledge and plant materials. People from different communities staying here together forming mixed communities and it is quite possible that one community will learn cultures of other communities gradually under that situation. Even then, especially in Terai, people of some very primitive ethnic communities like Oraons, Santals, Mundas etc are very much conservative about their traditional knowledge and it's sharing.

However, the medicine men are also mostly non-cooperative especially when the question of formulation comes under discussion. They can recognize a plant and are ready to discuss the properties but are not ready to divulge the set of plants use together as a medicine and their proportion. At the same time there are definite methods of preparation of a medicine which one need to learn with time and patience. Again, these traditional people generally pass over their knowledge only to their own family man and this is true for most of the communities.

A survey to the diseases they treat shows that ailments like Nervous debility, Piles, Diptheria, Liver disorders, Snake bites, High Blood Pressure, Ulcers, Gonorrhoea, UTI, Enlarged Spleen, Cardiac disorders, Post-delivery bleeding, Seminal weakness, Insanity, Tonsilitis, Food Poisoning, Tumors, leucoderma etc. attempted to tackle by these herbalists.



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13.12 Dye Yielding Plants

Dye is required for different purpose in our every day life. That may be for colouring cloth, for ceremonies, for food, for cosmetics or even for medicines. The preference for the use of natural dye is always there in the traditional society and at the same time, the demand is increasing in the international market with no limit. Like minerals, plants are also a rich source for natural dye and like any other tribal dominating area; in Darjiling hills and Terai also people use some plants for the extraction of dye. The present survey has reorded the use of nine species of plants for this purpose as has been presented in Table 13.7.

Table-13.7: List of plants used by Tea garden workers as dye yielding Plants in Terai and hills of Darjiling in West Bengal.

[Abbreviations used: G = Gungaram T.E., H = Hansqua T.E., K = Kamalpur T.E., M = Matigara T.E., Mo = Mohurgong & Gulma T.E., Mk = Makaibari T.E., S = Soom T.E., T = Tamsong T.E.]

Sl. No.	Plants [Families]	Local Name	T.E. where recorded	Parts Used	Purpose of use
01	<i>Clerodendrum serretum</i> [Verbenaceae]	Andekhi	H, Mo	Leaves	Green dye
02	<i>Curcuma longa</i> [Zingiberaceae]	Hardi, Haldi, Halus	G, H, Mo, Mk, S, T	Rhizome	Yellow; use in cooked food; in dying cloth during relegious ceremonies, etc
03	<i>Deeringia amaranthoides</i> [Amaranthaceae]	Bakri saag	G, H, Mo	Ripe fruits	Red ink
04	<i>Mahonia nepaulensis</i> [Berberidaceae]	Chutro, Keshari	S, T	Ripe fruits	Yellow dye for fabrication of cloths and hand made paper
05	<i>Mallotus philippensis</i> [Euphorbiaceae]	Sindure	H, K, M, Mo	Seeds	Vermilion
06	<i>Morinda angustifolia</i> [Rubiaceae]	Hardi kath	G, H, Mo	Stem	Yellow dye for fabrication of cloths and hand made paper
07	<i>Rubia manjith</i> [Rubiaceae]	Majito	S, T	Root	Red dye for cosmetics
08	<i>Terminalia bellirica</i> [Combretaceae]	Barra	H, K, Mo	Fruits	Hair dye
09	<i>Toddalia asiatica</i> [Rutaceae]	Singane kanra	Mk, S	Root	Yellow dye

Out of the recorded nine species of dye yielding plants at least two are in regular trade. *Curcuma longa* is a multipurpose economic plant. It is a spice, a medicine and also a dye producer. The use of this species is long known to the Indian society as is also known by these people. The species is widely cultivated in this part of the country.

The use of Monjistha (*Rubia manjith*) is nicely documented in Ayurveda, the ancient Indian medical literature. The international market demand for the root of this species is quite high and its population is sharply decreasing due to regular exploitation from the natural habitat.

Traditional people generally do not like synthetic vermilion. The seeds of *Mallotus philippensis* produce a red dye and that is used as vermilion in traditional Nepali society.

The dye extracted from *Mahonia nepaulensis* is also exploited semi-commercially. Nepalees prepare a traditional paper from the bark of *Daphne cannabina* and *Edgwarthia gardneri*. The dye extracted from *Mahonia* fruits is regularly used in this paper. Dye extracted from *Clerodendrum serratum*, *Deeringia amaranthoides*, *Morinda angustifolia*, *Terminalia bellirica* and *Toddalia asiatica* are also used for this purpose. In addition, the dye extracted from Barra fruits are also used commonly as hair dye by hill people.

13.13 Religious Plants (including Super Natural Forces)

Common man's belief and faith is expressed in the religion. In every religion there are some religious practices and performances for with numerous plants are in use. Similarly, when man living in his forested environment they need to fight with numerous uncomfortable conditions and or natural forces. Whenever they fail to understand the reason of the misery or discomfort they impose it to the activities of the evil forces. So, people need to fight and/or satisfy also to these evil forces. Many religious practices, taboos, totems, social rites etc are imposed in traditional societies for this purpose. For this purpose these people sometimes take the help of some natural objects including plants. They believe that these plants are with some natural forces which can fight back with the harmful evil forces.

During the present Ethnobotanical survey, at least 41 species of plants has been recorded those are either used for worshiping the deities as religious offerings or as super natural forces to fight back the evil spirits. These plants have been presented below in Table 13.8.

Table-13.8: List of plants used by Tea garden workers as Religious Plants (including Super Natural Forces) in Terai Region of Darjiling Hills in West Bengal.

[Abbreviations used: G = Gungaram T.E., H = Hansqua T.E., K = Kamalpur T.E., M = Matigara T.E., Mo = Mohurgong & Gulma T.E., Mk = Makaibari T.E., S = Soom T.E., T = Tamsong T.E., SF = Supernatural Force]

Sl. No.	Plants [Families]	Local Names	T.E. where recorded	Parts Used	Purpose of use
01	<i>Achyranthes bidentata</i> [Amaranthaceae]	Chitchithii	G, H, Mo, Mk, S, T	Root, Whole plant	Marriage; driving away evil spirits
02	<i>Acorus calamus</i> [Acoraceae]	Bojo	G, H, M, Mo, Mk, S, T	Rhizome	Driving away evil spirits

03	<i>Aegle marmelos</i> [Rutaceae]	Bael, Bel	G, H, K, M, Mo	Whole plant, leaf	Abode of deity; worship of deities
04	<i>Artemisia dubia</i> [Asteraceae]	Titepati	Mk, S, T	Whole plant, leaf	Repellent of evil spirits. Used by Nepalese for worship and religious ceremonies
05	<i>Bauhinia variegata</i> [Caesalpiniaceae]	Koiralo	G, H, K, Mk, S, T	Stem	Cultural value in society
06	<i>Buddleja asiatica</i> [Buddlejaceae]		G, Mo, Mk, S, T	Dry stem	As incense in religious ceremonies by local priests
07	<i>Butea monosperma</i> [Fabaceae]	Palash	G, H, Mo	Flower	Worship
08	<i>Cannabis sativa</i> [Cannabaceae]	Bhengri, Bhang	G, H, Mo, T	Twig, Flower	Taken in little amount during worship
09	<i>Cryptomeria japonica</i> [Taxodiaceae]	Dhupi	S, T	Dry Twig	As incense during Buddhist religious ceremonies locally called dhup
10	<i>Cupressus corneyana</i> [Cupressaceae]	Weeping cypress	Mk, S, T	Dry Twig	As incense during religious ceremonies in Buddhist. Tree planted near monasteries
11	<i>Cynodon dactylon</i> [Poaceae]	Durba	G, H, K, M, Mo, Mk, S, T	Leafy twig	Worship of deities
12	<i>Datura metel</i> [Solanaceae]	Dhutura	G, H, K, Mk, T	Fruit, Seed	For worshiping Lord Siva
13	<i>Datura stramonium</i> [Solanaceae]	Seto Dhutura	G, H, K, M, Mk	Fruit, Flower	For worshiping Lord Siva
14	<i>Euphorbia royleana</i> [Euphorbiaceae]	Shionni	G, H, K, M, Mo, Mk	Whole plant	Planted near houses to be believed repeller of evil spirits
15	<i>Ficus benghalensis</i> [Moraceae]	Bor, Bot	G, H, K, M, Mo, Mk, S, T	Whole plant, leaf	Abode of deity, used in different ceremonies
16	<i>Ficus religiosa</i> [Moraceae]	Pipal, Aswath	G, H, K, M, Mo, Mk, S, T	Whole plant, leaf	Abode of deity; used in different ceremonies, like marriages, rituals
17	<i>Haldina cordifolia</i> [Rubiaceae]	Karam	G, H, K	Leafy braches	Treated as deity bt Santals & Oraons
18	<i>Lannea coromendelica</i> [Anacardiaceae]	Jiga, Dobdobe	G, H, K, M, Mo	Whole plant	Sacred to Oraon community
19	<i>Laportea terminalis</i> [Urticaceae]		Mk, S, T	Stem	Tie the string of a part of fibrous stem to newly born babies to repel evil spirits and to prevent loose motion
20	<i>Lycopodium pseudoclavatum</i> [Lycopodiaceae]	Nagbeli	Mk, S, T	Whole plant	Used in religious ceremonies and festivals
21	<i>Lygodium flexuosum</i> [Lygodiaceae]	Kukri larang	G, H, K, M, Mo	Leafy Twig	Fortune seeker
22	<i>Malva viscus arboreus</i> [Malvaceae]	Jabakusu m	G, H, Mo, Mk,	Flower	Worship of deities

23	<i>Mangifera indica</i> [Anacardiaceae]	Aam	G, H, K, M, Mo, Mk	Leafy Twig, leaf	Worship of deities
24	<i>Mimosa himalayana</i> [Mimosaceae]	Arari kanra	Mo, Mk, S, T	Long branches	Death ceremony; protect the place of worship
25	<i>Musa bulbisiana</i> [Musaceae]	Kala, Bonkera	G, H, K, M, Mo, Mk, S, T	Leaf, leaf sheath, pseudo stem	Ceremonial decoration & plates for offerings, last- rites
26	<i>Neyraudia aurandinacea</i> [Poaceae]	Ghung ring	Mk, S, T	Flowering twigs	Used in religious purpose in Nepalese
27	<i>Ocimum tenuiflorum</i> [Lamiaceae]	Tulsi	G, H, K, M, Mo, Mk, S, T	Leaf	Worship of deities
28	<i>Oroxylum indicum</i> [Bignoniaceae]	Totola, Taloyar, Dakdewa	G, H, K, M, Mo, Mk, S, T	Seeds	Seeds sacred to Buddhists, remover of evil spirits
29	<i>Oryza sativa</i> [Poaceae]	Chaule, Chawor	G, H, K, M, Mo, Mk, S, T	Grains	Unhusked & husked grains in many religious ceremonies; fortune seeker
30	<i>Plumeria rubra</i> [Apocynaceae]	Rukh chuwa	G, H, Mo	Flowers	Worship of deities
31	<i>Prunus cerasoides</i> [Rosaceae]		Mk, S, T	Slender branches	Different ceremonies
32	<i>Pupalia lappacea</i> [Amaranthaceae]	Chirchithi	G, H, K, Mo, Mk	Root	Driving away evil spirits
33	<i>Rauvolfia serpentina</i> [Apocynaceae]	Nagbeli	G, H, Mo, Mk	Root	SF
34	<i>Rhus chinensis</i> [Anacardiaceae]	Bhakimlo	Mk, S, T	Twigs	Used in rhymes of nepali cultural festivals
35	<i>Ricinus communis</i> [Euphorbiaceae]	Reri	Mo, Mk, S, T	Leaf	Driving away evil spirits during worship of Goddess Kali
36	<i>Scoparia dulcis</i> [Scrophulariaceae]	Atibala, Ba rier, Jangli Dhania, Ghuma, Darcheto war	G, H, K, M, Mo	Root (keep in pocket)	Driving away evil spirits; brings Good Fortune
37	<i>Shorea robusta</i> [Dipterocarpaceae]	Sakhuwa	G, H, K, M, Mo, Mk, S	Resin; whole plant	Used as incense is sal dhup in religious ceremonies; abode of deities to Santal and Oraon societies
38	<i>Tagetes patula</i> [Asteraceae]	Shaey patri	G, H, K, M, Mo, Mk, S, T	Flower	Flowers for warship
39	<i>Thuja orientalis</i> [Thujaceae]	Chapte dhupi	Mk, S, T	Dry leaves & twigs	As incense during religious ceremonies in Buddhist
40	<i>Thysanolaena latifolia</i> [Poaceae]	Amliso, Jharu	G, H, K, M, Mo, Mk, S, T	Shoot and infloresce- nce	For religious purposes
41	<i>Urtica ardens</i> [Urticaceae]	Ghariya sisnu	Mk, S, T	Fibrous stem	To make cords and tied around the waist of newborn baby for repelling evil spirit

As much as 41 species has been recorded for this non-commercial, faith dependent uses of plants. Out of these five plants [*Aegle marmelos*, *Ficus benghalensis*, *Ficus religiosa*, *Haldina cordifolia* and *Shorea robusta*] are treated as abode of deities by different groups of tribal people.

For driving away of the evil forces ten plants has been recoded during the present survey which are *Achyranthes bidentata*, *Acorus calamus*, *Artemisia dubia*, *Euphorbia royleana*, *Laportea terminalis*, *Oroxylum indicum*, *Pupalia lappacea*, *Ricinus communis*, *Scoparia dulcis* and *Urtica ardens*. These plants are used in different manner and to realize the integration of these social practices one need to be associated with such society for a long time and should try to understand the intricate philosophy of tribal life and society.

However, in addition, there are some fortune seeker plants like *Lygodium flexuosus*, *Oryza sativa* and *Scoparia dulcis*.

13.14 Ornamental and Decorative Plants used by Tea Garden workers in Terai and hills of Darjiling.

Ornamental and decorative plants are in great demand in all the societies. The flora of Eastern Himalaya is always a rich source of ornamental and decorative plants. The floricultural nurseries and plant hunters of this region were collecting beautiful plants of this region and were exporting those even in the ninth decade of the last century. Numerous endemic species of *Primula*, *Impatiens*, *Chirita*, *Dedymocarpus*, *Allium*, *Rhododendron*, orchids etc. has been sold away from this country against meager price by gridy tradesmen. Many of such plants are now not available in our country but are available in European gardens.

Table 13.9 has recorded the common ornamental and decorative plants used by the people of target groups.

Table 13.9: List of ornamental and decorative plants used by Tea garden workers in Terai and Hills of Darjiling in West Bengal.

[*Abbreviations used:* G = Gungaram T.E., H = Hansqua T.E., K = Kamalpur T.E., M = Matigara T.E., Mo = Mohurgong & Gulma T.E., Mk = Makaibari T.E., S = Soom T.E., T = Tamsong T.E., NK = Not known]

Sl. No.	Plants [Families]	Local Name	T.E. where recorded	Parts Used	Purpose of use
01.	<i>Aloe vera</i> [Liliaceae]	Ghew kumari	G, H, Mk	Leaf	Ornamental
02.	<i>Alstonia scholaris</i> [Apocynaceae]	Chhatiyan	G, H, K, Mo, Mk	Grown plant	Ornamental tree
03.	<i>Ardisia solanacea</i>	Damai phal	G, H, K	Flowers and	Ornamental

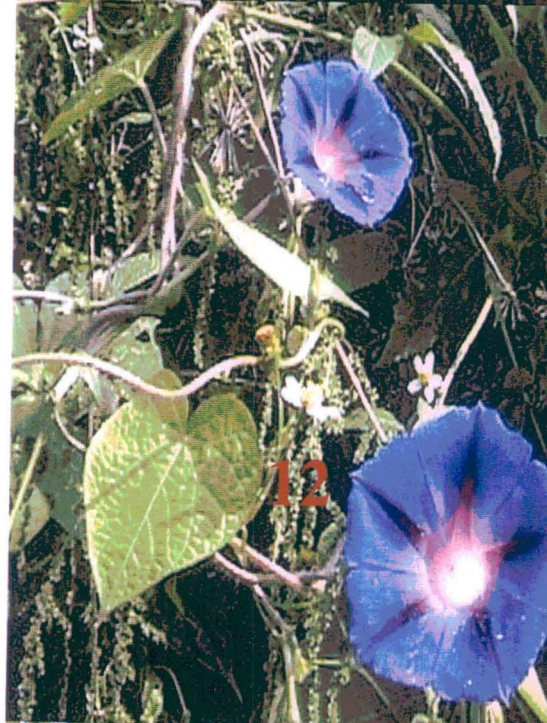
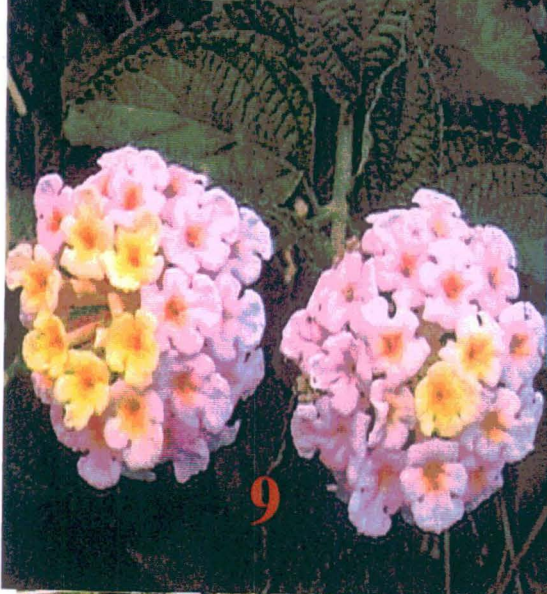
[Myrsinaceae]			fruits	
<i>Asparagus racemosus</i>	Kurilo	G, H, K,	Grown plant	Ornamental
[Asparagaceae]		Mo, Mk		
<i>Bauhinia purpurea</i>	Kochnar,	G, H, K,	Grown plant,	Ornamental
[Caesalpiniaceae]	Taki	M, Mo,	Flower	tree
		Mk, S, T		
<i>Bambusa</i> spp. [Poaceae]	Bans	G, H, Mk,	Stem, Leaf,	Decorative
		S, T	Inflorescens	
<i>Berginia ciliata</i> [Saxifragaceae]	Pakhan bet	Mk, S, T	Grown plant	Ornamentals
<i>Cassia alata</i> [Caesalpiniaceae]	Baro chakar	G, H, K,	Inflorescence	Decoration
		M, Mo		
<i>Cassia fistula</i> [Caesalpiniaceae]	Raj briksha	G, H, K,	Grown plant	Ornamental
		M		
<i>Catharanthus roseus</i>	Nayantara	G, H, K,	Flower	Ornamental
[Apocynaceae]		Mo, Mk,		
		T		
<i>Clerodendrum viscosum</i>	Ghato, Vhauti	G, H, K,	Flower	Ornamental
[Verbenaceae]		M, Mo,		
<i>Clerodendrum inerme</i>	NK	G, H, Mo,	Grown plant	Hedge
[Verbenaceae]				
<i>Clitoria ternatea</i> [Fabaceae]	Aparajita	G, H, K,	Flower	Ornamental
		Mk, T		
<i>Coix lachryma-jobi</i> [Poaceae]	Ghanrey mala	G, H, Mk,	Stony bracts	Jewelry
		S, T		
<i>Costus speciosus</i>	Bet lauree	G, H, K,	Grown plant	Ornamental
[Zingiberaceae]		M, Mk, T		
<i>Crinum amoenum</i>	NK	G, H, Mo,	Flower	Ornamental
[Amaryllidaceae]				
<i>Datura stramonium</i>	Dhutura	G, H, K,	Flower	Ornamental
[Solanaceae]		Mk		
<i>Delonix regia</i> [Caesalpiniaceae]	Gulmohar	G, H, K,	Pods, Flower	Decorative
		M, Mo,		
		Mk, T		
<i>Dillenia pentagyna</i>	Tantari	H, Mo,	Leaf	Decorative
[Dilleniaceae]		Mk		
<i>Erythrina stricta</i> [Fabaceae]	Phaledo	S, T	Grown plant	Ornamental tree
<i>Euphorbia pulcherrima</i>	Lalupate,	G, H, K,	Grown plant	Ornamental
[Euphorbiaceae]	Ratopate	M, Mo,		
		Mk, S, T		
<i>Ficus benjamina</i> [Moraceae]	Kabra	G, H, K,	Grown plant	Ornamental
		M, Mo,		
		Mk		
<i>Hibiscus rosasinensis</i>	Jaba	G, H, K,	Flower	Ornamental
[Malvaceae]		M, Mo,		
		Mk, S, T		
<i>Jasminum sambac</i> [Oleaceae]	Chameli	G, H, K,	Flower	Ornamental, aromatic
		M, Mo		
<i>Jatropha curcas</i>	Sada Varendra	G, H	Grown plant	Hedge
[Euphorbiaceae]				
<i>Justicia adhatoda</i>	Basak	G, H, K,	Grown plant	Hedge
[Acanthaceae]		M		
<i>Justicia gendarussa</i>	Jagatmadan	G, H, M,	Grown plant	Hedge
[Acanthaceae]		Mo		
<i>Lagerstroemia reginae</i>	Jarul	G, H, K,	Fruit flowers	Decorative
[Caesalpiniaceae]		M, Mo,		



PLATE XIX : Some common potential ornamental plants of Tea

Garden area:

1. *Primula melacoides*
2. *Cestrum aurantiacum*
3. *Poinsettia pulcherrima*
4. *Erigeron karvinskianus*
5. *Anaphalis margaritacea*
6. *Dahlia imperialis*
7. *Arundina graminifolia*
8. *Impatiens arguta*



29.	<i>Lantana camara</i> [Verbenaceae]	Kuttus, Putus kanta	Mk G, H, Mo	Grown plant	Hedge
30.	<i>Lycopodiella cernua</i> [Lycopodiaceae]	NK	H, K, Mo, S, T	Shoot	Decorative
31.	<i>Lycopodium pseudoclavatum</i> [Lycopodiaceae]	Nagbeli	S, T	Whole plant	Decorative
32.	<i>Lygodium salicifolium</i> [Lydodiaceae]	Kukri Larang	G, H, K, Mo,	Leafy branches	Decorative
33.	<i>Malvaviscus arboreus</i> [Malvaceae]	Jaba ful, Lanka-jaba	G, H, K, Mo, Mk	Flower	Ornamental
34.	<i>Maranta aurandinacea</i> [Marantaceae]	Ararut	G, H, M, Mk	Grown plant	Ornamental
35.	<i>Melastoma malabathricum</i> [Melastomataceae]	Dnatrangi, Chulasi	G, H, Mo, Mk, S, T	Flower	Ornamental
36.	<i>Mirabilis jalapa</i> [Nyctaginaceae]	Jahajuhin, Krishnakali	G, H, K, M, Mo, Mk	Flower	Ornamental
37.	<i>Murraya paniculata</i> [Rutaceae]	Kamini	G, H, K, M, Mo, Mk, T	Flower	Ornamental, aromatic
38.	<i>Neolamarckia cadamba</i> [Rubiaceae]	Kadam	G, H, K, M, Mo, Mk	Grown plant, Flower	Ornamental tree
39.	<i>Oroxylum indicum</i> [Bignoniaceae]	Totola	Mo, Mk, S, T	Seed, Fruit	Decorative
40.	<i>Plumbago zeylanica</i> [Plumbaginaceae]	Chetoar, Chitawar	G, H	Flower	Ornamental
41.	<i>Plumeria rubra</i> [Apocynaceae]	Rukh chuwa	G, H, K, M	Grown plant, flowers	Ornamental
42.	<i>Polyalthia longifolia</i> [Annonaceae]	Dewdar	G, H, K, M, Mo	Leafy branches, Grown tree	Decorative
43.	<i>Prunus cerasoides</i> [Rosaceae]		Mk, S, T	Grown tree	Ornamental tree
44.	<i>Sansevieria trifasciata</i> [Dracaenaceae]	Sarpahara	G, H, K, M, Mo	Grown plant	Ornamental
45.	<i>Sterculia villosa</i> [Sterculiaceae]	Odal	G, H, K, M, Mo	Fruit	Decorative
46.	<i>Swietenia macrophylla</i> [Meliaceae]	Mehgini	G, H, K, Mo,	Fruit axis	Decorative
47.	<i>Swietenia mohaginy</i> [Meliaceae]	Mehgini	G, H, K, M,	Fruit axis	Decorative
48.	<i>Tagetes patula</i> [Asteraceae]	Ganda, Shaey patri	G, H, K, M, Mo, Mk, S, T	Flower	Ornamental, worship, ceremonies
49.	<i>Zephyranthes carinata</i> [Amaryllidaceae]	Piyaziful	G, H, K, M, Mo, Mk, S, T	Grown plant	Ornamental

It is difficult to prepare a list of ornamental and/or decorative plants of this area as almost all the demands its incorporation in this category. However, the Table 13.9 has recorded 50 species those were particularly using by these people. Hill people love gardening very much.

Almost every house or cottage is having few pots of ornamental plants. But, the Tea Garden workers in general are extremely poor people and they can not spare enough money or time for this purpose. Even then they are using ornamental plants. A close scrutiny of the listed plants shows that there are a good number of exotic plants like *Aloe vera*, *Catharanthus roseus*, *Clitoria ternatea*, *Delonix regia*, *Euphorbia pulcherrima*, *Hibiscus rosa-sinensis*, *Justicia gendarussa*, *Lantana camara*, *Malvaviscus arboreus*, *Mirabilis jalapa*, *Swietenia macrophylla*, *Swietenia mahagony*, *Tagetes petula*, *Zephyranthes carinata*, etc.

The selection of ornamental plants in Terai garden workers are mainly related to their religious requirements. Use of decorative items is rare among them. Majority of the decorative items reported here are from hill workers and only few are either overlapping or are from Terai workers.

13.15 Fibre Yielding Plants

Fibre is one indispensable product in the human society. We need it for our dresses, for building our houses, tying our domesticated animals and for innumerable other jobs. Apart from the body hairs of few animals, most of the fibres we collect from plants. Fibres are sclerenchymatous tissue generally remain closely associated with the vascular bundles and save the plant body from stress and strain. But, the usable fibres are not available in all plants. So, proper search for usable fibre is very important.

People in the traditional societies are testing the natural products for thousands of years. They have also discovered the uses of many fibres available in their locality. For different species of plants method of fibre extraction is not same. And, in many cases they do not extract the fibre in final form and, instead, they use the bark itself as fibre/ chord/ rope. Fibres are also available from different parts of a plant body. Root, stem, leaf, fruit and seed are the major fibre yielding parts in different species of fibre yielding plants. The recorded 15 species of fibre yielding plants are presented below in Table 13.10.

Table 13.10: List of plants used by Tea garden workers in Terai and hill region of Darjiling for the extraction of fibre.

[**Abbreviations used:** G = Gungaram T.E., H = Hansqua T.E., K = Kamalpur T.E., M = Matigara T.E., Mo = Mohurgong & Gulma T.E., Mk = Makaibari T.E., S = Soom T.E., T = Tamsong T.E., NK = Not known]

Sl. No.	Plants [Families]	Local Name	T.E. where recorded	Parts Used	Purpose of use
01	<i>Ambroma augusta</i> [Sterculiaceae]	Sano Kapasi	H, Mo, Mk, S, T	Stem	Yields fibre
02	<i>Boehmeria macrophylla</i> [Urticaceae]	Kamli	S, T	Stem	A strong fibre
03	<i>Bombax ceiba</i> [Bombacaceae]	Simal	G, H, Mo, Mk, S, T	Floss	Foss for stuffing pillow, mattress, etc.
04	<i>Corchorus capsularis</i> [Tiliaceae]	Paat	G, H, K	Fibre from stem	Mats, rope
05	<i>Crotalaria juncea</i> [Fabaceae]	Sanaiful	G, H, M	Fiber from Stem	Rope, fishing net
06	<i>Dendrocnide sinuata</i> [Urticaceae]	Moringe, Chotra	H, Mo	Stem	Fibre for rope
07	<i>Girardinia diversifolia</i> [Urticaceae]	Vangre Sishnu	Mk, S, T	Stem	Yields fibre for making hand bags, gunny cloths, etc.
08	<i>Gossypium herbaceum</i> [Malvaceae]	Kapas	G, H, K, M, Mo, Mk, S, T	Lint on seeds	Cotton to make cloths, stuffing bed, pillows, quilt, etc.
09	<i>Moutia puya</i> [Urticaceae]	NK	Mk	Stem bark	Strong fibre for making rope
10	<i>Musa balbisiana</i> [Musaceae]	Bankera	G, H, K, M	Leaf-sheaths	Fibre prepared for making rough rope
11	<i>Sida rhombifolia</i> [Malvaceae]	Bariari ghash, Khareto	G, H, K, M	Branched Stem	Produce good quality fibre
12	<i>Sterculia villosa</i> [Sterculiaceae]	Odal	G, H, K, M, Mo, Mk	Barks	Ropes, head and shoulder straps to carry loads in remote areas which is durable in rainy seasons
13	<i>Urena lobata</i> [Malvaceae]	Bheray kuro, Kuray pat	G, H, K	Stem	Yields strong fibre
14	<i>Urtica dioica</i> [Urticaceae]	Sishnu	S, T	Stem	Yields fibre for making hand bags
15	<i>Urtica parviflora</i> [Urticaceae]	Sishnu	S, T	Stem	Yields fibre for making hand bags

Urticaceae is dominating in the list of reported fibre yielding plants. Six, out of 15 plants are from this family. It is followed by Malvaceae with three species and Sterculiaceae with two species. Bombacaceae, Fabaceae, Musaceae and Tiliaceae are represented with one species only. Of these 12 species produce usable fibres from their stem-bark; two from seeds (*Bombax ceiba*, *Gossypium herbaceum*) and only one from leaf sheaths (*Musa balbisiana*). Of these four species are regularly exploited for commercial production of fibre those are *Bombax ceiba*, *Corchorus capsularis*, *Crotalaria juncea* and *Gossypium herbaceum*. And, except *Bombax ceiba* remaining three species are in regular cultivation and at least two (*Corchorus capsularis*, *Gossypium*

herbaceum) are industrial plants. But the fibre extracted from some other species like *Boehmeria macrophylla*, *Sida rhombifolia*, *Sterculia villosa*, *Urena lobata* and *Urtica dioica*.

In fact, there are many more fibre-yielding plants available in the flora of Darjiling region but the present enumeration is based on the plants used by Tea Garden workers only.

13.16 Plants of Miscellaneous Uses

For leading a normal life man need to depend on many more plants for to meet up various other needs for survival. Though these people survive with the most minimum requirements even the list prepared in Table 13.11 became quite long with the incorporation of 79 species of plants.

Table 13.11: List of plants of miscellaneous uses by Tea garden workers in Terai and hill region of Darjiling Hills in West Bengal.

[*Abbreviations used:* G = Gungaram T.E., H = Hansqua T.E., K = Kamalpur T.E., M = Matigara T.E., Mo = Mohurgong & Gulma T.E., Mk = Makaibari T.E., S = Soom T.E., T = Tamsong T.E., NK = Not known]

Sl. No.	Plants [Families]	Local Name	T.E. where recorded	Parts Used	Purpose of use
01	<i>Acacia catechu</i> [Mimosaceae]	Khayer	G, H, K, M, Mo, Mk, S, T	Resin, wood	Catch or khayer chewing with pan, mature stem for timber and fuel wood
02	<i>Actinidia strigosa</i> [Actinidiaceae]		T	Fruit	Brewing
03	<i>Alnus nepalensis</i> [Betulaceae]	Utis	S, T	Trunk	Timber, fuel
04	<i>Aloe barbadensis</i> [Liliaceae]	Ghiukumari	G, H, K, Mk, T	Leaf	Cosmetic
05	<i>Artemisia dubia</i> [Asteraceae]	Titepati	Mk, S, T	Dry plant	Plant smoke is insect repellent
06	<i>Azadirachta indica</i> [Meliaceae]	Neem	G, H	Leaf, trunk	Timber used for construction, furniture, lvs as insecticides
07	<i>Bambusa</i> spp. [Poaceae]	Bansh	G, H, M, Mo, Mk, S, T	Culm	Construction, Baskets, walking sticks
08	<i>Bauhinia purpurea</i> [Caesalpiniaceae]	Taki	G, H, Mo, Mk, S, T	Bark	Tanning
09	<i>Bauhinia vahlii</i> [Caesalpiniaceae]	Bhorla	Mo	Leaf	Plates, hats
10	<i>Betula alnoides</i> [Betulaceae]	Shour	S, T	Trunk	Timber
11	<i>Bidens pilosa</i> [Asteraceae]	Kuro	Mk, T	Yng Sht	Crushed and kept in fine cotton cloth and used as tea or as substitute of green tea
12	<i>Boehmeria macrophylla</i> [Urticaceae]	Kamli	S, T	Stem	Fibre

13	<i>Boehmeria rugulosa</i> [Urticaceae]	Daar	H, K, Mo, Mk	Stem	Used to make many household vessels
14	<i>Bombax ceiba</i> [Bombacaceae]	Simal	G, H, M, Mo, Mk	Timber	Packing boxes, match box, plywood.
15	<i>Buddleja asiatica</i> [Buddlejaceae]	Bhimsen pati	Mk, S, T	Mature leaves, Rt	Prevent mite infestation of poultry birds. Ingredient of starter mixture for local traditional drinks
16	<i>Cajanus cajan</i> [Fabaceae]	Arhar	G, H, Mo	Stem	Fuel
17	<i>Calamus erectus</i> [Ericaceae]	Bet	Mk, S, T	Stem	Making chairs, stools, table etc.
18	<i>Callicarpa arborea</i> [Verbenaceae]	Gwelo	G, H, Mo, Mk	Wood	Fuel
19	<i>Camellia kissi</i> [Theaceae]	Lekali, Hingua	S, T	Leaves, trunk	A substitute of tea; timbers strong used for axe and hoe handles
20	<i>Camellia sinensis</i> [Theaceae]	Chia, Chha	Mk, S, T	Leaf	Cosmetic
21	<i>Canna edulis</i> [Cannaceae]	Phul tarul	Mk, S, T	Rhizome	Janr, a traditionally fermented beverage prepared from it
22	<i>Cannabis sativa</i> [Cannabaceae]	Bhengri, Bhang, Ganja	G, H, K, M, Mo, Mk, S, T	Leaf, Flower	Hallucinatory
23	<i>Chromolaena odorata</i> [Asteraceae]	Banmara	G, H, K, Mo	Whole plant	Aproduce good green manure
24	<i>Clerodendrum inerme</i> [Verbenaceae]	NK	G, H, K, Mo, Mk	Branches, grwn plant,	Thatch
25	<i>Coix lachryma-jobi</i> [Poaceae]	Ghanrey mala	G, H, Mk, S	Stony bracts	Jewellery
26	<i>Colebrookea oppositifolia</i> [Lamiaceae]	Dhusrey	Mk	Foliage	Incubation of unripe fruits
27	<i>Cryptomeria japonica</i> [Taxodiaceae]	Dhupi	Mk, S, T	Bark strips, timber	Kitchen roof and houses. Timber good for partition, ceiling, floor works
28	<i>Cupressus corneyana</i> [Cupressaceae]	Weeping cypress	S, T	Timber	Very valuable; wood as incense
29	<i>Cymbopogon nardus</i> [Poaceae]	Citronella ghash	G, H, Mo, Mk, T	Leaf	Insect repellent , soil binder
30	<i>Dicranopteris linearis</i> [Gleicheniaceae]	Kalame Unew	Mk, S, T	Stem	Writing pens made from stout hollow stem
31	<i>Dioscorea pentaphylla</i> [Dioscoreaceae]	Rani bhyagur	G, H, K	Yam	Used to wash cloth
32	<i>Ehretia acuminata</i> [Ehretiaceae]	NK	G, H, K, M, Mo	Wood	Fuel
33	<i>Elaeocarpus sphaericus</i> [Elaeocarpaceae]	Rudraksha	G, H, Mk, S, T	Stones from fruits	Used as holy rosary beads
34	<i>Elsholtzia fruticosa</i> [Lamiaceae]	Bhote pati	Mk, S, T	Dry leaves	Used as incense
35	<i>Emblica officinale</i> [Euphorbiaceae]	Amala	G, H, K, M, Mk, S	Bark	Used in tanning

36	<i>Gmelina arborea</i> [Verbenaceae]	Khamari, Gamari	G, H, K, M	Wood	Furniture, drum, & others domestic purposes
37	<i>Hyptis suaveolens</i> [Lamiaceae]	Gande jhar	G, H	Leaves	Used as shampoo for lice and parasite infestation
38	<i>Imperata cylindrica</i> [Poaceae]	Siru	G, H, K, Mo, Mk	Rhizome	Thatch, rope
39	<i>Jatropha curcas</i> [Euphorbiaceae]	Hatikane	G, H, K, Mo	Latex	Children make bubble with soapy sap from detached petiole
40	<i>Justicia adhatoda</i> [Acanthaceae]	Asuro	G, H, K, Mo, Mk	Leaves	Good insecticide
41	<i>Litsea glutinosa</i> [Lauraceae]		G, H, Mo, Mk	Trunk	Timber durable
42	<i>Luffa aegyptiaca</i> [Cucurbitaceae]	Gomra, Dhundhul	G, H, K, M, Mo,	Fibrous mesocarp	Bath sponge
43	<i>Machilus villosa</i> [Lauraceae]	Kawlo	G, H, Mo, Mk	Bark	Raw material for incense stick
44	<i>Mahonia nepaulensis</i> [Berberidaceae]	Chutro, Keshari	Mk, S, T	Stem	Handles of khukuri
45	<i>Malvaviscus arboreus</i> [Malvaceae]	Jabakusu m	Mk	Leaves	Hairs softening
46	<i>Michelia champaca</i> [Magnoliaceae]	Chanp	G, H, K, Mo, Mk	Trunk	Good timber
47	<i>Michelia doltsopa</i> [Magnoliaceae]	Rani Chanp	S, T	Trunk	Good timber
48	<i>Morus australis</i> [Moraceae]	Sano kimbu	G, H, Mk, S, T	Grown plant	Rearing of silkworms
49	<i>Murraya paniculata</i> [Rutaceae]	Bajradant hi	G, H, K, M, Mo	Stem	Handles of domestic tools
50	<i>Oroxylum indicum</i> [Bignoniaceae]	Totala	G, H, Mo, Mk, T	Foliage	Good fodder for cattle
51	<i>Oryza sativa</i> (Poaceae)	Dhan	G, H, Mk, T	Straw	Insulator
52	<i>Ostodes paniculata</i> [Euphorbiaceae]	Bepari	S, T	Mature seeds, gum	Used as lamp by burning in remote areas. Gum as natural adhesive
53	<i>Oxalis corniculata</i> [Oxalidaceae]	Amarchin gari, Khatta saag, Amruli	H, K, Mk, S	Whole plant	Washing utensils
54	<i>Pandanus nepalensis</i> [Pandanaceae]	Keya	Mo, Mk, T	Stem	Used as pillar
55	<i>Persicaria chinensis</i> [Polygonaceae]		Mk, S, T	Leaves	Cleaning copper utensils
56	<i>Persicaria hydropiper</i> [Polygonaceae]	Kusurpota Sukurpota	G, H, K, M	Whole plant	Fish poison
57	<i>Phrynium pubinerve</i> [Marantaceae]	Kamaiko pat	Mo, Mk, S	Leaves	Making <i>ghum</i>
58	<i>Pongamia pinnata</i> [Fabaceae]	Karanj	G, H	Twigs	Toothbrush
59	<i>Premna bengalensis</i> [Verbenaceae]	Baro sinduwer,	G, H	Leafy Twig	Repellent

		Gineri			
60	<i>Prunus cerasoides</i> [Rosaceae]	Painyun	Mk, S, T	Timber	Construction, furniture
61	<i>Psidium guajava</i> [Myrtaceae]	Ambak	Mo, Mk	Stem	Handles of khukuri, other carpenter's tools
62	<i>Pterospermum acerifolium</i> [Sterculiaceae]	Hattipaila	G, H, K, M, Mk	Leaves	Meal plates used during ceremonies; rain guards in gardens.
63	<i>Saccharum officinarum</i> [Poaceae]	Ikh, Ukhu	G, H, Mo,	Leaves	Fuel
64	<i>Sapindus mukorossi</i> [Sapindaceae]	Ritha	G, H, K, Mk	Pericarp	Good substitute for washing soap; popular herbal shampoo
65	<i>Schima wallichii</i> [Theaceae]	Chilaune	H, K, Mo, Mk, S, T	Timber	Household purposes
66	<i>Sesbania sesban</i> [Fabaceae]	Dhanche, Jayanti	G, H, K, M	Whole plant	Green manure
67	<i>Shorea robusta</i> [Dipterocarpaceae]	Sal, Sakhuwa	H, K, Mo	Resin, leaves	Inscens (fumigating rooms to repel mosquitoes); leaf-plates; durable timber
68	<i>Sida acuta</i> [Malvaceae]	Bariari ghash, Khareto	G, H, K, M	Branched Stem	Broom (Khareto)
69	<i>Sida rhombifolia</i> [Malvaceae]	Bariari ghash, Khareto	G, H	Branched Stem	Broom (Khareto)
70	<i>Terminalia chebula</i> [Combretaceae]	Harra	G, H, M, Mk, S	Dry fruits	Tanning
71	<i>Terminalia myriocarpa</i> [Combretaceae]	Panisaj	G, H, K, Mo, Mk, T	Timber	Furniture and construction
72	<i>Tetradium fraxinifolium</i> [Rutaceae]	Khanakpa	Mk, S, T	Timber	Tea chests, match sticks, etc.
73	<i>Thysanolaena latifolia</i> [Poaceae]	Phul jharu, Amliso	S, T	Inflorescence	Broom
74	<i>Toona ciliata</i> [Meliaceae]	Tooni	G, H, K, Mo, Mk	Trunk	Good timber, construction & furniture
75	<i>Trema orientalis</i> [Ulmaceae]	Khas-khasia	G, H, K, Mo	Wood	Good fuel
76	<i>Vetiveria zizantoides</i> [Poaceae]	NK	G, H, Mo	Root	Perfumery oil, mat
77	<i>Vitex negundo</i> [Verbenaceae]	Sinduwer	G, H, K	Leafy Twig	Hedge
78	<i>Wrightia arborea</i> [Apocynaceae]		G, H, K	Wood	Household purposes
79	<i>Zizyphus mauritiana</i> [Rhamnaceae]	Baer	G, H, Mo, Mk	Bark, trunk	Tanning. Wood for fuel

Out of the 79 species of plants recorded here a good number of them are already in trade and commerce. Plants *Acacia catechu*, *Aloe barbadensis*, *Azadirachta indica*, *Bambusa* spp., *Bombax ceiba*, *Calamus erectus*, *Cannabis sativa*, *Cryptomeria japonica*, *Cymbopogon nardus*, *Gmelina arborea*, *Imperata cylindrica*, *Michelia champaca*, *Morus australis*, *Oryza sativa*,

Sapindus mukorossi, *Terminalia myriocarpa*, *Toona ciliata* and *Vetiveria zizanioides* are already in trade for the same use those are recorded here. Some of these plants are also grown commercially for the purpose. Many of these are of multipurpose use in the society as well as in the industry. *Shorea robusta* is a good example. Its resin, leaf-plates and very high quality durable strong timber – all are in high demand in the market. Plants like *Azadirachta indica* and *Bambusa* spp. are also with multipurpose use as mentioned in Table 13.10.

Apart from these a good number of other plants of this list are also used in the outer world for similar purpose like *Coix lachryma-jobi*, *Elaeocarpus sphaericus*, *Jatropha curcas*, *Luffa aegyptiaca*, *Machilus villosa*, *Oxalis corniculata*, *Sesbania sesban*, and *Vitex negundo*.

Many other plants of this table can easily be adopted by the outer society for the similar purpose and can improvise the basic material and/or the use.

13.17 Discussion

The present Ethnobotanical survey among the Tea Garden workers in five Tea Estates in Terai and three in Darjiling Hills has resulted in the record of large number of plants under different categories as has been classified below [Table 13.12]:

Table 13.12: Numerical abstract of representation of different types of recorded Ethnobotanical plants as reported by Tea Garden workers in Terai and hills of Darjiling.

Ethnobotanical Category	Terai	Hill	Common	Total
Edible Plants	85	69	14	140
Fodder Plants	45	48	36	57
Medicinal & Aromatic Plants	201	239	104	336
Dye Yielding Plants	06	04	01	09
Religious Plants (including Super Natural Forces)	32	36	28	41
Ornamental and Decorative Plants	45	30	26	49
Fibre Yielding Plants	10	09	04	15
Miscellaneous uses	54	57	32	79

A consolidated list [Table 13.13] of recorded ethnobotanically important plants revealed the total number as 420 species.

Table 13.13: Consolidated list of plants recorded during Ethnobotanical survey in Tea Gardens of Terai and hills of Darjiling.

Plants [Families]	Edible	Fodder	Miscellaneous	Fibre	Ornamental	Religious	Dye	Medicinal
1 <i>Acacia catechu</i> [Mimosaceae]	Ed	*	Msc	*	*	*	*	Med
2 <i>Achyranthes aspera</i> [Amaranthaceae]	*	*	*	*	*	*	*	Med

3	<i>Achyranthes bidentata</i> [Amaranthaceae]	*	*	*	*	*	Rlg	*	Med
4	<i>Acmella calva</i> [Asteraceae]	Ed	Fd	*	*	*	*	*	Med
5	<i>Aconogonum molle</i> [Polygonaceae]	Ed	Fd	*	*	*	*	*	Med
6	<i>Acorus calamus</i> [Acoraceae]	*	*	*	*	*	Rlg	*	Med
7	<i>Actinidia strigosa</i> [Actinidiaceae]	Ed	*	Msc	*	*	*	*	*
8	<i>Adenantha pavonina</i> [Mimosaceae]	Ed	*	*	*	*	*	*	*
9	<i>Adiantum capellusveneris</i> [Adiantaceae]	*	*	*	*	*	*	*	Med
10	<i>Aegle marmelos</i> [Rutaceae]	Ed	*	*	*	*	Rlg	*	Med
11	<i>Ageratina adenophora</i> [Asteraceae]	*	*	*	*	*	*	*	Med
12	<i>Ageratum conyzoides</i> [Asteraceae]	*	*	*	*	*	*	*	Med
13	<i>Ageratum houstonianum</i> [Asteraceae]	*	*	*	*	*	*	*	Med
14	<i>Ajuga macrosperma</i> [Lamiaceae]	*	*	*	*	*	*	*	Med
15	<i>Albizia lebbek</i> [Mimosaceae]	*	*	*	*	*	*	*	Med
16	<i>Albizia odoratissima</i> [Mimosaceae]	*	*	*	*	*	*	*	Med
17	<i>Alnus nepalensis</i> [Betulaceae]	*	*	Msc	*	*	*	*	*
18	<i>Alocasia macrorrhiza</i> [Araceae]	Ed	*	*	*	*	*	*	*
19	<i>Aloe barbadensis</i> [Liliaceae]	*	*	Msc	*	*	*	*	Med
20	<i>Aloe vera</i> [Liliaceae]	*	*	*	*	Orn	*	*	Med
21	<i>Alstonia scholaris</i> [Apocynaceae]	*	Fd	*	*	Orn	*	*	*
22	<i>Alstonia scholaris</i> [Apocynaceae]	*	*	*	*	*	*	*	Med
23	<i>Alternanthera paronichioides</i> [Amaranthaceae]	Ed	*	*	*	*	*	*	Med
24	<i>Alternanthera sessilis</i> [Amaranthaceae]	Ed	Fd	*	*	*	*	*	*
25	<i>Amaranthus lividus</i> [Amaranthaceae]	Ed	*	*	*	*	*	*	*
26	<i>Amaranthus spinosus</i> [Amaranthaceae]	Ed	*	*	*	*	*	*	*
27	<i>Amaranthus viridis</i> [Amaranthaceae]	Ed	Fd	*	*	*	*	*	*
28	<i>Ambroma augusta</i> [Sterculiaceae]	Ed	*	*	Fbr	*	*	*	Med
29	<i>Ammania baccifera</i> [Lyth]	Ed	*	*	*	*	*	*	Med
30	<i>Amomum subulatum</i> [Zing]	*	*	*	*	*	*	*	Med
31	<i>Amorphophallus paeoniifolius</i> [Araceae]	Ed	*	*	*	*	*	*	Med
32	<i>Ampelocissus barbata</i> [Vita]	*	*	*	*	*	*	*	Med
33	<i>Ananus comosus</i> [Brom]	*	*	*	*	*	*	*	Med
34	<i>Andrographis paniculata</i> [Brom]	*	*	*	*	*	*	*	Med
35	<i>Annanus comosus</i> [Brom]	*	*	*	*	*	*	*	Med

36	<i>Annona reticulata</i> [Annonaceae]	Ed	Fd	*	*	*	*	*	Med
37	<i>Annona squamosa</i> [Annonaceae]	Ed	Fd	*	*	*	*	*	Med
38	<i>Antidesma acidum</i> [Euphorbiaceae]	Ed	*	*	*	*	*	*	Med
39	<i>Ardisia solanacea</i> [Myrsinaceae]	Ed	*	*	*	Orn	*	*	*
40	<i>Argemone mexicana</i> [Papaveraceae]	*	*	*	*	*	*	*	Med
41	<i>Artemisia dubia</i> [Asteraceae]	*	*	Msc	*	*	Rlg	*	Med
42	<i>Artemisia indica</i> [Asteraceae]	*	*	*	*	*	*	*	Med
43	<i>Artemisia vulgaris</i> [Asteraceae]	*	*	*	*	*	*	*	Med
44	<i>Artocarpus heterophyllus</i> [Moraceae]	Ed	Fd	*	*	*	*	*	*
45	<i>Artocarpus lacucha</i> [Moraceae]	Ed	Fd	*	*	*	*	*	Med
46	<i>Asparagus racemosus</i> [Asparagaceae]	*	*	*	*	Orn	*	*	Med
47	<i>Astilbe rivularis</i> [Saxifragaceae]	*	*	*	*	*	*	*	Med
48	<i>Averrhoa carambola</i> [Averrhoaceae]	*	*	*	*	*	*	*	Med
49	<i>Axonopus compressus</i>	*	Fd	*	*	*	*	*	*
50	<i>Azadirachta indica</i> [Meliaceae]	Ed	*	Msc	*	*	*	*	Med
51	<i>Bacopa monierii</i> [Scrophulariaceae]	Ed	*	*	*	*	*	*	Med
52	<i>Bambusa</i> sp. [Poaceae]	*	*	*	*	*	*	*	Med
53	<i>Bambusa</i> spp. [Poaceae]	*	Fd	Msc	*	Orn	*	*	*
54	<i>Bauhinia purpurea</i> [Caesalpinaceae]	Ed	*	Msc	*	Orn	*	*	Med
55	<i>Bauhinia vahlii</i> [Caesalpinaceae]	*	Fd	Msc	*	*	*	*	*
56	<i>Bauhinia variegata</i> [Caesalpinaceae]	Ed	Fd	*	*	*	Rlg	*	Med
57	<i>Begonia palmata</i> [Begoniaceae]	*	*	*	*	*	*	*	Med
58	<i>Begonia picta</i> [Begoniaceae]	*	*	*	*	*	*	*	Med
59	<i>Berginia ciliata</i> [Saxifragaceae]	Ed	*	*	*	Orn	*	*	Med
60	<i>Betula alnoides</i> [Betulaceae]	*	*	Msc	*	*	*	*	*
61	<i>Bidens pilosa</i> [Asteraceae]	*	Fd	Msc	*	*	*	*	*
62	<i>Biophytum sensitivum</i> [Oxalidaceae]	*	*	*	*	*	*	*	Med
63	<i>Bischofia javanica</i> [Euphorbiaceae]	*	Fd	*	*	*	*	*	Med
64	<i>Blumea balsamifera</i> [Asteraceae]	*	*	*	*	*	*	*	Med
65	<i>Boehmeria macrophylla</i> [Urticaceae]	*	Fd	Msc	Fbr	*	*	*	*
66	<i>Boehmeria rugulosa</i> [Urticaceae]	*	Fd	Msc	*	*	*	*	Med
67	<i>Boerhavia coccinea</i>	Ed	*	*	*	*	*	*	Med

	[Nyctaginaceae]								
68	<i>Bombax ceiba</i> [Bombacaceae]	*	*	Msc	Fbr	*	*	*	Med
69	<i>Brassaiopsis hainla</i> [Araliaceae]	*	Fd	*	*		*	*	Med
70	<i>Brassica campestris</i> [Brassicaceae]	Ed	*	*	*	*	*	*	*
71	<i>Brassica juncea</i> [Brassicaceae]	Ed	*	*	*	*	*	*	Med
72	<i>Bridelia retusa</i> [Euphorbiaceae]	*	*	*	*	*	*	*	Med
73	<i>Buddleja asiatica</i> [Buddlejaceae]	*	*	Msc	*	*	Rlg	*	*
74	<i>Buddleja asiatica</i> [Buddlejaceae]	*	*	*	*	*	*	*	Med
75	<i>Butea monosperma</i> [Fabaceae]	*	*	*	*	*	Rlg	*	*
76	<i>Cajanus cajan</i> [Fabaceae]	Ed	*	Msc	*	*	*	*	Med
77	<i>Caladium hortulanum</i> [Araceae]	*	*	*	*	*	*	*	Med
78	<i>Calamus erectus</i> [Arecaceae]	Ed	*	Msc	*	*	*	*	*
79	<i>Calamus tenuis</i> [Arecaceae]	*	*	*	*	*	*	*	Med
80	<i>Callicarpa arborea</i> [Verbenaceae]	*	*	Msc	*	*	*	*	Med
81	<i>Calotropis gigantea</i> [Asclepiadaceae]	*	*	*	*	*	*	*	Med
82	<i>Camellia kissi</i> [Theaceae]	*	*	Msc	*	*	*	*	*
83	<i>Camellia sinensis</i> [Theaceae]	Ed	*	Msc	*	*	*	*	Med
84	<i>Canarium strictum</i>	*	*	*	*	*	*	*	Med
85	<i>Canna edulis</i> [Cannaceae]	Ed	Fd	Msc	*	*	*	*	*
86	<i>Cannabis sativa</i> [Cannabaceae]	*	*	Msc	*	*	Rlg	*	Med
87	<i>Capsicum frutescens</i> [Solanaceae]	*	*	*	*	*	*	*	Med
88	<i>Cardamine hirsuta</i> [Brassicaceae]	Ed	*	*	*	*	*	*	Med
89	<i>Carica papaya</i> [Caricaceae]	Ed	*	*	*	*	*	*	Med
90	<i>Cassia alata</i> [Caesalpiniaceae]	*	*	*	*	Orn	*	*	Med
91	<i>Cassia fistula</i> [Caesalpiniaceae]	*	*	*	*	Orn	*	*	Med
92	<i>Cassia occidentalis</i> [Caesalpiniaceae]	Ed	*	*	*	*	*	*	Med
93	<i>Cassia sophera</i> [Caesalpiniaceae]	*	*	*	*	*	*	*	Med
94	<i>Cassia tora</i> [Caesalpiniaceae]	Ed	*	*	*	*	*	*	Med
95	<i>Catharanthus roseus</i> [Apocynaceae]	*	*	*	*	Orn	*	*	Med
96	<i>Catunaregam longispina</i> [Rubiaceae]	Ed	*	*	*	*	*	*	*
97	<i>Centella asiatica</i> [Apiaceae]	Ed	*	*	*	*	*	*	Med
98	<i>Chenopodium album</i> [Chenopodiaceae]	Ed	*	*	*	*	*	*	Med
99	<i>Chenopodium ambrosoides</i> [Chenopodiaceae]	*	*	*	*	*	*	*	Med
100	<i>Choerospondias axillaria</i> [Anacardiaceae]	Ed	*	*	*	*	*	*	*
101	<i>Chromolaena odoratum</i>	*	*	Msc	*	*	*	*	Med

	[Asteraceae]								
102	<i>Cinnamomum bejolghota</i>	Ed	*	*	*	*	*	*	*
	[Lauraceae]								
103	<i>Cinnamomum sp.</i> [Lauraceae]	*	*	*	*	*	*	*	Med
104	<i>Cinnamomum tamala</i>	Ed	*	*	*	*	*	*	Med
	[Lauraceae]								
105	<i>Cissampelos pariera</i>	*	*	*	*	*	*	*	Med
	[Menispermaceae]								
106	<i>Cissus quadrangularis</i> [Vita]	*	*	*	*	*	*	*	Med
107	<i>Citrus aurantium</i> [Rutaceae]	Ed	*	*	*	*	*	*	Med
108	<i>Citrus grandis</i> [Rutaceae]	Ed	*	*	*	*	*	*	*
109	<i>Citrus maxima</i> [Rutaceae]	Ed	*	*	*	*	*	*	Med
110	<i>Citrus mlicca</i> [Rutaceae]	Ed	*	*	*	*	*	*	Med
111	<i>Clematis buchananiana</i>	*	*	*	*	*	*	*	Med
	[Ranunculaceae]								
112	<i>Cleome rutidosperma</i>	*	*	*	*	*	*	*	Med
	[Cleomaceae]								
113	<i>Clerodendrum indicum</i>	*	*	*	*	*	*	*	Med
	[Verbenaceae]								
114	<i>Clerodendrum inerme</i>	*	*	Msc	*	Orn	*	*	*
	[Verbenaceae]								
115	<i>Clerodendrum serretum</i>	*	*	*	*	*	*	Dye	Med
	[Verbenaceae]								
116	<i>Clerodendrum viscosum</i>	Ed	*	*	*	Orn	*	*	Med
	[Verbenaceae]								
117	<i>Clinopodium umbrosum</i>	*	*	*	*	*	*	*	Med
	[Lamiaceae]								
118	<i>Clitoria ternatea</i> [Fabaceae]	*	*	*	*	Orn	*	*	Med
119	<i>Coccinia grandis</i>	Ed	*	*	*	*	*	*	*
	[Cucurbitaceae]								
120	<i>Coffea arabica</i> [Rubiaceae]	*	*	*	*	*	*	*	Med
121	<i>Coix lachryma-jobi</i> [Poaceae]	Ed	Fd	Msc	*	Orn	*	*	Med
122	<i>Colebrookea oppositifolia</i>	*	*	Msc	*	*	*	*	Med
	[Lamiaceae]								
123	<i>Colocasia esculenta</i> [Araceae]	Ed	*	*	*	*	*	*	Med
124	<i>Commelina benghalensis</i>	Ed	Fd	*	*	*	*	*	Med
	[Commelinaceae]								
125	<i>Corchorus capsularis</i>	*	*	*	Fbr	*	*	*	*
	[Tiliaceae]								
126	<i>Coriandrum sativum</i>	Ed	*	*	*	*	*	*	Med
	[Apiaceae]								
127	<i>Costus speciosus</i> [Costaceae]	Ed	*	*	*	Orn	*	*	Med
128	<i>Crassocephalum crepidioides</i>	*	*	*	*	*	*	*	Med
	[Asteraceae]								
129	<i>Crinum amoenum</i>	*	*	*	*	Orn	*	*	*
	[Amaryllidaceae]								
130	<i>Crotalaria juncea</i> [Fabaceae]	Ed	*	*	Fbr	*	*	*	Med
131	<i>Croton bonplandianus</i>	*	*	*	*	*	Rlg	*	Med
	[Euphorbiaceae]								
132	<i>Cryptomeria japonica</i>	*	*	Msc	*	*	*	*	*
	[Taxodiaceae]								
33	<i>Cupressus coneyana</i>	*	*	Msc	*	*	Rlg	*	
	[Cupressaceae]								
34	<i>Curculigo capitulata</i>	*	*	*	*	*	*	*	Med

	[Hypoxidaceae]								
135	<i>Curculigo orchoides</i>	*	*	*	*	*	*	*	Med
	[Hypoxidaceae]								
136	<i>Curcuma amada</i> [Zing]	*	*	*	*	*	*	*	Med
137	<i>Curcuma aromatica / caesia</i> [Zing]	*	*	*	*	*	*	*	Med
138	<i>Curcuma longa</i> [Zing]	*	*	*	*	*	*	Dye	Med
139	<i>Curcuma zloaria</i> [Zing]	*	*	*	*	*	*	*	Med
140	<i>Cuscuta reflexa</i> [Cuscutaceae]	*	*	*	*	*	*	*	Med
141	<i>Cyanthillium cinereum</i> [Asteraceae]	Ed	*	*	*	*	*	*	*
142	<i>Cymbopogon citratus</i> [Poaceae]	*	*	*	*	*	*	*	Med
143	<i>Cymbopogon nardus</i> [Poaceae]	*	*	Msc	*	*	*	*	Med
144	<i>Cynodon dactylon</i> [Poaceae]	*	Fd	*	*	*	Rlg	*	Med
145	<i>Cyperus rotundus</i> [Cyperaceae]	*	*	*	*	*	*	*	Med
146	<i>Dalbergia sissoo</i> [Fabaceae]	*	*	*	*	*	*	*	Med
147	<i>Datura fastuosa</i> [Solanaceae]	*	*	*	*	*	*	*	Med
148	<i>Datura metel</i> [Solanaceae]	*	*	*	*	*	Rlg	*	Med
149	<i>Datura stramonium</i> [Solanaceae]	*	*	*	*	Orn	Rlg	*	Med
150	<i>Datura suaveolens</i> [Solanaceae]	*	*	*	*	*	*	*	Med
151	<i>Deeringia amaranthoides</i> [Amaranthaceae]	Ed	*	*	*	*	*	Dye	Med
152	<i>Delonix regia</i> [Caesalpiniaceae]	*	*	*	*	Orn	*	*	*
153	<i>Dendrocnide sinuata</i> [Urticaceae]	*	*	*	Fbr	*	*	*	*
154	<i>Desmodium triflorum</i> [Fabaceae]	*	*	*	*	*	*	*	Med
155	<i>Dicliptera bupleuroides</i> [Brom]	*	*	*	*	*	*	*	Med
156	<i>Dicranopteris linearis</i> [Gleicheniaceae]	*	*	Msc	*	*	*	*	*
157	<i>Dillenia indica</i> [Dilleniaceae]	Ed	Fd	*	*	*	*	*	Med
158	<i>Dillenia pentagyna</i> [Dilleniaceae]	*	Fd	*	*	Orn	*	*	*
159	<i>Dioscorea alata</i> [Dioscoreaceae]	Ed	Fd	*	*	*	*	*	Med
160	<i>Dioscorea belophylla</i> [Dioscoreaceae]	Ed	*	*	*	*	*	*	Med
161	<i>Dioscorea bulbifera</i> [Dioscoreaceae]	Ed	*	*	*	*	*	*	Med
162	<i>Dioscorea deltoidea</i> [Dioscoreaceae]	*	*	*	*	*	*	*	Med
163	<i>Dioscorea floribunda</i> [Dioscoreaceae]	*	*	*	*	*	*	*	Med
164	<i>Dioscorea pentaphylla</i> [Dioscoreaceae]	Ed	*	Msc	*	*	*	*	Med
165	<i>Dioscorea prazeri</i> [Dioscoreaceae]	*	*	*	*	*	*	*	Med
166	<i>Diplazium esculentum</i> [Athyriaceae]	Ed	*	*	*	*	*	*	Med

167	<i>Drymaria diandra</i> [Caryophyllaceae]	*	*	*	*	*	*	*	Med
168	<i>Drymaria villosa</i> [Caryophyllaceae]	*	*	*	*	*	*	*	Med
169	<i>Dryopteris filix-mas</i> [Dryopteridaceae]	Ed	*	*	*	*	*	*	*
170	<i>Eclipta prostrata</i> [Asteraceae]	*	*	*	*	*	*	*	Med
171	<i>Ehretia acuminata</i> [Ehretiaceae]	*	Fd	Msc	*	*	*	*	*
172	<i>Elaeocarpus lancaefolius</i> [Elaeocarpaceae]	Ed	*	*	*	*	*	*	*
173	<i>Elaeocarpus sphaericus</i> [Elaeocarpaceae]	*	*	Msc	*	*	*	*	*
174	<i>Elephantopus scaber</i> [Asteraceae]	*	*	*	*	*	*	*	Med
175	<i>Elettaria cardamomum</i> [Zing]	*	*	*	*	*	*	*	Med
176	<i>Eleusine indica</i> [Poaceae]	*	Fd	*	*	*	*	*	Med
177	<i>Elsholtzia blanda</i> [Lamiaceae]	*	*	*	*	*	*	*	Med
178	<i>Elsholtzia fruticosa</i> [Lamiaceae]	*	*	Msc	*	*	*	*	*
179	<i>Embllica officinale</i> [Euphorbiaceae]	Ed	*	Msc	*	*	*	*	Med
180	<i>Entada rhei</i> [Fabaceae]	*	*	*	*	*	*	*	Med
181	<i>Enydra fluctuans</i> [Asteraceae]	Ed	*	*	*	*	*	*	Med
182	<i>Equisetum debile</i> [Equisetaceae]	*	Fd	*	*	*	*	*	Med
183	<i>Equisetum diffusum</i> [Equisetaceae]	*	*	*	*	*	*	*	Med
184	<i>Erycibe paniculata</i> [Convolvulaceae]	*	*	*	*	*	*	*	Med
185	<i>Eryngium foetidum</i> [Apiaceae]	Ed	*	*	*	*	*	*	*
186	<i>Erythrina arborescence</i> [Fabaceae]	*	*	*	*	*	*	*	Med
187	<i>Erythrina stricta</i> [Fabaceae]	*	*	*	*	Orn	*	*	Med
188	<i>Euphorbia hirta</i> [Euphorbiaceae]	*	*	*	*	*	*	*	Med
189	<i>Euphorbia pulcherrima</i> [Euphorbiaceae]	*	*	*	*	Orn	*	*	Med
190	<i>Euphorbia royleana</i> [Euphorbiaceae]	*	*	*	*	*	Rlg	*	Med
191	<i>Euphorbia tirucalii</i> [Euphorbiaceae]	*	*	*	*	*	*	*	Med
192	<i>Evodia fraxinifolia</i> [Rutaceae]	*	*	*	*	*	*	*	Med
193	<i>Fagopyrum debotrys</i> [Polygonaceae]	Ed	*	*	*	*	*	*	*
194	<i>Ficus benghalensis</i> [Moraceae]	Ed	Fd	*	*	*	Rlg	*	Med
195	<i>Ficus benjamina</i> [Moraceae]	Ed	Fd	*	*	Orn	*	*	*
196	<i>Ficus hispida</i> [Moraceae]	Ed	*	*	*	*	*	*	Med
197	<i>Ficus hookeriana</i> [Moraceae]	*	Fd	*	*	*	*	*	*
198	<i>Ficus neriifolia</i> [Moraceae]	*	Fd	*	*	*	*	*	*
199	<i>Ficus religiosa</i> [Moraceae]	*	Fd	*	*	*	Rlg	*	Med
200	<i>Girardinia diversifolia</i> [Urticaceae]	*	Fd	*	Fbr	*	*	*	Med
201	<i>Glinus oppositifolius</i>	Ed	*	*	*	*	*	*	

	[Caryophyllaceae]								
202	<i>Gmelina arborea</i>	*	*	Msc	*	*	*	*	Med
	[Verbenaceae]								
203	<i>Gonostegia hirta</i> [Urticaceae]		*		*	*	*	*	Med
204	<i>Gossypium herbaceum</i>	*	*	*	Fbr	*	*	*	*
	[Malvaceae]								
205	<i>Haldina cordifolia</i> [Rubiaceae]	*	*	*	*	*	Rlg	*	*
206	<i>Hlychium spicatum</i> [Zing]	*	*	*	*	*	*	*	Med
207	<i>Hlyotis scandens</i> [Rubiaceae]	*	*	*	*	*	*	*	Med
208	<i>Heliotropium indicum</i>	*	*	*	*	*	*	*	Med
	[Boraginaceae]								
209	<i>Hemiphragma heterophylla</i>	*	*	*	*	*	*	*	Med
	[Scrophulariaceae]								
210	<i>Heracleum nepalense</i>	Ed	*	*	*	*	*	*	Med
	[Apiaceae]								
211	<i>Heracleum wallichii</i>	*	*	*	*	*	*	*	Med
	[Apiaceae]								
212	<i>Hibiscus rosasinensis</i>	*	*	*	*	Orn	*	*	*
	[Malvaceae]								
213	<i>Holarrhena pubescens</i>	*	*	*	*	*	*	*	Med
	[Apocynaceae]								
214	<i>Houttuynia cordata</i>	Ed	*	*	*	*	*	*	Med
	[Saururaceae]								
215	<i>Hydrocotyle himalaica</i>	*	*	*	*	*	*	*	Med
	[Apiaceae]								
216	<i>Hydrocotyle sibthorpioides</i>	*	*	*	*	*	*	*	Med
	[Apiaceae]								
217	<i>Hygrophila auriculata</i> [Brom]	Ed	*	*	*	*	*	*	Med
218	<i>Hypericum japonicum</i>	*	*	*	*	*	*	*	Med
	[Hypericaceae]								
219	<i>Hypericum petulum</i>	*	*	*	*	*	*	*	Med
	[Hypericaceae]								
220	<i>Hyptis suaveolens</i> [Lamiaceae]	*	*	Msc	*	*	*	*	*
221	<i>Ichnocarpus frutescens</i>	*	*	*	*	*	*	*	Med
	[Apocynaceae]								
222	<i>Imperata cylindrica</i> [Poaceae]	*	Fd	Msc	*	*	*	*	Med
223	<i>Ipomoea aquatica</i>	Ed	*	*	*	*	*	*	Med
	[Convolvulaceae]								
224	<i>Ipomoea batatas</i>	*	*	*	*	*	*	*	Med
225	<i>Jasminum sambac</i> [Oleaceae]	*	*	*	*	Orn	*	*	Med
226	<i>Jatropha curcas</i>	*	*	Msc	*	Orn	*	*	Med
	[Euphorbiaceae]								
227	<i>Justicia adhatoda</i> [Brom]	*	*	Msc	*	Orn	*	*	Med
228	<i>Justicia gendarussa</i> [Brom]	*	*	*	*	Orn	*	*	Med
229	<i>Kaemferia rotunda</i> [Zing]	*	*	*	*	*	*	*	Med
230	<i>Kalanchoe pinnata</i>	*	*	*	*	*	*	*	Med
	[Crassulaceae]								
231	<i>Lagerstroemia reginae</i> [Lyth]	*	*	*	*	Orn	*	*	Med
232	<i>Lannea coromandelica</i>	*	*	*	*	*	Rlg	*	Med
	[Anacardiaceae]								
233	<i>Lantana camara</i>	Ed	*	*	*	Orn	*	*	Med
	[Verbenaceae]								
234	<i>Laportea terminalis</i>	*	*	*	*	*	Rlg	*	Med
	[Urticaceae]								

235	<i>Leucas indica</i> [Lamiaceae]	Ed	*	*	*	*	*	*	Med
236	<i>Lindenbergia grandiflora</i> [Scrophulariaceae]		*	*	*	*	*	*	Med
237	<i>Litsea citrata</i> [Lauraceae]		*	*	*	*	*	*	Med
238	<i>Litsea cubeba</i> [Lauraceae]	Ed	*	*	*	*	*	*	Med
239	<i>Litsea glutinosa</i> [Lauraceae]		*	Fd	Msc	*	*	*	Med
240	<i>Lobelia nummularia</i> [Lobeliaceae]		*	*	*	*	*	*	Med
241	<i>Luffa aegyptiaca</i> [Cucurbitaceae]	Ed	*		Msc	*	*	*	Med
242	<i>Lycopodiella cernua</i> [Lycopodiaceae]		*	*	*	*	Orn	*	*
243	<i>Lycopodium pseudoclavatum</i> [Lycopodiaceae]		*	*	*	*	Orn	Rlg	*
244	<i>Lygodium flexuosum</i> [Lygodiaceae]		*	*	*	*	*	Rlg	*
245	<i>Lygodium salicifolium</i> [Lygodiaceae]		*	*	*	*	Orn	*	*
246	<i>Lyonia ovalifolia</i> [Ericaceae]		*	*	*	*	*	*	Med
247	<i>Macaranga indica</i> [Euphorbiaceae]		*	*	*	*	*	*	Med
248	<i>Machilus villosa</i> [Lauraceae]		*	*	Msc	*	*	*	
249	<i>Maesa chisia</i> [Myrsinaceae]		*	*	*	*	*	*	Med
250	<i>Mahonia nepaulensis</i> [Berberidaceae]		*	*	Msc	*	*	*	Dye Med
251	<i>Mallotus philippensis</i> [Euphorbiaceae]		*	*	*	*	*	*	Dye Med
252	<i>Malva verticillata</i> [Malvaceae]	Ed	*	*	*	*	*	*	*
253	<i>Malvaviscus arboreus</i> [Malvaceae]		*	*	Msc	*	Orn	*	Med
254	<i>Malvaviscus arboreus</i> / / Flowers for		*	*	*	*	*	Rlg	*
255	<i>Mangifera indica</i> [Anacardiaceae]		*	Fd	*	*	*	Rlg	Med
256	<i>Manihot esculenta</i> [Euphorbiaceae]	Ed	*	*	*	*	*	*	*
257	<i>Maranta arundinacea</i> [Marantaceae]		*	*	*	*	Orn	*	Med
258	<i>Marsilea minuta</i> [Marsileaceae]	Ed	*	*	*	*	*	*	Med
259	<i>Mazus japonica</i> [Scrophulariaceae]		*	*	*	*	*	*	Med
260	<i>Melastoma malabathricum</i> [Melastomataceae]	Ed	*	*	*	*	Orn	*	Med
261	<i>Melissa parviflora</i> [Lamiaceae]		*	*	*	*	*	*	Med
262	<i>Melochia corchorifolia</i> [Sterculiaceae]	Ed	*	*	*	*	*	*	*
263	<i>Mentha arvensis</i> [Lamiaceae]	Ed	*	*	*	*	*	*	Med
264	<i>Mentha piperata</i> [Lamiaceae]	Ed	*	*	*	*	*	*	Med
265	<i>Mesua ferrea</i> [Clusiaceae]		*	*	*	*	*	*	Med
266	<i>Michelia champaca</i> [Magnoliaceae]		*	*	Msc	*	*	*	Med
267	<i>Michelia doltsopa</i> [Magnoliaceae]		*	*	Msc	*	*	*	*

268	<i>Mikania micrantha</i> [Asteraceae]	*	Fd	*	*	*	*	*	*
269	<i>Mimosa himalayana</i> [Mimosaceae]	*	*	*	*	*	Rlg	*	Med
270	<i>Mimosa pudica</i> [Mimosaceae]	*	*	*	*	*	*	*	Med
271	<i>Mimusops elangi</i> [Sapotaceae]	Ed	*	*	*	*	*	*	Med
272	<i>Mirabilis jalapa</i> [Nyctaginaceae]	*	*	*	*	Orn	*	*	Med
273	<i>Molineria gracilis</i> [Hypoxidaceae]	*	*	*	*	*	*	*	Med
274	<i>Momordica charantia</i> [Cucurbitaceae]	*	*	*	*	*	*	*	Med
275	<i>Momordica dioica</i> [Cucurbitaceae]	Ed	*	*	*	*	*	*	Med
276	<i>Morinda angustifolia</i> [Rubiaceae]	*	*	*	*	*	*	Dye	Med
277	<i>Moringa oleifera</i> [Moringaceae]	*	*	*	*	*	*	*	Med
278	<i>Morus alba</i> [Moraceae]	*	*	*	*	*	*	*	Med
279	<i>Morus australis</i> [Moraceae]	Ed	*	Msc	*	*	*	*	Med
280	<i>Morus macroura</i> [Moraceae]	*	Fd	*	*	*	*	*	Med
281	<i>Moutia puya</i> [Urticaceae]	*	*	*	Fbr	*	*	*	*
282	<i>Mucuna pruriens</i> [Fabaceae]	Ed	*	*	*	*	*	*	Med
283	<i>Murraya koenigii</i> [Rutaceae]	*	*	*	*	*	*	*	Med
284	<i>Murraya paniculata</i> [Rutaceae]	*	Fd	Msc	*	Orn	*	*	Med
285	<i>Musa balbisiana</i> [Musaceae]	Ed	Fd	*	Fbr	*	Rlg	*	Med
286	<i>Mussaenda macrophylla</i> [Rubiaceae]	*	*	*	*	*	*	*	Med
287	<i>Mussaenda roxburghii</i> [Rubiaceae]	Ed	*	*	*	*	*	*	Med
288	<i>Mussaenda treutleri</i> [Rubiaceae]	*	*	*	*	*	*	*	Med
289	<i>Nasturtium officinale</i> [Brassicaceae]	Ed	*	*	*	*	*	*	Med
290	<i>Neolamarckia cadamba</i> [Rubiaceae]	Ed	*	*	*	Orn	*	*	Med
291	<i>Nephrolepis cordifolia</i> [Nephrolepidaceae]	*	*	*	*	*	*	*	Med
292	<i>Neyraudia aurandinacea</i> [Poaceae]	*	*	*	*	*	Rlg	*	*
293	<i>Nyctanthes arbortristis</i> [Verbenaceae]	*	*	*	*	*	*	*	Med
294	<i>Ocimum tenuiflorum</i> [Lamiaceae]	*	*	*	*	*	Rlg	*	Med
295	<i>Oldenlandia corymbosa</i> [Rubiaceae]	Ed	*	*	*	*	*	*	Med
296	<i>Oldenlandia diffusa</i> [Rubiaceae]	Ed	*	*	*	*	*	*	Med
297	<i>Opuntia dillenii</i> [Cactaceae]	*	*	*	*	*	*	*	Med
298	<i>Oroxylum indicum</i> [Bignoniaceae]	Ed	Fd	Msc	*	Orn	Rlg	*	Med
299	<i>Oryza sativa</i> (Poaceae)	*	Fd	Msc	*	*	Rlg	*	*
300	<i>Osbeckia nepalensis</i> [Melastomataceae]	*	*	*	*	*	*	*	Med

301	<i>Ostodes paniculata</i> [Euphorbiaceae]	Ed	*	Msc	*	*	*	*	*
302	<i>Oxalis corniculata</i> [Oxalidaceae]	Ed	*	Msc	*	*	*	*	Med
303	<i>Oxalis corymbosa</i> [Oxalidaceae]	Ed	*	*	*	*	*	*	*
304	<i>Paleria foetida</i> [Rubiaceae]	Ed	*	*	*	*	*	*	Med
305	<i>Pandanus nepalensis</i> [Pandanaaceae]	Ed	*	Msc	*	*	*	*	*
306	<i>Passiflora lulis</i> [Passifloraceae]	Ed	*	*	*	*	*	*	*
307	<i>Peperomia pellucida</i> [Piperaceae]	*	*	*	*	*	*	*	Med
308	<i>Percompylus glaucus</i> [Menispermaceae]	*	*	*	*	*	*	*	Med
309	<i>Perilla frutescens</i> [Lamiaceae]	*	*	*	*	*	*	*	Med
310	<i>Persicaria chinensis</i> [Polygonaceae]	Ed	Fd	Msc	*	*	*	*	Med
311	<i>Persicaria hydropiper</i> [Polygonaceae]	Ed	*	Msc	*	*	*	*	*
312	<i>Persicaria microcephala</i> [Polygonaceae]	*	*	*	*	*	*	*	Med
313	<i>Phlogacanthus thyrsoflorus</i> [Brom]	Ed	*	*	*	*	*	*	Med
314	<i>Phrynium pubinerve</i> [Marantaceae]	*	*	Msc	*	*	*	*	*
315	<i>Phyla nodiflora</i> [Verbenaceae]	*	*	*	*	*	*	*	Med
316	<i>Phyllanthus amarus</i> [Euphorbiaceae]	*	*	*	*	*	*	*	Med
317	<i>Phyllanthus simplex</i> [Euphorbiaceae]	*	*	*	*	*	*	*	Med
318	<i>Phyllanthus urinaria</i> [Euphorbiaceae]	*	*	*	*	*	*	*	Med
319	<i>Physalis peruviana</i> [Solanaceae]	*	*	*	*	*	*	*	Med
320	<i>Pinus roxburghii</i> [Pinaceae]	*	*	*	*	*	*	*	Med
321	<i>Piper chava</i> [Piperaceae]	Ed	*	*	*	*	*	*	*
322	<i>Piper longum</i> [Piperaceae]	*	*	*	*	*	*	*	Med
323	<i>Piper peepuloides</i> [Piperaceae]	*	*	*	*	*	*	*	Med
324	<i>Plantago erosa</i> [Plantaginaceae]	*	*	*	*	*	*	*	Med
325	<i>Plumbago zeylanica</i> [Plumbaginaceae]	Ed	*	*	*	Orn	*	*	Med
326	<i>Plumeria rubra</i> [Apocynaceae]	*	*	*	*	Orn	Rlg	*	Med
327	<i>Polyalthia longifolia</i> [Annonaceae]	*	*	*	*	Orn	*	*	*
328	<i>Polygonum plebeium</i> [Polygonaceae]	Ed	*	*	*	*	*	*	*
329	<i>Pongamia pinnata</i> [Fabaceae]	*	*	Msc	*	*	*	*	*
330	<i>Portulaca oleracea</i> [Portulacaceae]	Ed	*	*	*	*	*	*	*
331	<i>Pouzolzia zeylanica</i> [Urticaceae]	*	*	*	*	*	*	*	Med
332	<i>Premna bengalensis</i> [Verbenaceae]	*	*	Msc	*	*	*	*	Med

333	<i>Premna mucronata</i> [Verbenaceae]	*	*	*	*	*	*	*	Med
334	<i>Premna obtusifolia</i> [Verbenaceae]	*	*	*	*	*	*	*	Med
335	<i>Prunus cerasoides</i> [Rosaceae]	Ed	*	Msc	*	Orn	Rlg	*	Med
336	<i>Psidium guajava</i> [Myrtaceae]	Ed	*	Msc	*	*	*	*	Med
337	<i>Pteridium aquilium</i> [Pteridiaceae]	Ed	*	*	*	*	*	*	*
338	<i>Pterospermum acerifolium</i> [Sterculiaceae]	*	*	Msc	*	*	*	*	*
339	<i>Punica granatum</i> [Punicaceae]	Ed	*	*	*	*	*	*	Med
340	<i>Pupalia atropurpurea</i> [Amaranthaceae]	*	*	*	*	*	*	*	Med
341	<i>Pupalia lappacea</i> [Amaranthaceae]	*	*	*	*	*	Rlg	*	Med
342	<i>Raphanus sativus</i> [Brassicaceae]	Ed	*	*	*	*	*	*	Med
343	<i>Rauvolfia serpentina</i> [Apocynaceae]	Ed	*	*	*	*	Rlg	*	Med
344	<i>Rhododendron arboreum</i> [Ericaceae]	*	*	*	*	*	*	*	Med
345	<i>Rhus chinensis</i> [Anacardiaceae]	*	*	*	*	*	Rlg	*	Med
346	<i>Rhus semialata</i> [Anacardiaceae]	*	*	*	*	*	*	*	Med
347	<i>Ricinus communis</i> [Euphorbiaceae]	*	*	*	*	*	Rlg	*	Med
348	<i>Rosa brunonii</i> [Rosaceae]	*	*	*	*	*	*	*	Med
349	<i>Rubia manjith</i> [Rubiaceae]	*	*	*	*	*	*	Dye	Med
350	<i>Rubus calycinus</i> [Rosaceae]	*	*	*	*	*	*	*	Med
351	<i>Rubus ellipticus</i> [Rosaceae]	*	*	*	*	*	*	*	Med
352	<i>Rubus lineatus</i> [Rosaceae]	*	*	*	*	*	*	*	Med
353	<i>Rumex nepalensis</i> [Polygonaceae]	Ed	Fd	*	*	*	*	*	Med
354	<i>Rumex trisetifer</i> [Polygonaceae]	*	*	*	*	*	*	*	Med
355	<i>Saccharum officinarum</i> [Poaceae]	*	*	Msc	*	*	*	*	Med
356	<i>Saccharum officinarum</i> [Poaceae]	*	*	*	*	*	*	*	*
357	<i>Sansevieria trifasciata</i> [Dracaenaceae]	*	*	*	*	Orn	*	*	Med
358	<i>Sapindus mukorossi</i> [Sapindaceae]	*	*	Msc	*	*	*	*	Med
359	<i>Sauraja nepalensis</i> [Actinidaceae]	*	Fd	*	*	*	*	*	*
360	<i>Schima wallichii</i> [Theaceae]	*	*	Msc	*	*	*	*	Med
361	<i>Scoparia dulcis</i> [Scrophulariaceae]	Ed	*	*	*	*	Rlg	*	Med
362	<i>Senesio scandens</i> [Asteraceae]	*	*	*	*	*	*	*	Med
363	<i>Sesbania grandiflora</i> [Fabaceae]	Ed	*	*	*	*	*	*	Med
364	<i>Sesbania sesban</i> [Fabaceae]	Ed	*	Msc	*	*	*	*	*
365	<i>Setaria palmifolia</i> [Poaceae]	*	Fd	*	*	*	*	*	*

366	<i>Shorea robusta</i> [Dipterocarpaceae]	*	*	Msc	*	*	Rlg	*	Med
367	<i>Sida acuta</i> [Malvaceae]	*	*	Msc	*	*	*	*	Med
368	<i>Sida cordifolia</i> [Malvaceae]	*	*	*	*	*	*	*	Med
369	<i>Sida rhombifolia</i> [Malvaceae]	*	*	Msc	Fbr	*	*	*	Med
370	<i>Skimmia arborescens</i> [Rutaceae]	*	*	*	*	*	*	*	Med
371	<i>Smilax ovalifolia</i> [Smilacaceae]	*	*	*	*	*	*	*	Med
372	<i>Solanum indicum</i> [Solanaceae]	*	*	*	*	*	*	*	Med
373	<i>Solanum nigrum</i> [Solanaceae]	Ed	*	*	*	*	*	*	Med
374	<i>Solanum torvum</i> [Solanaceae]	Ed	*	*	*	*	*	*	Med
375	<i>Spinacea oleracea</i> [Chenopodiaceae]	*	*	*	*	*	*	*	Med
376	<i>Spondius pinnata</i> [Anacardiaceae]	*	*	*	*	*	*	*	Med
377	<i>Stellaria mlia</i> [Caryophyllaceae]	Ed	*	*	*	*	*	*	*
378	<i>Stephania glabra</i> [Menispermaceae]	Ed	*	*	*	*	*	*	Med
379	<i>Stephania hernandifolia</i> [Menispermaceae]	*	*	*	*	*	*	*	Med
380	<i>Stephania japonica</i> [Menispermaceae]	Ed	*	*	*	*	*	*	Med
381	<i>Sterculia villosa</i> [Sterculiaceae]	*	*	*	Fbr	Orn	*	*	Med
382	<i>Streblus asper</i> [Moraceae]	*	Fd	*	*	*	*	*	Med
383	<i>Swietenia macrophylla</i> [Meliaceae]	*	*	*	*	Orn	*	*	*
384	<i>Swietenia mohaginy</i> [Meliaceae]	*	*	*	*	Orn	*	*	*
385	<i>Syzygium cumini</i> [Myrtaceae]	*	Fd	*	*	*	*	*	*
386	<i>Tagetes patula</i> [Asteraceae]	*	*	*	*	Orn	Rlg	*	Med
387	<i>Tamarindus indica</i> [Caesalpiniaceae]	*	*	*	*	*	*	*	Med
388	<i>Taxus baccata</i> [Taxaceae]	*	*	*	*	*	*	*	Med
389	<i>Tectaria coaduanata</i> [Tectariaceae]	*	*	*	*	*	*	*	Med
390	<i>Terminalia alata</i> [Combretaceae]	*	*	*	*	*	*	*	Med
391	<i>Terminalia arjuna</i> [Combretaceae]	*	*	*	*	*	*	*	Med
392	<i>Terminalia bellirica</i> [Combretaceae]	Ed	*	*	*	*	*	Dye	Med
393	<i>Terminalia chebula</i> [Combretaceae]	Ed	*	Msc	*	*	*	*	Med
394	<i>Terminalia myriocarpa</i> [Combretaceae]	*	*	Msc	*	*	*	*	Med
395	<i>Tetradium fraxinifolium</i> [Rutaceae]	Ed	Fd	Msc	*	*	*	*	Med
96	<i>Tetrameles nudiflora</i> [Datisceae]	*	*	*	*	*	*	*	Med
97	<i>Thuja orientalis</i> [Thujaceae]	*	*	*	*	*	Rlg	*	*
98	<i>Thysanolaena latifolia</i> [Poaceae]	*	Fd	Msc	*	*	Rlg	*	Med

399	<i>Tinospora cordifolia</i> [Menispermaceae]	*	Fd	*	*	*	*	*	Med
400	<i>Toddalia asiatica</i> [Rutaceae]	Ed	*	*	*	*	*	Dye	*
401	<i>Toona ciliata</i> [Meliaceae]	*	*	Msc	*	*	*	*	Med
402	<i>Trema orientalis</i> [Ulmaceae]	*	Fd	Msc	*	*	*	*	Med
403	<i>Trewia nudiflora</i> [Euphorbiaceae]	*	*	*	*	*	*	*	Med
404	<i>Trichosanthes dioica</i> [Cucurbitaceae]	*	*	*	*	*	*	*	Med
405	<i>Trichosanthes lepiniana</i> [Cucurbitaceae]	Ed	*	*	*	*	*	*	Med
406	<i>Trifolium repens</i> [Fabaceae]	*	Fd	*	*	*	*	*	Med
407	<i>Urena lobata</i> [Malvaceae]	*	*	*	Fbr	*	*	*	Med
408	<i>Urtica ardens</i> [Urticaceae]	Ed	*	*	*	*	Rlg	*	Med
409	<i>Urtica dioica</i> [Urticaceae]	Ed	Fd	*	Fbr	*	*	*	Med
410	<i>Urtica mairei</i> [Urticaceae]	*	*	*	*	*	*	*	Med
411	<i>Urtica parviflora</i> [Urticaceae]	Ed	Fd	*	Fbr	*	*	*	Med
412	<i>Vallisneria spiralis</i> [Alismaceae]	*	*	*	*	*	*	*	Med
413	<i>Vetiveria zizanioides</i> [Poaceae]	*	*	Msc	*	*	*	*	Med
414	<i>Viburnum erubescens</i> [Caprifoliaceae]	*	*	*	*	*	*	*	Med
415	<i>Vitex negundo</i> [Verbenaceae]	*	*	Msc	*	*	*	*	Med
416	<i>Wattakaka volubilis</i> [Asclepiadaceae]	Ed	*	*	*	*	*	*	*
417	<i>Wielia montana</i> [Asteraceae]	Ed	*	*	*	*	*	*	Med
418	<i>Wrightia arborea</i> [Apocynaceae]	*	*	Msc	*	*	*	*	Med
419	<i>Youngia japonica</i> [Asteraceae]	*	*	*	*	*	*	*	Med
420	<i>Zanthoxylum acanthopodium</i> [Rutaceae]	*	*	*	*	*	*	*	Med
421	<i>Zanthoxylum alatum</i> [Rutaceae]	*	*	*	*	*	*	*	Med
422	<i>Zanthoxylum budrunga</i> [Rutaceae]	*	*	*	*	*	*	*	Med
423	<i>Zanthoxylum nitidum</i> [Rutaceae]	Ed	*	*	*	*	*	*	Med
424	<i>Zanthoxylum oxyphyllum</i> [Rutaceae]	Ed	*	*	*	*	*	*	Med
425	<i>Zephyranthes carinata</i> [Amaryllidaceae]	*	*	*	*	Orn	*	*	*
426	<i>Zingiber officinale</i> [Zing]	Ed	*	*	*	*	*	*	Med
427	<i>Zizyphus mauritiana</i> [Rhamnaceae]	Ed	*	Msc	*	*	*	*	Med
Total number of species		141	57	79	15	49	41	9	336

A scan through the list expresses the diversity within the useful plants. There are Pteridophytic, Gymnospermous, Dicotyledonous and Monocotyledonous plants in the list. There are exotic and endemic species also in their menu.

The most interesting condition is presented by medicinal plants. A high number of 336 species of plants has been reported by these people as Medicinal Plants. It is not at all suggested to use these plants based on the available informations, but should be used after proper investigation and prescription by a trained and/or qualified person.

The record of 140 species of edible plants is also interesting. Many of these plants are available round the year, which means the availability of human food in the vegetation even during the period os scarecity.

However, all the recorded information need scientific evaluation befor their use except for those plants which are already in use for the same purpose as reported here.