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Floristic composition in the campus of Bangladesh tea research institute – i. angiosperms

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Abstract: An annotated checklist of the angiosperm genetic resources of Bangladesh Tea Research Institute (BTRI) was prepared to provide information on the plant diversity it contained. The study revealed that a total of 199 plant species under 155 genera and 69 families were present in BTRI campus. The dicotyledonous plants consists of 168 species with 127 genera and 57 families, and the rest (31 species of 28 genera and 12 families) under the monocots. Both at family and species level, Leguminosae ranked top with 20 genera and 29 species followed by Gramineae with 9 genera and 11 species. There were 38 families, each of which are represented by only single genus, and 35 families which are represented by single species in each. According to their use, plants were classified into twelve major utility groups. Some of the rare and endangered plants species of Bangladesh have also been conserved in this institute. It might be concluded that by planting the maximum number of plant species, particularly the rare and endangered plants with the proper care, this institute could also be emerged as a unique centre for plant conservation, education, research and information relating to plant biodiversity.
Key words: Floristic composition, Angiosperms, Bangladesh Tea Research Institute, Uses

Introduction

Plant genetic resources (PGR) are one of the most important elements of biodiversity which support life systems on the earth. They are the global assets of incalculable value to present and future generations; and are the sources of improved yield and quality factors; and in all aspects, they represent the very foundation of human existence (FAO 1984). As a part of Indian-Subcontinent centre of plant diversity, Bangladesh is very rich in its plant genetic resources (Valilov, 1926). But, numerous plant species are at risk of being lost in all or part of their distribution ranges because of reduction in their population number due to over exploitation (Das, 1987). In view of the inadequacy of *in situ* conservation activities, various institutes in many countries have strengthened *ex situ* conservation of rare and endangered PGR in order to save them from extinction. In Bangladesh along with the natural forests and botanic gardens, there are also some collection of PGR in different organizations as a result of tree plantation programmes and personal collections of different personnel associated with these institutes. There is a lack of information on *ex situ* genetic resources they contain and have not known to others. Although some reports on plant records of different institutions are available, they are very small in number and inadequate as an information-providing source (e.g., Chowdhury, 1991, 1996, Talukder, 1999).

Bangladesh Tea Research Institute (BTRI), established in 1957, is located on 3 km away from Srimangal town in Moulavibazar district surrounded by tea gardens. The landscape of the area with slope and Tillah up to 500 m. Soil properties are close to Assam (of India) and belong to Agro-Ecological Zone AEZ – 29 (UNDP and FAO 1988). Soils are yellow-brown to strong brown, permeable, friable, loamy and very strongly acidic having low water holding capacity. The predominant plant species of the institute are tea plants (*Camellia sinensis* var. *sinensis*, var. *assamica*, and sub-species *lasiocalyx*) and different shade trees (e.g. *Albizzia* spp., *Derris robusta* etc.). With the progress of tea plantation the natural vegetation of this area degraded and almost disappeared. On the other hand some exotic ornamental and other plant species were planted which enriched the plant diversity of this institute. The institute has also initiated a programme on collection and conservation of tea germplasm from home and abroad. A total of 320 clone and seed stocks have been collected and preserved here (Alam *et al*., 1997), and the programme is going on. However, there is no updated and well-documented information exists about the plant diversity of this institute that has been developed through the years till to date. Therefore, the present research work has been undertaken to indicate the plant diversity and to prepare a document on plant holdings of the BTRI.

Materials and Methods

To exploratory and to ascertain the plant holdings of Bangladesh Tea Research Institute (BTRI) and Bilashcherra experimental farm of this institute, a detailed survey has been conducted. This work consisted of basic methodological approaches and survey. The plant resources of the study area were listed and recorded with their uses, and every species was identified separately. The major floristic works consulted Hooker (1872 - 97), Prain (1903), Brandis (1906), Zevan and de Wet (1982), Khan *et al*. (1996, 2001), Khan and Haq (2001) and Uddin *et al*. (2003). The families, genera and species are arranged alphabetically.

Results

The angiosperm genetic resources (AGR) of BTRI comprised 199 species under 155 genera and 69 families (Table 1). The dicotyledonous plants comprise 168 species of 127 genera and 57 families, and 31 species of 28 genera and 12 families under the monocots. Among the dicotyledons, Leguminosae was the largest family with 20 genera and 29 species followed by Myrtaceae of 4 genera and 9 species and Rubiaceae of 4 genera and 7 species while 30 families were represented by a single genus and 28 families by single species each. In monocotyledons, Gramineae was the largest family with 9 genera and 11 species followed by Palmae of 5 genera and 5 species. On the other hand, 8 families were represented by a single genus and 7 families by single species only.

According to their uses, plant resources were classified into twelve groups viz., timber, fruit, medicinal, ornamental, fuel yielding, spices, beverage, green/cover crops, weed, bamboo, rubber and others (Table 2). Some of these plants were included in more than one utility group. The species distribution of different plant groups and their proportionate position in total AGR were presented in Table 2.

Discussion

Bangladesh is rich in field crops, fruits, nuts and forest plants covering a wide array of species, genera and families (Valilov, 1926). Some of these species, especially fruit and timber yielding plants, are very common and distributed all over the country. The present investigation indicating that some of the common plant species are also present in BTRI which are similar to those of others (Chowdhury, 1991, 1996; Talukder, 1999). Along with the common fruit and timber yielding plants, many minor edible fruits, medicinal plants, rare and endangered plant species have also observed in this campus (Table 1). In the floristic composition of BTRI, dicotyledonous plants are predominant over the monocots. At the family level, Leguminosae has emerged as the largest family, comprises ca. 15% of the total species diversity of BTRI followed by Gramineae (ca. 6%). Among the genera, *Albizzia* is the largest genus with 5 species, comprises ca. 3% of total species diversity followed by the genera *Citrus*, *Eugenia* and *Terminalia* with 4 species each. Moreover, the most interesting observation was that more than 50% of the total plant families (35 families out of 69) were represented by single species only (Table 1).

According their use, plants as a source of edible fruits and medicines are the prominent groups collectively constituting ca. 48% of the total species diversity followed by timber and ornamental plants ca. 18% each (Table 2).

These medicinal plant species are prescribed and used by the tea workers, village people and tribal communities in and/or around the campus for human and animal treatment. But, many of them are threatened in the wild due to habitat destruction and over collecting e.g., *Terminalia arjuna*, *T. belerica*, *T. chebula* etc. (Khan, 1997). A total of 106 species of different genera was included in the plant red data book of Bangladesh (Khan *et al*., 2001), and this number is increasing day by day. Some of these rare and endangered plant species are conserved in this institute e.g., *Anacardium occidentale*, *Mangifera sylvatica*, *Spondias pinnata*, *Artocarpus lakoocha* etc. (Table 1). From the field observations, it is evident that most of the plant species have been planted in BTRI campus on personal interest of different personnel associated with this institute, not from the conservation view point. Some plant species were planted in a huge number where others were inadequate. From conservation point of view, each species should have at least 5 – 10 plants to avoid any loss or damage due to natural calamities. Therefore, required number of plants should be planted in view of real conservation concepts. There are ample scope of further plantation of minor fruits, medicinal and other threatened and endangered plant species in and/or around the campus. Results of this study might be used as a source of information to know what was conserved where, by making a computerized data base of the plant holdings; which was becoming increasingly more important (Prance, 1997).

It might be concluded that by planting the maximum number of plant species, particularly the rare and endangered plants with the proper care, this institute could also be emerged as a unique centre for plant conservation, education, research and information relating to plant biodiversity.

Table 1: Diversity of angiospermic flora of Bangladesh Tea Research Institute.

Botanical Name	Family	Common Name	Habit	Uses
Dicotyledons				
Adhatoda zeylanica Medic.	Acanthaceae	Basak	Shrub	Leaves and roots as medicine
Andrographis paniculata Nees.	"	Kalomegh	Herb	Root/Leaf used as medicine
Amaranthus spinosus L.	Amaranthaceae	Katanote	Herb	Weed/Fodder
Anacardium occidentale L.	Anacardiaceae	Kajubadam	Tree	Fruit
Mangifera indica L.	"	Aam	Tree	Fruit /Timber
M. sylvatica Roxb.	"	Ban aam	Tree	Timber
Spondias pinnata (Koen. & L.f.) Kurz.	"	Amrah	Tree	Fruit
S. cytherea Sonner.	"	Belati amrah	Tree	Fruit
Annona squamosa L.	Anonaceae	Ata	Tree	Fruit
Allamanda cathartica L.	Apocynaceae	Kalkephul	Tree	Ornamental
Aganosma caryophyllata G. Don.	"	Malatilata	Shrub	Ornamental
Alstonia scholaris (L.) R. Br.	"	Chattim	Tree	Bark and milky juice as medicine
Catharanthus roseus G. Don.	"	Nayantara	Shrub	Flower used as medicine
Holarrhena antidysenterica Wall.	"	Kurchi	Tree	Bark and seeds used as medicine
Rauwolfia sarpentina (L.) Benth.	"	Sarpagandha	Herb	Whole plant used as medicine
Calotropsis gigantea (L.) R. Br.	Asclepiadaceae	Akanda	Shrub	Leaf, latex and bark as medicine
Tylophora asthmatica W. & A.	"	Anantamul	Shrub	Root used as medicine
Averrhoea carambola L.	Averrhoaceae	Kamranga	Tree	Fruit
Spathodium campannlatum	Bignoniaceae	Australian tulip	Tree	Ornamental
Bixa orellana L.	Bixaceae	Bixa	Shrub	Colouring material

Botanical Name	Family	Common Name	Habit	Uses
Bombax ceiba L.	Bombacaceae	Lalshimul	Tree	Fibre
Casuarina equisetifolia Forst.	Casuarinaceae	Belati jhau	Tree	Timber
Terminalia arjuna Bedd.	Combretaceae	Arjun	Tree	Bark used as medicine
T. bellerica (Gaetrn.) Roxb.	"	Bahera	Tree	Fruits used as medicine
T. chebula Retz.	"	Haritaki	Tree	Fruits used as medicine
T. catappa L.	"	Kadh badam	Tree	Timber/Fruit
Quisqualis indica L.	"	Basantilata	Climber	Ornamental
Blumea lacera (Burm. f.) DC.	Compositae	Shialmuti	Herb	Leaves used as medicine/Weed
Centella asiatica (L.) Urban	"	Thankuni	Herb	Green leaves used as medicine
Chrysanthemum coronarium L.	"	Chandramallika	Herb	Ornamental
Kalanchoe pinnata Pers.	Crassulaceae	Patharkuchi	Herb	Leaves used as medicine
Cuscuta reflexa Roxb.	Cuscutaceae	Swarnalata	Climber	Weed/ Plant used as medicine
Dillenia indica L.	Dilleniaceae	Chalta	Tree	Fruit/Seeds used as medicine
Dipterocarpus turbinatus Gaertn.	Dipterocarpaceae	Garjan	Tree	Timber
Shorea robusta Roxb. ex. Gaertn.	"	Sal	Tree	Timber
Diospyros discolor Willd.	Ebenaceae	Belati gab	Tree	Fruit
Elaeocarpus robustus Roxb.	Elaeocarpaceae	Jalpai	Tree	Fruit
Baccauria ramiflora Lour.	Euphorbiaceae	Latkan	Shrub	Fruit
Euphorbia pulcherrima Willd.	"	Lalpata	Shrub	Ornamental
Hevea brasiliensis	"	Rubber	Tree	Rubber producing plant
Phyllanthus embelica L.	"	Amloki	Tree	Fruit used as medicine
Quercus spicata Sw.	Fagaceae	Barachakma	Tree	Fuel
Flacourtia indica (Burm. F.) Merr.	Flacourtiaceae	Boichi	Shrub	Fruit
F. jangomus (Lour.) Raeus	"	Lukluki	Tree	Fruit
Hydrocarpus kurzii (King) Warb.	"	Chalmugra	Tree	Seeds used as medicine
Mesua ferrea L.	Guttiferae	Nageswar	Tree	Bark, flower & seed as medicine
Mentha arvensis L.	Labiatae	Pudhina	Herb	Oil extracts used as medicine
Ocimum americanum L.	"	Tulshi	Herb	Leaves used as medicine/Weed
O. sanctum L.	"	Shwet tulshi	Shrub	Leaves used as medicine/Weed
O. basilicum L.	"	Babui tulshi	Shrub	Leaves used as medicine/Weed
Cinnamomum tamala Nees & Eberm.	Lauraceae	Tejpata	Tree	Spices
C. zeylanicum Breyn.	"	Daruchini	Tree	Spices
Persea americana Mill.	"	Avocado	Tree	Fruit
Barringtonia acutangula (L.) Gaertn.	Lecythidaceae	Hijol	Tree	Fuel/Timber
Couroupita guianensis Aubl.	"	Nagalingam	Tree	Ornamental
Acacia auriculiformis	Leguminosae	Akashmoni	Tree	Timber
A. catechu (L.) Willd.	"	Khair	Tree	Timber/ extracts as medicine
A. nilotica (L.) Delile	"	Babla	Tree	Timber
Albizzia chinensis (Osb.) Merr.	"	Kalosiris	Tree	Shade tree/Timber
A. lebbeck (L.) Benth.	"	Cham koroi	Tree	Shade tree/Timber
A. odoratissima (L.f.) Benth.	"	Kalo koroi	Tree	Shade tree/Timber
A. procera (Roxb.) Benth.	"	Shada koroi	Tree	Shade tree/Timber
A. richardiana King & Prain	"	Belati koroi	Tree	Shade tree/Timber
Bauhinia acuminata L.	"	Kanchan	Tree	Ornamental
B. variegata L.	"	Swet kanchan	Tree	Ornamental
Butea monosperma (Lam.) Taub.	"	Palas	Tree	Ornamental
Caesalpinia pulcherrima (L.) Swartz.	"	Rhadhachura	Tree	Ornamental
Cajanus cajan (L.) Millsp.	"	Arhar	Shrub	Fruit
Calapogonium muconoides Desv.	"	Calapogonium	Herb	Green crop
Cassia fistula L.	"	Sonalu	Tree	Fruit used as medicine/Timber
C. nodosa Buch.-Ham. Ex. Roxb.	"	Bonsonalu	Tree	Ornamental
Clitoria ternata L.	"	Aparajita	Climber	Root as medicine/Ornamental
Crotalaria anagyroides Kunth	"	Crotalaria	Shrub	Green crop
Dalbergia sissoo Roxb.	"	Sisu	Tree	Timber
Delonix regia (Bojer ex Hook.) Rafin.	"	Krishnachura	Tree	Fuel/Ornamental
Derris robusta (Roxb. Ex DC.) Benth.	"	Derris	Tree	Shade tree/Timber
Erythrina variegata L.	"	Madar	Tree	Fuel
Mimosa diplotricha C. Wright	"	Mimosa	Herb	Weed/Green crop
M. pudica L.	"	Lajiaboti	Herb	Weed/Whole plant as medicine
Pterocarpus santalinoides L'Herit.	"	Lal chandan	Tree	Resin used as medicine/Fuel
Saraca asoca (Roxb.) de Wilde.	"	Asoke	Tree	Bark as medicine/Ornamental
Senna occidentalis (L.) Link	"	Bara Kalkesunde	Shrub	Leaf and fruit used as medicine
Tamarindus indica L.	"	Tetul	Tree	Pulp of fruit used as medicine
Xylia xylocarpa (Roxb.) Taub.	"	Lohakat	Tree	Timber
Dendropthoe falcata (L. f .) Etting.	Loranthaceae	Buramanda	Shrub	Parasite
Lagerstroemia flos-reginae Retz.	Lythraceae	Jarul	Tree	Timber
Lawsonia alba Lamk.	"	Mehedi	Shrub	Leaves used as medicine

Botanical Name	Family	Common Name	Habit	Uses
Magnolia grandiflora Roxb.	Magnoliaceae	Magnolia	Tree	Ornamental
Michelia champaca L.	"	Champa	Tree	Ornamental
Abutilon hirtum G. Don.	Malvaceae	Jhampi	Shrub	Weed
A. indicum (Torner) Sweet.	"	Rotary	Shrub	Weed
Hibiscus rosa-sinensis L.	"	Jaba	Shrub	Ornamental
H. ficulneus L.	"	Ban-derosh	Shrub	Weed
Melastoma malabathricum L.	Melastomaceae	Ban-tejpata	Shrub	Timber
Azadirachta indica A. Juss.	Meliaceae	Neem	Tree	Leaves &fruits as medicine
Chikrassia tabularis Juss.	"	Chikrassia	Tree	Timber
Dysoxylym procerum Hiern.	"	Bara rata	Tree	Timber
Melia sempervirens (L.) All.	"	Ghoranim	Tree	Timber/ Leaves used as medicine
Swietenia mahagoni (L.) Jacq.	"	Mehagoni	Tree	Timber
Artocarpus chapalasha Roxb.	Moraceae	Chambol	Tree	Timber
A. heterophyllus Lam.	"	Kanthal	Tree	Fruit/Timber
A. lakoocha Roxb.	"	Dehua	Tree	Fruit
Ficus hispida L.f.	"	Dumur	Tree	Fruit/Fuel
F. semicordata Buch.-Ham.ex Sm.	"	Jagdumur	Tree	Fruit/Fuel
Moringa oleifera Lam.	Moringaceae	Sajina	Tree	Fruit
Myristica fragrans Hontt.	Myristicaceae	Jaifal	Tree	Spices
Callistemon lanceolatus DC.	Myrtaceae	Bottle brush	Tree	Ornamental/Timber
Eucalyptus citriodora Hook.	"	Eucalyptus	Tree	Fuel
E. globulus Labill.	"	Eucalyptus	Tree	Fuel
E. saligna Sm.	"	Eucalyptus	Tree	Fuel
Eugenia jambolana Lam.	"	Kalojam	Tree	Fruit, bark as medicine/Timber
E. jambos L.	"	Golapjam	Tree	Fruit
E. javanica Lam.	"	Jamrul	Tree	Fruit/ Timber
E. malaccensis L.	"	Jamrul	Tree	Fruit
Psidium guajava L.	"	Peyara	Tree	Fruit
Bouganvitlea spectabilis Willd.	Nyctaginaceae	Baganbilash	Shrub	Ornamental
Jasminum auriculatum Vahl.	Oleaceae	Jui	Shrub	Ornamental
J. grandiflorum L.	"	Chameli	Shrub	Ornamental
J. sambac (L.) Ait.	"	Ban mallika jui	Shrub	Ornamental
Nyctanthes arbortristis L.	"	Sephali	Tree	Ornamental
Oxalis corniculata L.	Oxalidaceae	Amrul	Herb	Weed/Leaves used as medicine
Passiflora foetida L.	Passifloraceae	Jhumko lata	Climber	Ornamental
Piper betle L.	Piperaceae	Pan	Creeper	Leaves used as medicine
P. nigrum L.	"	Golmarich	Climber	Spices
P. longum L.	"	Pipul	Climber	Root/Fruits used as medicine
Grevillea robusta A. Cunn. Ex. R. Br.	Proteaceae	Silver oak	Tree	Timber/Shade tree
Punica granatum L.	Punicaceae	Dalim	Shrub	Fruits
Ziziphus jujuba Mill non Lam.	Rhamnaceae	Kul	Tree	Fruit
Pyrus communis L.	Rosaceae	Nashpathi	Tree	Fruit
Prunus domestica L.	"	Plum	Tree	Fruit
Anthocephalus chinensis (Lamk.) A.	Rubiaceae	Kadam	Tree	Ornamental/Fuel
Coffea arabica L.	"	Coffee	Shrub	Beverage
C. canephora Pierre ex Frochner	"	Coffee	Shrub	Beverage
C. liberica Hiern.	"	Coffee	Shrub	Beverage
Gardenia coronaria Ham.	"	Bankamal	Tree	Ornamental
G. jasminoides Ellis	"	Gandharaj	Shrub	Ornamental
Ixora parviflora Vahl	"	Rangan	Shrub	Ornamental
Aegle marmelos (L.) Corr.	Rutaceae	Bel	Tree	Fruit
Citrus aurantifolia (Christm.) Swing.	"	Kagajilebu	Shrub	Fruit
C. grandis (L.) Osbeck	"	Jambura	Shrub	Fruit
C. medica L.	"	Lebu	Shrub	Fruit
C. reticulata Blanco	"	Kamlalebu	Shrub	Fruit
Feronia limonia (L.) Swing.	"	Kathbel	Tree	Fruit
Murraya exotica L.	"	Kamini	Tree	Bark as medicine/Ornamental
Santalum album L.	Santalaceae	Shwet chandan	Tree	Wood used as perfume
Litchi chinensis Sonn.	Sapindaceae	Lichu	Tree	Fruit
Achras sapota L.	Sapotaceae	Safeda	Shrub	Fruit
Bassia latifolia Roxb.	"	Mahua	Tree	Flower and seed as medicine/Fuel
Chrysophyllum cainito L.	"	Star apple	Tree	Fruit
Mimusops elengi L.	"	Bakul	Tree	Leaf as medicine/Ornamental
Cestrum nacturnum L.	Solanaceae	Hasnahena	Shrub	Ornamental
Solanum nigrum L.	"	Tita begun	Herb	Weed/Fruits used as medicine
Withania somnifera Dunal.	"	Arshagandha	Herb	Root/Whole plant as medicine
Arboma augusta L.	Sterculiaceae	Ulotkambal	Shrub	Fresh root used as medicine

Botanical Name	Family	Common Name	Habit	Uses
Theobroma cacao L.	Sterculiaceae	Coco	Tree	Fruit
Camellia sinensis (L.) O. Kuntze	Theaceae	Cha	Shrub	Beverage
C. japonica L.	"	Camellia	Shrub	Ornamental
Schima wallichii Choisy	"	Kanak	Tree	Timber
Aquilaria malaccensis Lamk.	Thymelaeaceae	Agar	Tree	Wood extract used as perfume
Clerodendrum viscosum Vent.	Verbanaceae	Ghetu	Shrub	Leaves used as medicine
Duranta repens L.	"	Duranta	Shrub	Hedge plant
Gmelina arborea Roxb.	"	Gamari	Tree	Timber
Lantana camara L.	"	Lantana	Shrub	Hedge plant
Tectona grandis L.	"	Segun	Tree	Timber
Vitex negundo L.	"	Bara nishinda	Shrub	Weed/Leaves used as medicine
Vitis vinifera L.	Vitaceae	Angur	Climber	Fruit
V. quadrangularis Wall.	"	Harjora	Climber	Stem used as medicine
Monocotyledons	"			
Polianthes tuberosa L.	Amaryllidaceae	Rajonigandha	Herb	Ornamental
Pothos scandens L.	Araceae	Gujpipul	Shrub	Fruits used as medicine
Ananas comosus (L.) Merr	Bromeliaceae	Anaras	Herb	Fruit
Cyperus rotundus L	Cyperaceae	Mutha	Herb	Weed
Bambusa arundinacea (Retz.)	Gramineae	Kantabans	Tree	Bamboo
B. tulda Roxb.	"	Jaibans	Tree	Bamboo
Crysopogon aciculatus (Retz.) Trin.	"	Chorkanta	Herb	Weed, soil erosion control
Cymbopogon citratus (DC) Stapf.	"	Lemon grass	Herb	Green crop/Recovery crop, Leaves oil used as medicine
C. nardus (L.) Randle	"	Citronella grass	Herb	Green crop/Recovery crop
Cynodon dactylon (L.) Pers.	"	Durba	Herb	Lawn grass/Leaves as medicine
Dinochloa gigantea Munro.	"	Barabans	Tree	Bamboo
Echinochloa crusgalli (L.) Beauv.	"	Bara shama	Herb	Weed, soil erosion control
Imperata cylindrica (L.) Beauv.	"	Ulu	Herb	Weed
Melocanna baccifora (Roxb.)	"	Mulibans	Shrub	Bamboo
Saccharum spontaneum L.	"	Khash	Herb	Weed, soil erosion control
Aloe barbadensis Mill.	Liliaceae	Ghritokanchan	Herb	Leaves used as medicine
Musa balbisiana Colla	Musaceae	Kala	Herb	Fruit
M. sapientum var. *paradisiaca* L.	"	Kach kala	Shrub	Vegetable
Revenala madagascariensis Sonner.	"	Panthopadap	Shrub	Ornamental
Nymphaea pubescens Willd.	Nymphaeaceae	Sada sapla	Herb	Ornamental/Petiole as vegetable
N. rubra Roxb.	"	Lal sapla	Herb	Ornamental
Vanda roxburghii Br.	Orchidaceae	Rasna	Herb	Ornamental
Borassus flabellifer L.	Palmae	Tal	Tree	Fruit
Calamus tenuis Roxb.	"	Bandori bet	Shrub	Fuel
Cocos nucifera L.	"	Narikel	Tree	Fruit
Phoenix paludosa Roxb.	"	Khejur	Tree	Fruit
Rcystonea regia O.F. Cook	"	Bottle palm	Tree	Ornamental
Eichhornia crassipes (Mart.) Solms.	Pontederiaceae	Kachuripana	Herb	Weed
Amomum aromaticum Roxb.	Zingiberaceae	Baraelach	Shrub	Spices
Curcuma domestica Val.	"	Haldi	Herb	Spices/Rhizome used as medicine
Elettaria cardamomum (L.) Maton.	"	Elachi	Herb	Spices
Zingiber officinale Rosc.	"	Ada	Herb	Spices/Rhizome used as medicine

Table 2. Angiosperm genetic resources of Bangladesh Tea Research Institute according to their use

Utility	Fruit	Medi-cinal	Timber	Orna-mental	Weed	Fuel	Spices	Green/ cover crops	Beve-rage	Bamboo	Rubber	Other
No. spp.	48	46	36	36	15	9	7	5	4	4	2	12
%	24.1	23.1	18.1	18.1	7. 5	4.5	3.5	2.5	2. 0	2. 0	1.0	6. 0

References

Alam, A.F.M.B., Dutta, M.J. and Haque, S.K.L. 1997. Tea germplasm in Bangladesh and their conservation. Tea J. Bangladesh., 33 (1&2): 29-35.

Brandis, D. 1906. Indian Trees. Reprint 2nd ed., 1978, Bishen Singh Mahendra Pal Singh, Dehra Dun, 767 pp.

Chowdhury, A.N.M.A. 1991. Ecological studies on degraded woodlands of the Rajshahi University Campus. M. Sc. Thesis, Rajshahi Univ. Bangladesh.

Chowdhury, N.A. 1996. Tree resources of BARD campus and potentials for their improvement. J. Rural Dev., 26(1): 129-143.

Das, D.K. 1987. Edible Fruits of Bangladesh Forests. Bull. No. 3 Taxonomy Series, Bangladesh Forest Res. Inst., Chittagong.

FAO. 1984. *In Situ* Conservation of Wild Plant Genetic Resources: A status Review and Action Plan. Document by FAO and IUCN, Rome.

Hooker, J.D. 1872-1897. The Flora of British India. Vols. 1-7. London.

Khan, M.S. 1997. Conservation of wild plant genetic resources of Bangladesh. In: Proc. Nat. Works. Plant Genetics Resour., 26-29 August 1997, BARC, Dhaka, pp.180-196.

Khan, M.S. and Haq, M.A. 2001. The vascular flora of Chunati wildlife sanctuary in south Chittagong, Bangladesh. Bangladesh J. Plant Taxon., 8(1): 47-64.

Khan, M.S., Khatun, B.M.R. and Rahman, M.M. 1996. A preliminary account of Legume diversity of Bangladesh. Bangladesh J. Plant Taxon., 3(1): 1-33.

Khan, M.S., Rahman M.M. and Ali, M.A. (eds.). 2001. Red Data Book of Vascular Plants of Bangladesh. Bangladesh National Herbarium, Mirpur, Dhaka.

Prain, D. 1903. Bengal Plants. Vols. 1 & 2, Reprint ed., 1981, Calcutta.

Prance, T.G. 1997. Plant diversity and conservation. A paper presented in the 9th Biennial Botanical Conference, Bangladesh Bot. Soc., 8-9 January 1996, Univ. Dhaka, Dhaka.

Talukder, M.S. 1999. Plant Diversity in Bangladesh Agricultural University Campus. M. S. Thesis, Dept. of Crop Botany. Bangladesh Agril. Univ., Mymensingh.

Uddin, M.Z., Hasan, M.A. and Khan, M.S. 2003. An annotated checklist of angiospermic flora of Rema-Kalenga Wildlife Sanctuary (Habiganj) in Bangladesh – II.a. Magnoliopsida (Dicots). Bangladesh J. Plant Taxon., 10(1): 79-94.

UNDP and FAO. 1988. Land resources appraisal of Bangladesh for Agricultural Development: Agroecological regions of Bangladesh. BARC/UNDP, New Airport Road, Farmgate, Dhaka, pp. 212-221.

Vavilov, N.I. 1926. Studies on the origin of cultivated plants. Bull. Appl. Bot. (Trudy Byuro prikl. Bot.), 26(2): 248.

Zeven, A.C. and de Wet, J.M.J. 1982. Dictionary of Cultivated Plants and Their Regions of Diversity. Cen. Agril. Pub. Doc., Wageningen.