

Local and Developed Mulberry Varieties in Bangladesh



**Bangladesh Sericulture Research &
Training Institute, Rajshahi**

Ministry of Textile & Jute

Characteristics of local and developed mulberry varieties

Mulberry is the key plant of sericulture. Establishment of sericulture oriented industries in the country is primarily depend on the production of quantity as well as quality mulberry leaf at economic cost. Therefore, development of improved mulberry variety is an important factor to reduce the leaf cost through maximum foliage production per unit area of land. Germplasm is considered as the storehouse of genetic materials and is used as the basic material for the development of respective plant. Bangladesh Sericulture Research and Training Institute, Rajshahi is only the research institute in the country maintaining mulberry germplasm in its germplasm bank. Present position of the germplasm bank of BSRTI is as follows:

Total number of variety: 60	
Indigenous	Exotic
Local: 13	Local: 1
Developed: 21	Developed: 21
Wild: 2	Wild: 2
Total: 36	Total: 24

Local mulberry varieties:

Before 1980 mulberry cultivation in Bangladesh was totally dependent on the local mulberry varieties. Though these varieties are adaptable with local cultural practices but the leaf yield per unit area was very low. At present in the field level local varieties are very rare but these are maintaining in the germplasm bank of BSRTI, Rajshahi as research materials. Some significant characteristics of the local varieties are:

Telia: This variety is very well known among the local varieties.

Branching nature of this variety is spreading and stem colour is ash-gray. Leaf size is very small, slightly coarse, green and highly lobed. In very rare cases leaves are found unlobed. Rooting ability of cutting is above 80% and suitable for traditional bush



plantation. Leaf moisture content 74%, moisture retention capacity 28.66%, total minerals 8.00%, total sugar 4.24%, reducing sugar 3.69%, protein 19.21% and leaf yield 12 mt/ha/yr.

Dudhia: At present this variety is very rarely found in the field level. Branching nature of this variety is spreading and stem

colour is whitish-gray. Leaf size is small, smooth, slightly waxy, green, lobed and rarely unlobed. Rooting ability of cutting is about 80% and suitable for traditional bush plantation. Leaf moisture content 71.00%, moisture retention capacity 35.77%, total minerals 10.25%, total sugar 4.29%, reducing sugar 3.21%, protein 16.99% and leaf yield ability 12.25 mt/ha/yr.



Ghagra: This local variety is not now using by the farmers. Branching nature of this variety is also spreading and stem colour is ash-gray. Leaf is also small, slightly coarse, green, highly lobed and rarely unlobed. Rooting ability of cuttings is about 80%, suitable for traditional bush plantation. Leaf moisture content 70.98%, moisture retention capacity 24.58%, total minerals 8.85%, total sugar 4.85%, reducing sugar 3.47%, protein 18.50% and leaf yield is about 12.50 mt/ha/yr.



Lal Bomby: Leaf production capacity of this variety is slightly higher than Telia. It is also rarely found in the farmer's level but now maintaining in the germplasm of BSRTI. Branching nature of this variety is spreading and stem colour is ash-gray but reddish-green at young stage. Leaf is comparatively larger than Telia, slightly coarse, green, lobed and rarely unlobed. Rooting ability is about 80% and suitable for traditional bush plantation. Leaf moisture content 72.99%, moisture retention capacity 36.85%, total minerals 8.10%, total sugar 3.54%, reducing sugar 3.43%, protein 16.99% and leaf yield is about 15 mt/ha/yr.



Sada Bomby: Leaf production capacity of this variety is also similar to Lal Bomby. At present it is also very rare in the field level. Branching nature of this variety is erect and stem colour is pale-brown but whitish-green at young stage. Leaf size is similar to Lal Bomby, smooth and slightly waxy, lobed and rarely unlobed. Rooting ability is about 90% and suitable for traditional bush



plantation. Leaf moisture content 70%, moisture retention capacity 39.12%, total minerals 9.05%, total sugar 5.33%, reducing sugar 3.88%, protein 16.00% and leaf yield is about 18 mt/ha/yr.

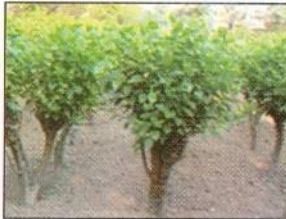
Developed varieties:

To boost up the leaf yield productivity per unit area of land some mulberry varieties have been developed and recommended for commercial exploitation in the field level since 1980. Important characteristics of the developed mulberry varieties are:

BM-1: Leaf production of this developed variety is high and leaf is nutritious to silkworm. Its branching nature is erect and stem colour is ash-brown. Leaf size is large, smooth, green, heterophyllous (unlobed/loped). Rooting ability is above 80% and suitable for bush, low cut and tree plantation. Leaf moisture content 75.73%, moisture retention capacity 51.19%, total minerals 8.55%, total sugar 3.95%, reducing sugar 2.84%, protein 19.69% and leaf yield 33.00 mt/ha/yr.



BM-2: This variety is now cultivated in the field level. Branching nature of this variety is spreading and stem colour is yellowish-gray. Leaf is medium in size, slightly coarse, yellowish-green, unlobed. Rooting ability is 80% and suitable for bush plantation. Leaf moisture content 76.52%, moisture retention capacity 50.72%, total minerals 9.05%, total sugar 4.66%, reducing sugar 3.29%, protein 22.44% and leaf yield 29.00 mt/ha/yr.



BM-3: This developed variety has high leaf productivity as well as leaf quality. It is very popular and widely cultivated in the field. Branching nature of this variety is spreading and stem colour is gray-brown. Leaf is unlobed, medium in size but smooth, waxy and dark green in colour. Rooting ability is above 90% and suitable for bush, high bush, low cut and tree plantation. Leaf moisture content 74.51%, moisture retention capacity 50.42%, total minerals 8.55%, total sugar 5.11%, reducing sugar 3.88%, protein 20.41% and leaf yield 35.50 mt/ha/yr.



BM-4: Leaf yield ability of this developed variety is higher and nutritious. Its branching nature is spreading and stem colour is ash-brown. Leaf is broad, unlobed, smooth, thick and deep green. Rooting ability is above 80% and suitable for low-cut plantation but frequent pruning is not permissible. Leaf moisture content 76.97%, moisture retention capacity 53.88%, total minerals 9.50%, total sugar 3.43%, reducing sugar 2.17%, protein 16.09% and leaf yield 36.50 mt/ha/yr.



BM-5: This variety is more or less similar to BM-4. Branching nature of this variety is spreading and stem colour is ash-gray. Leaf is broad, unlobed, smooth, thick, yellowish-green. Rooting ability is above 80% and suitable for low cut plantation but frequent pruning is not permissible. Leaf moisture content 77.00%, moisture retention capacity 59.00%, total minerals 10.00%, total sugar 4.14%, reducing sugar 3.84%, protein 16.01% and leaf yield 35.50 mt/ha/yr.



BM-6: This developed variety is now exploiting in the field level for commercial cultivation. Branching nature of this variety is spreading and stem colour is ash-brown. Leaf size is large, unlobed, smooth, thick, light green. Rooting ability is above 90% and suitable for high bush, low cut and tree plantation. Leaf moisture content 74.51%, moisture retention capacity 50.42%, total minerals 8.55%, total sugar 5.11%, reducing sugar 3.88%, protein 19.79% and leaf yield 35.00 mt/ha/yr.



BM-7: Leaf production of this developed variety is high and leaf quality is suitable for silkworm. Branching nature is spreading and stem colour is gray. Leaf size is large, smooth, thick, unlobed, light green. Rooting ability is above 90% and suitable for high bush, low cut and tree plantation. Leaf



moisture content 75.06%, moisture retention capacity 54.97%, total minerals 10.65%, total sugar 5.03%, reducing sugar 3.65%, protein 17.78% and leaf yield 37.00 mt/ha/yr

BM-8: This newly developed variety is under the process of multiplication for exploiting in the field level. Branching nature of this variety is erect and stem is whitish-gray. Leaf is broad, unlobed, smooth, waxy and deep green. Rooting ability is above 90% and suitable for high bush and tree plantation. Leaf moisture content 73.51%, moisture retention capacity



51.42%, total minerals 9.55%, total sugar 5.10%, reducing sugar 3.68%, protein 18.41% and leaf yield 37.20 mt/ha/yr.

BM-9: This is also a newly developed variety and is under the process of multiplication. Branching nature of the variety is spreading and stem colour is gray. Leaf is unlobed, medium in size but smooth, waxy and deep green in colour. Rooting ability is above 95% and suitable for bush and high bush plantation. Leaf moisture content 74.51%, moisture



retention capacity 52.43%, total minerals 10.55%, total sugar 5.30%, reducing sugar 3.98%, protein 19.81% and leaf yield 40.50 mt/ha/yr.

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