

Table S1. List of mulberry genotypes in the breeders' collection along with their taxonomic status, sex, known pedigree and special attributes.

Sl. No.	Name	Acc. No.	Sex	Species	Pedigree/Genetic origin/Method of creation	Special attributes
1	KOUSEN	ME-0066	♂	<i>M. latifolia</i>	Selection	Temperate variety grows fairly well in tropical conditions with good leaf quality.
2	PUNJAB LOCAL	MI-0026	♀	<i>M. indica</i>	OPH ^a selection	Genotype with high rooting ability.
3	HIMACHAL LOCAL	MI-0007	♀	<i>M. indica</i>	Selection	Typical female genotype with large number of shoots and good combining ability.
4	M. MULTICAULIS	ME-0006	♂	<i>M. multicaulis</i>	Collection	Typical female genotype with good combining ability and leaf quality. Frequently used in breeding.
5	BER. S-1	ME-0065	♀	<i>M. alba</i>	OPH ^a of Mandalay	Variety with dark green leaves, high yielding and performs well even under adverse climatic conditions.
6	MYSORE LOCAL	MI-0052	♀	<i>M. indica</i>	OPH ^a selection	Traditional cultivar with high regeneration ability under rainfed/water stressed condition.
7	S-13	MI-0012	♂	<i>M. indica</i>	OPH ^a of K-2	Moisture stress tolerant mulberry variety, suitable for rainfed condition.
8	G-4	--	♀	--	<i>M. multicaulis</i> x S-13	High yielding, on par with the popular V-1 variety.
9	MUKI	ME-0144	♀	<i>M. alba</i>	Collection	Good rooting ability and high yielding.
10	S-36	MI-0013	♀	<i>M. alba</i>	EMS ^c treatment of Berhampore Local	High yielding and leaves suitable for rearing young age silkworms.
11	S-34	MI-0160	♂	<i>M. alba</i>	S-30xBer. C-776	Moisture stress tolerant, suitable for rainfed conditions.
12	S-30	MI-0046	♀	<i>M. alba</i>	EMS ^c treatment of Berhampore Local	Good economical characteristics.
13	RFS-175	MI-0066	♀	<i>M. indica</i>	OPH ^a of K-2	Variety recommended for rainfed conditions of South India.
14	SUJANPUR-5	MI-0017	♀	<i>M. indica</i>	OPH ^a selection	Tolerant for cultivation in alkaline soils.
15	S-763	MI-0124	♀	<i>M. alba</i>	OPH ^a selection	Improved variety with superior agronomic characters.
16	ENGLISH BLACK	ME-0004	♀	<i>M. alba</i>	CPH ^b selection	Typical female genotype with good leaf quality.
17	THAIPECH	ME-0056	♂	<i>M. alba</i>	Selection	Genotype with profuse male inflorescence.
18	RC-2	--	♀	--	Punjab Local xKousen	Variety recommended for resource constrained situations.
19	S-799	MI-0037	♂	<i>M. alba</i>	OPH ^a selection	Male genotype with good performance under cultivation.
20	KPG-2	MI-0105	♀	<i>M. alba</i>	Clonal selection	Genotype with vigorous growth and dark green, large sized leaves.
21	C-776	MI-0158	♂	--	<i>M. multicaulis</i> x Black	High yielding variety recommended for eastern India. Extensively used as male

					Cherry	parent in breeding.
22	LF-1	MI-0006	♀	<i>M. indica</i>	Clonal selection	High biomass with vigorous growth.
23	MOULAI	MI-0347	♀	<i>M. alba</i>	Collection	Genotype with desirable planta characteristics.
24	RC-1	--	♀	--	Punjab Local x Kousen	Variety recommended for resource constrained situations.
25	G-2	--	♀	--	<i>M. multicaulis</i> x S-34	High yielding genotype; leaf suitable for young age silkworm rearing.
26	K-2 X KOUSEN (SAHANA)	MI-0524	♀	--	K-2xKousen	Shade tolerant mulberry recommended for inter-cultivation in coconut gardens.
27	V-1	MI-0308	♂	--	S-30xBer. C-776	Popular high yielding mulberry variety of South India and perform extremely well under irrigated and higher inputs.
28	S-523	MI-0043	♂	<i>M. alba</i>	OPH ^a selection	Superior mulberry variety suitable for cultivation in eastern India.
29	MS-3	MI-0002	♂	<i>M. indica</i>	Selection	Genotype with high water use efficiency.
30	ROSOU	ME-0141	♀	<i>M. latifolia</i>	Collection	A temperate variety with good leaf quality.
31	RFS-135	MI-0048	♂	<i>M. indica</i>	OPH ^a of K-2	Variety recommended for rainfed conditions of South India.
32	S-1635	MI-0173	♂	<i>M. alba</i>	OPH ^a selection of CSRS-1	Popular mulberry variety of northern India and was considered as national check under All India Coordinated Experiment on Mulberry (AICEM).
33	M. INDICA (HP)	MI-0099	♀	<i>M. indica</i>	Collection	Genotype with good combing ability.
34	DOOMAR NALI	MI-0365	♀	<i>M. laevigata</i>	Collection	A collection of wild mulberry (<i>M. laevigata</i>) with large leaves and desirable characters.
35	K-2	MI-0014	♀	<i>M. inidca</i>	OPH ^a of Mysore Local	Traditional cultivar evolved from Mysore Local.
36	LAMIA BAY	MI-0364	♂	<i>M. laevigata</i>	Collection	A collection of wild mulberry (<i>M. laevigata</i>) with large leaves and desirable characters.

^aOPH = Open Pollinated Hybrid

^bCPH = Cross Pollinated Hybrid

^cEMS = Ethyl methanesulfonate