

## Breeding of Mulberry Varieties for Tropical Conditions

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The success and economics of silkworm rearing to a large extent is governed by the quality and productivity of mulberry leaf fed to the worms. The sericulture scenario in the country in general and in southern peninsula in particular during the sixties was characterized by low productive mulberry variety, Local, which besides poor yielding was also qualitatively inferior. The leaf yield was about 15 - 20 MT/ha/yr. Thus, the overall income from sericulture was very low, making the sericulture a subsidiary occupation rather than main activity.

In order to improve the productivity and the quality of the feed, especially to support the rearing of improved silkworm hybrids, breeding of mulberry was taken up at National level by different Institutions of Central Silk Board. Boosting the vertical improvement of mulberry productivity and quality was the main aim owing to the pressure on land due to fast urbanization. The varietal improvement began with the selection from natural variability, direct selection from germplasm and combining of desirable traits through inter-varietal hybridization, induction of tetraploidy and development of triploids was resorted to obtain promising cultivars.

Gradually, with the release of varieties like Kanva-2, S-36 and V-1, the field productivity in southern part could be raised to over 50 MT/ha/yr under irrigated conditions. The unique variety V-1 has now gained popularity in field and is in great demand. Similarly, the varieties S-13 (for red soils) and S-34 (for black cotton soils) evolved for dry farming conditions have the potentials of yielding about 15 MT of leaf of good quality per hectare. With their unique drought endurance properties, the varieties are now in great demand in soil moisture stress areas of the southern tropics. These varieties have led to vertical improvement in production. Similarly, new varieties like S-1635, S677, etc. in North-eastern India, S146 in Northern states have been able to bring the drastic change on productivity front. With the release of these improved varieties, the productivity levels have also increased many folds in major sericultural states of the country. With such improvements, the overall productivity in the field has

improved, as reflected by high cocoon yield of the ruling and the productive hybrids. Further the recently developed location / situation specific varieties namely, AR-11, AR-12, RC1, RC2, K2 x Kosen, G2, etc. are being field tested in hot spot areas.