Research investigations reveal that tree architecture, canopy density and photosynthetic efficiency play an important role in governing the fruiting potential.

Decline in productivity of old and dense orchards was largely due to poor photosynthetic efficiency besides several other compounding factors.

Technique for rejuvenation of old and unproductive orchards of mango has been standardized through pruning and intensive after care management.
PRUNING TECHNOLOGY

Branches are pruned from a height of 4-5 metres from ground as per the architecture of individual trees, during December.

Before undertaking pruning work umbrella like frame work of individual trees is planned.

About four to five main branches with outward growth are considered for constituting the basic frame work of the tree for development of canopy.

These four to five selected branches are marked with while chalk by making a ring around the branches at a distance of 75 cm from the base.

Other criss-crossed, intermingling, overcrowding, dried and diseased branches are marked with red chalk for complete removal.

During December, the red marked branches should be completely removed by pruning from their base. Later, branches marked with while chak should be pruned at a distance of about 75 cm from their base. Development of canopy is promoted on these branches.

Pruning should be initiated firstly from lower surface of the branch.

Immediate after pruning, a fungicidal paste prepared by mixing 1kg copper oxychloride, 250 gm caster oil and water as per requirement, should be applied on cut surface. Application of cow dung paste or bio dynamic tree paste, prepared by mixing cow dung, orchard soil, sand in equal proportion with cow horn manure has also proved beneficial.

Pruning work in alternate rows of tree in the orchard has proved beneficial and economical.

Once pruned trees in the alternate row attain canopy and come into fruiting, the remaining trees are subjected to pruning.

Three to four months after pruning i.e. during March-April, there is profuse emergence of shoots on pruned branches. Consequently, dense and bushy canopy of un-healthy shoots with poor bearing potential develops on pruned trees.

Selective and regular thinning of shoots is essential for facilitating development of open and spreading canopy of healthy shoots.

Only outwardly growing 8-10 healthy shoots are retained per branch and the rest are removed.

Thinning operation are undertaken during June and August.

Pruned trees need intensive care of nutrition and irrigation, weeding, etc. for survival, emergence of new shoots and development of canopy.