

Comparison of different systems of high density planting of apple trees

A.A. Fahadan, E. Ganji Moghadam, A.Mokhtarian

Khorasan Agriculture Research Center. Hort. Dept.

Practical training and pruning systems are of prime importance in efficient orchard management. The trees should be pruned and trained to maximum light exposure for uniform fruiting throughout the tree. The systems of fruit growing are classified on the basis of density or intensity of planting as medium high density planting (MHDP), Optimum high density planting (OHDP) and maximum or ultra high density planting (UHDP). The classification of this system is again made based on the shape, size and forms of tree such as bush, tatura trellis, pyramid, cordon, curtain, hedgerow and meadow orchard. The success of high density planting depends on number of factors including the light intercepted by the bearing volume of the tree, production efficiency of the trees, and the need to optimize productivity over the life of the grove. These in turn depend on the pruning of the tree, tree stature and form, nutrient and water availability, etc. The most commonly known planting systems are espalier, cordon, spindle bush, oblique, palmette, trellis and hedge. The practical systems which fit into moderate density plantings are pillar, spindle bush, offset, bed and free standing type. In this study, the different systems of apple high density planting are compared.