

#### **Workshop 4**

#### **"Tree Spacing or Tree Thinning - Which is Best?"**

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Neither tree spacing on its own, nor tree thinning alone can be regarded as the best orchard practice to maximize and maintain the fruit yield of a given avocado orchard. This was the first important conclusion arising from the discussion of the above title. The members of the workshop agreed that both practices, tree spacing and tree thinning, should be used in an integrated approach.

Spacing was recognized as one of the most important considerations in planting an orchard. The correct spacing for the long-term productive life of an orchard should depend on the expected size of the mature tree. Mature tree size depends upon several factors such as the vigor of the root-stock, the cultivar's natural growth habit (spreading or erect) and soil type as well as soil depth. The same root-stock-scion combination on a deep, well-drained and fertile soil will attain a greater size than on a shallow, restricted or less fertile soil. Climate and other environmental influences also affect mature tree size. A determination of mature tree size would have to be made for each condition and cultivar for each avocado growing area of the world. A general recommendation for the best spacing could therefore not be given.

In practice, few avocado orchards are initially set at spacings to accommodate the mature tree size. Planting at such spacings results in low production per acre while the orchard is young. High costs of land, orchard development and cultural operations, force growers to attain the greatest yields possible during the first few years of production. Consequently, most orchards today are double-set and some are quadruple-set, and thus require timely tree thinning. If thinning is carried out too late, excessive crowding causes shading-out of lower branches with the only growth occurring in the tops of the trees. This results in loss of production, higher harvesting costs and greater difficulty in carrying out cultural operations and practices necessary for pest and disease control. Thinning was defined as the timely removal of trees to prevent excessive crowding.

The ideal scenario, supported by 107 people out of 110 who attended this workshop, was as follows: plant as many trees as economically feasible, using precocious cultivars, and thin with courage. The closest initial tree spacing that is economically

feasible is the spacing that attains high enough yields to make some profit before the first thinning.