



## **High Density- A new revolution in Apple industry.**

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There is a perceptible change in the concept of horticulture development in the state of Jammu and Kashmir. There are around 7 lakh families comprising of about 33 lakh people which are directly or indirectly associated with horticulture (Anonymous 2015). Horticulture development is one of the thrust areas of state Government. Apple has a diverse climatic adaptation and most apple varieties require about 1500 hours of chilling below 7<sup>0</sup> C to break the rest period. The average temperature should be around 21 to 24<sup>0</sup>C during the growing period. Apple trees grown on seedling rootstock often tend to develop into large & vigorous trees making it difficult to manage them. Clonal rootstocks offer a viable solution to this problem, which have been used by the fruit growers in scientifically advanced countries for better management & quality fruit production. In most of the countries an increased interest is shown for planting high density and for this early developing dwarf and semi dwarf rootstocks are used.

More than eighty percent of apple plantation is on seedling rootstock. On this rootstock plants are attaining huge size and become unmanageable, if not pruned annually and the cost of cultivation per acre is on higher side. Intensive research in production techniques and introduction of clonal rootstocks and new cultivars have led to higher productivity of quality fruit in Europe and USA. In India the production is very much on lower side. There is urgent need to increase the production of apples which can be achieved only by shifting from low density to high density plantation. The state government has also taken up the initiative on large scale to shift to high density plantation. High density plantation refers to the accommodation of large number of trees per unit area and this type of plantation has already made headway in our state. Besides having an increased number of trees per unit area, a high density orchard must come in bearing within 2-3 years of planting. The traditional systems of planting having long juvenile period, are labour-intensive and low yielding with poor quality fruits, whereas, high density planting is more efficient plantation system. It is precocious, easily manageable, higher yield potential with better quality fruits and higher returns per unit area.

Government is making efforts to realize state's potential for high quality apple production by introducing latest advancements like use of high density plants to bridge the gap between demand and supply. Keeping in view, the Year-2017 is being celebrated as the "Year of Apple", that with fruit growers shift to high density plantation which can produce five times produce than traditional farming, the state will be able to produce promising export figures, therein reducing imports. Besides, the farmers will also be able to get greater economic returns on their yield as the produce from high density plants fetches better market prices.

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