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*Shaping Lives...
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Center for Smart Agriculture

Hi Tech Fruit Culture



Module 2: High Density Planting
Session 3: High Density Planting in Guava



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- **High Density Orcharding**
- There is a trend to plant fruit trees at closer spacing leading to high density or meadow orchard.
- Higher and quality production is achieved from densely planted orchards through judicious canopy management and adoption of suitable tree training systems.



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- The rectangular system of planting/layout is preferred as it facilitates orchard operations.
- Planting can be done anytime during the year provided irrigation facilities are available.
- If planting in December-January there is a chance of frost it causes severe damage.
- The pits of about 80 x 80 x 80 cm or 55 x 55 x 55 cm or 45 x 45 x 45 cm are dug as per layout plan.



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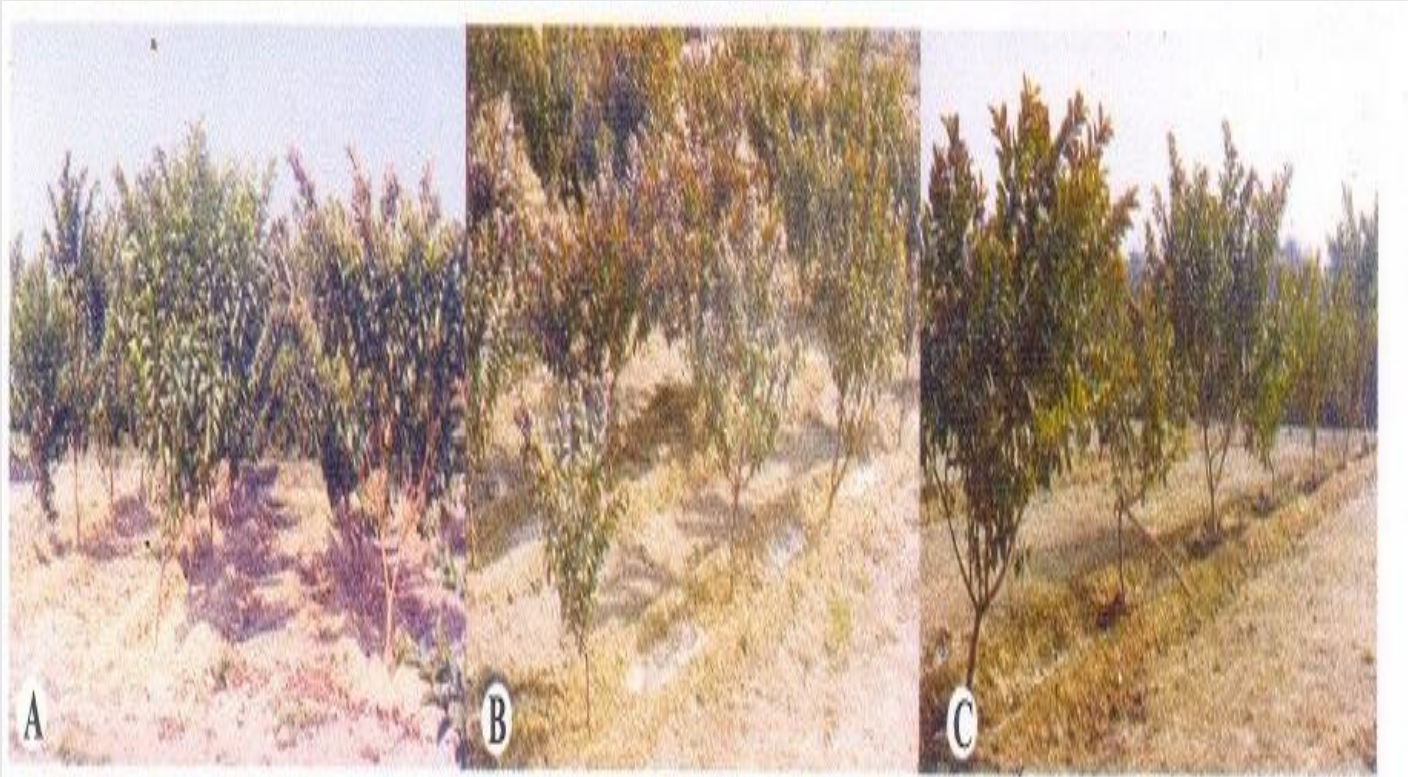
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- As guava responds very well to pruning, the following plant densities have been recommended by Central Institute for Subtropical Horticulture, Lucknow for early, higher and quality guava production:
- A. 3.0m (row to row) x 1.5m (plant to plant) accommodating 2222 plants / ha
- B. 3.0m (row to row) x 3.0m (plant to plant) accommodating 1111 plants/ha
- C. 6.0m (row to row) x 3.0m (plant to plant) accommodating 555 plants/ha



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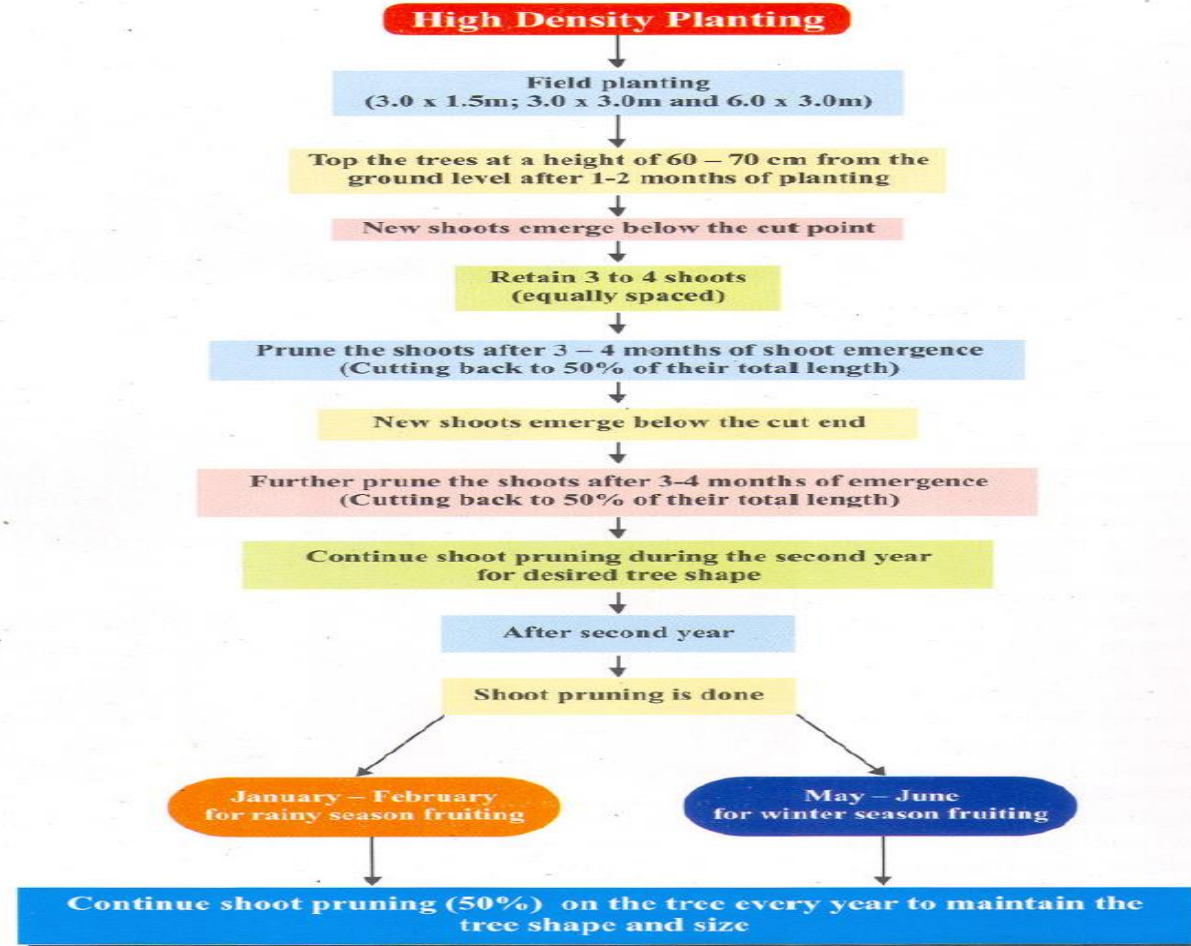


High Density Planting in Guava



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- **Ultra high density planting (UHDP) system in guava**
- Plants spaced at 1x2 m accommodates 5000 plants per hectare
- Plants are topped 2 months of planting in October for emergence of new shoots below cut ends
- 50 per cent length of each new shoot , pruned again in December-January for induction of more shoots ; good spread is attained by May ; flower buds differentiate



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TRAINING AND PRUNING FOR CULTIVATION OF HIGH DENSITY GUAVA

(UHDP) SYSTEM IN GUAVA



Planting distance: 2.0 x 1.0m



**Heading back at height of 30
to 40 cm**



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New growths after pruning



Growth after 2nd pruning



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Growth after 3rd pruning



Flowering after 3rd pruning



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Comparison between traditional systems and HDP systems of guava growing

Attributes	Traditional systems	Meadow systems
Bearing	After two years	From first year
Production	Overall production is low (12-20 t ha ⁻¹)	Increased overall production (30-50 t ha ⁻¹)
Management	Difficult to manage due to large size of trees	Easy to manage due to small trees
Labor requirement	More	Minimum
Production cost	Higher cost of production	Reduced cost of production
Harvesting	Difficult	Easy
Quality	Large canopy, poor sunlight penetration and poor quality	Small canopy encourages air to circulate and sunlight to penetrate into centre of the tree canopy, good air circulation minimizes disease, sunlight interception contributes to high fruit quality and colour



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*Thank
you*

