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*Shaping Lives...
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Center for Smart Agriculture

Hi Tech Fruit Culture



Module 1: Nursery Management
Session 2: Nursery Management in Guava



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- **Nursery management in Guava**
- **Propagation**
- **Seed Propagation:**
 - Guava propagated from seeds germinates in about three weeks.
 - Boiling the seeds for five minutes, soaking them in water for weeks prior to sowing or treating them in strong sulphuric acid for five minutes facilitates their germination.
 - Freshly extracted seeds of fully matured fruits should be used for this purpose.



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Seed Propagation





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- **Vegetative Propagation**
- **a) Air-Layering**
- Air-layering is the commercial method in practice for propagation of guava (**April and June**)
- A shoot from previous year's growth of 1cm in diameter is selected for air-layering.
- A ring of bark about 3cm long is removed.
- This area is covered with wet sphagnum moss and tied with polyethylene film.
- The rooting takes place in about 30-40 days.



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Air-Layering



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Approach grafting/Inarching:

- Inarching or approach grafting is the oldest technique employed in many guava growing areas.
- This methods yields very high success (85 to 95%) during rainy season.
- A thin slice of bark about 2.5-3 inches in length and about 1/3 inch in thickness at a height of 15-20 cm above the ground level is removed from the rootstock with sharp knife.



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- A similar cut is made in the branch of mother plant to be used as scion.
- The cut portions of both rootstock and scion are brought together and tied firmly with the help of grafting tape.
- After two months, stock above and scion below the union are cut gradually.
- Suckers sprouting from the rootstock are also removed.



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Approach grafting/Inarching



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- **Wedge grafting in Guava**
- The technique involves growing of seedlings in polyethylene bags, grafting, capping and hardening of grafts.
- Seedlings are raised for rootstocks in the nursery for approximately 6 to 8 months.
- When the stem diameter of seedling is of pencil thickness (0.5-1.0 cm) they are chosen for wedge grafting.
- In this technique, proper selection and preparation of scion sticks is very important for obtaining higher success.



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- 15-20 cm long shoots (3-4 months old) with 3-4 healthy buds and of pencil thickness should be selected for grafting.
- Selected scion shoots are defoliated on the mother plant, about a week prior to detaching.
- At the same time, the apical growing portion of selected shoot is also beheaded. This helps in forcing the dormant buds to swell.
- In this way, the buds on the scion are ready to start sprouting at the time of grafting.



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Wedge grafting in Guava

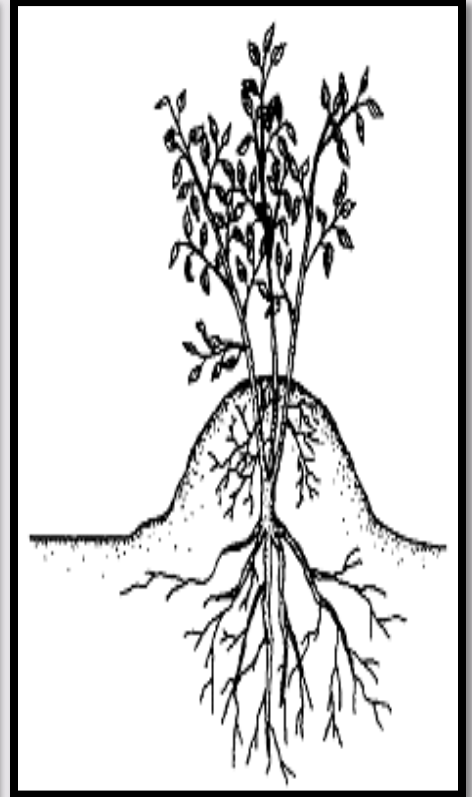
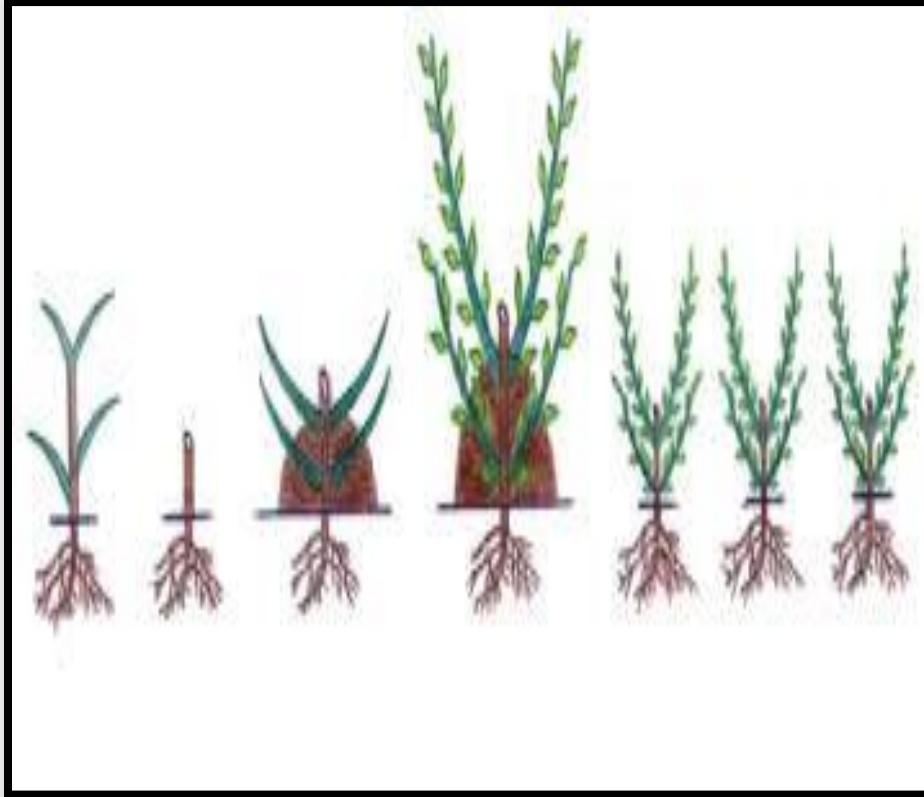


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- **Stooling:**
- Stooling is the easiest, cheapest and another commercial method of guava propagation.
- Stooling is done twice on the same mother stools in a year.
- With the advancement in its age, the number of stool layers also increases every year.
- The growth and development of stool layers are better than seedlings.



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Stooling



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*Thank
you*

