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Air Layering in Guava

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Air layering is a highly effective commercial propagation method for guava (*Psidium guajava* L.), used to produce true-to-type, clonal plants that fruit within 6-8 months. Best performed in warm, humid conditions (April-June), it involves removing a 3cm bark ring, applying 10,000 ppm IBA (Indolebutyric acid) for optimal rooting, and covering with damp sphagnum moss/cocoa peat.



Introduction

Air layering in guava is a highly successful vegetative propagation method used to create new, genetically identical plants with fruit within a shorter period. It involves inducing root formation on a healthy, 1cm thick, one-year-old branch, wrapped in moist rooting media like sphagnum moss and plastic, typically during warm, humid weather (April-July).

Key Steps and Techniques for Air Layering Guava

- ✓ Ideal Time: The best time for layering is April to June (spring/summer) when humidity is high and temperatures range between 29.3-30.5°C.
- ✓ Branch Selection: Select a healthy, matured, woody, or semi-hardwood branch about 1-2 cm in diameter.

Methodology

- ✓ Girdling: Remove a 3cm ring of bark (about 1-1.5 inches) just below a leaf node.
- ✓ Hormone Application: Apply rooting hormones like IBA (Indole-3-butyric acid) or NAA (Naphthaleneacetic acid) to the exposed, upper cut surface to stimulate rapid root development.
- ✓ Wrapping: Cover the ringed area with moist rooting medium (sphagnum moss, coconut coir, or potting soil).
- ✓ Covering: Wrap the mixture with a piece of polyethylene film (transparent plastic is best for monitoring roots) and seal it tightly at both ends with twine or tape.
- ✓ Rooting and Removal: Roots typically develop in 1-3 months.
- ✓ Once sufficient roots are visible through the plastic, cut the branch below the wrap and plant it in a pot, keeping it in the shade until established.

Advantages

- ✓ High Success Rate: It is very effective for propagating guava, often better than cuttings.
- ✓ Quality Assurance: Produces a clone identical to the parent, ensuring the same quality of fruit.
- ✓ Fast Fruiting: Air-layered trees can start fruiting earlier than seed-propagated trees.

Conclusion

Air layering is a simple, economical, and effective method for the propagation of guava. Plants produced through air layering establish quickly, bear fruits earlier, and maintain the desirable characteristics of the mother plant. This method is highly suitable for nursery production as well as commercial guava cultivation. When air layering is performed during the appropriate season with proper care, it results in a high success rate and good quality planting material.

References

1. Singh KK. A review: Macro-propagation of guava (*Psidium guajava*). *Journal of Pharmacognosy and Phytochemistry*. 2018;7(2):2629-34.
2. Singh KK. Vegetative propagation of guava (*Psidium guajava* L.) Through air layering: a review. *Plant Archives* (09725210). 2020 Oct 1, 20(2).
3. Rathore N, Lekhi R, Nair CS, Mandloi DS, Bhadouria P, Kashyap A. Study of vegetative propagation of guava (*Psidium guajava* L.) Cv. Gwalior-27 throws air layers with different concentration of PBZ. *IJCS*. 2020;8(2):2235-7.
4. Singh G, Sahare H, Deep M. Recent Trends in Guava Propagation-A Review. *Biosciences Biotechnology Research Asia*. 2019 Mar 30;16(1):143-54.
5. Baghel M, Raut UA, Ramteke V. Effect of IBA concentrations and time of air-layering in guava cv. L-49. *Research Journal of Agricultural Sciences*. 2016 Jan;7(1):117-20.