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## Banana Propping

\*K. Venmugil, Dr. B. Guna, Mrs. M. Arthy and Ms. S. Poornima

Nalanda College of Agriculture (Affiliated to Tamil Nadu Agricultural University,  
Coimbatore), M. R. Palayam, Trichy, Tamil Nadu, India

\*Corresponding Author's email: [venmugilvenmugil808@gmail.com](mailto:venmugilvenmugil808@gmail.com)

Propping is an essential cultural operation in banana (*Musa* spp.) cultivation, designed to prevent lodging (toppling) caused by the heavy weight of fruit bunches and high-velocity winds, particularly in tall or heavily bearing varieties. This practice involves providing structural support, typically using one or two bamboos or wooden poles placed against the stem on the leaning side to form a protective triangle. Studies indicate that while up to 88.9% of farmers are aware of this practice and 83.3% adopt it, economic constraints regarding the cost of materials remain a barrier. As part of integrated management, propping, in conjunction with other techniques like de-suckering and nutrient management, helps maintain plant balance, prevents yield loss, and contributes to improved, uniform fruit quality. It is especially critical in high-density planting systems to ensure stability during the monsoon season.



### Introduction

Banana propping is an essential horticultural practice in banana cultivation where physical supports—typically bamboo poles, wooden sticks, or ropes—are placed against banana plants to prevent them from breaking, bending, or toppling over ("lodging") due to the immense weight of developing fruit bunches or strong winds. This support system ensures the plant remains upright, prevents the bunch from touching the ground, and protects against damage, ultimately maximizing yield and fruit quality.

### Key Objectives of Banana Propping

- **Preventing Lodging (Falling):** The main objective is to provide structural support to the weak, herbaceous, and top-heavy pseudostem, especially when loaded with heavy fruit bunches.
- **Preventing Wind Damage:** Propping protects the plants from breaking or toppling over during strong winds or storms.
- **Ensuring Quality and Size:** By keeping the plant upright, it allows the bunch to develop properly, leading to uniform, clean, and high-quality fruit, preventing damage from soil contact.
- **Maximizing Yield:** It prevents premature loss of the plant, which would otherwise result in significant yield losses.
- **Improved Management:** Propping aids in easier, more efficient harvesting and reduces the risk of injury to the plant, which can affect future sucker growth.
- Propping is typically done right after the shooting of the bunch, often using two bamboos forming a triangle on the leaning side of the plant.

### Materials Used for Propping:

- **Bamboo Poles:** The most common material, often used in a "scissors" formation (two poles crossed at the top) to cradle the bunch.
- **Eucalyptus and Casuarina Poles:** Used for their strength and durability.
- **PVC Pipes:** More durable, though they require higher upfront investment.
- **Coir or Polythene Rope/Twine:** Used for tying and securing the pseudostem to the props.
- **Steel Wires:** Used in "cable guying" systems, particularly to secure plants in high-wind areas.



### Types of Banana Propping Methods

- **Single Propping (Single Pole):** A single bamboo or wooden pole (approx. 2.5–3m long) with a V-shaped end is placed directly under the bunch or against the leaning side of the pseudostem.
- **Double Propping (Double/V-Shape):** Two poles are crossed to form a 'V' or 'X' shape, providing more stable support for heavier bunches and in areas with high wind speeds.
- **String/Twine Propping (Arching):** Utilizing, coir, polythene, or synthetic twine to tie the tops of 3-4 adjacent banana plants together, creating a mutually supportive structure.
- **Triangle Propping:** A more secure method using three poles arranged in a triangle around the pseudostem to provide maximum stability for large, high-yielding, or tall varieties

### Advantages of Banana Propping

- **Prevents Lodging:** Acts as a crucial support mechanism for weak stems or plants heavily loaded with fruit, preventing them from falling over due to wind or weight.
- **Improves Fruit Quality and Size:** Ensures the bunch remains upright, which allows for even, consistent, and uniform growth, resulting in better, larger, and healthier fruit.
- **Protects Against Damage/Disease:** Keeps the fruit bunch and plant from falling to the ground, which prevents the fruit from breaking, rotting, or getting damaged by soil-borne pests and diseases.
- **Reduces Economic Loss:** By keeping the plants stable, it minimizes premature losses and enables higher market value for the produced fruit.
- **Supports Tall Varieties:** Essential for tall, heavy-fruiting banana cultivars to maintain stability throughout the maturation process.
- **Facilitates Harvest:** An ordered, upright farm makes the harvesting process easier and more efficient

### Conclusion

Propping is an essential, cost-effective, and practical technique in banana cultivation, providing necessary structural support to prevent lodging caused by heavy fruit loads or high winds. By maintaining vertical stability, it significantly reduces fruit loss and damage,

ensuring superior quality, larger bunch sizes, and better marketability. Using bamboo or poles for propping ultimately maximizes profitability and productivity

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