

## *Harvest Strategies of Garlic*

### **Introduction**

Garlic (*Allium sativum*) is a widely cultivated bulb crop known for its culinary and medicinal properties. Proper harvesting and post-harvest handling are crucial to maintaining bulb quality, extending shelf life, and ensuring better marketability.

### **1. Optimal Harvesting Time**

Harvesting garlic at the right stage is essential for maintaining quality and storability.

- **Maturity Indicators:** The lower leaves start to turn yellow and dry, while the upper leaves remain green.
- **Harvesting Period:** Typically **90-150 days** after planting, depending on the variety and climatic conditions.
- **Bulb Firmness:** Fully matured bulbs have well-developed cloves covered with tight, dry skin.

### **2. Harvesting Methods**

#### **a) Manual Harvesting**

- Garlic is **hand-pulled** or dug using small tools to avoid damage.
- Careful handling is required to prevent bruising and splitting of bulbs.
- Harvesting is done in the **morning** when temperatures are moderate.

#### **b) Mechanical Harvesting**

- Used in commercial garlic production to increase efficiency.
- Mechanical lifters and harvesters carefully loosen the soil before extracting bulbs.
- Requires careful calibration to avoid bulb damage.

### **3. Post-Harvest Handling**

To ensure long-term storability, proper post-harvest handling is necessary.

#### **a) Curing & Drying**

- **Curing:** Garlic bulbs are air-dried in **well-ventilated sheds** for **2-4 weeks** to improve skin formation and shelf life.
- **Temperature & Humidity:** Ideal curing conditions are **25-30°C** with **60-70% relative humidity**.

#### **b) Cleaning & Sorting**

- Roots and excess soil are trimmed after curing.
- Bulbs are sorted based on size, weight, and external appearance.

## 4. Storage & Transportation

- **Storage Conditions:** Ideal storage temperature is **-1 to 0°C** with **65-75% humidity** to prevent sprouting and decay.
- **Packaging:** Garlic is packed in **mesh bags, wooden crates, or ventilated cartons** to allow air circulation.
- **Transport:** Requires **dry, cool conditions** to maintain freshness and prevent fungal growth.

## 5. Challenges in Garlic Harvesting & Storage

- **Sprouting:** Proper temperature control is essential to prevent premature sprouting.
- **Mold & Decay:** Good ventilation and moisture control reduce fungal infections.
- **Mechanical Damage:** Careful handling is required to avoid bruising and splitting.
- **Storage Longevity:** Well-cured garlic can last **6-8 months** under optimal storage conditions.

## Conclusion

Efficient harvesting and post-harvest management of garlic help maintain its quality, extend shelf life, and enhance profitability. Implementing best practices in curing, storage, and transportation ensures higher market returns and reduces post-harvest losses.

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This document provides a comprehensive guide on garlic harvesting strategies. Implementing proper techniques will help farmers achieve higher productivity and better market value.

