# **TRANSPORTATION**

| State             | Districts<br>(Major<br>Markets) | Taluka Market   |
|-------------------|---------------------------------|---|
| Maharashtra       | Solapur                         | Karmala, Barshi, Madha, Mohol, Mangalwedha, Sangoae, Malsiras, Pandharpur, Akkalkot.  |
|                   | Nasik                           | Kalvan, Peth, Igatpuri, Sinnar, Niphad, Yeola, Nandgaon,<br>Satana Surgana, Dindori, Melgaon                                  |
|                   | Sangli                          | Atpadi, Khanapur, Islampur, Shirala, Valva, Tasgaon,<br>Kavathe Mahankal, Jat, Miraj  |
|                   | Ahmednagar                      | Srirampur, Sangamner, Akola, Rahuri, Nevasa, Parner,<br>Pathardi, Srigonda,   |
|                   | Pune                            | Junnar, Ambegaon, Ghod, Rajgurunagar, Wadgaon,<br>Shirur, Mulshi, Welhe, Purandhar, Bhor, Baramati,<br>Indapur, Daund, Saswad |
|                   | Satara                          | Mahabaleshwar, Khandala, Wai, Phaltan, Koregaon, Khata, Patan, Karad, Vadug.  |
| Karnataka         | Bijapur                         | Indi, Sindgi, Basavna Bagevadi, Muddebihal, Tikota.   |
|                   | Belgaum                         | Athni, Arkali, Chikodi, Mukeri, Bailhongal, Ramdurg   |
|                   | Bagalkot                        | Jamkhandi, Mudhol, Hungund, Badami.   |
| Andhra<br>Pradesh | Anantpur                        | Guntakal, Gooty, Rayalacheruve, Uravakonda, Kanekallu, Rayadurg, Kalyandurg, Kambadur, Manakasira, Nallamada.                 |
| Gujarat           | Bhavnagar                       | Botad, Gadhda, Valbhipur, Umrala, Mandir,<br>Gariadhar, Palitana, Talaja, Chogha, Vaibhipur.                                  |
|                   | Ahmedabad                       | Mandal, Rampura, Samand, Bavia, Dholka, Dhandhkulla, Ranapur.   |
|                   | Sabarkantha                     | Vijarnagar, Khedbrahma, Vadali, Idar, Bhiloda, Talod, Dhansura, Bayad, Malpur, Meghraj, Bhiloda                               |

# **Modes of transport for pomegranate**

## 1.Road Transport:

- **Refrigerated Trucks:** To maintain the freshness and quality of pomegranates, especially over long distances, refrigerated trucks are used
- Standard Trucks: For shorter distances or when immediate delivery is possible, standard trucks may be used.

## 2.Air Transport:

- Cargo Planes: When pomegranates need to be transported internationally or over long distances quickly, air freight is the preferred mode.
- Passenger Planes: when space is available and the destination requires quicker delivery

## 3.Sea Transport:

- **Refrigerated Containers:** These containers are equipped to maintain the necessary cold chain, keeping the fruits fresh during the long voyage
- Standard Containers: Shorter sea routes or when immediate refrigerated storage is available upon arrival

## 4. Rail Transport:

• Refrigerated Rail Cars: This method combines the benefits of large volume capacity with controlled environments.

#### Dos

- Maintain cool, controlled environment.
- Use insulated containers.
- Handle gently to prevent damage.
- Check temperature/humidity before loading.
- Secure packaging.
- Ensure proper ventilation.

### Don'ts

- Use extreme temperatures.
- Use prolonged exposure to sunlight or heat.
- Use overcrowds containers.
- Use rough handling.
- Transport with ethylene-producing fruits.
- Delays in transportation.

# **Specific Stacking Recommendations**

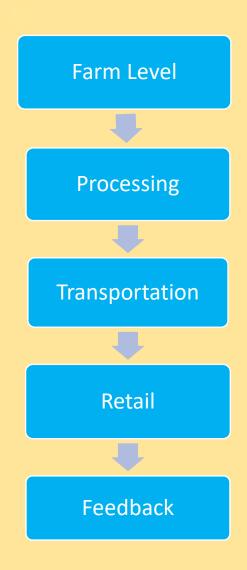
### **For Truck Transport**

- **Stable base:** Start with a stable base layer on the truck floor.
- **Secure Stacking:** Stack the boxes in a brick or column pattern to increase stability.
- Maximum Layers: Typically, do not exceed 8 layers of boxes, considering the height of the truck and the strength of the boxes.

### **For Container Transport**

- Pallet Height: Ensure the total height of the pallets, including the boxes, does not exceed the container's height restrictions (usually around 2.2 meters)
- Securing the Load: Use dunnage bags or bracing to prevent movement within the container.

# Flowchart of The Traceability System



### **GPS Tracking:**

nstallation of GPS Devices:

Equip transport vehicles with GPS trackers

Monitoring Software: Use software platforms to provide live updates and historical route data.

#### **RFID Tags:**

Tagging Shipments: Attach RFID tags to pomegranate shipments.

Readers at Key Points: Place RFID readers at key transit points to log when shipments pass through.

Vehicle Tracing Methods

### **Telematics:**

Data Collection:Collect data on vehicle speed, routes, and conditions.

Integration: Integrate with GPS for comprehensive monitoring.

#### **IoT Sensors:**

Environmental Monitoring: Attach IoT sensors to monitor temperature, humidity, and other conditions

Real-Time Alerts: Send real-time alerts if conditions deviate from the optimal range