WAXING

Waxing of Pomegranate

A protective edible coat on fruit and vegetable which protect them from transpiration losses and reduce the rate of respiration is called '**waxing'**.

Waxing is a common practice used in the post-harvest handling of fruits like pomegranates to enhance their shelf life and appearance. Various types of waxes are used for this purpose, often depending on regulatory approvals and the specific requirements of the market.

1)Waxing and fungicide application

The shelf life of pomegranate can be extended up to 48 days in zero energy cool chamber when pretreated with waxing coupled as against 3-4 weeks under room temperature.

- Thiabendazole or Benomyl @ 1000 ppm concentration.
- Only good quality edible wax must be used.
- Monitor edible wax quantity.
- Monitor concentration of the fungicide to avoid crossing of international residue limit.
- Effective wax coating is very important.

2)Drying the wax coating

- Temperature of drying tunnel must not to beyond 30-35°C
- Bulbs, heaters, hot air circulation along with fans, air knives must work properly for proper drying

Advantages of waxing

1. Improved appearance.
2. Reduced weight loss.
3. Prevent chilling injury and browning.
4. Protect produce from bruising.
5. Protects pomegranate from micro-biological infection.
6. Increase in the shelf life.

DO’s

1.Choose food-grade wax like carnauba or beeswax.

2. Clean and dry pomegranates thoroughly.

3. Apply a thin, even layer with a soft brush.

4. Maintain proper temperature during application.

5. Allow pomegranates to dry completely.

6. Ensure hygiene during the process.

7. Use fresh wax for each batch.

DON’T’s

1. Use non-food grade waxes.

2. Over-apply wax; it can alter taste and texture.

3. Use waxing damaged fruit.

4. Wait before waxing post-harvest.

5. Use wax in extreme conditions.

Here are some common waxes used in pomegranate waxing:

Carnauba Wax

Derived from the leaves of the Carnauba palm, this natural wax is its high gloss and commonly used due to protective properties. It is considered safe for consumption and is widely approved by food safety authorities.

Beeswax

Another natural wax, beeswax is known for its excellent moisture barrier properties. It provides a good shine and is safe for food use, though it is less commonly used than carnauba wax due to cost and availability.

Polyethylene

These synthetic waxes are used for their strong moisture barrier properties. They can be engineered to meet specific requirements but are less common in food applications due to stricter regulatory scrutiny.