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Centre for Smart Agriculture

Production Technology of cut and loose flower



Module 3: Post Harvest Management
Session 23: Cold Chain Management



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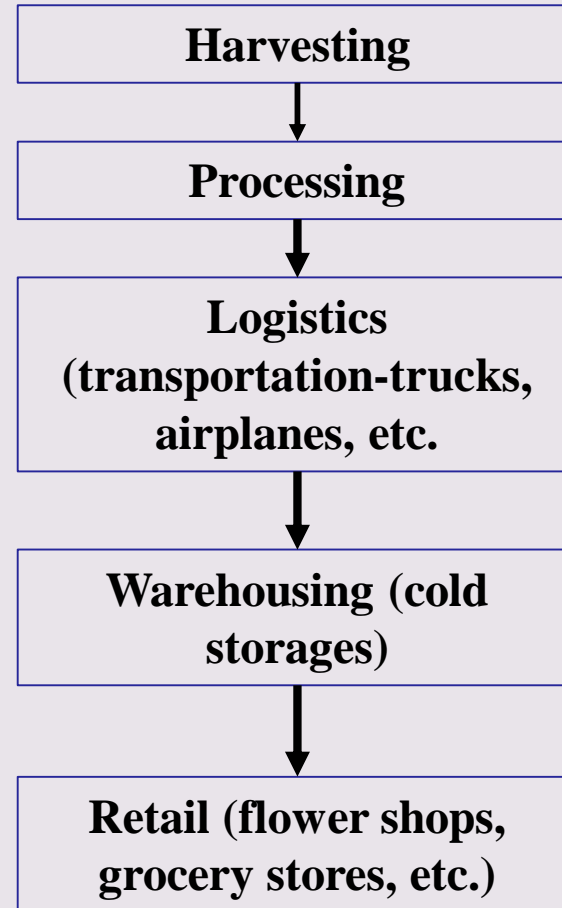
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Cold chain management- a network of facilities and distribution options that performs the functions of procurement of materials, transformation of these materials into intermediate and finished products, and the distribution of these finished products to customers.



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Cold chain logistics stages





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Temperature monitoring

1. Time temperature indicators(TTIs)
2. Radio frequency identification(RFID)



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TTIs-

- ✓ monitor the temperature conditions in fresh produce supply chain
- ✓ indicate the cumulative time temperature history of the products
- ✓ enables the classification of products according to keeping quality/shelf life remaining.



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RFID-

- ✓ used in monitoring temperature hours in agri-food supply chains.
- ✓ facilitates automated data collection without human intervention throughout the supply chain.



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Storage

1. Refrigerated storage
2. Controlled atmosphere storage
3. Modified atmosphere storage
4. Hypobaric or low pressure storage



Refrigerated storage:

- ✓ Wet storage-flowers are stored with their bases dipped in water or preservative solution.
- ✓ Dry storage-flowers are sealed in plastic bags to prevent loss of moisture.

Controlled atmosphere storage:

- ✓ low temperature storage in gas tight chambers under decreased levels of oxygen and increased levels of carbon dioxide



Modified atmosphere storage (MA)

- ✓ the dry storage of flowers in sealed bags leads to reduction in O_2 and increase in CO_2 levels due to respiration of tissue.

Hypobaric or low pressure storage(LPS)

- ✓ storage at low atmosphere pressure under refrigerated conditions, continuous ventilation and high relative humidity.



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Thank you.....