

# *Post Harvest Management and Banana Ripening Solutions*

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# Objective

- ▣ Understanding Consumer perception today
- ▣ Present Banana supply Chain.
- ▣ Ideal Ripening processes and Technology.
- ▣ Identifying the right supply Chain Linkage



# Consumer perception

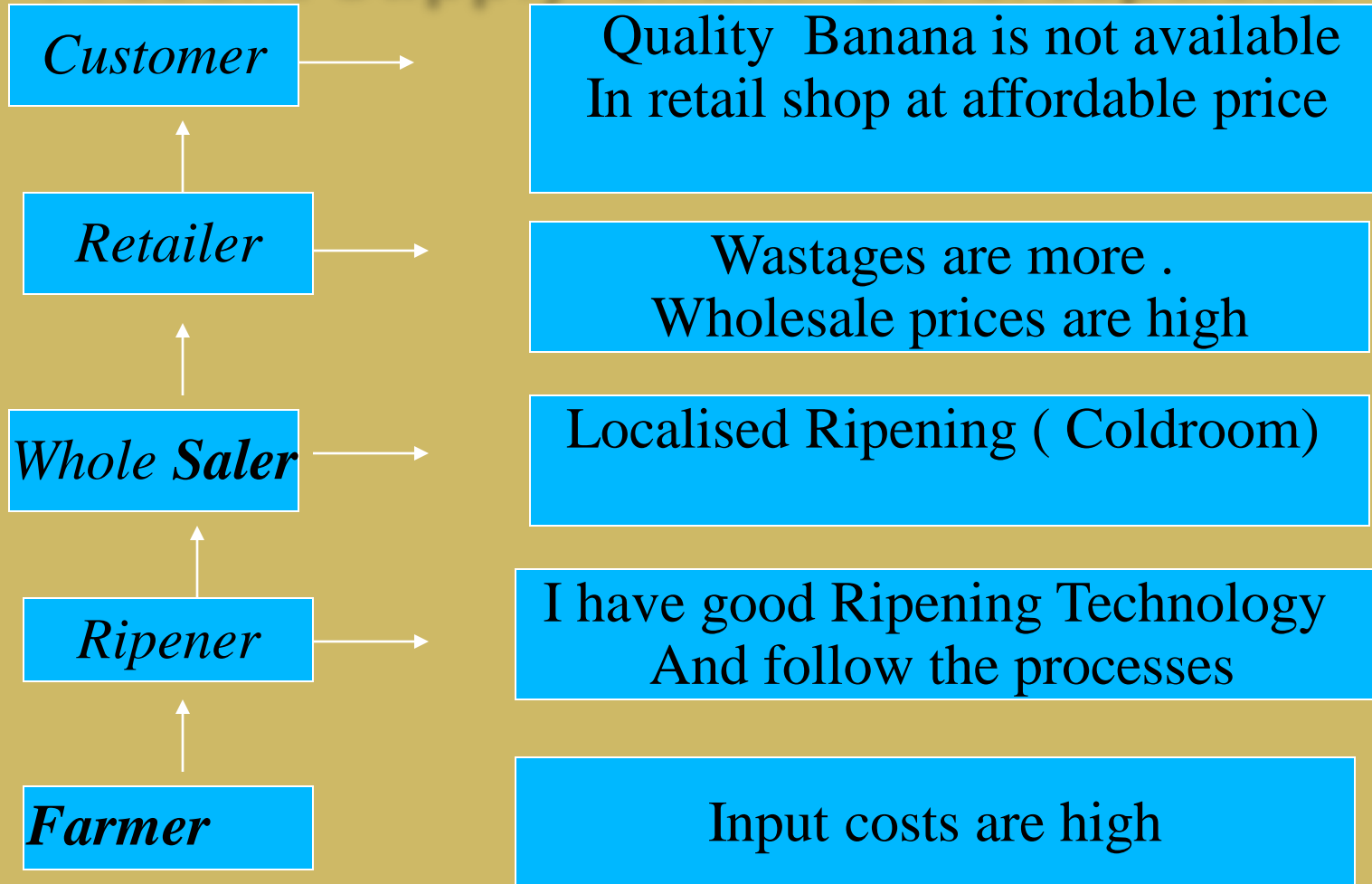
## Can I get a Good Banana ???

- *More Shelf life - most of the times no*
- *Taste – Inconsistent most of the times*
- *Clean & Food Safe – Is it safe ?*
- *Shelf life of Ripened bananas ? -*

*Affordable to all sectors of society - ???*

# Present Scenario - Supply Driven

## Present Supply Chain & Perceptions



# Indian Banana Supply chain Losses Estimated upto 40% ( As per FAO study)

S1 no	Farm	Ripening Rooms	Supply chain and Whole sale	Retail
1	5 to 8%	10%	12 to 15%	5 to 8%

# Reasons - Supply Chain Losses

- ❑ Non adoption of Right Technology and processes Many Ripening rooms are cold rooms.
- ❑ Decision on Right Room capacities , Chamber sizes and Machines.
- ❑ Inefficiency during Transportation and Handling .
- ❑ Absence of Right linkage between the stalk holders.

# Creating Ideal Supply Chain

- ▣ Adopting
- ▣ Post Harvest Management practices
- ▣ Appropriate Ripening Technology.
- ▣ Efficient Supply Chain Management
- ▣ **Right Linkage between the Stalkholders**

# Banana Supply Chain

- From Supply Driven to Customer Driven
- Creating a Short and Efficient Chain
- Finding the Right Linkage
-



# Ripening Process Management

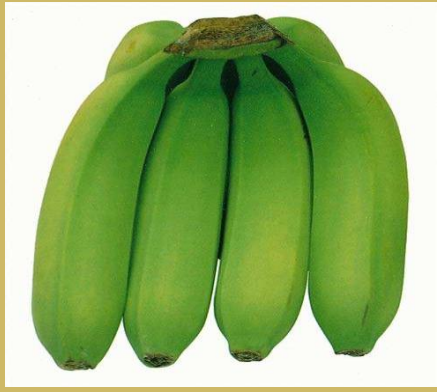
To control and regulate the Fruit parameters

- **Ethylene production**
- **Respiration - Production of CO<sub>2</sub>**
- **Solatisation - softening of the pulp**
- **Starch conversion into sugars**



# Result of Ripening Technology

## Colour change during mechanical ripening



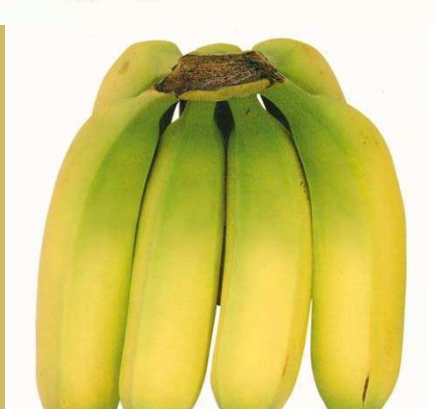
Day 2

18% Starch, 4% Sugar



Day 3

15% Starch, 7% Sugar



Day 4

11% Starch, 11% Sugar

## Colour change during mechanical ripening



Day 5

7% Starch, 15% Sugar



Day 6

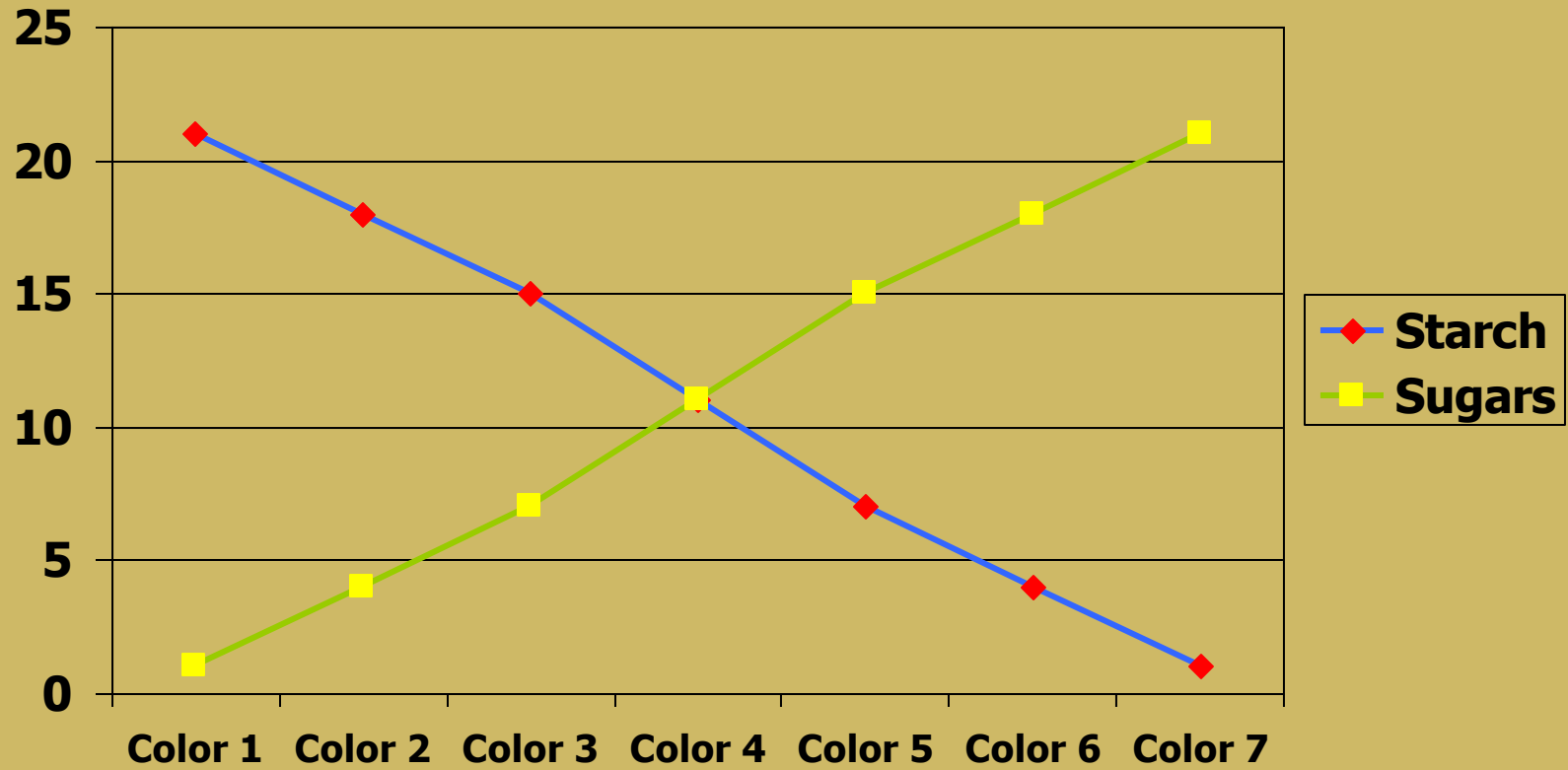
4% Starch, 18% Sugar



Day 7

1% Starch, 21% Sugar

# Starch vs Sugars.





# Banana Ripening Facility

- What is the ideal ripening room ?
  - Gas tight
    - To maintain ethylene in the room to have even colors.
  - High humidity.85-95 %.
    - Less weight loss.
    - Longer shelf life.
  - Even airflow and pressure.
    - Even colors and temperatures.
  - Even temperatures..
  - Temperature control by measuring banana temperatures.
  - Analog controller.



THANK YOU