

# Webinar 8: How to improve postharvest management for horticultural crops

Horticulture for Development Professional Series

Questions? Email horticulture@ucdavis.edu







# Importance of Good Postharvest Handling (like Good Agricultural Practices – GAP)

Beth Mitcham
University of California, Dept. of Plant Sciences
Horticulture Innovation Lab
Postharvest Technology Center









### The Contribution of Horticulture Crops



### Characteristics of Fruits and Vegetables

- Good source of nutrients
- High water content
- Easily damaged
- Alive a biological system
- Deterioration begins at harvest



# Estimated Postharvest Losses (%) of Fresh Produce

Locations	Developed Countries		Developing Countries	
	Range	Mean	Range	Mean
From production to retail sites	2-23	12	5-50	22
At retail, foodservice, and consumer sites	5-30	20	2-20	10
Cumulative total	3.5-26.5	32	3.5-35	32





#### **Postharvest Losses of Fruits and Vegetables**

- Quantitative
- Qualitative
  - Loss of acceptability by buyer
  - Loss of weight
  - Loss of caloric and nutritive value
  - Loss of edibility



# Reducing Losses is Key to Sustainability and Food Security

- Highly nutritious products, like fruits and vegetables, are often more perishable
- Investments lost when produce degrades
  - land, energy, seed, fertilizer, water, and labor
- To increase food security, must reduce produce losses after harvest along with enhanced productivity
- Increased availability increases returns to farmers and may reduce prices for consumers







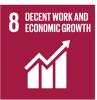




































# Causes of Postharvest Loss in the Developing World

- High Temperatures after Harvest
  - Sun exposure, lack of cooling, cold transport/storage
- Water Loss
  - high temperatures, low RH, poor packaging
- Physical Damage
  - poor packaging, inadequate transportation
- Decay
  - high temperatures, poor sanitation, physical damage
- Inadequate drying and dry storage
  - molds, mycotoxins, deterioration

### **Reasons for Low Adoption**



- Lack of incentives/market
- Lack of resources/capital
- Lack of information among farmers, handlers and marketers
- Policies that inhibit best practices
- Others?







## **Reasons for Low Adoption**



- Lack of incentives/market
  - Lack of resources/capital
- Lack of information among farmers, handlers and marketers
- Policies that inhibit best practices
- Others?





