Postharvest Technology: Introduction to systems analysis

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Systems Analysis

Four steps are involved:
1. Identify the overall system
   - From beginning to end
2. Identify the individual components that comprise the system
   - Identify subcomponents within each component (e.g., harvest, transport, pack, cooling operations)
3. Analyze each of the components
4. Synthesize the components into a workable plan

Before analyzing postharvest operations...

Determine requirements for the crop(s)
- Storage temperature and relative humidity
- Appropriate cooling method(s)
- Appropriate packing/shipping containers

Then...

1. Define the system (overall operation)

2. For each component, define the subcomponents

What comprises each subcomponent?
The first component is the Harvest Operation

Harvest
- Manual vs. Maching?
- Feed Pack vs. P-hose?
- Container Type?

Identify/define each subcomponent. Ask: What, where, why, how?

Complete for components 2, 3, then...

3. Analyze the components

Subcomp 1
Subcomp 2
Subcomp 3
Component 1
Subcomp 1
Subcomp 2
Subcomp 3
Component 2
Subcomp 1
Subcomp 2
Subcomp 3
Component 3

How are the components and subcomponents inter-related?

4. Synthesize the system

Component 1
Subcomp 1
Subcomp 2
Subcomp 3
Component 2
Subcomp 1
Subcomp 2
Subcomp 3
Component 3
Subcomp 1
Subcomp 2
Subcomp 3

What are the strengths and weaknesses of each?
What improvements be made?