

A collage of transportation modes including a globe, an airplane, a cargo ship, a semi-truck, and a train. The globe is in the background, showing the Americas. The airplane is flying across the sky. The cargo ship is in the foreground, sailing on the ocean. The semi-truck is in the foreground, and the train is in the background.

Maximizing Quality and Profits in Cold Chain Logistics

“Pat” Hughes



Overview

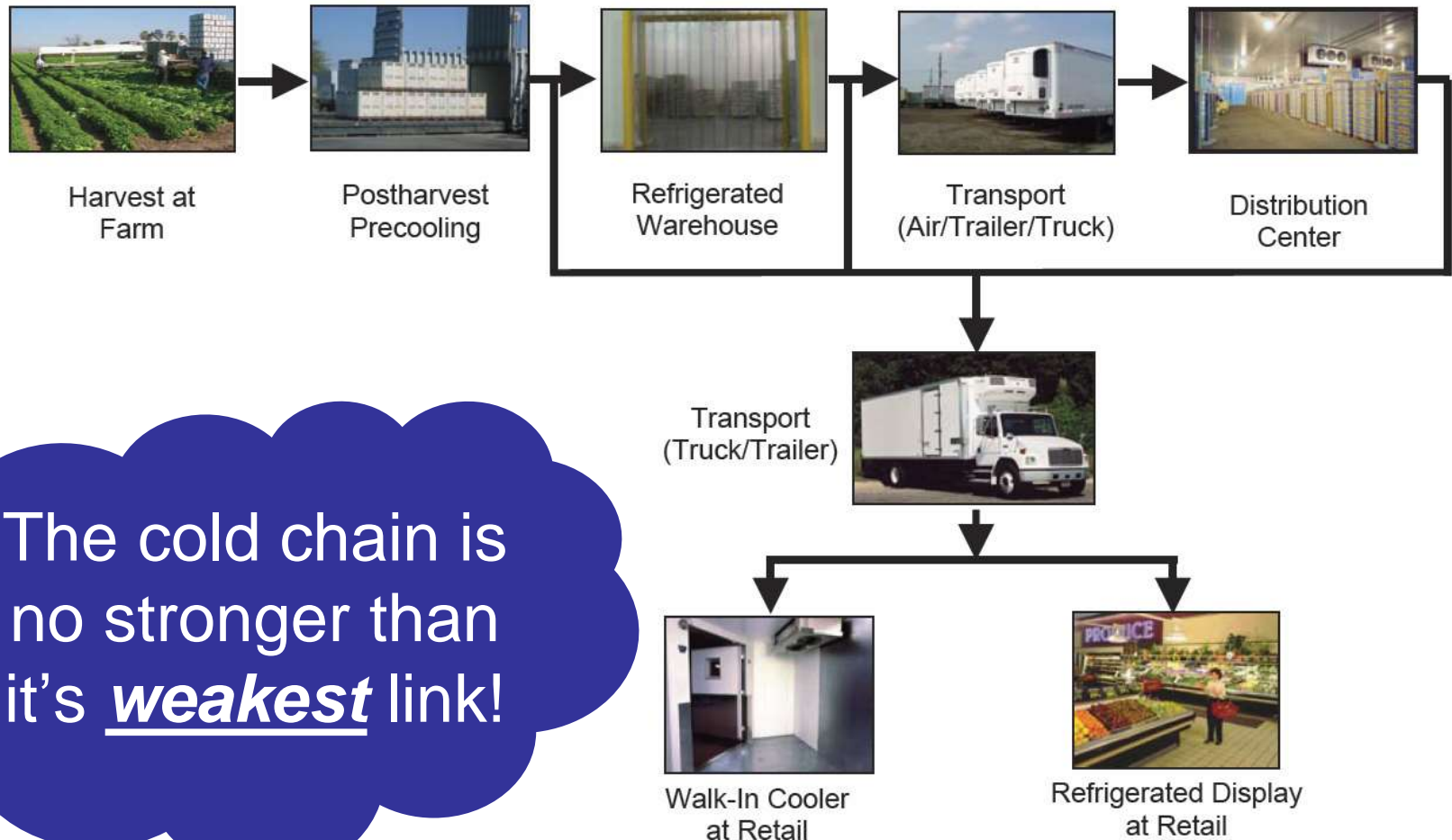
- Links in the Cold Supply Chain (Cold Logistics)
- Most Common Causes of Profit Loss in the Cold Supply Chain
- Comparison of Logistics Models
- Observations made of Food Supply Chains within the CIS nations
- Logistics Business Planning
- Target Market(s) – Discussion



Links in the Cold Supply Chain (Cold Logistics)

- Farm - Initial Product Sortation--FARMER
- Refrigerated Transport to Processing--TRUCKER
- Sorting, Grading (in cooled area)—
PROCESSOR/WAREHOUSE
- Pre Cooling—PROCESSOR/WAREHOUSE
- Packaging (in cooled area)—
PROCESSOR/WAREHOUSE
- Refrigerated Storage--WAREHOUSE
- Refrigerated Transport to Market--TRUCKING

The Cold Supply Chain



The cold chain is no stronger than its *weakest* link!

Most Common Causes of Profit Loss in the Cold Supply Chain

- Temperature Abuse ~~€€€€€€~~
- Humidification Abuse ~~€€€€€€~~
- Ethylene (or CO2) Abuse ~~€~~
- Microbial Growth Damage ~~€€€€~~
- Damage due to Mishandling ~~€~~
- Weight Control Loss ~~€€~~
- Transportation Damage ~~€€~~

Comparison of Logistics Models

- Independent Links
 - Farm, Transportation, Processing, Warehousing
- Transportation Arbitrage (purchase and sell directly, and provide transportation service for self)
- Warehouse Arbitrage (purchase and sell directly, and provide warehousing service for self)
- Full Service or 3PL (provide all services from “Farm to Fork”) as a service to owner/s

Observations made of Food Supply Chains within the CIS nations

- Commonly Independent Links, there are no shared services or incentives
- Refrigeration is used, however it is most often abused and misunderstood
- Little or No Pre-Cooling in use
- Little or No Humidity Control in use
- Little or No Microbial Growth control in use
- Weight Measurements and Transportation Processes are rarely used

Observations made of Food Supply Chains within Ukraine

- Commonly Independent Links, there are no shared services or incentives
- Refrigeration is used, however it is most often abused and misunderstood
- Little or No Pre-Cooling, Humidity & Microbial Control
- Weight Measurements and Transportation Processes are rarely used
- Farming Practices are Well below Standard
- Tax code restrictions, customs, and other related issues stand in the way of market growth

Logistics Business Planning

- Know your MARKETS!
 - How Many Consumers?
 - How Much Money?
 - What do they Want?
 - Are they willing to pay more for the BEST?
- Let the Business dictate the assets
 - Budget and understand your Business Plan, and use it to determine the assets you need to manage your success!

Logistics Business Planning

- Assets
 - Buildings
 - Processing Equipment
 - Transportation
 - Information Technology

Logistics Business Planning

- Buildings
 - Room to Grow
 - Purpose Built by industry professionals
 - Logistically designed
 - Product based
 - Environmental Control Equipment
 - Temperature, Humidity, Gas, Microbial

Equipment



Equipment



Logistics Business Planning

- Processing Equipment
 - Pre-Cooling
 - IQF
 - Grading, Sorting, Washing, Waxing
 - Packaging

Equipment



Equipment



Equipment



Equipment



Logistics Business Planning

- Transportation
 - Types of Equipment
 - ISO, Reefer, Compartmented, Side-Doors
 - Trusted, Trained Drivers
 - Asset Management
 - Logistically focused haul lanes
 - Back hauls
 - Photographed and Documented

Equipment



Equipment



Equipment



Equipment



Logistics Business Planning

- Information Technology
 - Farms- who controls them?
 - Packinghouses
 - Transportation Management System
 - Environmental Control System
 - Warehouse Management System
 - Market Watch
 - Financial Management
 - Electronic Payments

Target Market(s) – Discussion

- **DOMESTIC**
 - Ukraine – Highest % Earners
 - Ukraine – Hotels, Restaurants, Institutions
- **EXPORT**
 - Regional – Kiev, Tbilisi, Baku,
 - Global – Europe, U.S., Emirates, NATO Forces
- Other...?

Thank You!

Pat Hughes

phughes316@gmail.com