



# Fresh-Cut Europe 2006

Packaging Ideas for Fresh-  
Cut Products

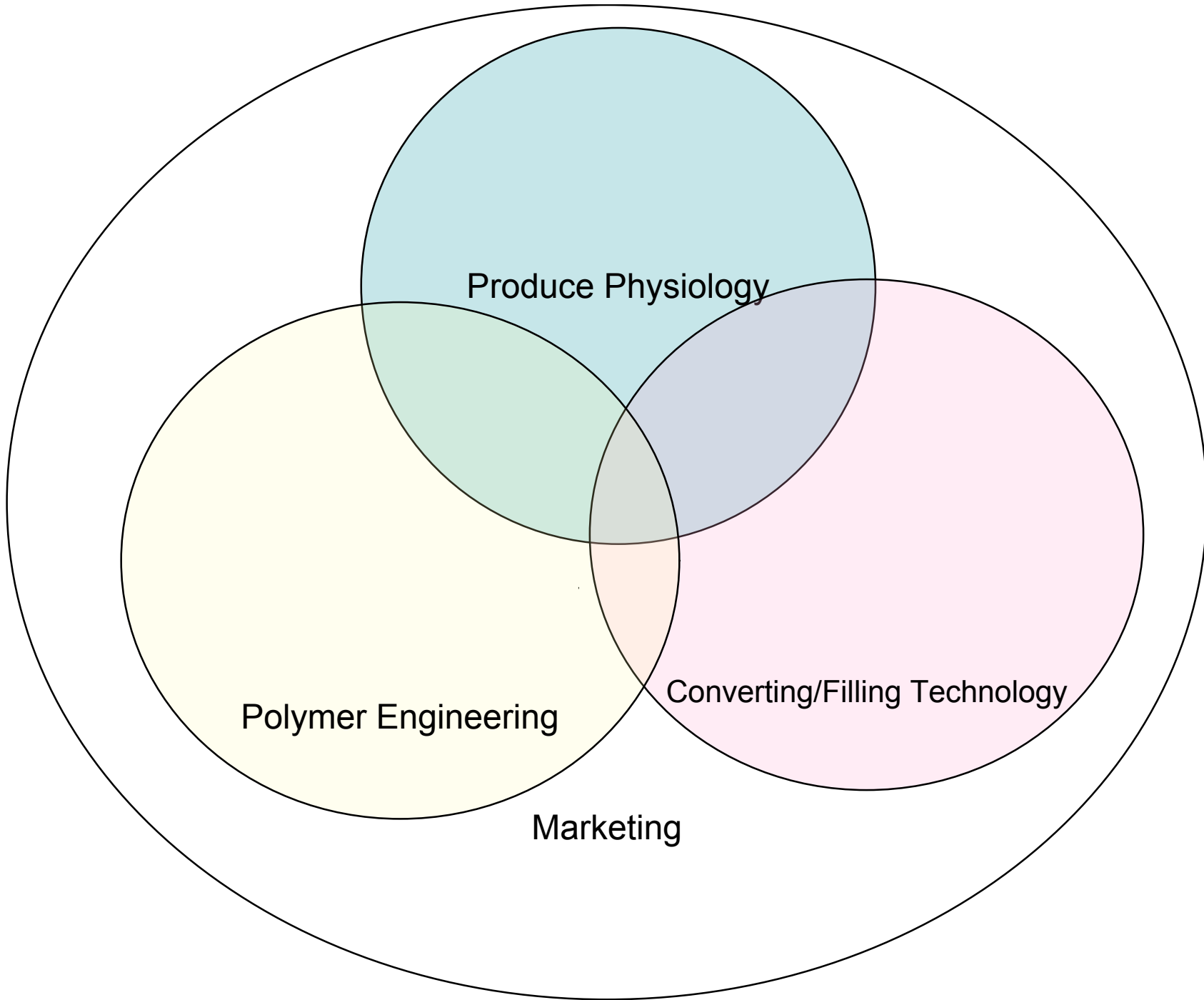
3 November 2006

Presented by:  
The JSB Group, LLC

# Packaging for Fresh-cut Produce

- Introduction
- History
- Possibilities
- Challenges
  - Interdisciplinary design
  - Separate industries
  - Different languages





Produce Physiology

Polymer Engineering

Converting/Filling Technology

Marketing



# Relevant Industries

- Seed Company
- Grower
- Processor
- Transportation
- Converting
- Polymer
- Film
- Additive
- Government





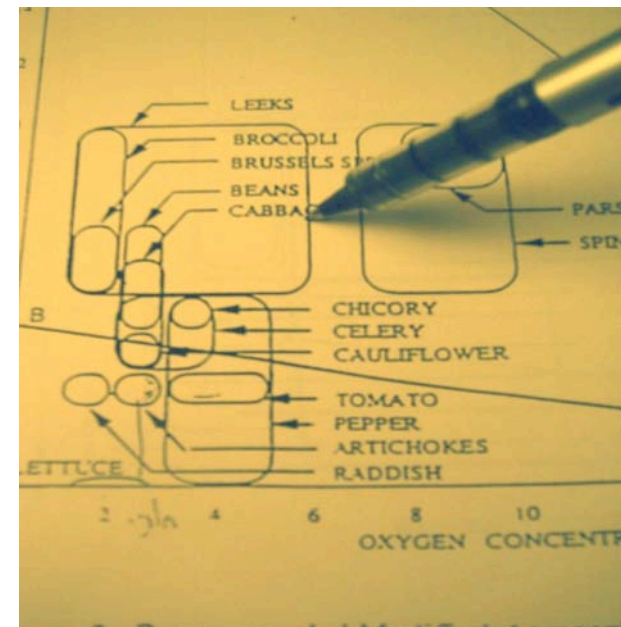
# **Packaging Innovations**

## **What is Driving Innovation**

- Consumer Requirements
- Packaging Misconceptions
- Produce Types/Combinations
- Packaging Technology

# Consumer Requirements

- Convenience
- Freshness
- Quality
- Safety



# Packaging Misconceptions

- Temperature Control
- Incoming Product Quality
- Post Harvest Handling
- Leakers
- Gas Flushing
- Static Environment
  - MAP vs. CAP
- Chill Chain Management
- One Packaging Product Fits All



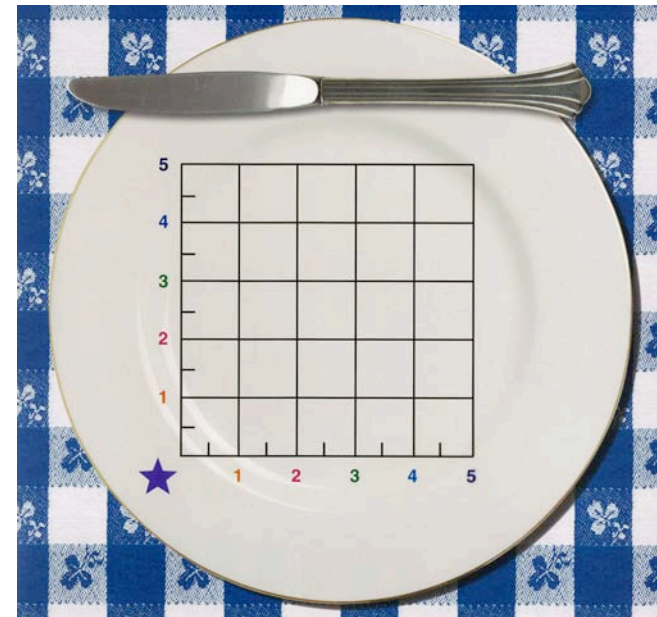


# **New Produce Items/Combinations**

- Vegetables
- Fruits
- Produce Combinations
- Combinations of Produce, Carbohydrate, and Protein

# Packaging Technology

- Process Innovations
- Polymer Innovations
- Structure Innovations
  - Cook In Packaging
  - Combination Packaging





# Packaging Technology Process Innovations

- Agricultural Analysis and Quantification, GAP
- Post Harvest Processing Analysis and Quantification, GMP
- Optimal Respiration Rate Analysis and Quantification
- Target Modified Atmosphere Analysis and Quantification
- Shelf Life vs. Shelf Quality
- Chill Chain Management




# Packaging Technology Polymer Innovations

- Increased OTR polymers
  - Modified polyethylenes
  - Polypropylenes
- Increased WVTR Polymers
- PLA
- Enhanced Peelable Technology

# Packaging Technologies Structure Innovations

- Hermetically Sealed Packaging
- Water Management
- Breathable Rigid Packaging
  - T<sup>3</sup> Technology
- Bag in Box/Carton Liner Technology
- MA Pallets



**Frieda's**  
ORIGINAL. RELIABLE. INVENTIVE.

**1962**  
Frieda's names Kiwifruit and introduces it to the U.S.

**1988**  
Frieda's brings Baby Kiwifruit to market

**1993**  
Frieda's launches Golden Kiwi

**2006**  
Pre-Peeled, Pre-Sliced Kiwifruit debuts at PMA as another innovation from Frieda's

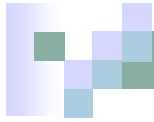
More than 170 product introductions since 1962.

# Packaging Technologies

## Structure Innovations

- Multi Container/Multi Food Type Packaging
- Cooking Methods of Fresh-Cut Produce
  - Steam
  - Microwave
  - Grilling







# Putting It All Together/ Conclusions

- Thorough Understanding Of Requirements And Desired Results
- Matching Requirements to Properties
- Understand the Language
- Selecting the Proper Package
- Designing the Proper Package
- On-going Quality and Testing



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