Packaging Ideas for Fresh-Cut Products
Summary

1. Who’s CFS?
2. How to increase the shelf-life of fresh cut products?
3. Trends in packaging
4. A Growing Demand: Biodegradable Packaging
1. Who’s CFS?
CFS : Compagnie Franco Suisse

- Flexible Packaging Converter
- Location : Illfurth (Alsace, France)
- 2005 Turnover : 30 millions €
  60% out of France
- 220 People
Products & Know-How

- Rotogravure printing
- Microperforation
- Lamination
- Wax Coating
- Cushion pads
- Metallization
Market segmentation

Major customers: Cadbury, Kraft Foods, Ready Pac, Soleco, Unilever, Wrigley ...
Packaging solutions for Fresh Products

- Bags (VFFS)
- Flowpacks (HFFS)
- Lidstock for trays
- Pouches
2. How to increase the shelf-life of your products?
Shelf-life

- Europe: usually 5 to 7 days
- US: usually 10 to 14 days

Main parameters:
- Quality of the product
- MAP
- Cold Chain control
- Packaging OTR optimization
- Bags Seal Integrity

2. How to increase the shelf life of your products?
Respiration rate

Each fresh-cut produce has its own respiration rate

Tailored breathable film

2. How to increase the shelf life of your products?
Oxygen Transmission Rate

2. How to increase the shelf life of your products?
Oxygen Transmission Rate

Optimized Packaging:
Good balance between $O_2$ & $CO_2$
Solutions

• Microperforated films

• Unperforated High OTR films
  OTR: from 2000 to 9000 cc/m².24h
  (Std 30µ OPP: 1200 cc)

2. How to increase the shelf life of your products?
Non perforated HOTR Films

Key aspects:

CO₂TR / O₂TR ratio = 1 for a microperforated film

For certain fruits & vegetables, preservation improves with a ratio >1

CO₂ diffuses through HOTR films 2 to 6 times faster than O₂
Therefore, CO₂ exits a package much faster than O₂ enters
⇒ Atmosphere with low O₂ & low CO₂

OTR is homogeneous in the film in comparison with microperforation

2. How to increase the shelf life of your products?
HOTR Films

- Very high OTR (> 10,000 cc): use of microperforation
  (ex: fresh cut fruits, baby vegetables)

- Ex: fresh-cut produces in a tray
  all the gas exchange is done via the lidstock
  usually very high OTR needed

2. How to increase the shelf life of your products?
Seal Integrity

- **Europe**: mainly monofilms (OPP..)
  - => leaks frequent
due to the film, the machine ...

  => impact on the gas exchange and then on the shelf-life

2. How to increase the shelf life of your products?
Seal Integrity : solutions

- Laminates
  - Very good seal integrity
  - Hazy package (not as clear as an OPP)
  - Thicker film

2. How to increase the shelf life of your products?
Seal Integrity: solutions

- Monofilms with enhanced sealing ability
  - Good seal integrity
  - Clear package
  - Thinner film
  - Cost effective solution

2. How to increase the shelf life of your products?
Partners

• Universities & Research labs:
  INRA, CTCPA, VCBT...

• Fresh Technologies (UK)

• Scalime (France)

2. How to increase the shelf life of your products?
3. Trends in packaging
Packaging Concepts for Consumer Convenience

3. Trends in packaging
Snacking

3. Trends in packaging
Cook in the bag

- Boil cooking
- Steam cooking
- Microwave cooking
Microwave cooking

- Self venting packaging
- No need to pierce or tear the package
- Innovative system allows the pouch to open itself while cooking in the MW
Microwave cooking

- Available on monofilms & laminates
- 3-5 min
- Printed “hold here” areas provide safe gripping.

3. Trends in packaging
High visibility packaging
High visibility inks

- Fluorescent
- High gloss varnish
- Pearl effect
- Metallic effect

3. Trends in packaging
Strip metallization

- Outstanding Metal effect
- Very High Gloss
- The Product can still be seen on the front side

3. Trends in packaging
Banners: coupons

Commercial coupon strip to be attached to a bag or flowpack for special advertising action.

3. Trends in packaging
Banners: coupons

- Basic process of application on existing vertical or horizontal form fill seal equipment
- Peelable seal. Coupon easy to cut off without tearing the bag
- Design independent from existing ones

3. Trends in packaging
Banners: coupons

- Possibility to print a bar code on the reverse side
- Better readability than a sticker
- Easier management of advertising artworks

3. Trends in packaging
4. A Growing Demand: Biodegradable Packaging
Biodegradable solutions

- Renewable resources

- Flex. Packaging made of:
  - PLA
  - Nature Flex (Cellophane)
  - Paper
  - Combinations
  - ...

4. Biodegradable Packaging
Biodegradable solutions

- Pouches
- Bags
- Flowpacks
- Lidstock

4. Biodegradable Packaging
Biodegradable solutions

- Pads
  - Used for Unprocessed fresh products like tomatoes
  - Provide cushion in a tray
  - Biodegradable solution
    (paper, water based glue)

“Paper Matrix”
Conclusion

• More & more Convenient Packaging

• A growing demand for differentiated packaging (high visibility packaging, biopolymers, easy-opening features...)

• Dev	: Smart & active packaging
Thank you for your attention!

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