Unsaleables Are Unsustainable: Developing an Appetite for Reducing Unsaleables
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Developing an Appetite for Reducing Unsaleables

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Unsaleables are Unsustainable

• Background
• Objective
• Research method
• Findings
• Recommendations
  – Quality control in distribution model
  – Standard unsaleables reporting format (URF)
  – Packaging feedback
    • Material reduction, protection improvement
    • Damage reproduction testing
FMI: Have “sustainability” initiatives inadvertently increased “unsaleables?”

• MSU: Why don’t you know?
  – Various metrics
  – Data is lost in transactions and conflict
  – Packaging “reduction” ≠ damage!

• Better than a “study,” we recommend a management system to track and manage damage.
Packaging Vision of Loss and Damage Management

- Quality control in distribution
- Identify and quantify L&D “defects”
- Reproduce damage in tests
- Compare alternative packages’ performance and cost
- Implement changes and track L&D history
Rich history: 20 years of FMI/GMA Joint Industry Reports on Unsaleables

• 1990s: reclamation, shared responsibility
• 2000s: alarming benchmarking
  – $ unsaleables = $ gross margin
  – Adjustable rate policy blame and negotiation
  – Auditing vs reclamation
  – Damage is only half of the problem
    • Lack of collaboration on launches & discontinuation
    • Code date and stock rotation
    • Sustainability initiatives?
Ancient History: Reasons that Loss and Damage Management has not been developed (Cavinato 1977)

- Loss and damage cost is a burden that can be shifted to other firms
- Responsibility is fragmented
- Info systems can’t measure and performance can’t be judged
- Management sees as “tolerable cost”
- No true indicators of packaging sufficiency
  - So we leave it to the FBA and NMFCC to argue about ECT vs burst strength of corrugated board
2015: Now “Reasons” no longer hold true

• Total cost theories are the foundation for SCM
  – Not a “tolerable cost”: 1-2% is unsustainable
• SCM integrates other information systems to collect, analyze and share data
• Automatic identification enables SKU data entry
• Loss and damage information are key to guide packaging initiatives (cost reduction, sustainability as well as damage reduction)
• Now is the time for a shared database to manage unsaleables!
Research Objective

• This research proposes a standard grocery supply chain information feedback mechanism to give food/CPG decision-makers real time measurement of loss, damage and expiration on a SKU level. These measures can represent the first step in analyzing and controlling the root causes, with a goal to reduce unsaleables, and their associated waste in grocery channels.
Case Study Research Method

- Five retailers (3 chains, 2 independents)
- Three manufacturers
- Two 3rd-party reclamation centers
- Mapped flow of information, goods and money.
Findings

- Proactive
- Reactive
Proactive retailers consider unsaleables as a strategic initiative

- Emphasis: reduce unsaleables
- Top management leadership
- Improve unsaleable management
Proactive Retailers have better information

• More sophisticated systems
  – Chain-wide standard data-entry at store level
    • No industry standards
    • Varying degree of company vs SKU-level and “reason codes”
  – Remove from inventory
  – Aggregate data to manage store-level unsaleables
  – Aggregate to negotiate adjustable rate (ARP) with manufacturers
    – Few allow manufacturers to see their own data
• 3rd party reclamation data and audits
• Occasional data sharing with manufacturers, especially where there are clear problems
Reactive retailers mark down

• Common for independents
• Sell as much in-store as possible
• Tracking cost is greater than potential benefit
  – Especially for independent grocer
Proactive Manufacturers

• Distrust retailers’ data because of ARP implications
  – Insufficient detail, formats vary
  – But a standard URF would give another data point
  – And they do meet with retailers to solve problems
• 3rd party audits
  – Very detailed, statistical sample, specific reason codes
  – Some of the same 3rd parties that reclaim on behalf of retailers
• Track test shipments for package changes
• Value fraud prevention, disposition information
Reactive Manufacturers

• Complain.

  • (Just kidding, we didn’t talk to any. But we heard stories.... )
  • “Keep it simple. Everybody will disagree.”
Our Simple Recommendation

- Unsaleables Reporting Format (URF)
  - SKU level: bar code scan in store
  - Six reason codes
  - Share with EDI transaction set
- Quality control in distribution
Six reason codes: Kept simple to minimize errors

1. Beyond code date
2. Recall
3. Discontinued products, promotions and launches
4. Seasonal
5. Damage
6. Other
1. Beyond-code date

Open code dates make the expiration of product visible to consumers. Retailers and manufacturers have different policies on how expiration codes are created and when discounting of product in the store should occur (i.e. how soon before the product expires). Given that dates are open and printed on product packages, this reason would be easy to assess.
2. Recall

Recalls occur when a manufacturer or the government requires product to be removed from shelves to limit liability. Recalls are important to track for consumer safety and to ensure recalled product is not sold on secondary markets. Tracking recalls often also allows further testing for detection and prevention purposes.
3. Discontinued products, promotions and product launches

Manufacturers and retailers make decisions to discontinue and add products to the product portfolio or to the store shelf. Additionally, promotions, managed by the manufacturer alone or in collaboration with retailers, are used to drive sales increases. While category management and other initiatives have come a long way toward improving demand-supply alignment in these efforts, the reality is that excess, unwanted inventory exists. As some point, retailers decide to remove that inventory from their stores and distribution channels.
4. Seasonal

Seasonal items have short windows of opportunity and challenge both manufacturers and retailers with respect to alignment of demand and supply. Improvements in forecasting techniques and processes may be used to improve seasonal planning, but excess, unwanted inventory may still exist. Depending on the product and shelf life, retailers may hold some season stock for future sales, but often inventory is removed from their stores and distribution channels.
5. Damage

Gross product damage, such as dented, crushed, open, or cut packages and leaking products, is easy to judge and provides an indicator of overall package performance. This is particularly true when trends illustrate the same form of damage being seen repeatedly. In these cases, an early warning detection system can aid in understanding the ramifications from package changes for reasons of sustainability, cost reduction or damage reduction.
6. Other

This category is the “catch all” for other reasons for unsaleables. While this would likely represent the least used category, it is important to enable a generic code for non-standard unsaleables. As an example, some retailers have policies against putting any consumer-returned food items back on the shelf despite a lack of apparent damage or use. That type of return does not fit the previously discussed codes, and, as such, would warrant the “other” classification.
The most interesting lessons

- Commitment from the highest level and knowledgeable personnel are key to developing a successful distribution quality management system.
- EDI is used for other transaction and shipping information exchange (even where paper trail did not exist, e.g. advanced shipping notice).
- Aggregated data by SKU is more useful to identify specific problems, compared to data only aggregated by vendor.
- Back-room personnel spend more time with each package, removing it from inventory and packing it up, than do the workers in reclamation centers. In a well-managed system, they also bear responsibility for markdowns or salvage, and they are therefore in the best position to assign reason codes.
- Reason codes assigned by personnel need to be simple and easy to use. A limited number is recommended.
- The top unsaleable reasons are damage and code dating, both of which are related to packaging.
Retail Success Story

- Two vendors supply bagged product, and when one switched to a stronger bag, the retailer found that damage rate went down and rewarded the manufacturer with a better ARP allowance. The second vendor was denied the lower allowance, because the retailer had the data to show it had a higher damage rate. Other retailers that did not have good data gave both vendors the same low rate.
Manufacturer Success Story

• “Turns data into dollars,” knows the contribution to damage of every packaging line, plant and DC. Internal and external audits, goals, metrics and accountability give packaging professionals a broader viewpoint. E.g. open perforation problem was identified and solved.
How would manufacturers use damage data?

• Identify SKUs for package improvements
  – Then use an audit to get specific damage mode
  – Reproduce damage in tests
  – Compare alternatives
  – Implement changes
  – Continuous improvement
## Appendix 2: Test Methods Associated with Damage Types

<table>
<thead>
<tr>
<th>Damage Type</th>
<th>Test Code</th>
<th>Description of Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>All packages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>crush</td>
<td>ASTM D642</td>
<td>Test Method for Determining Compressive Resistance of Shipping Containers, Components, and Unit Loads</td>
</tr>
<tr>
<td></td>
<td>TAPPI 804</td>
<td>Compression Test for Fiberboard Shipping Containers</td>
</tr>
<tr>
<td>improperly sealed</td>
<td>ASTM F2391</td>
<td>Standard Test Method for Measuring Package and Seal Integrity Using Helium as the Tracer Gas</td>
</tr>
<tr>
<td>top/middle/bottom location</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cut</td>
<td></td>
<td></td>
</tr>
<tr>
<td>leaking</td>
<td>ASTM D3078</td>
<td>Determination of Leaks in Flexible Packaging by Bubble Emission</td>
</tr>
<tr>
<td></td>
<td>ASTM D5094</td>
<td>Gross Leakage of Liquids from Containers with Threaded or Lug-Style Closures</td>
</tr>
<tr>
<td></td>
<td>ASTM D4991</td>
<td>Leakage Testing of Empty Rigid Containers by Vacuum Method</td>
</tr>
<tr>
<td>infestation</td>
<td>QC</td>
<td></td>
</tr>
<tr>
<td>unlabeled or mislabeled</td>
<td>QC</td>
<td></td>
</tr>
<tr>
<td>over/short weight or partially filled</td>
<td>QC</td>
<td></td>
</tr>
<tr>
<td>crushed, dented or collapsed</td>
<td>ASTM D6537</td>
<td>Standard Practice for Instrumented Package Shock Testing for Determination of Package Performance</td>
</tr>
<tr>
<td>soiled, stained, sticky, etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>misprinted code date</td>
<td>QC</td>
<td></td>
</tr>
<tr>
<td>Labels</td>
<td></td>
<td></td>
</tr>
<tr>
<td>coming off</td>
<td>ASTM D5252/D6252M</td>
<td>Standard Test Method for Peel Adhesion of Pressure-Sensitive Label Stocks at a 90° Angle</td>
</tr>
<tr>
<td>scuffing</td>
<td>ASTM D5264</td>
<td>Standard Practice for Abrasion Resistance of Printed Materials by the Sutherland Rub Tester</td>
</tr>
<tr>
<td>bad print</td>
<td>QC</td>
<td></td>
</tr>
<tr>
<td>off-center</td>
<td>QC</td>
<td></td>
</tr>
<tr>
<td>Cans</td>
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<td>dent</td>
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</tbody>
</table>
Opportunities to develop more specific damage-reproduction tests

• Example: can dents
  – Special fixture, shock machine
  – Edge drop
• Found that tightness is key
  – RSC is too loose
  – Wrap-around case
  – Shrink bundle (depends on technique)
All retailers complained of unnecessarily short open code dates

• Inconsistent vendor inventory management
  – Independents scale back buying quantity
• Code dates are not on cases
• Much out-of-date food is still good quality
  – Donation and secondary markets depend on it
  – Joke: “What happens to vinegar after the use-by date?”
• Opportunity for a more scientific basis for code dates
  – Shelf-life testing, or at least prediction
• Promote longer shelf-life as a benefit
  – Fight the marketing impulse to make canned soup seem more “fresh”
In conclusion, we recommend

- Standard Unsaleables Reporting Format (URF)
  - Track damage trends
  - As well as code date, and other reasons
- Audits for more granular data
- Provide the data to support the packager’s vision of quality control in distribution:
  - Minimize damage and waste
  - And minimize package cost!
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  – Joan Pierce – AMERIPEN
  – Joint Industry Steering Committee

• Cooperating Retailers, Manufacturers and Third-party Providers