Food Marketing Institute Convention: Insights into Traceability and RFID
Traceability in the Produce Industry

United Fresh Fruit & Vegetable Assoc program
T&A workshop presentation follows
T&A company’s experience relates to huge-scale growing, harvesting, packing and shipping. What can be learned as it applies to PFID-F&V?
The black RPC are destined for Wal-Mart.
Fresh Vegetable Production

Receiving Yard Unloading
Fresh Vegetable Production

Pressure Tunnel

Hydro Chiller

Clamshell (Ice)

Vacuum Tubes

Cooling Systems (34°-38°)
Traceability

- Most companies are tracking at pallet level
  - Issue occurs when pallets are combined and/or split

Sample "combined" issue

- Pallet - A From Lot A
- Pallet - B From Lot B
- Pallet - A(Combined) From Lot A or B
Tag Application in the Field

- Traceability at the case level
- Case-Pallet aggregation

Barcode-based process in the field

- Pre-encoded EPC data logically linked to barcode readable data
- Today field deployed RF readers are not practical or cost effective
RFID Tags

Sample RFID Tags
- We have chosen to deploy bar codes with our RFID tags
RFID Testing

Portal
- PVC frame
  - Portable and flexible
- Matrics Reader and 4 antennas
- We also use Alien Readers (not shown)
- Locally networked to laptop for data capture

- Structure of testing
  - Tracks many variables (>45)
  - 10 passes per variable set
  - Created Excel-based data capture application
  - Automated output of visual result
Testing Outcomes

Direct Conclusions
- 95-100% reads feasible
- Effect of metal (forklift effect)
- Effect of high water-content product
- Speed factor

• Indirect Conclusions
  - Readability highly influenced by portal configuration
Challenges to date

- Immature of technology
  - Readers – We still have some issues with readers. Issues usually relate to firmware.
  - Middleware – We decided to wait on a middleware decision. We developed in house software to meet our needs for now.
  - Tags – Getting more reliable but there is room for improvement.

- Cost & availability
  - Reader lead times could be an issue for many users.
  - Tag availability and lead times are an issue. Tags are expensive relative to our margins.

- Process risk
  - There is no room for special handling of products.
  - We verify tags during staging to limit special handling.
  - Managing simultaneous production and warehousing of tagged and non-tagged product for same customer in same warehouse – We have expanded SKU’s to deal with issue.
Accenture workshop: Grocery oriented viewpoint
Accenture Workshop on RFID Systems

- RFID is evolving rapidly – the market is not stalled
- Barriers still exist but that is not stopping them
- Rewards outweigh the risks
- RFID does solve business problems today
- Internal enthusiasm is high
- ROI is in sight
- Other benefits are appearing in unexpected applications
- Investment and pilots continue

Accenture RFID/EPC Leaders Research
Best Practices

What it takes to succeed – Lessons from leaders

- Be prepared to scale, but only after the results prove it’s time.
- Ensure you & your leadership recognize RFID is an emerging “game changing” investment, not “quick hit” novelty. Stay focused on the value. Be patient.

Focus on low hanging fruit targeted applications with achievable RPIs. Avoid a “slap and ship” mentality that reduces value unlocking possibilities.

Create significant live pilots that build experience, but are separated enough to learn safely

RFID Leaders on the Future

- Adoption on Track “First Real Year” of RFID
- Prepare for Uptake
- Pace and Intensity Continue
- Data Sync Becomes a Reality
- No Market-Shifting Changes Expected
- Key Changes to Accelerate Deployment
  - Standards
  - Costs
  - Technology
  - Data

RFID Delivering Performance

1. Making the Commitment
2. Learning: Labs, Pilots & Mini Launches
3. Finding the ROI
4. Scaling for Growth

Create that build...
Advice from the Leaders

- Compliance alone is a losing proposition and a "wait and see" approach really means falling behind.
- Be either a pragmatic pioneer or a fast follower.

Now let’s hear from some of the leaders.....
• RFID applications will be widespread in the food industry. But growth is expected to be gradual and linear. “Not IF…but WHEN.” Prepare now for the inevitable
• As more retailers demand RFID, lower costs will enable ROI opportunities
• Benefits are possible, but not inevitable: Most companies supplying RFID to Wal-Mart and Albertsons do so in response to mandates. Even retailers have not envisioned the full range of benefits. Traceability can be much more than inventory tracking.
• How consumers might benefit: Out of stock reduction; faster supermarket checkout; fresher products; lower prices; safer products, in-home inventory management. What else?
Supplier Benefits

- RFID tagged pallets, shipping cartons and consumer packages are “intelligent” revealing data and eventually actionable information.
- Data sharing with retail customer will be faster, continuous and “granular” (a term being widely used, meaning more detailed). “Sometimes data” to “real time data”
- Data Use: Integrate information into entire enterprise: Reduce costs of inventories; accuracy in many phases of logistics; greater accuracy in accounting for deductions in retailer invoices.
- Example: In loading trucks, instead of physical counting, operate by exceptions. A green light means the entire truck has been accurately loaded.
- Ability to track many physical assets such as tools, people and equipment
Recommended Supplier Responses

• Begin now by learning. Run trials. Limited commitment at this point in time. At this phase, pallet and carton tagging is the focus.
• Be among the first movers or early followers to leverage investments. Playing catch up will yield few competitive benefits.
• RFID tagging of items (consumer packages) will result in many complex issues (confidentiality concerns, etc.) High value/margins, fast moving products are likely candidates, such as pharmaceuticals.
• Build a business case to justify the economics of RFID from the bottom up. As additional retailers demand RFID, costs of technologies will decline making ROI compelling. Strategize with this assumption in mind.
• Create cross-functional project team including Sales, Marketing, Logistics and Operations. This is more than a technical challenge: it must involve the entire organization.
Challenges

- Global harmonizing of frequencies and codes to read and apply data.
- The GMOs dilemma should demonstrate that privacy issues require astute managing of this technology.
- Managing item-level at the store level will be complex. Yet, this is a major potential area to streamline food distribution.
- Danger is that many companies may take a “Slap & Ship” approach, only to have to restructure the process at high cost in order to reap necessary benefits.
- Future relates to the pace of retailers demanding RFID from suppliers.
Bob Summers and Fernando Balsevich Comments

- Univ. Florida running RFID tests, as is C. H. Robinson & T&A
- Major expansion in 2-4 years; but produce will lag. Traceability will become a way of life
- Produce challenges: liquid, cold temps, metal fork lifts, wire creates. Small boxes deep in pallets cannot be scanned. (Line of sight).
- Developing countries may differentiate by enhanced safety and other marketing factors.
Carl Steidmann, Chief Economist, Deloitte Research: Impact on retailing

- “RFID is the technology of the future…and it may always be the technology of the future” (This was a little joke)
- RFID is a “transitional technology”
- It will facilitate major food system changes in response to emerging consumer expectations--differentiation to an amazing degree.
  - Smaller stores offering shoppers ways to make use of products they buy. Stores tailored to shoppers’ needs and local cultures. Stores and staff as problem solvers, offering solutions as well as products. Stores will continue trend of being highly differentiated. Stores will deliver authenticity; yet create fusion of cultures. They will be physically and emotionally closer to consumers.
- Technology will permit extended and complex distribution systems and tailored product mixes.