
Cost Evaluation of Product Tracing

An IFT report to the FDA

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Task Approach: Cost Evaluation Subpanel

- Helen Jensen, Ph.D.; Department of Economics, Iowa State University, IA
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- Mary K. Muth; RTI International, NC
- Kevin Keener, Purdue University, IN
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Firms Perceptions of Cost

- Generally couldn't provide estimates
 - “expensive”
- Often assigned costs to things other than product tracing
- Very few data exist
- **DISCLAIMERS!**



Benefits vs. costs at the firm level

Benefits

- Improved supply chain management
- Inventory control
- Access to contracts and markets
- More targeted recalls

Types of costs

- Capital investment and start up
- Software and associated fees
- Equipment
- Consultants
- Labor and training
- Materials and supplies
- Change in operations

Case Study: LGMA

- Compared different technologies to communicate information- assumed information was the same
 - Bar code
 - Active RFID
 - Passive RFID
- Bottom line:
 - Cost to leafy green industry in CA to use barcodes: \$3.2M year
 - Cost (industry and societal) of 2006 *E. coli* O157:H7 in spinach: \$129M
 - Benefit (illness prevented) of a more rapid system: \$16-41M

Case Study: Fresh Cut Produce Processor

Table 4. Total costs: Case of a Specialty Bulk and Pre-Cut Produce Distributor (Jensen, 2009)

<i>Fixed costs:</i>	
Software (25% of system attributed to traceability)	\$100,000
Scanners	50,000
GS1 number acquisition	20,000
<i>Variable costs (annual):</i>	
Software (25% of maintenance)	5,000
GS1 (renewal, annual fees)	1,500
Scanner maintenance/replacement	5,000
Labor (2)	100,000
IT (40% of IT consultant)	40,000
Labels (2/box for each case)	24,000
Estimated cost per case	\$0.10 – 0.15/case

Costs: Sector and Societal Implications

- Societal costs
 - Lower healthcare costs: loss of life
 - Loss of consumer confidence
 - Major psychological and emotional damages due to massive outbreaks
 - Indirect loss in economic output and productivity losses
- Additional considerations:
 - Loss of market share if traceability systems are not similar for whole sector
 - Lack of adequate capital, labor, and technology expertise
 - *The probability of occurrence of a triggering event/year vs. costs and benefits per sector needs to be further assessed*

Thank You!
Any Questions?

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