



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

# The Role of Third-Party Logistics (3PL) Providers in Produce

Roger A. Hinson

Supply-Chain Management (SCM) reduces time requirements and costs from supply chains to improve profitability and/or competitiveness. These savings are possible through conceptual advances and increasing use of powerful computer hardware and software. The SCM concept is defined, and some considerations of its application in the produce area are discussed. Most applications and benefits have resulted from alliances between large retailers and large packaged-goods vendors. Third-party logistics (3PL) companies offer an alternative opportunity for medium and smaller companies to capture SCM gains.

Supply-chain management (SCM) uses information technology and a changing, closer relationship between businesses linked in a supply chain to reduce time and costs. Businesses recognize SCM as a core competitive advantage in the marketplace. It is management of information and the physical flow of raw materials and finished goods, and the “mechanism allowing a supply chain of multiple entities to be managed as a single, profit-maximizing firm” (Coyle, Bardi, and Langley 1996). There has been significant merger/acquisition activity in the retail food sector since the mid-to-late 1990s. As retailers consolidated, they generally were perceived to have gained power in the supply chain. Among reasons given for consolidation have been the efficiency gains and lower procurement costs available, and the gaining of an improved stance to compete with alternative formats that include nontraditional retailers and the food-away-from-home sector (Harris et al. 2002). Wal-Mart successfully experimented with SCM in non-food pilot programs, and then extended the concept to grocery items as it and other general merchandise mass-marketer (MM) retailers added food to their stores.

## Objectives and Methods

This article highlights the role of SCM as applied by companies within their own operations and as applied by third-party logistics (3PL) providers. Literature in academic journals, textbooks, and commercial internet sites helps to specify the concept. As an evolving concept based in large part on electronic hardware and software advances, SCM practitioners have used the internet for publication,

information exchange, and promotional opportunities. An example site ([manufacturingnet.net](http://manufacturingnet.net)) focuses on logistics and other applications topics and hosts both an academic journal and business sites that are useful links showcasing applications.

Some companies, particularly intermediaries in the supply chain, have expanded to offer value-adding SCM expertise. To illustrate a specific application of these 3PL companies, the C. H. Robinson Worldwide (CHRW) web site, an interview with a CHRW vice president, and company promotional material are used to illustrate this company's SCM offerings. This kind of company is an alternative coordination mechanism to traditional interactions between shippers, middlemen, and retailers.

## Defining Supply-Chain Management

SCM is identified as a core source of business competitiveness. Ross (1997) traced the evolution of SCM from a search for internal firm efficiencies across functions to efficiencies related to information transfer between independent firms. To coordinate actions by independent companies in a supply chain, as integrated profit-maximizing firms do, technology for data interchange is indispensable. It allows decision tools to manage production and logistics to minimize inventories, share firm-level costs, and minimize chain response time.

Firms linked by SCM perceive more value in knowledge and servicing of customers' wants and needs, in contrast with the traditional focus on selling and pushing products through to the consumer. Ross adds that SCM is “. . . a highly competitive, customer-enriching supply system focused on developing innovative solutions and synchronizing the flow of market-place products, services and information to create unique, individualized sources of customer value.” He asserts that a com-

---

Hinson is professor, Department of Agricultural Economics and Agribusiness, Louisiana State University Agricultural Center, Baton Rouge.

pany or a supply channel is selling not products and services, “but the enrichment value of the skills and knowledge possessed by the people who work within the organization and outside in its partner companies and suppliers” (1997). Metz (1998) adds an “over-riding pervasive customer focus,” where information about consumers’ wants and needs are incorporated into decision-making through real-time sharing of retail sales data.

The term SCM includes, but is not limited to, several techniques related by a common general objective but with different approaches. Included are Efficient Consumer Response (ECR), Quick Response (QR), Vendor Managed Inventory (VMI), Efficient Resource Planning (ERP), and Collaborative Planning, Forecasting and Replenishment (CPFR).

To use CPFR as an example, a holistic approach to management of a network of trading partners is taken (VICS 2005). Increased sales, organizational streamlining and alignment, administrative and operational efficiency, improved cash flow, and improved return-on-assets (ROA) performance are potential areas for gains. The point of collaboration is the retail-level demand forecast, which synchronizes replenishment and production plans using web-based coordination (Fliedner 2003). A front-end partnership is created, followed by joint business planning, development and sharing of demand forecasts, and then replenishment. Forecasts are developed iteratively, and the forecast becomes the order.

#### *Supply versus Demand Focus*

CPFR has been criticized for a process orientation—information and product flows are improved, but consumer preferences are not adequately addressed. As the system’s “driver,” does the chain actively seek information about consumer preferences and demands when decisions about products, production levels, and markets are made? The “supply” in SCM reveals a continuing bias toward the system’s (manufacturer, middleman, retailer) needs (Hewitt 2001). Other approaches actively include the consumer. According to Lee and Whang (2001), “Demand chain management (DCM) . . . might seem basic and fundamental. But in reality, comparatively few companies have mastered the concept. In fact, the competitive differential between the best-in-class practitioners and the rest of the pack can be huge.”

They use two cases to demonstrate “that successful DCM can be a core competitive differentiator.” Their case studies (*Long Drugs* and *Seven-Eleven Japan*) “have mastered the art of capturing and using information to respond to actual customer demands quickly and accurately. These leaders not only are operating at peak efficiency but also are posting profitability and value numbers that are the envy of the industry.”

ECR, developed by traditional chain grocers in response to mass merchandiser (MM) entry into the food category, is a demand-oriented model (Kurt Salmon Associates 1993). Of its four major thrusts, three (store assortments, promotion, and product introductions) address consumer preferences directly. ECR has had a strong consumer focus and was designed to be a responsive, consumer-driven system where business allies work together to maximize consumer satisfaction and minimize cost.

#### *Partnership and Collaboration—Achieving the Promise*

The literature suggests that efforts to create SCM partnerships and collaboration have produced some expected and some less-than-expected results. Most firms have many customers, and a portion of sales probably will not involve SCM relationships. There are significant barriers. As an example, users of VMI did not achieve significant results primarily because of poor information, disconnected systems and lack of collaboration (VICS 2005). These stemmed from lack of trust, lack of within-firm forecast collaboration, availability and cost of technology, fragmented information sharing standards, the large number of forecasts required, and fear of collusion.

The pitfalls to implementation lie in understanding “the meaning (and behavioral implications) of collaboration in the supply chain” (Barratt 2004). Problems identified were an over-reliance on technology, failure to identify appropriate partners, and the issue of lack of trust between trading partners. Specifically, issues included (1) a firm’s often uncoordinated plans and subplans, (2) shortcomings of forecasting methods, (3) barriers to communication between functional areas within firms, (4) a firm’s failure to understand its own processes (which prevent it from understanding its partners’ processes), (5) delegating implementation after making decisions, (6) not applying common performance measures between partners, and (7) an

excess of management-information reports that may be ignored, even if helpful.

#### *Intra-Firm Issues Affecting Collaboration*

Within firms, internal communication and conflicting goals were barriers to successful SCM implementation (Bermudez 2002). “Less than 15 percent of manufacturing companies had successfully implemented more than a few of the applications they purchased from leading supply chain planning software providers,” and corporate organizational structures are part of the root cause. Adopting SCM applications means “. . . they must not only learn the technology but also really understand how their existing supply chain processes work . . . (the processes) cross many of the functional silos that have arisen in corporations . . . the more silos . . . the more complicated . . .” Bermudez notes additional difficulties when both official and informal systems exist within a firm, or multiple activities within functions. The issues are more complex because each function or division may have its own management and goals. So it is not surprising that “applications designed to optimize order fulfillment and inventory levels across the supply chain are more commonly applied to isolated planning problems. Though even an isolated implementation usually provides some value, it always falls short of expectations.”

In addition, collaboration does not happen in all business relationships (Barratt 2004). Some potential partners want or would accept collaboration, forming the basis of strategic partnerships. These firms then begin collaborative action—aligning processes and activities between functions and partners, implementing joint decision making, and developing common supply-chain metrics.

#### *Information Sharing*

Sharing a firm’s proprietary information is counter to the long-held approach of arms-length transactions between independent companies. SCM requires exchange of information to make the best product-combination choices, determine how products will be shipped to retailers, and choose the quantities to be shipped to stores. Partners must feel comfortable with that. The intangibles that make collaboration possible—the firm’s culture, trusting collaborators outside and inside the firm, assuring

win-win situations, and communication—develop over time. Relationships provide rewards because the right products are available at the right time, place and price, resulting in customer satisfaction and loyalty.

The literature cited above illustrates the difficulties. Achieving Ross’ concept of cross-functional teams coordinating production and marketing activities across firms requires top-management commitment and coordination. In some supply chains the concept is imposed on suppliers by MM retailers, as illustrated by the close relationship between Wal-Mart and suppliers of dry packaged goods such as Proctor and Gamble. Minor suppliers also must operate within these systems.

#### **Physical and Market Characteristics of Produce that Affect SCM Applications**

Like all perishables, produce always has moved through the system quickly, but other chain-management improvements may be available. A critical issue to adoption is structural change that has occurred (Cook 2001). There are fewer but larger retailers than in the past, and the number of buyers has declined along with consolidation. MMs are more important. The offices of remaining companies handle larger quantities, and corporate-level buying has increased as field buying declined. Contracting accounts for a growing share of trade, and is more common when large buyers deal directly with large producers. In 2003 there were 8 grocery retailers with at least \$10 billion in sales, led by Wal-Mart with an estimated \$66.5 billion (Tarnowski and Heller 2004). Fresh-produce sales typically account for some 15% of sales, so the business potential is quite large. On the foodservice side, the continued growth of food-away-from-home sales has provided opportunities for distributors and wholesalers. Sales are dominated by Sysco, with 2004 sales of \$29.3 billion, and a few other large firms. All the leading distributors procure and merchandise produce.

Large retailers and distributors have demanded efficiencies from suppliers, and produce growers have responded. These companies have become larger, and farm-level activities are coordinated across geographically dispersed production locations. “In key production regions like California and Florida, a few large growers are forward-integrated into the marketing of their own production and the production of other growers . . . but shipper

structure for many crops is still quite fragmented relative to structure at the buying end of the marketing system” (Cook 2001). The general conclusion was that retailer demand for SCM has lowered marketing costs and improved communication of consumer preferences to growers.

### SCM Implementation in the Produce Industry

Handling produce differs from manufacturing of non-perishable products. With non-perishable products, processes can occur year-round, inventories arrive just in time for sale, output is uniform in weight and size, and barcode scanning is quick and accurate (Schotzko and Hinson 2000). Farm-produced perishables differ because production is seasonal, weather may affect production, and the harvest window and storage and shelf life are not as well-defined. Within a season, there is little opportunity to increase inventories or change characteristics. At retail, irregular weights and absence of packaging affect barcode scanning. Overall, the application of SCM to perishables, such as produce, was more difficult compared to packaged grocery items.

In terms of pricing, spot markets based on established grade and size standards continue to account for most sales, but contracting and partnerships within chains covers a growing share of volume (Cook 2001).

According to Schotzko and Hinson 2000, areas in produce supply chains where performance could be enhanced include

- Difficulty with communication of consumer preferences to producers. The current system of price reporting did not indicate preferences for product grades, and minimal breadth and/or depth of markets increased the possibility of distortion.
- Coordination of systems for crops with small volume and grower size was problematic. The tasks of identifying and segmenting consumer preferences were too large for these participants.
- An acceptable service level—the right price, quantity, place and time—depended on a flow of information to make the best choices, and smaller entities had less access.

### Access to SCM through 3PL Companies

Quite aside from the implementation issues discussed above, SCM is less available to smaller food and foodservice companies because adoption is expensive in terms of cost, and perhaps more critical is the learning curve. One avenue to affordable access is spreading development and other SCM costs among customers by 3PL suppliers. The 3PL provider always has been a factor in distribution (particularly transportation), because some firms prefer to use resources to expand their core business rather than to operate collateral activities. Broadline and specialty distributors and wholesalers link production and retail and increasingly are becoming 3PL providers, using an expanded definition of logistics to include SCM. In addition, non-food 3PL companies have begun to serve this segment. Other formats, such as distribution cooperatives and trade-industry associations, also provide analysis and SCM advice to these smaller retailers. Services provided by these entities can help smaller suppliers and retailers remain competitive. An objective of Food Distributors International (FDI) is to enhance the competitiveness of the independent retailer. These stores, on average, were significantly slower than chain stores in getting new products onto store shelves, so sales were lost (The Partnering Group 2000). Better category management and training could address this problem. Smaller store chains and independent stores—the low resource end of grocery retailing that is losing market share—may become more competitive through these sources.

Electronic hardware and software companies also are 3PL providers and view the grocery industry as another application of their technologies. These companies also are partnering or otherwise providing services to owned-distribution systems, broadline distributors, and other more specialized companies.

### A 3PL Case: C. H. Robinson Worldwide (CHRW)

CHRW was established about 1905 as a produce company. Over time it became a multi-modal transportation provider for all types of loads while retaining its roots in the produce industry. Sales increased from \$2 billion in 1998 to \$3.6 billion in 2003, when the company reported more than 16,000 customers and more than 3.2 million shipments worldwide

(C. H. Robinson Worldwide 2003). Services range from multimodal transportation to global logistics management of supply chains. About 88 percent of net transportation revenue originates from managing over-the-road freight. According to corporate literature, CHRW is flexible enough to serve both small and large customers, spreading its value-added services over a broad set of logistics needs.

CHRW said it was not aware of competitor companies that offer a similar range of services, from contracting for crop production to store-category management. While most competitors own transportation equipment and other real assets, CHRW maintains a non-asset structure that allows capital to be used for other purposes and provides lower rates because equipment owners continually bid for contracts.

#### *CHRW Products and Services in Produce*

CHRW offers customers the opportunity to outsource activities, including contract planting, co-packing, contracted production of items such as pre-packaged salads, transportation and warehousing services, and retail category management. At its most comprehensive level, a retailer could contract all functions except perhaps retail-case re-stocking. CHRW has a few large customers that have outsourced their entire produce responsibility for certain distribution centers, geographic areas, or commodities.

Some general service categories and a brief description are provided below:

- Motor carriage transportation is the basic service. Transportation for the food and beverage industries, including temperature-protected, refrigerated, and frozen products, is a significant segment of sales. Logistics managers evaluate customer service and cost requirements and suggest modal options. Real-time tracking assures delivery schedules.
- Customized logistics programs can analyze a customer's procedures from order initiation through fulfillment. Modal and carrier use are benchmarked against industry "best practices" to formulate a customized solution, sometimes including a comprehensive project plan and a support team for implementation.

- Relationships with retail customers are developed and built through access to national and private-label brands. Services include pricing strategies, merchandising materials, and promotion.
- Competitive quality produce is sourced year-round, and extended pricing is offered.
- Through a "co-managed replenishment" relationship, inventory can be managed.
- An array of contract management, business analysis, and payment services is offered.
- Information technologies are available. Services such as electronic procurement allow account visibility, order entry, shipment tracking, document retrieval, and generation of reports. A complete warehouse management system is available.

#### *Customer Use of SCM: Progress from 1999 and 2001?*

With incentive to adopt, chain-management systems available, and competitive position on the line, how rapidly are CHRW customers adopting? A CHRW vice-president responded to questions about adoption in 1999 and again in 2001. The proportion of customers across the size spectrum using these services is expected to increase over time. Non-adopters are expected to face an increasing cost disadvantage. SCM probably would no longer be called a source of "sustainable competitive advantage," but increasingly might be called a "best practice." A small set of practices was chosen from the literature to represent adoption. The interview was a discussion format, and responses summarized here are the interviewer's interpretation from the discussion.

Questions focused on the scanner data transfer and application, services used, and whether automated replenishment seemed to be taking hold. CHRW has a mix of retailer and wholesaler customers. Among small customers there was little movement toward adoption of SCM in any of the areas of interest, except that they were able to send scanner data as email attachments by 2001 (Table 1). Small customers had little investment, either financial or intellectual, in SCM.

For large customers, some things did not change over the period. These customers had secure internet

**Table 1. Differences between CHRW Supply-Chain-Management Applications for Small and Large Customers, 1999 and 2001.**

Activity	Customer size	1999	2001
Scanner data transfer method	Small	Disks sent via regular mail	E-mail attachments
	Large	Secure internet sites	Secure internet sites
Scanner data applications	Small	Inventory, sales forecasts	Inventory, sales forecasts
	Large	Inventory and sales management	Same functions, but increasingly sophisticated
Kind of services used	Small	Mostly transportation	Mostly transportation
	Large	Several, from production contracting to co-managed inventory	All—largest customer(s) contracted the category for regions or products
Automated replenishment	Small	No	No
	Large	System is operating, but people review orders	Improved systems, but orders still are reviewed

Source: Interviews with CHRW vice president.

sites for data transfer in both years. In both years, files from many customers were incompatible in some sense, so CHRW employees manually transformed this scanner data into useable sales reports. Applications of the scanner data to support decision-making involved additional levels of sophistication, but still were in the areas of inventory and sales management, indicating these customers were “buying in” to SCM. Some large customers shared sales data which were used to generate purchase orders to meet agreed-upon service levels. However, even in 2001, reports spanning product movement always were evaluated by employees prior to shipment.

Overall, the company felt that its customers’ information-technology applications had increased. Some part of the change was attributed to strengthening of business relationships. Working together and establishing trust had led to information exchange, which contributed to time and cost savings and other benefits of enhanced chain management. As suggested by the literature review, the few largest customers were the primary users of advanced services. Small customers did not use automated replenishment in either year, while some of the most sophisticated customers were implementing this process by 2001.

In addition to information presented in Table 1, CHRW indicated that informal agreements or cost-

based transactions were the rule for small customers. In both years, large retailer and foodservice customers wanted contracts.

The company felt that SCM does help achieve cost efficiencies. Lower inventory and other logistics advantages are part of the savings, and there are benefits in other areas (cross-customer optimization of loads, models to select shipment and transshipment routes, value-added processing through a co-packer contract, contractual relationships with grower/shippers and customers, and other similar activities). In 1999, specific cost savings had not been documented, though the items above were cited as areas of saving. In 2001, that situation had not changed. According to the company, demonstrating savings by comparing alternative scenarios is difficult because customers, as data owners, dictate whether information can be shared. With a firm’s data, a total cost yardstick could be employed and costs compared between the current system and other scenarios. Comparing a CHRW offer to another vendor’s offer was not possible because customers would not share information about offers received from other vendors. Given that, commonly used measures were on-time deliveries, improved service level, reduced lead times, replenishment services, percentage of on-time and complete deliveries, percentage of in-stocks versus

out-of-stocks, percentage of inventory long situations, and invoice match rate.

### **Conclusion**

SCM partnerships can provide efficiencies that contribute to competitive advantage. The literature, however, provides a barrage of barriers to and problems with implementation. These include operational, organizational, and trust issues.

How and why SCM is being implemented in produce was documented. To meet customer requirements and to reduce the overhead associated with required investments, large product grower/shippers have expanded product lines, supply over a longer portion of the year, and coordinate closely with their customers. But most grower/shippers are medium and small in size. Similarly, while a few large firms dominate in retail and foodservice, there are many medium and small wholesalers and distributors, particularly in the specialty group which includes produce handlers. Access by these companies to the efficiencies of SCM may be important to their long-term viability.

Services provided by 3PL service providers are an alternative source. Smaller suppliers may purchase access to SCM as a service such as data analysis and management reports based on sales and cost data. CHRW asserted that these services and management assistance can be very inexpensive when purchased along with produce items and/or services such as transportation. A small retailer might use a 3PL firm to procure and transport its produce needs, providing an important efficiency for smaller companies. As another example, a produce wholesaler might use a 3PL firm as a transportation provider, and the 3PL might be able to use customer sales data to optimize inventories for individual customers and reduce transportation costs by better utilization of its hauling capacity.

Information from interviews with CHRW supported the points made in the literature review. The barriers identified were reinforced. Many companies choose not to share information, so those transactions will remain cost-based. Bermudez stated that few companies had successfully implemented most of the applications they purchased, and CHRW noted that most customers purchase a service or two, but only a few large companies fully embrace SCM. Measurement of supply-chain efficiencies and common measures across partners

were other areas where CHRW had found information exchange barriers.

The literature noted firms' difficulties in understanding their own operations/supply chain, and extending that to knowing another firm's operations was another step. While not a solution for this problem, 3PL providers in a sense bypasses this barrier by substituting their systems for the customer's, though at a large-firm level this substitution was the issue in a "re-engineering of the supply chain" article (Bhatnagar and Viswanathan 2000). In that case, delivery-schedule requirements were attained mostly through using the existing assets of the 3PL. For the customer, delivery was attained at acceptable cost, and the 3PL gained through load consolidation of its air transport and distribution system. The existing system, with its advantages and problems, was bypassed.

Some large retailers have informed their suppliers that specific or compatible technologies and procedures must be used by all suppliers. A recent example is Wal-Mart's decision to require the RFID tag, a better but more expensive tracking system. Potential suppliers understand they must comply or be excluded as a supplier.

In addition, the CHRW case reinforces other points. Keys are real-time data exchange and willingness to collaborate. Smaller companies were less-inclined to share data. Electronic technology and data are quite good but not perfect, so shipment schedules suggested by automated replenishment programs were subject to review by knowledgeable employees. And, while discussion of the efficiencies of SCM both in the literature and by CHRW management was straightforward, identification and measurement of savings in real-world applications were problematic because of the data-sharing issue.

The CHRW case may help explain other competitiveness problems of small and medium businesses. Reluctance to share information can reduce inventory-control effectiveness, but other advantages also are lost. A significant source of added value is the combination of scanner and other data such as neighborhood demographics to provide better understanding of the customer base and to develop more-effective promotions. Loyalty cards—increasingly popular with large retailers—are another information source that could further enhance these data.

Generally, this advancing technology, its adop-



tion by the integrated wholesale-retailers, and the growth of market share captured by those large retailers suggests an increasing competitive challenge for smaller firms across the produce industry.

## References

- Barratt, M. 2004. "Understanding the Meaning of Collaboration in the Supply Chain." *Supply Chain Management: An International Journal* 9(1):30–42.
- Bhatnagar, R. and S. Viswanathan. 2000. "Re-engineering Global Supply Chains." *International Journal of Physical Distribution and Logistics Management* 30(1):15–34.
- Bermudez, J. 2002. "Supply Chain Management: More Than Just Technology." *Supply Chain Management Review* 6(2):15–18.
- C. H. Robinson Worldwide Inc. 2003. [www.chrobinson.com](http://www.chrobinson.com).
- . 1999 and 2001. Personal communication.
- Cook, R. 2001. "The Dynamic U.S. Fresh Produce Industry: An Industry in Transition." In *Postharvest Technology of Horticultural Crops*, A. A. Kader, ed. Division of Agriculture and Natural Resources, University of California - Davis, Davis, Ca., pp 5–30.
- Coyle, J., E. Bardi, and J. Langley, Jr. 1996. *The Management of Business Logistics*, 6<sup>th</sup> edition. St. Paul, MN: West Publishing Co.
- Fliedner, G. 2003. "CPFR: An Emerging Supply Chain Tool." *Industrial Management and Data Systems* 103(1):14–21.
- Harris, J., P. Kaufman, S. Martinez, and C. Price. 2002. "The U.S. Food Marketing System, 2002 Competition, Coordination, and Technological Innovations into the 21st Century." AER No. 811, U.S. Department of Agriculture, Washington, D.C., p 2.
- Hewitt, F. 2001. "After Supply Chains, Think Demand Pipelines." *Supply Chain Management Review* 5(3):28–41.
- Kurt Salmon Associates. 1993. *Efficient Consumer Response: Enhancing Consumer Value in the Grocery Industry*. Food Marketing Institute, Washington, D.C., pp 29–30.
- Lee, H. and S. Whang. 2001. "Demand Chain Excellence: A Tale of Two Retailers." *Supply Chain Management Review* 5(2):40–47.
- Manufacturing.net. 2005. [Manufacturing.net/sc/scmr/archives/sc11.99/11chains.htm](http://Manufacturing.net/sc/scmr/archives/sc11.99/11chains.htm). Accessed March 2005.
- Metz, P. 1998. "Demystifying Supply Chain Management." *Supply Chain Management Review* 1(4):46–57.
- The Partnering Group. 2000. *Whose Shelf is It Anyway*. Falls Church, VA: Food Distributors International.
- Schotzko, T. and R. Hinson. 2000. "Supply Chain Management in Perishables: A Produce Application." *Journal of Food Distribution Research* 31(2):17–25.
- Tarnowski, J. and W. Heller. 2004. "The Super 50." *Progressive Grocer* 83(7):59–66.
- Ross, D. 1997. *Competing Through Supply Chain Management*. Kluwer Norwell, MA: Academic Publishers.
- Voluntary Interindustry Commerce Standards Association (VICS). 2005. [vics.org/committees/cpfr/CPFR\\_Overview\\_US-A4.pdf](http://vics.org/committees/cpfr/CPFR_Overview_US-A4.pdf). Accessed March 2005.