DISTRIBUTION STRATEGY TAKES OFF FOR VETERINARY SUPPLIER

Fort Dodge Laboratories partners with Airborne Express to shorten the distribution pipeline and serve customers.

by Clyde E. Witt, senior editor

Fort Dodge Laboratories has added wings to its distribution program. The partnering agreement it has forged with Airborne Express Company may be a precursor for others dedicated to providing better customer service via quicker, more flexible response. Fort Dodge Laboratories manufactures veterinary supplies.

Fort Dodge's initial efforts to centralize its distribution began in 1992 with order processing. It was operating 11 distribution centers throughout the country. Customers called orders into these centers. Often the center manager took the call, then processed the paperwork.

"Our first move — to establish a toll-free telephone number for central order processing at our headquarters in Fort Dodge, Iowa — was the beginning of better customer service," says Judy Davis, manager at the new Fort Dodge distribution center in Wilmington, Ohio.

"Orders were then electronically transmitted to individual distribution centers. That opened the way to investigate the feasibility of consolidating other aspects of the distribution business," she adds.

At the time a management team from Fort Dodge was reviewing new distribution strategies, Airborne Express was seeking tenants for its new industrial park located virtually on the runways of its hub in Wilmington, near Dayton, Ohio.

The agreement worked out by Fort Dodge calls for a 10-year lease on the building, plus some special rates for using Airborne's services. Airborne is creating a core of customers at this airpark hub. Both partners find advantages in this arrangement.

Making the transition

For Fort Dodge Laboratories, the southwest corner of Ohio would prove to be an ideal location for distribution. Immediate access to Airborne's delivery services has meant a much shorter distribution channel. Orders of most products received as late as 8 p.m. can be delivered to nearly 80 percent of its customers by 10:30 a.m. the next day. Many of the items it ships (veterinary biological and pharmaceutical products) are temperature sensitive.

The efficiencies of the system allow Fort Dodge to supply products to a distributor network and international customers as well. About 70 percent of the company's distribution business is handled from this location. The remaining 30 percent, mostly bulk or unit load orders destined for distributors, is handled from Fort Dodge's headquarters in Iowa.

How the system works

The center receives truck loads of finished products each week. These are items that have passed through the quality control process in Fort Dodge and are approved for sale. Biological products (vaccines) must be refrigerated. Approximately 6,400 square feet of this 32,000-square-foot facility is a cooler with temperatures controlled between 35 and 45 degrees. (The material handling equipment distributor on this project was Advanced Handling Systems in Cincinnati, winner of *MHE*'s Value Added Award in 1991.)

In the packaging area, packers like Brandon Shumaker have an assortment of containers and material, including ice, to prepare orders for shipping. Items are manually checked against an invoice.

John Perides, vice president, Pro-Tech Resource Corporation, material handling consultants on this project, cites the cooler area as one spot where the expertise of consultants paid off for the client.

"In the original design [Fort Dodge] had a large cooler area plus some smaller coolers at another end of the building. Supplying the smaller coolers would necessitate daily transfers of product," Perides says. "We suggested installing doors in the cooler walls and using gravity flow rack and a pick-through application to get to the biologicals."

The result was better management of labor within the cooler. Resupplying racks requires a shorter travel distance and the person can also pick some large orders.

Currently, incoming goods are checked at the dock. They are manually verified against shipping documents transmitted via computer from company headquarters. If the shipment is correct, the information is entered into the computer and an automatic putaway program takes over. It immediately shows the status of the inventory to order fillers.

Soon, some of the manual aspects of this part of the process will be taken over by hand held automatic data collection terminals. This will speed the process of getting the material from the dock into the inventory picking system.

"The computer system directs putaway based on its knowledge of our immediate needs," explains Davis. "The computer assigns product to an open location in either zone 1, which means it will be picked immediately, or into one of the reserve locations."

Determination of which product gets picked first is also controlled by the computer. Each product carries a lot number and date. The computer selects by the first-in, first-out method to assure that

fresh product is always in the active picking modules.

Products destined for reserve storage are kept in a narrow aisle rack system (Interlake Material Handling). Wire-guided orderpicking trucks (Crown Equipment Co.) and swing-reach trucks (Drexel Industries) are used for putaway and picking unit loads.

Customer orders from central processing in Iowa are transmitted to the distribution center every hour. Invoices with bar code labels are printed (Decision Data printers) at point of use near the front of the picking modules. The label carries basic customer information such as name, customer number and ZIP code location.

Operators arrange the incoming invoices for most efficient picking by zone. There are three zones. To select customers' orders, the picker takes several invoices to the front of the picking module in the designated zone. He or she slides a reusable plastic tote (Buckhorn) along a roller conveyor (Rapistan), selecting items from gravity flow racks (Select-A-Flow, Interlake Material Handling) on either side of the aisle. When all the items on the invoice for that zone have been selected, the tote is moved along the line into zone 2 or 3 where the order is completed. Totes with finished orders are placed on a weight-activated takeaway roller conveyor beneath the picking roller conveyor. From there, totes move to the order packing area.

"One thing unique to our business is a mix of refrigerated and non-refrigerated products," says Davis. "An orderpicker selects from both sides of the aisle, in the cooler area on the right or regular racks on the left. We've designed the gravity flow racks to have fast, medium and slow movers in each zone to better distribute the labor."

Davis adds that the system is so well designed that two pickers can handle three picking zones, providing enough work to keep eight packers going all day. Some orders might be a single carton, others a couple of palletloads.

In the packaging area, totes queue up at one of eight packing stations. Packers remove the tote from the line into their workstation or, alternatively, the conveyor has a stop-bar that can shunt the tote into the station.

The packer is surrounded by a selection of cartons and expanded polystyrene (EPS) foamed material. Each item in the order is checked against the invoice before it goes into the carton. Future enhancements to the system will include bar code labels on every piece and scanners in the packing stations to validate shipments.

Based on experience, the packer selects the right size container for the order. Planks of EPS used to cushion the product also help insulate orders that require ice and refrigeration.

Bar code labels from the invoice are placed on finished cartons. Cartons are then placed on a takeaway conveyor and move to the shipping area.

Disciplined Project Development

John Perides, vice president, Pro-Tech Resource Corporation, Mount Laurel, New Jersey, likes to spice his advice with humor. Perides says the accumulated experience of the members of this six-year-old firm comes from the school of hard knocks.

"We've come out of the manufacturing environment where we've had all of the various errors done to us," he says, somewhat facetiously. "So we've developed the concept of disciplined project development. The key for people in manufacturing to recognize is that glitz doesn't make it! Successful projects, successful execution, successful maintenance and continuing improvement are what bring you recognition and success.

"Ours is a back-to-basics approach. We take information only the client knows such as his product, his challenges and where he can invest his time, effort and money, and tie it to things he might not know, like what needs fixing, how to fix it or even if it's worth fixing."

When the project is in proper focus, studies must be made, findings analyzed and concepts developed to correct the problems. Beyond that comes steps in developing project costs as well as time schedules and project management concerns on the way to implementation.

Shipping: where partners join hands

In the shipping department there are two workstations. One handles orders going out via Airborne Express and the other handles orders, usually non-biologicals, that will go via United Parcel Service.

"Just upstream of the shipping department we have a photoelectric sensor that reads a special reflecting label that has been placed on the side of packages going to the Airborne workstation," Davis says. "A diverter shunts those orders down that arm of the conveyor. Cartons without the reflecting label move to the UPS side. There are also photoelectric sensors that will stop the line and prevent carton jamming when predetermined limits are reached. Then, as the shipping department people catch up with the flow of cartons the line begins to move again.

"The shipping people scan the information into the system to adjust the inventory and provide shipping data for

headquarters in Iowa. A new shipping software program we'll be bringing on line soon will allow us to provide the customer with instant tracking and package tracing information."

Cartons are staged on wooden pallets. If there are biologicals in the loads, pallets must be returned to the cooler area. Late in the evening, two employees from Airborne Express come to the center and begin scanning the orders into its system. The workers also load the orders into their shipping containers.

Around 9:30 p.m., Airborne picks up the containers and takes them a short distance to its sorting operation. Fort Dodge's packages enter the stream of thousands of others where they are loaded into freight carrier airplanes for next-day delivery.

Packages going via UPS are picked up twice a day. Those that must move via UPS air service go out late in the evening.

Because of the temperature sensitivity of many of the products in this distribution center, controls and monitoring equipment are found throughout the building. A temperature recorder provides a record of temperatures within the cooler and the warehouse. Central station monitoring notifies selected staff members whenever the temperatures fall outside the limits. A panel outside the offices provides a visual display of cooler temperatures and compression operations.

Recordings are made of this temperature information and kept for five years. In the event that the agency that monitors this business wants to check possible exposure to heat of a particular batch of product, Fort Dodge has a record. Monitors are also used on delivery trucks to monitor the temperatures during shipment from manufacturing plants to the distribution center.

All employees have to be sensitive to the temperature needs of the products they are working with. Orders are often handled twice to move them from the cooler to the packing and shipping areas, then back to the cooler. Special picking module configurations had to be designed to accommodate selecting refrigerated products as easily as non-refrigerated.

From the time facility planning began in September 1992 until move-in day in April, material handling was a key part of the plan.

Perides says this was a particularly fast-paced project. He cites the perseverance of all parties involved as the key to getting the job done. As advice to others contemplating these kinds of projects, he suggests anticipating delays and building those delays into your schedule.

"The key to avoiding disasters," Perides says, "is to be your own champion; don't rely on others to do it for you. Don't go to your limits. By providing some slack in these complex arrangements that involve many parties, you can respond to things that inevitably go wrong."

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The challenge of selecting temperature-sensitive biologicals at the same time as other products was solved by locating coolers along one side of the picking aisle and pharmaceuticals on the other.

Photoelectric sensors are used to direct cartons down the proper shipping lane. Orders are staged on pallets for pick up by either Airborne Express or UPS.

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