Use benchmarking to improve

**SHIPPING METRICS**

Companies can use benchmarks to improve shipping metrics and quality of service to customers while reducing costs by tracking efficiencies.

By Paul Thomas and Charles Hall

With increases in fuel costs, wages and regulations, shipping goods has become a larger factor in the overall cost of selling goods. Add the decline in margins brought on by the recession, and you can understand why growers handling their own distribution are looking at shipping costs and procedures.

Since 2008, average freight rates have increased to $2.67 per mile, 23 percent higher than the year before. Transportation costs now rank above debt capital, equity capital and marketing in relation to total costs.

In a recent survey of Georgia growers, 80 percent of the respondents indicated that their transportation costs have increased an average of 21 percent since 2008. At that level, transportation accounted for 10 percent of the total cost of production. Growers have commonly added delivery surcharges or a fuel tax to customers’ invoices. There is a point, however, where customers tire of delivery surcharges.

There are many aspects of shipping that growers typically do not evaluate, given that their main expertise lies in production and managing greenhouse...
staffs. By breaking down transportation costs into activity segments and then establishing company policies that require drivers, dock hands and shipping managers to keep specific records, management can often make changes that significantly increase profit margins. It may be worthwhile for a company to re-evaluate how its products are shipped, how deliveries are routed and how efficiently these operations are managed.

**Shipping metrics**

Given the complexity of shipping for growers who use more than one truck and driver, shipping costs can’t be lumped together and then expect to develop a meaningful set of benchmarks. To be successful, shipping activities must be divided into more specific line items or cost segments. Each segment has unique features, and likely has its own challenges when it comes to putting real data to paper.

Keep in mind that if a company does not keep records of fixed and variable costs associated with operating a truck delivery system, it will be difficult to glean tangible information. Be sure the company’s accountant or office manager is on board with measuring shipping metrics before you begin training shipping employees.

Shipping can be divided into five activity segments. If employees are engaged to record key information during their daily work, the benchmarks for current operations become evident. From that, future improvement can be determined.

### 1. Order pulling and loading logistics

Huge amounts of time (labor cost) is lost during greenhouse order pulling and loading operations. A significant amount of this loss is not due to laziness, but rather inefficient inventory staging systems. These “hurry up and wait” scenarios can occur when trucks arrive late or pulling crews are busy elsewhere.

Many of these issues can be dealt with once some basic information is collected. Once shipping managers have access to efficiency ratios, they can quickly determine where bottlenecks affect shipping.

For the fulfillment and load value ratios, data must be taken per truck, either by truck bed size or fleet unit number. Use of carts may seem to increase efficiency greatly. Just be sure to include the time it takes to pull orders and load carts even if the orders are pulled the day before.

Management needs daily tallies of units loaded for each truck to calculate the load value ratio. The ratio values are very different for boxed plugs than for 10-inch sleeved poinsettias. It becomes imperative for a company to track the details of which crops are the predominant material being loaded and in what package form (boxes, racks or self-contained units).

### 2. Routing

A shipping manager faces no greater mystery than what route a truck should take. It’s common to drop materials to several customers per delivery. There is relatively inexpensive software that helps route trucks over several stops during a day or a week.

But the shortest route may not be the least costly, depending on traffic, road conditions and vehicle limitations. Routes change daily for businesses that deliver to florist shops, home improvement and hardware stores and independent garden centers. A company can waste up to 30 percent of its fuel and time following the same route regardless of what’s being delivered from the truck.

Drivers sometimes deviate from routes to run errands, eat at favorite restaurants or just to take, what they consider, a short cut. These seemingly small variations can be very costly.

Large trucking firms program each day’s route on a computer and set a tire meter to verify the actual vehicle mileage is within a percent or two of the predicted mileage. Modern GPS systems can display in real time where each truck is located and sound a warning if a truck deviates more than a mile away from a designated route.

Given the mileage cost of nearly $2.50 per mile, it’s easy to understand why large shipping companies seek the most efficient delivery routes. To be successful, a company should develop policies and enlist drivers who report data and stick to the delivery routes they are assigned.

**Routing Efficiency Ratio** (Assesses the shipping manager)

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\text{Routing Efficiency Ratio} = \frac{\text{The number of shipping/delivery events coordinated by truck}}{\text{The number of miles driven to accommodate these deliveries}}
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**Routing Execution Ratio** (Assesses the shipping manager)

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\text{Routing Execution Ratio} = \frac{\text{The computer-predicted shipping miles for that day’s deliveries}}{\text{The number of miles driven to accommodate these deliveries}}
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Shipping managers have to allow some flexibility. Let drivers provide input on route planning, and allow them to deviate from routes due to flat tires, road construction, weather and other conditions. Just make sure drivers explain why the decision to alter the route was taken.

### 3. Off-loading and merchandising tasks

Recent research at the University of Georgia using global-positioning technology enabled researchers to study
how much money could be saved if off-loading and merchandising time was reduced. The answer was a significant amount.

Time windows for off-loading and merchandising are handled differently, but the cost of labor is the same. For example, driver/merchandisers can track the minutes spent at each account. If the employees are honest, realistic and efficient, this data can be valuable for future planning.

Be sure the time required to service each account is recorded. Other information needed is the number of units on a truck or the square footage maintained per site. The time data must then be standardized by dividing the time by units or square footage serviced. This is essential because each account can vary greatly by size or configuration.

The data can provide a reasonable idea of labor costs in terms of minutes per 100 units or minutes per 100 square feet. With this information, the amount of time for each stop can be predicted and a relatively accurate delivery/service plan can be established, as well as the costs involved. This is essential for planning routes, pricing product, evaluating customer value and possibly adding customers to an inefficient route.

In the University of Georgia study, computer models divided the time windows into three divisions: 30, 60 and 90 minutes per stop. By improving off-load efficiency, significant savings were found.

By reducing off-load/merchandising events from an average of 60 minutes to 30 minutes or less saved more than 15 percent in costs over a year. This savings included driving time, labor and truck hours. Seeing how small improvements affect truck operating expenses, it becomes a useful exercise to benchmark shipping operations.

4. Operations maintenance and servicing history

This is a relatively simple ratio assigned to each truck. Once efficiency ratio for each truck begins to decrease, management can make the decision to overhaul or sell the vehicle. Remember that a poorly performing truck costs labor

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hours due to drivers being stranded, lost customers and loss of inventory.

Repair costs, both in-house and external, must be tracked. Record these expenses in three- or six-month increments. Do not underestimate the cost of an old truck that needs to be repaired often. It can be far less expensive to buy a new truck and incur a loan cost, than to try to maintain an aging vehicle.

5. Customer value
With the right information, managers can look at whether or not certain customers are profit centers or costing the company money. This set of ratios gives clear cut answers. Customers can be ranked, sales managers can focus on the right customers, minimum delivery orders can be set and non-profitable customers can even be eliminated.

These actions can save inventory, which can be sold for more profits elsewhere, and focus trucking resources on new sales closer to home. This is where significant savings can be realized. A company may have only a few poor-value customers, but they are too expensive to keep in today's low-margin markets.

By themselves, each benchmarking effort may yield only a percent or two in savings. However, as collected data is tweaked and more detailed analysis is added to benchmarking efforts, the savings can be significant. Once a company has a handle on the big shipping/delivery picture, management will be able to determine if it is less or more expensive to outsource to common carriers or a local trucking firm.

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