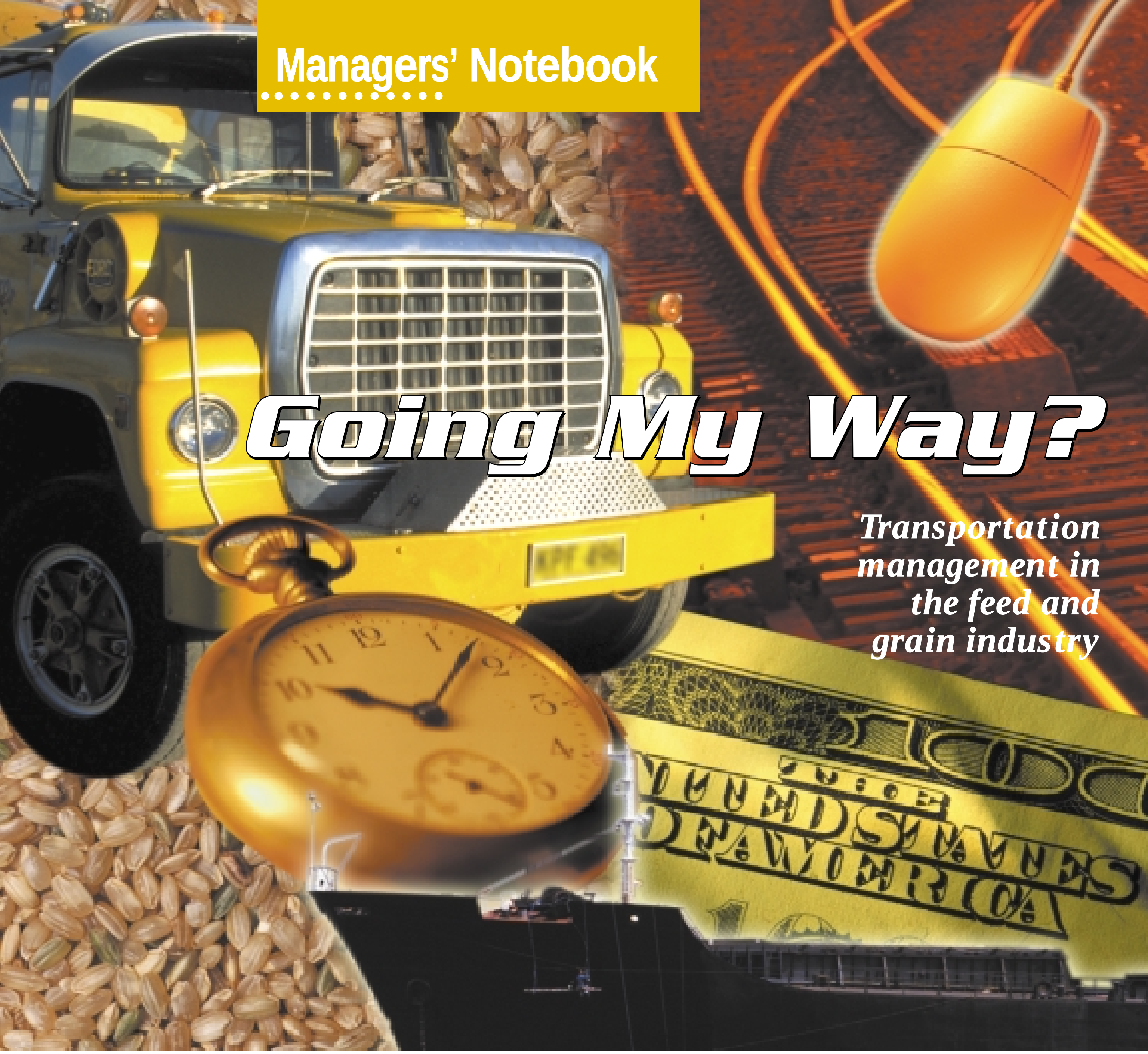


Going My Way?

Transportation management in the feed and grain industry

By Dr. John Foltz and Dr. Jay Akridge

Within the United States and around the world, the American feed and grain industry rolls on the wheels of trucks and trains, and rides in the holds of barges and ships. Transportation is vital to our business — that of moving feedstuffs, grain and grain products from farm and manufacturer to further processing and ultimately to the consumer.

Transportation is key

Figure 1 illustrates annual grain movement by mode of transportation, for the 15-year period between 1981-95, the most recent figures available. You will note the increased use of trucking over the period, which is partially a result of rail abandonment.

The transportation and logistics systems that serve grain and feed markets are critical, given that transportation costs typically represent more than half of a commodity's total landed cost. In economics, transportation is said to provide "place" utility — physically moving products — as processors and consumers want the product at one location rather than another. Managing transportation needs and the associated costs have become an area of significant emphasis for many firms. Due to warehousing costs (including the accompanying

Figure 1

U.S. Grain Movement by Mode of Transportation, 1981-1995

GRAIN TYPE / YEARS	TRUCK	RAIL	BARGE
Corn	34%	40%	26%
Wheat	12%	67%	20%
Soybeans	50%	20%	30%
Other Grains	40%	51%	10%
Total, 1981-85	32%	44%	24%
Corn	41%	39%	20%
Wheat	16%	65%	18%
Soybeans	45%	27%	28%
Other Grains	45%	45%	10%
Total, 1986-90	37%	43%	20%
Corn	46%	34%	20%
Wheat	20%	61%	19%
Soybeans	47%	24%	28%
Other Grains	45%	44%	11%
Total, 1991-95	41%	39%	20%

Percentage of shipments

costs of financing inventory and physical storage capacity), many firms have moved to just-in-time inventory methods. This means scheduling inventory to arrive approximately or "just-in-time" when it is needed. For this method to work, reliable and cost-effective transportation is an absolute necessity. In addition, transportation services are all about moving feed, grain and grain products efficiently and effectively. This can be a challenge because of the bulky nature of these products.

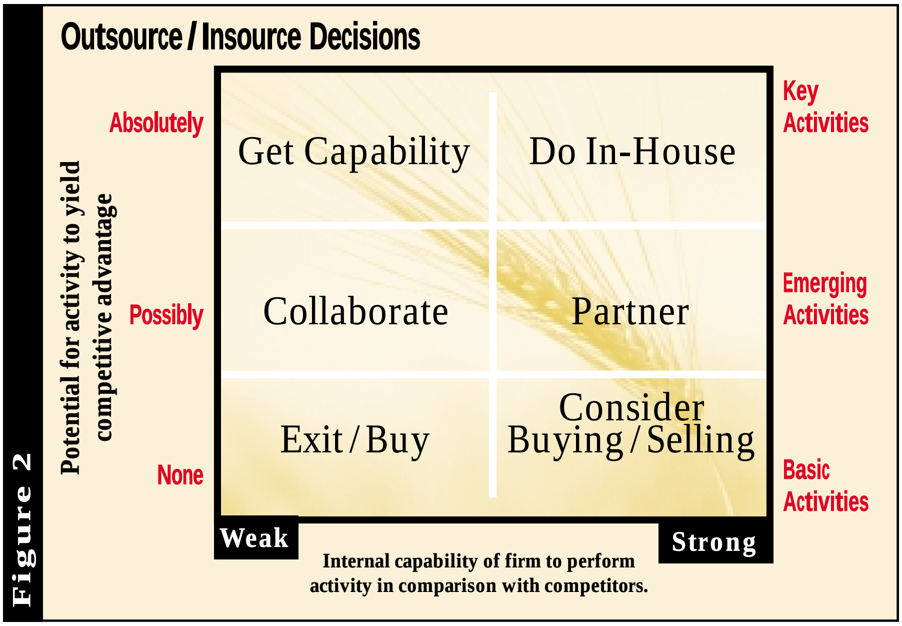
The sheer size of the transportation bill makes this an important area for managers to scrutinize. In addition, there have been a number of new developments in this area — such as new technology for managing transportation, new business models such as third party logistics providers, and new information technology to help coordinate transportation and logistics strategies.

In-house vs. outsourcing freight needs

The in-house vs. outsource trade-off is a decision that should be reviewed periodically. Figure 2 illustrates a context that may be helpful to utilize when making the decision on handling transportation needs yourself, or to employ contract carriers.

Using Fig. 2., the first decision a manager should make is whether there is potential for the activity (or transportation) to yield a competitive advantage for your company. Questions to help you answer this query are: How many trucking firms are there in your area; how strong are these firms; how crucial or key is trucking to your business; and what is the utilization rate (i.e., probability of backhauls or contract hauling).

Once you have decided if there is potential for the



Source: Adapted from Insinga, R.C. and M.J. Werle. "Linking Outsourcing to Business Strategy," Academy of Management Executives, 2000, Vol. 14. No. 4, pp 58-70.

activity, then you need to rate your firm's internal capability to perform the activity relative to your competition, on a scale from "weak" to "strong." Based on this analysis, the matrix in Fig. 2 will then help you decide on the appropriate strategy to pursue.

For example, the polar extremes are "Do In-House," and "Exit / Buy." If transportation absolutely has the potential to yield a competitive advantage for your company, and you have strong capabilities in this area relative to your competitors, it makes sense for you to do it "in-house." If, on the other hand, transportation has no potential to yield a competitive advantage and you have weak capabilities in relation to the competition, then you should "exit" this activity if you currently do it, and / or "buy" the capability by outsourcing your needs. If you find that your business falls "in-between," the matrix lists a variety of other strategies that will allow you to capitalize on your position — such as collaborating or partnering.

Collaboration technologies

Increased computing power and improvements in telecommunications via the Internet are generating new options for transportation collaboration.

"There's an opportunity for a whole new level of business-performance improvements in the collaborative redesign of processes, using the Internet as the great enabler," says James A. Champy, chairman of consulting at Perot Systems Corp. and author of "*X-Engineering the Corporation: Reinventing Your Business in the Digital Age.* "

Although North American companies spend more than one-half-trillion dollars every year on trucking transportation, it remains a manual, labor-intensive process. In the past, shippers and carriers have tended to work independently, causing nearly 20% of the trucks to move empty — a $30 billion hidden cost paid for by both parties. The goal of many of these Internet transportation and logistics management providers is to help companies improve the efficiency of their logistics operations and eliminate hidden costs.

Over a dozen companies including Land O' Lakes, General Mills and Nestlé are using a collaboration system called the Collaborative Logistics Network to use the fewest trucks possible and keep them full by matching loads and routes. The system, as designed by Nistevo, has four modules enabling organizations to subscribe to only those functions needed to address their current logistics needs.

However, we should note a word of caution regarding such technologically intensive collaborative projects. Many times firms can underestimate the training costs; the difficulties of changing people's behavior, especially among workers who aren't computer savvy; and some of the technological glitches.

Of note, it will take a little changing of attitudes for some managers that are wary of competitors, as several of these approaches require the sharing of sensitive information. As with any tactic, you must weigh the costs vs. the benefits and decide how to proceed. In many cases, the sharing of information may not be as risky as it might first seem, since many of the members of these networks are not in the same industry.

Carrier contracting tips

If you decide to contract a carrier, there are numerous considerations in dealing with these firms. There are several things shippers must consider with respect to which "mileages" will be used to govern distance-based rates. In most popular mileage software, there are two mileage "sets": the shortest distance; or the practical distance (sometimes longer, but interstate based). You need to decide which is most advantageous for you to use — ie., are you concerned about distance (do you pay by the mile) or are you concerned about how long a delivery takes (in which case the faster route may be preferred).

Second, make sure your contract is clear as to whether mileages are to be determined between "city / state" spelling or between three-digit zip code or between five-digit zip. There is often a considerable difference in distance between the two depending upon whether the mileages are determined between zip codes or between cities.

Another area to save money is to look at whether your contract contains a fuel surcharge. With the instability of oil prices, many contracts include these fuel surcharges, generally stated as a percentage of the total line-haul charge. However, many contracts fail to state if the fuel surcharges apply to the undiscounted or discounted charge. You should attempt to negotiate for these charges to be applied to the discounted charge.

Additional information is available from Condata, a transportation freight bill auditing firm. They can be found on the Web at: http://www.condata.org/Pages/import.html.

Keep on Trucking

Keeping close tabs on your transportation options and your freight costs is definitely prudent advice. The rising costs of fuel, liability insurance requirements, the cost of labor and your customers' needs all enter into the equation. F&G

John Foltz is associate professor, Department of Agricultural Economics and Rural Sociology, University of Idaho, Moscow, ID. Jay Akridge is professor, Department of Agricultural Economics and director of the Center for Food and Agricultural Business, Purdue University.