

Cold Chain Management Provides Value-Added Tool to Shrink Your Shrink



Temperature monitoring and analyzing data and processes are integral parts of cold chain management.

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Shrink is an ongoing concern for purveyors of consumable goods, whether it's theft in the broad world of retail or spoilage in the world of perishable products. For sellers of produce, it doesn't matter whether the goods actually spoil and "go bad" or if they simply lose their key quality attributes and look, smell, and taste bad. The end result is the same: the produce can't be, or shouldn't be, sold and the retailer loses money.

In general, losses due to shrink in perishable categories occur for one of the following reasons:

- Theft
- Physical damage to the product
- Code date expiration
- Spoilage (This can include products that are still within the code date but must be discarded from inventory due to improper temperature handling which results in quality degradation.)

The last two factors – code date expiration and spoilage due to temperature abuse – are the primary causes of shrink for the fresh-cut industry. Fortunately, we can do a great deal to manage the issue of spoilage due to

ineffective cold chain management. In fact, we can increase the useable life of many fresh-cut products. The key lies within aggressive cold chain improvement programs where experience shows we can reduce shrink for key categories as much as 30 to 50 percent. That difference can boost margins significantly for retailers and will drive growth of the category through improved customer perceptions of freshness. In short, it improves top line and bottom line performance.

Traditional Approaches to Reduce Shrink

Typically, shrink in the fresh-cut industry ranges from 10-20 percent, but it varies widely stock-keeping unit (SKU) to SKU. For example, shrink for a high volume SKU, such as a one-pound garden salad, may be 2 to 3 percent while for slower moving gourmet produce items it may be as high as 50 percent.

Traditionally, retailers concerned about perishable shrink attack the problem by manipulating inventory levels downward. By dropping stock levels and increasing inventory turns for

target SKUs the retailer reduces the risk that the product will pass code or degrade below acceptable quality levels prior to sale.

However, this often proves to be too blunt a tool for attacking shrink because it almost inevitably leads to an increase in out of stocks. It also becomes much more difficult to maintain the variety in key categories that consumers expect. Lower volume SKUs are, of course, extremely vulnerable to efforts to reduce inventory levels. Therefore, it becomes difficult to continue carrying such products.

With this dynamic in mind, it is understandable that those charged with keeping eyes on supermarket financial performance can be a bit skeptical about initiatives to substantially cut shrink. Their position is that the perishable shrink number and the out of stock number sit on each end of a seesaw. If a retailer aims to bring one of these key metrics down, the other has to go up, and vice versa. It becomes a sort of shell game where an undesirable financial metric is shifted from one place to another and back again.

However, initiatives to control perishable shrink don't have to result in increased out of stocks. There is a very different approach that attacks the spoilage issue head on. By better managing temperature and cold chain processes, retailers and their supplier partners can reduce spoilage or quality loss without having to manipulate inventory levels and risk out of stocks.

Cold Chain Management

The concept of cold chain management begins with temperature monitoring – a process that most retailers understand and embrace. However, cold chain management goes beyond the collection of temperature data on a single truck trip. It involves identifying where breakdowns in the entire cold chain occur, so that process improvements can be made – often at a modest cost – to achieve



The cold chain in the fresh-cut industry starts as soon as goods are harvested and cooled.

significant financial benefits.

The cold chain for fresh-cut produce involves a group of fairly standard processes. It starts with harvesting and cooling, can include transport to plant, continues on to processing and packaging, then shipment to customer, on to intermediate warehousing, then transport to supermarkets or restaurants, and finally to store level storage, handling and merchandising.

Moving a single case of product from production through to the supermarket shelf or restaurant kitchen may involve more than a hundred individuals, dozens of pieces of refrigeration equipment, several different vendors and multiple facilities. The path to reduced product shrink and enhanced freshness requires managing each of the key processes.

The nuts and bolts work of measuring and improving each of these key processes is where retailers and their supplier partners must focus their effort.

Cold chain management remains an industry-wide challenge despite the fact that reliable mechanical refrigeration is readily available and has been used widely in food distribution for over 40 years. In general, the problem is not the refrigeration systems themselves, it is in the *process* of managing the cold chain – how we move product through the various refrigeration systems and how we operate and maintain those refrigeration systems.

In fact, this is the good news – if improved cold chain performance were dependent solely on the capital-intensive process of replacing or upgrading refrigeration systems – meaningful improvement would be largely out of reach. But, in fact, when the key handling segments are intensively measured and analyzed, the corrective actions often turn out to involve much more manageable and cost-effective solutions – adjustments to procedures, loading patterns, product flows, storage practices – to name a few. Cold chain analysis can help retailers identify breakdowns in the distribution system. It pinpoints what *process* (not just which equipment) is involved, and what happens in different distribution segments. This “process mapping” information goes beyond just transportation and looks at events such as what happens at product hand off points. For example, it's useful to examine the process that occurs when trucks arrive at distribution centers. Proper temperature control on a 1,000-mile truck trip can be undone if the process of unloading the trailer and moving product in to proper storage conditions is mismanaged.

Other improvements come by more closely managing vendor performance. One example involves a large national food processor. By applying techniques of measuring and analyzing cold chain performance over time, it became clear that one of their contract transportation vendors had several trailers that always ran a little warmer than the rest of the



Moving a single case of produce from production to the supermarket shelf involves a complex series of interactions. Managing the processes along the cold chain can reduce shrink and enhance freshness.

fleet (hovering closer to 40°F than to 34°F).

Further investigation revealed that this sub-group of trailers was among the oldest in the company's fleet. They had damaged door seals and degraded insulation. Armed with this information, the processor convinced the vendor that the sub group of trailers should no longer be used when hauling their product. Immediately thereafter, substantial improvement in performance was seen in that segment of their distribution chain.

Shrinking the Shrink

In the world of food retailing, there are fewer and fewer ways to produce more profit out of already tight margins. Reducing shrink is one of those ways, and making those improvements through non-traditional means, such as cold chain management. This also offers retailers new avenues to improve financial performance and also achieve a competitive edge based on an enhanced reputation for perishable product freshness and quality.

As noted above, our experience points us to potential reductions in shrink of as much as 30 to 50 percent for key categories and SKUs. This savings not only provides direct financial and competitive benefits to participating retailers, it enhances the financial performance and relevance of the fresh-cut industry as a whole. ■

Editor's Note: Sensitech (www.sensitech.com) is a world-leading independent provider of cold chain information and analysis.