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Council of Supply Chain Management Professionals
U.S. House of Representatives Energy and Commerce Subcommittee on Health
"A National Framework for the Review and Labeling of Biotechnology in Food "
2123 Rayburn House Office Building
June 18, 2015

Good morning, Chairman Pitts, Ranking Member Green, and Members of the Subcommittee. My name is Rick Blasgen and I am the President and Chief Executive Officer of the Council of Supply Chain Management Professionals, (CSCMP). Founded in 1963, CSCMP is the preeminent worldwide professional association dedicated to the advancement and dissemination of research and knowledge on supply chain management. With over 8,500 members representing nearly all industry sectors, government, and academia from 67 countries, CSCMP members are the leading practitioners and authorities in the fields of logistics and supply chain management.

I have been the President and CEO of CSCMP since 2005. In this capacity I run the management of the organization, organize educational events, and give speeches on issues relating to logistics and supply chain management.

Prior to joining CSCMP, I was the Senior Vice President for Integrated Logistics at ConAgra Foods, Inc. from 2003-2005. ConAgra is a member of Plaintiff Grocery Manufacturers Association (GMA). Before joining ConAgra, I was the Vice President of Supply Chain at Kraft Foods from 2001-2003. Kraft Foods has since split into two companies, At both ConAgra and Kraft, I oversaw the coordination of supply chains supporting thousands of products, from developing manufacturing replenishment strategies to transportation and distribution to

customers. I routinely interacted with suppliers and customers in these roles. I also managed national operations involving dozens of regional distribution centers in the United States.

My testimony today focuses on the supply chain disruptions and costs resulting from Vermont's Act 120, which requires processed foods entirely or partially produced with genetic engineering to be labeled as "produced with genetic engineering," "partially produced with genetic engineering," or "may be produced with genetic engineering."

Supply Chain Basics

The supply chain for a processed food begins with the supplier of the raw commodity. The supplier sells the raw food to a manufacturer, often pursuant to a long-term supply contract. The manufacturer stores the food at the plant until it is processed into its ingredient form. That ingredient may be the final product (as in cooking oils), or it may be used in a finished food product containing multiple ingredients.

Finished foods are sent to the manufacturer's distribution center, where they are stored until ready for transport to the customer's distribution center. The customer at this stage may be a national or regional chain, or a regional distributor that sells to other retail outlets. The customer stores the finished foods at its center, then distributes them to its retail outlets, where they are sold to consumers.

For example, a corn supplier sells corn to a manufacturer, who processes it at its plant into corn oil. The manufacturer might bottle and sell the oil, or it might use the oil to make another food,

like potato chips (which are fried in oil). These products are stored at the manufacturer's distribution center, then transported to a customer, which for this example is a national retail chain. The chain stores these products in its warehouse, then transports them to its outlets, where they are stocked on the shelves. The bottle of corn oil in this example might have a shelf life of a year or more. The potato chips may have a shelf life of a month or so. Because the retailer owns the products it sells, it is the retailer's responsibility to ensure that damaged or expired products are removed from store shelves.

Because grocery manufacturing is a high-volume, low-margin business, any marginal increase in cost per unit — even by a matter of cents — can substantially affect a manufacturer's operations and bottom line. The primary cost centers in the supply chain described above are the cost of source materials; the capital, operational, and labor costs associated with manufacturing plants; those same categories of costs for storage and distribution centers; and transportation costs, including the cost of fuel.

A grocery manufacturer typically plans each stage of this supply chain in detail to ensure it is handled as safely and efficiently as possible, in an environmentally sustainable manner. One of a manufacturer's most significant concerns is to keep plants running on a constant basis. Manufacturing "downtime" at a plant comes at substantial cost, in terms of capital depreciation, as well as labor costs. Because agricultural production is seasonal, manufacturers must typically plan purchasing and processing schedules far in advance, sometimes years in advance, to avoid production downtime. This planning also benefits the consumer, because it contributes to a steady, safe, and affordable supply of food products to consumers throughout the year.

The core unit in a grocery manufacturer's supply chain is the stock keeping unit, or SKU. The SKU is a unique identifying number that applies to each distinctly packaged and marketed product. Take a favorite candy bar. There will be one SKU for the regular-size candy bar, another for SKU for king-size bar, and another SKU for the bag of separately packaged mini-bars that might be sold around Halloween. The SKU is used to package these products into separate cases, to package the cases onto separate pallets for storage and distribution, and to track sales to distributors. The distributors and retailers use the SKU to track their own inventory. The SKU is typically tied to the Universal Product Code (UPC) that is used by retailers for scanning prices.

Grocery manufacturers' SKUs typically apply uniformly across the United States. Manufacturers do not create different SKUs for different states and might only occasionally create a regional SKU (for market testing, e.g.). A single national SKU facilitates efficient storage, distribution, and inventory-tracking.

Grocery manufacturing plants in the United States make products exclusively, or nearly exclusively, for sale within the United States. Some plants may sell particular products into Canada. The number of these products is likely to be comparatively small, however, because manufacturers tend to site plants close to their ingredient sources, and Canada has a large agricultural sector. Canada also requires food to be labeled in French and English. For these and other reasons, manufacturers make food for other countries in those countries.

Compliance with Act 120

To comply with Vermont's Act 120, a manufacturer must ascertain which of its products, by SKU, will be labeled to reflect the mandatory language and which will not. At the outset, the manufacturer can remove SKUs that are not sold in Vermont, and SKUs that it sells exclusively for food service or restaurant use (Product Exemption 7). For purposes of this explanation, I will assume the manufacturer does not sell meat or milk (Product Exemption 1), alcoholic beverages (Product Exemption 4), or medical food (Product Exemption 8).

With the list of remaining SKUs, the manufacturer would then review each product to determine whether it contains ingredients are likely to be derived from GE crops. If not (as may be the case for a fresh-squeezed juice product, e.g.), the manufacturer would then need to arrange for a certification to be acquired from its upstream suppliers that this is the case. Act 120 also exempts food verified by an independent organization as produced without the knowing or intentional use of genetically engineered ingredients (Food Exemption 6).

For most products, however, at least one ingredient is likely to come from a supplier who has raised or purchased a commodity from a genetically engineered crop, such as corn, soybeans, cotton, or sugar beets. The manufacturer must then ascertain whether the product may qualify for one of Act 120's exemptions for foods for which the only GE ingredient would be a processing aid or enzyme (such as chymosin in cheese), or for which "genetically engineered material" in the aggregate constitutes less than 0.9% of the product by weight. This latter exemption may require testing for some products.

For all other SKUs, the manufacturer must then decide whether to re-label the product (to comply with both the mandatory label and the ban on "natural" and other words); to reformulate the product to use ingredients for which there are no GE varieties (swapping sunflower oil for corn oil, e.g.) and obtain certification; or to select suppliers who do not purchase GE varieties, substitute those ingredients, and obtain certification. The manufacturer must also decide whether it will make these changes just for Vermont, for the greater Northeast region, or the United States as a whole. It is also possible that the manufacturer could choose to stop selling the product to retailers or distributors who sell the product in Vermont.

In the end, for each product in its portfolio, the manufacturer will have eight options:

"National" Solutions

(I) retain the status quo, and obtain certification for Vermont as needed;

(2) re-label the product nationally according to Vermont's standard;

(3) reformulate the product nationally and certify for Vermont;

(4) substitute non-GE ingredients nationally and certify for Vermont;

Regional or State-Based Solutions

(5) re-label the product in Vermont or the Northeast

(6) reformulate the product sold in Vermont/the Northeast and certify for Vermont;

(7) substitute non-GE ingredients in Vermont/the Northeast and certify for Vermont;

or

(8) remove the product from the Vermont or Northeast market.

In short, the manufacturer must take some action with respect to every SKU in its portfolio that is not destined for food-service.

It is unlikely that a large, multiline manufacturer would choose a single one of these options for all products across its portfolio. Reformulation may be possible for only a subset of products, and substitution of non-GE ingredients is likely to be cost-prohibitive for most products because the supply of non-GE corn and soybeans is very low and either expensive or simply insufficient in volume. On the other hand, for a product whose only potentially GE ingredient is canola, where a substantial part of domestic production is non-GE, it may be possible to purchase the non-GE variety at reasonable cost. These determinations require careful cost and supply forecasting. Once these decisions have been made, the manufacturer will calculate its estimated demand for source materials, as well as packaging materials such as labeling and cardstock.

Creating Vermont/Northeast Products

Reformulation is probably not an option for many products, and substitution of non-GE ingredients, if it is not impossible in current market conditions, is likely to be cost-prohibitive, at least on a national basis. This means the options for a manufacturer, on most of its products, will be to re-label the product nationally (2); or re-label, reformulate or substitute ingredients for Vermont/the Northeast region (5), (6) and (7); or remove the product from the Vermont market (8).

The Vermont/Northeast-only options — (5), (6), and (7) — would entail the creation of a new, additional SKU for the product, so that the product can be processed, packaged, stored, shipped,

and distributed separately from the original SKU. It may also be necessary for some products to have an additional SKU at the case level to ensure compliance. Take a 20-pack case of granola bars. The case may need its own Vermont/Northeast SKU so that the manufacturer can ensure it is shipped to the correct distributor. The granola bars themselves might also need a separate SKU, if the distributor uses the cases to restock coolers or vending machines.

Each SKU effectively requires the manufacturer to create a separate product stream within the manufacturer's plant and distribution chains. Each batch of product is produced in a continuous "run" at the plant. Each SKU requires a distinct run. For the reformulation or substitution options described above, the manufacturer would have to stop the line before each Vermont/Northeast run, remove the labeling stock, reload the machine with the correct labeling stock, then remove and cleanse the system of the GE ingredients, conduct quality control, and add the non-GE ingredients. After the run of Vermont/Northeast products, the plant would then stop again, and go through the steps to switch back to the original labels and original ingredients

The Vermont/Northeast products would then be placed on their own pallets. This creates a ripple effect down the rest of the system. Pallets take up space wherever they go. They will take up space in warehouses, on trucks, and at customer distribution centers.

Costs Associated With Separate Vermont/Northeast Products

The separate-SKU system I have just described is highly inefficient. The extra downtime added to the plants is incredibly costly. If it takes five minutes to stop and start a line (hypothetically), each separate Vermont/Northeast SKU removes ten minutes from the productive time of the

plant, while manufacturers continue to pay for the ten minutes of labor, energy, and capital costs of depreciation. Now assume a single plant with 10 lines running simultaneously, each with one Vermont/Northeast run per day, over 300 days in the year. That makes 500 "lost" hours per year, or about three weeks of idle time. These assumptions are meant for illustration, with respect to a single plant. Large manufacturers may have dozens of plants, and each plant may have dozens of lines. Five minutes between runs may be realistic for a labeling change but would likely underestimate the amount of time needed to change ingredients. The downtime costs associated with a Vermont/Northeast SKU system are incalculable.

Warehousing and Distribution costs

A manufacturer would have to keep the sizable pallets for Vermont/Northeast SKUs separate, with sufficient space to control the risk of error. This adds up to a great deal of extra space required. A manufacturer who creates these SKUs would likely need to renovate or purchase new storage space or real estate, which are substantial capital costs. Separate storage and additional pallets would also likely slow down overall operations, by adding complexity to the systems, requiring extra trips to move pallets, and simple human error. Additional time would also be needed for quality control. Again, these costs are incalculable.

Similar concerns would apply to transportation and distribution. Additional pallets means additional trucks will be needed to transport products to customers. The trucks are capital investments, with ongoing maintenance needs, and associated labor costs. They also contribute to pollution.

As complexity in a supply chain increases so does the risk of error and the costs associated with it. Vermont/Northeast SKUs add complexity at processing, storage, and distribution stages. It is likely, to the point of certainty that a manufacturer will at some point ship a regular pallet to a Vermont or Northeastern retailer or distributor. If the retailer does not catch the error, and that product ends up on a Vermont shelf, the manufacturer would have violated Act 120. I have been told that 7 to 10 percent of regular pallets could be shipped to Vermont in error and the manufacturer will face penalties of $1,000 per day, per product. For a large company that has 2,500 SKU's it could translate to a $175,000 to $250,000 daily fine. Multiply that by thousands of products among multiple companies and fines could reach the millions.

The opposite situation is also likely to the point of certainty, that a Vermont/Northeast pallet would be shipped elsewhere. If so, that is one less pallet of food that can be sold to Vermont, potentially resulting in disruptions in inventory and revenue loss on that product.

The likelihood is that the shipping errors I have just described would occur across entire shipments of many pallets.

Costs Associated With Relabeling Generally

Implementing a labeling change at any scale, whether state or national, requires significant upfront financing and imposes other indirect costs.

Manufacturers buy labeling materials for their products in large amounts to reduce the cost of labeling per unit. As a result, many manufacturers hold large inventories of labeling materials.

The inventory at a single large manufacturer today may take many years to exhaust. Any inventory left over when a manufacturer implements a labeling change must be discarded, which is a waste not only of materials but the money the manufacturer may have spent in anticipation of using that stock. Waste and recycling charges would likely also apply.

The manufacturer would then have to make new labels with the correct text and design. The manufacturer may handle the design in-house but increasingly manufacturers rely on outside vendors who charge a fee. When the design is finalized, the manufacturer must then purchase the materials, schedule printing time, ship the labels to its plants, and load them into the processing lines.

Each step is costly. Labeling materials are one of the largest expenses affecting a manufacturer's bottom line. Printing new labels also costs money, the amount depending on the size, material, and complexity of the package, but in all cases substantial, comprising material, capital, and labor costs. Shipping costs would likely be higher than usual if a manufacturer has to expedite the process in order to comply by the July 2016 deadline.

Reloading systems with the correct labels also costs the manufacturer in production downtime. Relabeling for Vermont or the Northeast would not necessarily be less expensive than relabeling nationally. In addition to the costs of maintaining the separate SKU system described above, printing labels in smaller state or regional batches increases the cost per unit to the manufacturer. Even an increase of a few cents could result in hundreds of thousands of dollars in additional cost.

Compliance by the Effective Date

Vermont's labeling requirements go into effect on July 1, 2016. If a manufacturer chooses to reformulate or obtain new ingredients the manufacturer has about a year to complete the changes and obtain the required certification for those products by July 1, 2016. If a manufacturer chooses to re-label its products, it will have one year to design new labels, distribute its product through the supply chain, and somehow ensure that the correctly labeled products are on retailer shelves' as of July 1, 2016. The state has granted a 6 month compliance window, but products distributed after July 1, 2016 must be compliant.

It is my opinion that very few, if any, large manufacturers in the United States will be able to ensure compliance by that deadline. There are two principal reasons why. First, some products have long shelf lives, like cooking oil or frozen foods. Manufacturers who make these products must ensure the "old" products are off the shelves as of January 1, 2017, and fully replaced with "new" compliant products. For that to occur, the new products must enter the stream of commerce many months before, even as long as a year before. This shortens the time to reformulate or substitute to a year or less, and it makes relabeling of those products in time for compliance virtually impossible.

The second reason compliance is highly unlikely by the compliance date is that manufacturers have hundreds or even thousands of products and multiples of that in SKUs. To comply with Vermont's labeling mandate they will have to conduct a product-by-product and perhaps even SKU-by-SKU review, as described above, to make business determinations about how they will

go about achieving compliance. Those determinations are likely to involve numerous different departments: research, marketing, finance, operations, legal, and regulatory. Meanwhile the company will need to operate its business, addressing all of the issues it ordinarily addresses in its daily operation. It could take two years or more for a review process to run its course within some companies.

Assuming contrary to reality that shelf-life is not a concern, compliance would still be highly doubtful by the effective date. It is too late to reformulate and substitute ingredients in advance of July 1, 2016 because ingredient and supply contracts for 2016 have likely been in place for many months by now. Even if a company decided today to ask its supplier to produce so many acres of non-GE corn or soybeans, those plants would not be ready for harvest until 2017.

The one year allowed for new labeling is also far too short, even removing the concern about shelf life. Those same departments listed above would need far more than one year to review and revise the label for each affected SKU in the manufacturer's portfolio (and this would occur after the business determinations about each of the SKUs, as discussed above).

In summary, I believe Vermont's compliance requires intensive review of each SKU in the company's portfolio; a separate business determination for each incorporating input from numerous departments within the company; significant operational changes for most products; and, barring the adoption of a single national label conforming to Vermont's standard, the creation of a highly inefficient, highly costly, and environmentally damaging stream of parallel production and distribution that is prone to error and likely to generate significant liability risk.

Compliance by the deadline is virtually impossible, and compliance at any point would impose irreversible, burdens on the company's bottom line.

If a manufacturer rationally responds to these changes by exiting the Vermont market, or by raising prices, it would necessarily suffer a loss of sales revenue, not to mention a substantial decline in its goodwill with customers.

Mr. Chairman, U.S. consumers benefit from the safest and most cost efficient food supply in the world. I urge Congress protect our national food system from an unnecessary patchwork of state labeling schemes that will hurt American employers and do nothing to protect consumers.

Thank you for your time.