

Written Statement

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“Pet Treats and Processed Chicken from China: Concerns for American Consumers and Pets”

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Chairman Brown, Chairman Smith and distinguished members of the Commission, I would like to thank you for this opportunity to provide my perspective on current concerns with the safety of the food and feed system and potential steps to make it safer. I am the Director of the Food System Institute, LLC, a food system risk management and research firm and I have been focused on protecting our food system for years in prior positions as Director of the National Center for Food Protection and Defense, as Associate Professor of Food Systems in the Department of Veterinary Population Medicine at the University of Minnesota and as Vice President of Global Food and Beverage Research Development and Engineering for Ecolab.

As is often the case, there are a number of ongoing public and animal health concerns that are related to potential food and feed contamination. The pet deaths that appear to be attributable to jerky treats imported from China have raised concerns among many that we are exposed to unknown risks due to imported food products and food ingredients. The most commonly identified type of treats are chicken jerky treats, which may also raise concern that the USDA’s designation of China as an “equal to” country for processed poultry will expose consumers to additional unknown risks. The potential that the ongoing Porcine Epidemic Diarrhea virus (PEDv) outbreak in swine may be attributable, at least in part, to feed is another example of uncertain risk from food and feed. Among many possible solutions to these, and other, food system concerns are demands for increased regulatory inspection and clearer source labeling on consumers’ packages, more commonly known as COOL or Country Of Origin Labeling. Before addressing either of those approaches, I would first like to provide a bit of context around our current food and agriculture system and what that implies for how either increased inspection or COOL could be effectively implemented.

Everyone realizes that we are sustained by a global food and agriculture system, but it is often hard to conceptualize how global it really is. In the first four months of this year, January through April, we imported food and raw agricultural products from more than 179 countries with a total value of over \$48 billion and weighing over 26 million metric tons. When we focus on food items classified as “consumer oriented”, which are products close to the form in which consumers would purchase them and not intermediate products like raw cocoa beans, we imported \$23.5 billion and nearly 11 million metric tons of these products in the same four months. That is roughly 75

pounds per person in the U.S. for the first four months of the year or over half a pound per day. So at a basic level, we are always eating foods that come from around the world as well as those from around the block, and that is something that has been steadily growing over the last decade. In 2004, our imports of “consumer oriented” products were only \$12 billion and 8 million tons or about 56 pounds per person in the first four months of the year. Those imports come from a broad range of facilities, with over 6,800 USDA-FSIS approved domestic facilities and over 250 approved foreign facilities while over 81,000 domestic and 115,000 firms are registered with the FDA to supply food to the U.S.

A significant challenge any consumer faces is figuring out the origin of each ingredient in any particular meal, but it is easier to understand where it could have come from. If your lunch today was a cheeseburger, French fries and milk, the last two are fairly straightforward. We are a big producer of both fluid milk and frozen French fries, with only five countries exporting frozen French fries to the US and five countries exporting fluid milk. In both cases the dominant source is Canada. That doesn't necessarily mean that all components of these food items are domestically sourced, however, as Canada, Chile and Mexico have historically been exporters of salt to the U.S. that may be on the French Fries and the vitamins added to the milk are primarily imported from China and a few other countries. The cheeseburger is a bit more complicated as the bun, burger, cheese, tomato, lettuce, pickle, onion, ketchup, mustard and seasoning, ten consumer level items, can contain 75 or more individual ingredients. Last year those ingredients were imported to some degree from over 55 countries. That means that, including domestic sourcing, the burger has billions of possible combinations of country of origin for its various ingredients.

While any specific burger obviously has a dramatically smaller range of sourcing options, this simple lunch illustrates both the complexity of the food system and the hurdles of country of origin labeling. If it is winter, the lettuce and tomato are usually imported from Mexico and Central America. The ground beef is often a mix of domestic and imported sources, from Australia and other sources, to meet quality demands. The bun, ketchup, mustard and seasoning usually include imported ingredients from a number of countries, especially since many spices don't grow in our climate. While a company could verify what the country of origin was for each ingredient, under COOL the challenge becomes how to label and where to put this information? This is further complicated by the fact that sources, especially for seasonal ingredients, may change several times a year. Ingredients may also be comingled in entirely different ways in a relatively short time frame based on availability, cost or quality parameters. Clearly, accurate and informative labeling on country of origin is thus a challenge. With the increasing use of web based solutions, the only reasonable option might be to provide the information in something like a QR Code that you see on many consumer products that would take the consumer to a website for details that cannot be reasonably provided on the label. Whatever the solution, including the potential of reducing sourcing complexity to make COOL more easily achievable, there is an additional expense that would have to be added to the retail cost of the product, and consumers will ultimately bear the burden of the increased cost of foods reaching their table.

The scale and complexity of the food system we depend on contributes significantly to the challenge of ensuring that our food is always safe and complicates our ability to rapidly figure out what has happened when something goes wrong. The pet deaths linked to pet treats from China illustrate these challenges. As a happy “parent” of Storm, an Aussie-doodle, the pet treat related deaths are personally troubling. Storm gets a little treat after our walk every night, so I have been following this ongoing concern closely. While the first cases were reported in 2007, no causative agent has yet been identified. This is even though FDA has conducted extensive testing of a broad range of treats, including treats provided by owners of pets who passed away, and no probable agent has been found. Without knowing what is causing the illnesses, and thus no means of screening products to ensure that they are safe, firms and authorities have limited options. Purina has moved to a dedicated, direct supply chain in China for its production of chicken pet treats. By controlling all aspects of production from hatching through slaughter and processing, Purina can better ensure the integrity and safety of their Chinese sourced chicken pet treats. Until we know what the cause of illness is, however, they don’t have total assurance that this intensive effort has eliminated the potential for further illnesses.

If the problem is a low-level contaminant where cumulative dose is the reason for the illnesses, it could unfortunately take much more time to figure out. There are more unknowns and uncertainties with respect to chronic versus acute toxicities, whether the food is intended for human or animal consumption. Chronic toxicity becomes even more important for both infants and pets who tend to have the same limited sets of foods over time so that a low level of contamination in the treats, something not considered an acute health risk, could lead to chronic illness with the steady dose of treats over time. Additionally, pets and infants also consume more food per pound of body weight than adults and often have a lower threshold for illness than adults.

Regardless of whether the cause of illness was known, inspection and testing have limited utility in protecting public health for contaminants that are low-level and sporadic. Regulatory inspections and vendor audits have many benefits, including ensuring that the food safety system design meets regulatory or customer requirements. Inspections and audits also provide an awareness and education opportunity for all involved. They do not, however, provide an assurance of no probability of foodborne illness. If that were the case, there would never be an outbreak related to USDA inspected facilities since they have inspectors on site every day. In order to make sure that there are no deviations that could possibly lead to illness, it would require 100% inspection of every step from farm to table, and that is simply not achievable. Under the Food Safety Modernization Act (FSMA) the requirement is to inspect high-risk facilities at least every three years and other facilities every five years, and that is already well beyond the resources currently available to FDA. That is in part why third party audits are part of the FSMA framework, but even an annual inspection doesn’t ensure that any individual food is safe.

Similarly, for product testing to provide 100% assurance of no contamination would require testing of all servings of the product, leaving very little to actually eat. That is not to say that product testing isn't an important part of an effective food safety plan. Product testing provides a means of monitoring the food safety system to ensure that it is under control. The first step, however, is to know what to test for, and in the case of the pet treats that is still an unknown. Once you know what to test for, such as Salmonella in a meat or poultry product, you have to decide how you will test and what your sampling strategy will be. For example, for ready-to-cook poultry products the USDA requirement involves one sample per day over a fixed period of time period where an acceptable level is determined by having a prevalence of positive samples less than a predetermined performance standard. This testing approach can potentially be improved by quantifying the amount of contaminant in the product. This enumeration approach adds value because toxicity or infectivity is based on ingestion of a sufficient dose of pathogen. Consequently, knowing that one source or point in the system has infrequent, but significant or high level contamination can be far more valuable than knowing that all sources or points have low, infrequent contamination. This is especially the case for ready-to-cook products where some level of foodborne illness organisms is acceptable.

Since the pet treats of concern are sourced from China there is heightened concern about the granting of "equal to" status for processed poultry from China that was approved last year. It is important to recognize that this was not a capricious decision by USDA, but instead the next step in a process that began a decade ago. Under the provisions of the World Trade Organization, a country can require any scientifically justifiable safety standards to protect its public so long as the requirements are equivalent for domestic and foreign firms. That is precisely what USDA has done, and it is why poultry slaughter in China is not yet granted "equal to" status as the Chinese regulatory system and facilities have not yet been found to be "equal to" those in the U.S. That does not mean that consumers are going to be exposed to dramatically new foodborne illness threats when processed poultry from China begins arriving in the U.S. In the last four years there have been five multi-state foodborne illness outbreaks associated with U.S. poultry, so there is already some level of foodborne illness risk associated with poultry. I can tell you that one of the absolute best poultry plants I have ever conducted an audit on was in China. That facility's food safety system was driven more by its company's standards and customer expectations than any regulatory requirements, and that is very common both domestically and overseas. While there may be some baseline risk of illness due to consumption of food from any of the more than 179 countries we import food from, as was the case for that Chinese poultry facility, the real answer lies in the specific food systems and how they are managed. That is one of the strong points of FSMA as it will require firms to ensure that their suppliers, wherever they are, are meeting FDA requirements and thus some level of importer/supplier information sharing, directly or through the exporter, will have to occur. In addition, firms need to go beyond that minimum to certify that their suppliers meet the unique requirements of the intended finished product, and most firms already do that.

A different type of food and feed safety concern has been raised by the ongoing Porcine Epidemic Diarrhea Virus (PEDv) outbreak in the swine industry. Rabobank, a leading banking and financial firm focused on food and agriculture, has estimated that PEDv has impacted 60% of the U.S. sow herd and may reduce pork production by up to 7%. This would be the lowest pork production in the U.S. in over 30 years. While the pathway for PEDv spread to farms has not been confirmed, feed, or how the feed gets to the farm, has been strongly implicated. Swine transportation vehicles have also been identified as a potential source. Testing to date, however, has not been able to confirm that PEDv contaminated feed has been the source of any specific outbreak or that there is broad contamination of feed or feed ingredients with PEDv. This situation further illustrates the challenges of both testing as an intervention strategy and the current feed system complexity. Unlike the pet treat problem, with PEDv it is not just the animal that eats the feed that will get sick. Since an individual pig that gets ill can further spread the disease to others in its herd, it only takes a fraction of a herd to initially contract the virus for it to infect a large portion of the herd. Given that PEDv has a relatively low infective dose, it would thus only require low level, sporadic contamination of the feed, a feed ingredient or its packaging to spread the virus broadly. So even a robust testing strategy that was capable of detecting live virus at a very low level of every batch of feed could not match the effective sampling strategy of then providing the feed to tens of thousands of pigs where only a few of the servings would have to be contaminated for the virus to spread.

Whether the source is a feed ingredient or ingredient packaging, finished feed or transportation of feed to farm that turns out to be the source of the outbreak, the scale and complexity of the feed system makes solving the problem a challenge. For example, there are over 1,140 production-animal feed mills in the country so if the source is a feed ingredient, following a particular ingredient from its production to consumption and then matching that to geographic patterns of illness becomes very complicated. Just as is the case for almost every other final food product, there is no one place where all of the information on how the global food and agriculture system puzzle pieces fit together is maintained. Through their agreements with their suppliers, however, firms are in the best position to do this for their own products, regardless of what country they or their suppliers are located in. Supply chain visibility then becomes part of a firm's PEDv mitigation strategy.

To summarize, the ongoing association of pet deaths with Chinese sourced animal treats is understandably raising concerns. Until the actual cause of the illnesses is understood, however, inspections upon import or product recalls provide no assurance of greater safety. Even when the source is understood, it will likely still be more effective for firms to manage their supply chains to mitigate continued exposure than to expect import testing to prevent entry of any possibly contaminated treats. While there are many who are concerned about the prospect of allowing poultry processed in China to gain entry into the U.S. market, the approval is fully consistent with the current laws, regulations and international agreements. There are already some very good poultry production facilities in China, so, as is the case for domestic sourcing, with appropriate due diligence importers will have the ability to maintain the

safety of their poultry products sourced in China. For both domestically produced and foreign sourced poultry, especially ready to cook poultry, the food safety system could be further strengthened by including enumeration of potentially pathogenic bacteria to the current prevalence approach. If the feed system is proven to be the means by which PEDv is spread to swine herds, sampling and testing of feed and feed ingredients will be a necessary but insufficient means of protecting the swine industry. Testing can provide assurances that the system is behaving as intended, but first the system has to be designed so that the potential for contamination has been mitigated in the first place. In each case, a firm's supply chain visibility is an important part of the food and feed safety strategy.

Ensuring that our food safety standards are met at every step from farm to consumer, pet or farm animal in the global food and agriculture system is a daunting challenge. While the enabling laws and regulations are different between the agencies within a country and between countries, they share to basic goal of preventing illness. On a day-to-day basis the responsibility of achieving that goal is taken up primarily by the firms themselves, with the oversight and support of their local regulatory authorities, as they have the visibility and control of their supply chain and facilities to do so. While overall the food and agriculture system does a remarkable job of safely feeding us, we should do better. Through effective partnerships across stakeholders, from industry to authorities to the research community, the encouraging thing is we can.