

White Paper
Importing Spices from China and Other Countries
October 2007

Overview

Early in 2007 the U.S. pet food industry faced massive recalls after wheat gluten used in a wide variety of pet food products was found to have been made with ingredients that had been intentionally adulterated with melamine. A number of pets died as a result of eating the contaminated food and the media spotlight focused on the tainted products from China. Other problems with products being imported from China soon followed. They included toothpaste, seafood, fresh ginger, tires and even toys.

Media reports brought about a growing consumer awareness of the large volume of food that is imported into the U.S. As the number of safety issues related to China increased, consumer concerns were heightened and consumer confidence eroded. The number of products, both food and non-food, whose safety is being questioned is continuing to grow, making it essential for companies importing goods from China and other countries to take steps to ensure the safety of those products.

While there have been safety issues related to produce grown in the United States, the focus of much activity has been on the safety of imported food.

Actions to Date Related to China Safety Concerns

The publicity surrounding the safety of imported goods from China served to highlight the growing number of food imports in general and the focus of much current U.S. activity related to import safety and the safety of imported foods has implications beyond products coming from China. A wide range of actions have been taken to date by the U.S. government and the Chinese government. This activity continues to unfold and change on a regular basis. Following is an overview of key activity at the time this paper was published.

The FDA created a "Food Safety Czar" position in May, appointing David Acheson, MD Assistant Commissioner for Food Protection. In that role he is to provide advice and counsel on strategic and substantive food safety and food defense matters.

An Executive Order was issued in July establishing an Interagency Working Group on Import Safety. Health and Human Services Secretary Mike Leavitt is chairing the group which is charged with issuing a strategy to promote the safety of imported products. An initial report was released in mid-September and follow up actions will be recommended.

On September 27, 2007, President Bush signed into law the FDA Amendments Act of 2007. An amendment included in the Act establishes an adulterated food registry. Companies must report significant contaminations of the food supply within 24 hours of determining a problem. This reporting requirement also gives the FDA the authority to require companies to do an investigation, issue additional reports, and notify affected parties in the supply chain. Companies

that fail to report incidents, falsify reports, or comply with follow-up FDA requirements would be subject to civil and criminal penalties.

A number of other bills have been drafted or introduced in Congress related to food safety and imported food safety. Congress is expected to take action on various pieces of legislation in 2007 to demonstrate that they are being proactive in protecting the U.S. food supply. Key provisions that impact the spice industry include:

- FDA inspection and certification of all foreign food facilities that import food to the U.S.
- Import user fees between \$20 and \$50 per line item with fees to be designated for import inspections, lab testing of import samples and research on testing techniques of intentionally adulterated food imports
- FDA authority to limit food imports to specific ports of entry
- Mandatory recall authority for the FDA

In mid-August, Chinese officials announced plans to test every shipment of food being exported beginning on September 1, 2007, in an effort to allay concerns about the safety of Chinese goods. There have been ongoing discussions between China and the U.S. about the safety concerns, with the U.S. offering technical assistance to address systemic problems. There has been some retaliation by the Chinese following bans on the import of some types of seafood which was found to contain unsafe drugs.

Spice Industry Concerns

A wide range of food products and ingredients are imported into the U.S. each year from China and other countries and in some instances lower cost is driving the move to these new sources. In general, spices are not sourced from outside of the U.S. to reduce costs. Rather, with a few exceptions, spices cannot be grown in the U.S. because of the climatic conditions they require. Spices are sourced from dozens of countries including India, Vietnam, Indonesia, Egypt, Grenada, Sri Lanka, Spain, Morocco, Turkey, Brazil and China.

Many spices from developing countries are sourced from thousands of farmers who grow, harvest and dry spices on small plots of land. Some spices grow wild and are gathered in many different areas of the source country. Most of these countries lack the infrastructure for modern food production. In many instances there are ongoing problems with pollution and a lack of clean potable water. There can also be difficulties with general quality controls and knowledge about the need for such controls.

When there is a problem with spices, tracing it back to its source can be difficult because of the vast number of small farmers whose crops are mixed together well before they reach the processing phase.

Because the spice industry has a long history of sourcing products from developing countries there is a great deal of experience in dealing with potential problems like microbial contaminants such as *Salmonella* and *E. coli*. Recent incidents involving adulteration with illegal food dyes have presented a different challenge in ensuring the safety of spices.

The spice industry sources a number of spices from China, including ginger, star anise, garlic and onion. The amount of garlic sourced from China has risen dramatically in recent years as U.S. growers cut back on their production in response to lower prices for Chinese garlic that made it difficult to compete. It is estimated that China produces 75% of the world's garlic and almost half of the garlic sold in the U.S. today is grown in China.

There are a number of challenges facing companies that use garlic grown and processed in China. Garlic is a commodity in China and there are two distinct markets, one for fresh garlic and one for dehydrated garlic. Most of the raw material is processed at small factories that dry the garlic flakes and sell it to processors. There are also many small factories that grind the garlic flakes and then sell that to processors. As a result, the dehydrated garlic can change hands several times, making traceability difficult.

These various factors lead to some degree of risk for the spice industry that must be managed to ensure the safety of spices.

Risk Mitigation

Recognizing that there is a degree of risk inherent in importing food into the U.S. is an essential first step in ensuring the safety of the product. The establishment of systems and processes to mitigate that risk is the most effective means to deliver clean, safe spice, with a variety of issues to be addressed. Following are the key areas to address.

Know your ingredients

Each ingredient should have a documented specification clearly identifying the attributes that define composition quality, product safety, representation and compliance with U.S. legislation. Specifications should include tolerances and methods for assessing those attributes. Certificate of Analysis requirements should be established if any of the attributes are of significant importance to the finished goods and validation should be conducted based upon the historical performance of an ingredient's supplier. The degree of control exercised should be appropriate to the level of risk posed by the food product. Companies need to monitor changes in crop size and the availability of ingredients and be aware that significant fluctuations can increase the potential for economic adulteration as producers struggle to meet demand.

Control and/or know your supply chain

Managing the supply chain is critical to mitigating risk, although the nature of the spice industry can make this particularly challenging. Lot coding of raw materials is essential and traceability needs to be established throughout the supply chain, if possible back to the grower. When that is not possible, documentation should begin with the first processor of the ingredient. It is important to have a relationship with the processor so that you understand and trust that appropriate measures related to food safety are being taken. Ensure that you clearly communicate and document your expectations related to quality systems, food safety, which may include specific concerns such as microbiology, chemical and physical hazards, extraneous matter, good manufacturing practices and good agricultural practices. ASTA recommends that suppliers have a HACCP program in place. Other recommended programs include pest control, Good Manufacturing Practices, sanitation and employee training. These requirements are best communicated in the native language of the processor to reduce the odds of a misunderstanding.

Develop a program to ensure that non-conformance is identified and communicated to the supplier for improvement. Utilize non-conformance reports to improve supplier performance. It is also essential to have an allergen control program in place to ensure compliance in this key area.

A final key element is to research the FDA Detentions/Import Alerts/Recall information on both ingredient risk and processor risk can be found at http://www.fda.gov/ora/oasis/ora_ref_cntry.html.

Audit overseas facilities

It is important to validate the steps taken to control and know your supply chain to ensure that the standards you expect are being met. This should be done through the use of an audit system using both your own personnel and third party auditors. Your company's internal personnel can conduct an initial audit to approve a potential supplier by ensuring that your specific product quality and food safety requirements can be met. The audit process should be used to validate that programs are in place to prevent food safety problems. All suppliers' HACCP plans should be reviewed to ensure they are based on data and scientific references. An ongoing program of maintenance audits needs to be developed based on supplier and ingredient risks, past audit performance and ongoing ingredient performance.

Ensure contingency plans are in place for interruptions in the supply chain.

It is important that you be able to continue to meet contractual obligations with your customers; making it essential that you have contingency plans in place should there be an interruption in your normal supply chain. Make certain that you have other trusted, audited suppliers in place that you can turn to should problems develop in one area.

How to Deal with Customer Questions and Demands

Consumers are demanding reassurances that the food they eat is safe and such reassurances are also being sought by the customers of food ingredient companies. There are a number of steps that suppliers can take to address the questions that are commonly asked.

It can be common to view testing as a way to ensure the safety of spices. In some instances this can be effective, however, it is not reasonable to test for everything and it is impossible to test for the unknown. For example, testing initially would not have turned up the Sudan Red adulteration because no one knew to test for the illegal dye. Quality and safety are best ensured through risk mitigation and process control, not testing.

Some customers are specifying that spices not be sourced from China but from other countries instead. Country of origin cannot guarantee safety, particularly with spices because of how and where they are grown.

Maintaining good relationships with customers and strong communication is essential here to allow for an honest dialogue about the best steps to take to ensure safe and quality spice that meets customer expectations.

ASTA Activities and Resources

ASTA provides the latest information on activity related to food safety and concerns with China on the ASTA Web site at www.astaspice.org and in the monthly issues of *ASTA Advocate* and *FYI ASTA*.

ASTA is actively involved in analyzing and developing a strategy to deal with food safety and food import legislation that is being introduced. Our intent is to help shape the legislative outcome to ensure the safety of imported foods without compromising the supply or causing economic hardship to ASTA members. ASTA is also working with a large group of food and importing associations including the Grocery Manufacturers Association/Food Processors Association, to maximize the influence of the industries most impacted by this legislation. The ASTA Regulatory Workshop held in October was developed to provide much greater detail on the legislation and work underway in Washington DC on food safety.

The GMA/SAFE Spice Audit is available for facilities worldwide. Further information can be found at www.gma-safe.org/fpa/faq_supplier.htm

ASTA members can download the ASTA HACCP Guide free of charge from the ASTA Web site at www.astaspice.org. Non members should contact the ASTA office at info@astaspice.org for information on how to purchase a copy.

Links to relevant Web sites:

FDA:

- <http://www.fda.gov/>
- <http://www.cfsan.fda.gov/list.html>
- <http://www.foodsafety.gov/~dms/fs-toc.html>
- <http://www.foodsafety.gov/>
- <http://www.cfsan.fda.gov/~dms/defterr.html>
- <http://www.cfsan.fda.gov/~dms/fsbtact.html>
- <http://www.cfsan.fda.gov/~lrd/imports.html>

Interagency Working Group on Import Safety: www.importsafety.gov