



Know What You Eat

FoodSentry.org

Introduction to the Global Food Safety Problem

It is truly difficult to fully comprehend the size, scope and interrelationships of the industries and activities that bring food to our tables.

In addition to the enormous amount of food produced in the U.S., a rapidly increasing amount of the food on our tables comes from foreign producers. In 2011, the U.S. imported more than 615 million tons of food worth more than \$102 billion. What's more, some of our most popular foods are increasingly foreign-sourced, with seafood and shellfish, fruits and vegetables topping the list. About 90 percent of our seafood and two-thirds of our fruits and vegetables come from outside the United States.

This is cause for great concern; some of our primary foreign sources for food – China, India, Thailand, Vietnam, Indonesia, Mexico – have ineffective and/or poorly enforced food safety regimes in place.

The path of any individual food may originate in any of more than 150 countries that supply food to the U.S., pass through any of 300,000 foreign food processing and preparation facilities, and enter the U.S. through any of 350 ports-of-entry. This year, more than 24 million shipments of food will enter the United States. That number increases by about 10 percent per year.

Food safety in the United States is not just a domestic issue; it is global.

Who is minding the store?

Only about 2 percent of imported food gets inspected by the FDA. Even less actually gets tested in a lab. Burdened with many well-documented bureaucratic and operational inefficiencies, the U.S. Food and Drug Administration (FDA) has an unenviable record when it comes to keeping food safe. Subcommittees in Congress, the Government Accountability Office and numerous consumer organizations have many times over the years pointed out the myriad ways in which the FDA could improve, but to no avail. The lion's share of the agency's resources goes to drug testing and approval. Added to a not-invented-here mentality that is common to many regulatory agencies, it has literally taken an act of Congress to tell FDA how to do its job. The Food Safety Modernization Act (FSMA) of 2011 spelled out in detail how the agency needs to improve its future operations. But it won't happen soon. The program remains significantly underfunded and is already missing deadlines.

For comparison, most advanced countries test at least 10 percent of all foods they import, with some testing as much as 50 percent under certain conditions.

What this all means is that we are increasingly at risk of encountering food that is not safe for consumption. And even with only a 2-percent inspection rate, there are still thousands of food recalls, warning letters and import refusals each year. What about that other 98 percent?

In addition to its imported-food inspection role, the FDA has a responsibility to inspect foreign food production facilities to try to identify threats to food from poor production processes early on. This program is a complete failure. While the FDA inspected 46 percent of foreign drug manufacturing facilities and 30 percent of medical device manufacturing facilities between 2002 and 2007, it only inspected 1 percent of foreign food firms in the same period.

For four years, the open-source intelligence analysts who comprise the Food Sentry technical team worked under contract to the FDA. Our task was to discover, assess and report risky food of foreign origin to the FDA before it reached U.S. ports of entry. The purpose of this activity was to increase the FDA's ability to discover and block entry of risky food before it entered the U.S.

Much of the previously unavailable information we developed was used, but more was not. We measurably improved FDA's ability to identify risky food products en route to the United States. But often, no action was taken by the agency.

As our contract expired, we decided to take our skills and abilities directly to the consumer; Food Sentry was born.

What are the risks?

The Centers for Disease Control and Prevention (CDC) estimates that one in six of us will be stricken by food poisoning in a given year. That's about 48 million people. Some 140,000 of us will be hospitalized with a foodborne illness and more than 3,000 will die. Some organizations place these numbers much higher. Children, the elderly and the chronically ill are especially at risk.

But food poisoning is really just the tip of the iceberg. The chronic effects of regularly ingesting food contaminated with toxic metals, hundreds of different pesticides and chemicals, or contaminants introduced by economically motivated adulteration (EMA) may be just as concerning.

Risks to food can be introduced anywhere in the supply chain, either intentionally as with EMA, or unintentionally, such as with disruption of the cold supply chain, undetected contamination with pathogens in processing or in the field, poor quality control processes, and so on.

Enter Food Sentry

We at Food Sentry are acutely aware of the scope of the food safety and food risk problems that we all confront on a daily basis. We are experts in risk discovery and identification, and we are relentless in our pursuit of the facts of the issues.

We understand that there are many agendas in play and that much of the information is ambiguous or even contradictory. New science on food risk and food safety is published every day. We have learned to separate poor science and bad reporting from science that is valid and reporting that is based on a good understanding of how the science was done. Our goal is to make sense of the information glut, ferret out the information you can use and make sure you have it. If there is no conclusive answer to a question, we will make sure you know that, too.

The remainder of this document presents the features and products created by Food Sentry to help consumers become more aware about the food they consume. If any information is unclear or more is desired, we welcome inquiries to info@foodsentry.org.

Food Sentry – Credo

Food Sentry was born of our experience in identifying risks related to the ever-increasing amount of food being imported into the United States.

We did this work over several years under contract to the FDA, which has as one of its primary responsibilities the protection of U.S. consumers from unsafe food. We helped them develop new processes, techniques and information that measurably improved the FDA's ability to target and successfully find and stop bad food at the border.

For us, that wasn't enough. There was a lot of information we were developing that wasn't getting to consumers at all.

Too many foreign countries that provide our food have poor or ineffective regulatory structures in place. These realities result in many problems that manifest themselves in various ways: Toxic metal contamination in food-growing areas; poorly controlled food-production and processing; broken cold supply chains; large black markets; economically motivated adulteration; use of illegal pesticides, antibiotics, and steroids...the list grows daily. As a result, problems created by their food safety practices become our own.

The risk is there and it is increasing. Food Sentry is our way of bringing all of the information we find directly to you, from risk right here at home to those risky foods making their way now to the US.

Our mission is to inform, advise and educate. We at Food Sentry think that as consumers we all need to know as much as we can about the potential risks posed by the food we buy. A key part of our mission is to identify risks in foods before they get to the US, to predict

where the problems are likely to be and make that information available to you so you can make informed choices regarding food purchase and consumption.

Our team of open-source intelligence analysts is experienced and passionate about their work. All of them work in foreign languages; in fact, it's a requirement to be on the team. The reason is that very much of the critical information we collect isn't in English and never will be.

Using its expertise, Food Sentry aims to provide clarity, insight, and peace of mind to consumers with regard to the complex networks and relationships that comprise our food systems. We will constantly provide information for your education that will make you a more informed and intelligent shopper and consumer.

We are focused, we are passionate and we believe that accurate, timely and expert food risk knowledge is an important way for all of us to improve our own lives and the lives of those we care about.

Join us in this work. Tell us about food risks you've noticed; ask us about problems that are developing. Together we can make our food safer.

Food Sentry Features and Products

Ask the Sentry

Ask the Sentry is a way for you to ask our analytic team about a specific food safety issue that you would like to know more about. We will investigate the issue identified and provide our findings to all of our subscribers.

Some topics are complex and may require time to develop the research and analysis. Others may be more straightforward. In any case, we will build the issues into our research activities and provide the best answer available that is supported by the facts.

We get a lot of queries. We'll do our best to get to them all, but we prioritize our work based on the level of interest we see on a particular issue.

Food Recalls and Import Refusals

Food Sentry provides condensed, easy-to-read food recall information published by the U.S. Food and Drug Administration (FDA) and the U.S. Department of Agriculture's Food Safety Inspection Service (FSIS) within hours of it being available.

This abbreviated Food Sentry version contains critical information organized so that you can quickly determine whether you may be affected by the recall by looking at the product name, the geographical area affected and, if provided, the stores where the recalled product is for sale.

We also report foods that have been refused entry into the US. They have been identified by inspectors as being violative in some manner; these specific shipments should not make their way to grocery stores. We include these items in our recall data simply because it is entirely possible that some of the product may have been missed by inspectors and made its way into the US. We use this data to identify trends, foods with a high incidence of violation and countries that are associated with violative shipments. Remember that the FDA inspects less than 2 percent of food imports arriving at US ports of entry.

For more information, we provide a link to the recall announcement itself and, if available, a link to a picture of the recalled product.

In response to many requests, we are also providing pet food recall information as a service to our subscribers.

Warning Letters

Food Sentry publishes condensed and simplified versions of food-related Warning Letters issued by the U.S. Food and Drug Administration to companies which have been identified as engaging in violative practices in food production.

The FDA issues Warning Letters on the basis of inspections or investigations of food production facilities. If a practice in violation of the Federal Food, Drug and Cosmetic Act (FFDCA) is found, a Warning Letter is issued to advise the producer to voluntarily remedy the problem.

Warning Letters are not particularly timely, but they do serve notice as indicators of problematic practices in the named company. Be aware that because of the time delay between inspection and publishing the Warning Letter, the violative practice may have been remedied by the time you read the report. Unfortunately, the FDA will only provide that information in response to a FOIA request.

We use this information to track company performance over the long term.

We are providing it to our subscribers so that you can gain some insight into what kinds of problems have been identified and what companies have engaged in them.

Food Sentry Import Alerts

Food Sentry analysts have developed hundreds of sources globally to identify and characterize safety risks for foods that may be imported to the United States.

Very many of these resources are not in English and likely never will be. Food Sentry has taken the information and packaged it for you in Food Sentry Import Alerts.

These Alerts identify the country of origin and the product that has a problem, as well as a description of what the problem is and the date it was reported.

Because supply-chain traceability is not yet widely deployed, it is often difficult to determine if the named product will find its way to U.S. consumers. If we have confirmed knowledge that the product is en route to the U.S., we will say so. Even if we can't confirm that the product is en route to the U.S., we will still report the problem for two reasons:

It is entirely possible that the product will be or is in the United States but hasn't yet been discovered or identified as a problem by U.S. authorities;

Food Sentry subscribers planning foreign travel may want information about food problems at their destination(s).

We also include other useful information about the product. First, we identify the specific contaminant, with a description for you, and will usually quantify the problem in standard units, such as Parts Per Million (ppm), Colony Forming Units (CFU), and so on if specific testing results are available. We will also list the FDA standard for the contaminant in the particular product if one exists.

It is important to understand that for many, many contaminants, there is no universally agreed-upon standard. Each country may have its own, and international bodies like the UN's WHO and FAO have their standards. Some of them are less than, and some of them are more than US FDA standards. We provide you the FDA standard for reference so that you have a basis for comparison to use to make your own decision about the food's risk.

Important: The US FDA does not have standards or approved limits and does not routinely test for certain substances that may be reported by other entities. For example, while many countries regularly test for toxic metals in food, the FDA does not.

We will also list manufacturer, exporter and/or brand if available.

Food Sentry's Food Risk Rating System

The purpose of the Food Sentry Food Risk Rating System is to help consumers make safer food choices by providing them with advice and information on risks to foods they may encounter while shopping.

There are tens of thousands of food products available in a typical grocery store. We are initially concentrating on these foods:

- Meats
- Seafood
- Fruits
- Vegetables
- Herbs and Spices
- Dairy
- Nuts and Seeds
- Grains

We are concentrating on these foods for three reasons:

1. They represent raw or minimally processed foods that have a naturally high inherent safety risk (seafood is especially dangerous, which is why it is currently the most highly regulated food in the world) and have a long history of risk in the marketplace;
2. They are foods that almost everyone buys on a routine basis;
3. The US imports very large quantities of each of these food categories from countries that have little or no effective food safety regulatory structure.

Risk

There are many ways that risk is introduced to food, and many different kinds of risk. The most serious risks include those that can cause acute illness, with rapid onset of symptoms that can rapidly worsen without treatment. Typically, these are microbiological pathogens like *E.coli*, *Salmonella*, Norovirus, *Listeria monocytogenes*, Hepatitis A and so on. Other sometimes more insidious risks include contamination with toxic metals, most often arsenic, lead, mercury and cadmium, as well as decomposition, filth and substances such as steroids, hormones and antibiotics.

Pesticide contamination is almost always present to some degree in conventionally grown foods, and sometimes even in organic foods. Organophosphate pesticide contamination is particularly worrisome as it is neurotoxic and certain persons are highly vulnerable, especially fetuses and children. While there are established 'safe' limits for many pesticides, these limits are very frequently violated. Finally, many foreign countries use pesticides that are banned in the US and that go undetected in routine testing at U.S. borders.

Risks to food can be introduced anywhere in the supply chain, either intentionally as with Economically Motivated Adulteration (EMA), or unintentionally, such as with disruption of the cold supply chain, undetected contamination with pathogens in processing or in the field, poor quality control processes, and so on.

Finally, a factor that contributes broadly to risk to imported food products is the FDA's ability to inspect less than 2 percent of food imports. While its detection success on the 2 percent of inspected foods has improved due to the adoption of some predictive modeling, the vast majority of imported foods do not get inspected.

Risk Rating

Food Sentry analysts study and analyze a very wide variety of data to develop risk ratings for various foods. This information comes from numerous domestic data sources as well as global collection spanning more than 115 countries that import food to the United States. Sources include publicly available information such as data collected by commercial enterprises, governments, non-governmental organizations (NGO), foreign-government reporting, lab testing results conducted by regulators and consumer groups domestically and worldwide, and Food Sentry's own extensive database of its ongoing research and analysis of reported risks to food.

Typically, the only information routinely available to a consumer about the foods listed above is the country of origin. We have designed our rating system so that if the consumer knows the name of the product and the country of origin, Food Sentry will produce a relative ranking of all countries providing that food to U.S. consumers, with five Food Sentry shields indicating a preferred product, and one shield indicating a product for which there may be better choices.

Food Sentry rankings are not based solely on country of origin, although that is a factor. Country of origin is simply a common element that every consumer can identify to a product.

Many elements go into Food Safety's proprietary, patent-pending rating scoring algorithm. Analysts have exhaustively researched information on the frequency of problems with a given food from various countries, evaluated the kinds of problems they see with the foods (microbiological, pesticides, contaminants, etc.), characterized the regulatory infrastructure, performance standards and enforcement efficacy of various countries, and much more. Ratings are updated as often as new information becomes available.

Suppose you are at the grocery store looking at frozen tilapia fillets. You are most likely to find frozen tilapia fillets in the U.S. from the following countries: United States, China, Indonesia, Taiwan, Thailand, Ecuador, Honduras and Panama. In the rating module, simply identify the product category of interest (seafood); a drop-down list appears. Select 'tilapia, frozen fillet;' a list of countries that are sources for frozen tilapia fillets in the U.S. appears, with a rating for each one.



These are relative, not absolute ratings. The country with the most Food Sentry shields is that country whose product is the least likely to be risky to consume, compared to the other countries on the list.

Not rated?

Imports of food to the United States are increasing annually, not only in volume but also with new products being continually introduced. If you encounter a product not listed in Food Sentry's rating system, you can let us know submitting the information in a form on the website.

Need More Information?

Food Sentry, LLC is located at 5901 Indian School Road NE in beautiful Albuquerque, NM.

Media inquiries can be sent to Dr. Clinton R. Lanier at clanier@foodsentry.org, or call him directly at 575-323-8900.

Technical, membership and general inquiries can be sent through the Food Sentry website at <http://www.foodsentry.org/contact-us/> or by emailing info@foodsentry.org.