New US lab trains global scientists in food safety

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Global food trade is a big and risky business. About one trillion dollars worth of food is traded every year around the world, but only a tiny portion gets tested for contaminants -- ranging from about one percent of imports in the United States to about 10 percent in Japan.

And yet, at least 1.8 million people die from diarrheal disease caused by contaminated food or water annually, and "developing countries bear the brunt of the problem," according to the World Health Organization.

Considering the high costs of an outbreak -- both in human lives and in money lost -- world governments are searching for ways to improve food safety without actually boosting their surveillance of what enters their borders.

A new approach to the dilemma was unveiled this week at a university campus on the outskirts of the US capital, at a facility called the International Food Safety Training Laboratory.

The IFSTL is based in a handful of rooms on the campus of the University of Maryland where US government regulators and teachers equipped with advanced testing technologies train international scientists in the US food safety.

Lab manager Janie DuBois said it is the first lab of its kind in the world to tackle a variety of techniques year round, ranging from pesticide residue to microtoxins and bacterial pathogens like salmonella and E.coli.

"Everybody wants to know what the regulation is and understand how they are supposed to implement their scientific program to meet that regulation," DuBois said.

"The United States is not imposing its methods on other countries," she added. "There is really a grander goal of harmonization of techniques."

Such practices are needed because food imports into the United States have nearly doubled in the past decade, up from $41 billion annually in 1998 to $78 billion in 2007, according to US Department of Agriculture figures.

While deadly outbreaks -- such as the recent spread of E.coli in Germany and France that was traced to contaminated Egyptian fenugreek -- grab headlines and rattle consumers, the IFSTL was not created in response to any particular scare.

Instead, it was a change to US law, known as the Food Safety and Modernization Act, signed by President Barack Obama.

The law requires the US government to "expand the technical, scientific and regulatory food safety of foreign governments, and their respective food industries, from which foods are exported to the United States."

So now, for a cost of about $2,500 per week per student, governments and private businesses can send their food safety scientists to the US lab for hands-on training.

"We learned many things here we didn't know before," said Jackie Han, a Chinese food additives testing supervisor at Qingdao Hr-Qau Inspection Limited, who donned a white lab coat and spoke to AFP during a break in between sessions this week.

"There is not much information in China so we come out here to get the real thing," said Han, who was among about a dozen visiting students from China and Indonesia making up the lab's first-ever class.

"Our goal is to be the bridge between China and the foreign countries, between the food exporters and importers."

It may be good business for China, which is rapidly

increasing its US exports, to show its interest in keeping food safe, but it is also economical for the United States, which in turn can limit the burden on US inspectors.

To act otherwise when up to 60 percent of produce and 80 percent of seafood consumed in the United States comes from other countries, would be too expensive, said Paul Young, director of chemical analysis operations at Waters Corporation.

"Testing at import, while it is important for sure, is not the solution. The solution needs to be built into the production systems in the country of origin."

Waters provided equipment to the new lab, including a state of the art mass spectrometer.

The sophisticated machine enables scientists to test for "very large numbers of potential contaminants in a very short period of time and also to be able to detect them at exquisitely low concentrations," said Young.

Lab planning for the rest of this year is still under way, but organizers are aiming for 15-20 courses annually, with an eye to eventually replicating the model in other countries.

"The next step is building a global network of interconnected laboratories so they can share curricula and best practices," said Young.