

Traceability Can Help Combat Bioterrorism

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Prior to 9/11, if airline executives had fully understood the danger their industry faced from terrorism, we're confident they would have taken steps to reduce the risk and lessen the impact. It also seems certain these steps would have been one of the airlines' highest corporate priorities.

The National Academy of Sciences has raised a clarion call to the agrifood industry. The dangers cited in a recently-released NAS report have also been underscored in government briefings and at various industry conferences and private briefings. Just how real is the danger to the food industry? And what role, if any, can traceability play in defending ourselves?

The NAS report declared that "bioterrorism is now a reality" and concluded that the United States is vulnerable to agricultural bioterrorism and needs a comprehensive plan to defend against it. "Biological agents that could be used to harm crops or livestock are widely available and pose a major threat to U.S. agriculture," said Harley Moon, the Iowa State University veterinarian who chaired the study committee.

The report spotlighted the risk at raw material aggregation points such as grain elevators and cattle feedyards. "While a bioterrorism attack on U.S. agriculture is highly unlikely to result in famine or malnutrition, it could harm people, disrupt the economy, and cause widespread public concern and confusion," the NAS said.

How do you defend against the bioterrorist threat? The NAS study made several policy recommendations focused primarily on detection and public health response, advocating increased funding for laboratories and other public health infrastructure. Little attention was paid to the benefits of traceability, the tracking of appropriately-sized, discrete units of production through the food chain to provide frontline containment. While we believe that detection and response are critical, we also believe that containment reduces the impact and gives companies a way to protect consumers. Following a foot-and-mouth disease outbreak last year, British officials concluded that identifying the location of infected animals, and others with which they had contact, within hours—or, at most, a few days—along with current downstream location of specified animal by-products, was one of the keys to successful containment.

Given that U.S. food products have even a higher transportation component in their growth and processing than their U.K. counterparts, we need to know what has come from where and has been in contact with what other product throughout its life cycle.

Traceability is critical to this process. For example, if a recently arrived feedyard animal comes down with suspicious symptoms, an eartag identifying its origins and contacts

with other animals can help pinpoint in just a few hours what other animals and locations need to be checked.

A sick animal without identifying information is like an anthrax letter without a postmark—all post offices would be suspect, and containment resources would be spread way too thin. Knowing which other animals have come in contact with the victim would be exceedingly helpful. Learning the information in a matter of minutes or hours would be critical.

It is not surprising that traceability was overlooked as a key defense factor in the NAS study. The study had been in preparation for the past three years, well before the 9/11 disaster. The technologies and costs associated with traceability have changed markedly in recent years.

Value traceability needed

Another reason the NAS did not highlight traceability is negative reactions inspired by the notion of mandatory traceability. We share that concern. We've begun calling such requirements "regulatory traceability," which typically does nothing for the agri-food industry except add costs and provide a bit of an insurance policy.

Rather than mandating traceability, the agri-food industry should voluntarily embrace "value traceability" in ways that add value across the food chain. Value traceability increases profit through increased production efficiency brought about by tracking each discrete unit of production across multiple enterprises. Improved profitability would be the focus in addition to bioterrorism insurance.

Also, because value traceability has as its goal the continuous monitoring of the units of production through the production chain, concern about testing the system would vanish—the system would be tested every day. Appropriate ownership and location information could be captured by such a voluntary system for disclosure to the appropriate government agency only in the event of an actual emergency.

Each agri-food industry participant would control its own data flow and would determine who saw what. Value traceability would be used to support branding and marketing claims. The market would be the driver, not government.

Major companies should begin factoring voluntary value traceability into their work plans. Providing a path towards increased profitability while also gaining protection against bioterrorism is an important strategic initiative food industry executives can take to protect our industry, our employees and our customers.

The following checklist, developed from government and industry sources, outlines measures you can begin taking now to reduce outside threats.

- Have you identified potential threats to your operation?
- Do you have a process for assessing risks?
- Do you know the sources and/or origin of all ingredients?
- Are your suppliers appropriately licensed or permitted? Are ingredients and raw products packaged and labeled correctly?

- Have you taken steps to ensure that suppliers and transporters practice appropriate food security measures (e.g., auditing for compliance with food security measures that are contained in purchase and shipping contracts or letters of credit)?
- Do all of your facilities inspect incoming ingredients? Do you return products when there are signs of damage or tampering?
- Do you have systems in place for evaluating and testing incoming ingredients?
- Do you request locked and sealed vehicles/containers/railcars? Do you obtain seal numbers from the supplier and verify upon receipt?
- Can you reconcile the amount ordered and the amount listed on the invoice and shipping documents?
- Do you supervise off-loading of incoming ingredients?
- Do you investigate missing or extra stock or other irregularities outside a predetermined normal range of variability?
- Can you track ingredients and products at the individual unit of production level?
- Can you pinpoint and isolate individual units of production and the ingredients used in that product?

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