PRACTICE NOTE

Food Recall Operations: North Carolina Department of Agriculture and Consumer Services' Utilization of Internet Technologies to Track Effectiveness

PRACTICE
The North Carolina Department of Agriculture and Consumer Services (NCDA&CS) utilizes a Web site to track the effectiveness of its recall operations. NCDA&CS has also developed Web-based inspection forms that allow inspectors to input data directly into the Web site. This technology enhances NCDA&CS's ability to monitor recall operations and helps guide operational decision-making.

DESCRIPTION
A food recall incident may require NCDA&CS to coordinate a very large number of inspections within a short period of time. NCDA&CS officials recognized that their joint food emergency operations command center (JFEOCC) needed additional tools to enable its staff to monitor the recall operations and to analyze data generated by inspectors. To address this issue, NCDA&CS developed a Web site that serves as a database for recall operations. The Web site organizes and sorts recall compliance data, with which it can perform a variety of calculations (see Figure 1). Data from the Web site can be exported into other programs, such as Microsoft Excel and global positioning system mapping programs, for more sophisticated analyses. These tools allow NCDA&CS programmers to run queries and to develop digital maps that display inspected locations, recall compliance, and inspection dates (see Figure 2).

JFEOCC staff members use the Web site to track the progress of recall operations and to inform decision-making. The Web site helps guide JFEOCC operational decisions on such issues as whether to activate additional personnel or to expand the recall to include new distributors. JFEOCC staff members can also utilize the Web site to develop daily incident action plans, to construct recall strategies, and to coordinate recall inspectors. Through these activities, the Web site enhances the JFEOCC's situational awareness and contributes to more efficient and effective recall operations.

The Web site's benefits were demonstrated in July 2007 when Castleberry Food Company issued a voluntary recall of several food products due to contamination of *clostridium botulinum*, a bacterium that can cause botulism. NCDA&CS dispatched state health officials to conduct recall effectiveness checks of 250 locations that had recently received contaminated products. JFEOCC staff members used the Web site to monitor the effectiveness of recall operations and determined that

> For more information on food recall operations, please refer to the *Lessons Learned Information Sharing* Lesson Learned, Food Safety: Tracking Inspections during a Recall.

5,500 contaminated products were removed from 38% of inspected locations. The Web site proved to be a valuable tool that enabled the JFEOCC to manage recall operations, especially after the list of recalled products grew, which caused NCDA&CS to work with other state and local agencies to increase the number of inspectors.

During the Castleberry recall operations, NCDA&CS identified opportunities to further enhance the recall Web site. Initially, recall inspectors used Food and Drug Administration (FDA) forms to record data from each inspection. They then faxed or emailed the completed forms to the JFEOCC, where staff members manually inputted the data into the Web site. However, the very large number of forms received by the JFEOCC overwhelmed staff and delayed the entry of data into the Web site.

To address this issue, NCDA&CS developed an Internet-based form that enabled inspectors to submit data about an inspected location directly into the recall effectiveness Web site (see Figure 3). This eliminated the need to send the forms to the JFEOCC and to have staff members manually enter the data into the Web site. Inspectors accessed the Internet inspection form from a laptop computer by entering a username and password into the Web page. Inspectors recorded data about the inspection including the location, date, products offered for sale at the time of the visit, number of cans removed, and other pertinent information. The Internet-based form greatly improved JFEOCC monitoring and decision-making by providing it with real-time inspection data. The forms also reduced paperwork at the JFEOCC and freed up personnel who were entering inspection data.

NCDA&CS continues to improve its Internet-based recall form. Since the Castleberry Foods recall, NCDA&CS has enhanced the system to capture all of the information that is obtained on the hard-copy FDA form. This enables inspectors to record additional information using the Internet-based recall form.

CITATIONS

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DISCLAIMER

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State Event Totals by Day

Date	Total Locations	Locations with Product for Sale	Number Cans Removed from Sale	Percent Locations with Product
7/24/2007	6	2	31	33.33 %
7/27/2007	9	4	15	44.44 %
8/1/2007	39	0	0	0 %
8/2/2007	5229	285	3285	5.450 %
8/3/2007	3409	213	2464	6.248 %
8/4/2007	200	14	181	7 %
8/5/2007	10	1	1	10 %
8/6/2007	1425	74	407	5.192 %
8/7/2007	1132	38	191	3.356 %
8/8/2007	591	25	104	4.230 %
8/9/2007	288	5	7	1.736 %
8/10/2007	245	6	13	2.448 %
8/11/2007	10	0	0	0 %
8/12/2007	132	10	31	7.575 %
Totals	12725	677	6730	5.320 %

Report ran 8/14/2007 9:15:24 AM

Non Reported Counties A listing of counties that have no locations recorded in the database

Figure 1
NCDA&CS Recall Effectiveness Web site

Figure 2
NCDA&CS Recall Effectiveness Map

Figure 3
NCDA&CS Internet-Based Recall Inspection Form