Foodservice Operator's Preparedness for Bioterrorism

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Review

- Foodservice preparedness for terrorism is a concern
- Push to strengthen food defense
- Government & industry have role
  - Farm to table

Definition

- Food Defense (formally Food Security) is the prevention of deliberate contamination of food with the intent to cause harm or disruption

  - (Rasco & Bledsoe, 2005; NRA, 2003)

Public Foodservice Health Safety Roles

- CDC
- USDA/FSIS
- NRA
- FDA

CDC

- Research & education on:
  - Prevention & preparedness
  - Detection & surveillance
  - Laboratory, response & communication
    - (Khan, Morse & Lillibridge, 2000)

Needs

- Primary prevention program needed to avert terrorism

  - (Hintch,2004))

- Foodservice operators need to prepare

  - (Blank, 2002)

Many Threat Factors

- NBC agents
- Personnel screening
- Handling of visitors
- Handling of mail/ packages/receiving
- A security plan
- Training
- Physical security
- Laboratory safety

- Storage & inventory of hazardous chemicals
- Identification systems
- Restricted access areas
- Security of air, water and gases
- Security of computers and finished products

- (Draughon, 2002; Rasco & Bledsoe, 2005).

Crime Prevention through Environmental Design (CPTED)

- Natural surveillance
  - Outside activity
- Territorial measures
  - Property looks occupied
- Activity support
  - Place is busy
    - (Witherspoon, 2004)

USDA/FSIS Plan

- Outside security
- Interior security
- Safe receiving
- Personnel security

Literature/Problem

- Government agency and foodservice owner/operator confusion on protection responsibility exists

  - (Foxwell, 2003 and Blank, 2002)

- Numerous guidelines have been developed

- Foodservice owner/operators are not adapting guidelines

  - (Hintch, 2004 and Draughon, 2002)

National Restaurant Association (NRA)

- Threat is across food chain
- Focus on
  - Specific food item
  - Process
  - Company or business
    - (NRA, 2003)

NRA Elements

- Rank threats
- Eliminate threats by:
  - Establishing contingency plans, then:
    - Monitor
    - Control
    - Review

  - (NRA, 2003)

Hypothesis/Questions

1. Do commercial and non-commercial foodservice operators know and understand the threat of food terrorism?

2. What operation protection measures do they currently have in place?

3. What management contingency plans are in place for food defense?

Survey Methodology

Survey Methodology

- IRB approved
- Adapted with permission:
  - *Food Security: An Introduction$^{©}$* (2003), The National Restaurant Association Education Foundation
- Questions (Yes, No, Don't Know):
  - 1-14   Human Resource Elements
  - 15-40   Interior Elements of Facility
  - 41-49   Exterior Elements of Facility
- Demographics

Validity

- Adapted professional checklist
- Peer review
  - Homeland security
  - SME/author in food defense
  - Extension food safety specialist
  - State health inspector
- Pre-test
  - 40 school foodservice managers

Methodology

- Database
  - 3,000 South Dakota Foodservice Establishments
  - Random - county proportional
  - 1,000 operation sample
- Sampling
  - Mail out survey
  - Post card follow-up
  - Incentive packet for respondents
- Statistics
  - Frequency
  - ANOVA

Incentive Packet

- Employee Food Safety Video
- Refrigeration/Food Dial Thermometers
- Employee Food Safety Fact Sheets
- Security Guideline Brochures
- Retail Food Safety Pamphlets

Results/Response

1,000 Surveys	**n**	**%**
Returned Undeliverable	55	5.5

945 Surveys	**n**	**%**
Returned	117	12.3
Usable	114	12.1

Results/Demographics

Restaurant Type	n	%
Commercial Full Service	44	38.6
Commercial QSR	32	28.1
Commercial Convenience	4	3.5
School	1	.9
Correctional	1	.9
Contract On-site	1	.9
Other	28	24.6

Results/Demographics

Average Check	n	%
$9.99 or less	46	40.4
$10.00 to $19.99	37	32.5
$20.00 to $29.00*	8	7.0
$30.00 or higher	16	14.0

*.99 questionnaire gap

Results/Demographics

Management	n	%
Owner	85	64.6
Single-Unit	15	13.2
Multi-Unit Manager	5	4.4

Results/Preparedness

Item	n	%
No food protection plan (includes don't know)	80	72.7
Unprepared to respond to terrorism (includes don't know)	65	58.6

Results/ANOVA

- Significance at α=.05
  - Interior elements by familiarity with NRA Food Security pamphlet
  - Human, Interior, Exterior elements by preparedness to respond
  - Human, Interior, Exterior elements by having a plan in place

Results/Ranking

- See handout

Conclusions

- Implementation of food defense educational materials for foodservice managers has value
- Operators prioritize interior vice human resource or external

Conclusions

- Trust in employees hired
- Terrorism is low priority
- More training and resources needed to:
  - control deliveries and access to back of house
- Fairly good operator control
  - Tampering, water testing, internal access controls

Conclusions

- Existing food defense educational materials need to be used and implemented

Boundaries/Limitations

- South Dakota
- Power
  - Return rate of 12.4%

Future Research

○ Measure effects of training materials on preparedness – Longitudinal Study