P1-95 Needs Assessment Survey of Processors of Human Food in Tennessee for Meeting the

Entrepreneur is

not covered by

this rule

NO

Does operation

grow, harvest, pack,

or hold produce?

Sections 112.1 and

112.3 (c)

Not exempted

from Produce

Rule

Range

Range

Occasionally Availab

■ Rarely Available

Occasionally Availab

■ Frequently Available

Rarely Available

Occasionally Available

Frequently Available

Rarely Available Occasionally Availab

Years in Business

Number of Employee

Availability of

Training

Difference between foodborne illness

and spoilage

Procedures used to control

microorganisms

Temperature danger zone for

microorganisms to grow

Preventing cross-contamination when

making food products

Demographics of Tennessean

Requirements of the Food Safety Modernization Act

United States Department of Agriculture

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The produce is not

covered by the

Does the produce

rarely consumed

Exemption from

Produce Rule as

per section 112.6

YES

YES Section 112.2(a)(1)

ABSTRACT

Food Safety Modernization Act (FSMA) is the most extensive legislation related to the microbial safety of food manufacturing and agricultural production in the country since the 1930s. The legislation aims to ensure safety of imported as well as domestically-grown foods by shifting the focus from the response to contamination to preventive measures. The purpose of the current study was to assess the needs of the producers of human food in middle Tennessee for meeting the requirements of the legislation. A survey (n=17) with 5-point hedonic scales and the demographic section was administered to processors of human foods in middle Tennessee to assess their existing knowledge and training needs for meeting the regulatory requirements of Human Food Rule of the Food Safety Modernization Act (FSMA). The content was analyzed using OpenEpi software at type one error level of 5%. Number of employees in the processing plants were ranging from 1 to 8 (average 2 employees) and the processors were in business for an average of 8 years (ranging from 1 to 30 years). 58% of respondents indicated they do not know if they are exempt from Preventive Control for Human Food rule. 36% of processors indicated they possess "poor knowledge" of "Allergen concerns of food products," while 28% of processors indicated they possess "good knowledge" of "Hazards during transportation of food products." 33% of processors indicated they possess "average knowledge" of "Agencies that regulate food processing facilities and food products." Assimilating the needs of the manufacturers is of importance for emerging entrepreneurs, enhancing the prospect of expanding their operations which otherwise would have to remain low in profit in order to stay within the FSMA exemption "box."

FOOD SAFETY: A MOVING TARGET

- ☐ Unlike the vast majority of species, microbial communities have the ability of moving toward diversity and fitness through vertical and horizontal gene transfer mechanisms, enabling the "emergence" of organisms with new characteristics in response to evolving agricultural and manufacturing environments.
- ☐ Consequently, assuring the safety of the public against natural and anthropogenic microbial pathogens in food and agricultural commodities is a daunting task and a moving target.
- **Recent Epidemiological Study:** (Scallan et al., 2011)
- □ 47.8 million illnesses, 127,839 hospitalizations, and more than 3,037 deaths in the United States.
- □ 9.4 million illnesses, 55,961 hospitalizations, and 1,351 deaths are cause by 31 known foodborne agents.
- **Losses beyond Healthcare:** (Fouladkhah, 2017)
- ☐ In addition to consumer insecurity, foodborne diseases cause around \$77.7 billion for losses in productivity and economical losses.
- ☐ Approximately 30% of population are especially "at risk" for foodborne diseases

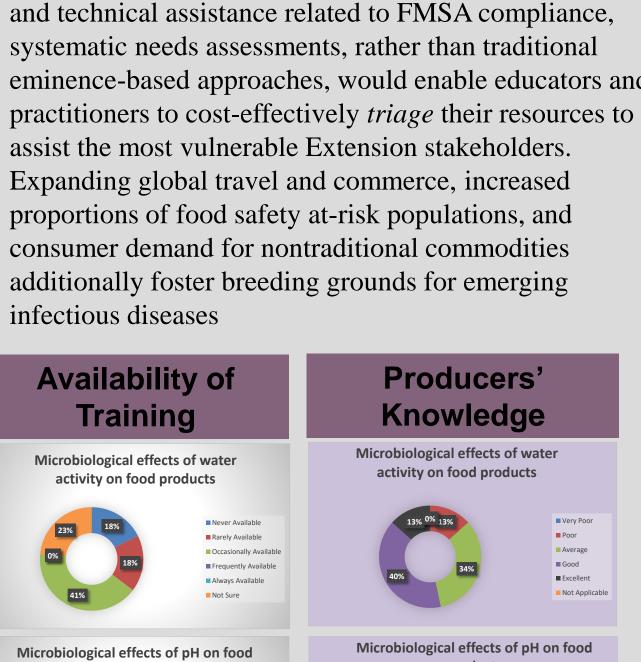
Contributors to Foodborne Illness & Death: (CDC, 2017)

- ☐ Fresh produce: 46% of illness, 23% of death

- ☐ Meat and poultry: 23% of illness, 29% of death □ Dairy and eggs: 20% of illness, 15% of death ☐ Fish and shellfish: 6.1% of illness, 6.4% of death

NEEDS ASSESSMENT FOR EVIDENCE-BASED OUTREACH AND TECHNICAL ASSISTNT

- Various sectors of food manufacturing and agricultural production are in immediate need of food safety outreach and technical assistance for meeting the requirements of this new regulatory landscape.
- ☐ Whereas large-scale entrepreneurs might be able to afford third-party consultations or additional quality and food safety staff to help them meet the new requirements, medium- and small-sized operations, which produce a considerable proportion of the country's food supply (USDA, 2016), are among most vulnerable in the new food safety regulatory climate.
- ☐ Considering the diversity of industries in need of materials and technical assistance related to FMSA compliance, systematic needs assessments, rather than traditional eminence-based approaches, would enable educators and practitioners to cost-effectively triage their resources to assist the most vulnerable Extension stakeholders.
- ☐ Expanding global travel and commerce, increased proportions of food safety at-risk populations, and consumer demand for nontraditional commodities additionally foster breeding grounds for emerging infectious diseases

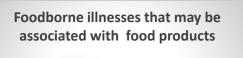


products





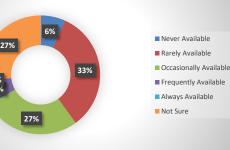




products



Causes of spoilage in food products



■Good **Causes of spoilage in food products**

■ Excellent

Foodborne illnesses that may be

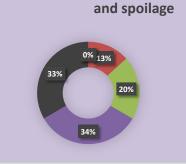
associated with food products

Producers' Knowledge

1-29

1-8

Difference between foodborne illness



Canned foods.

microorganisms

Temperature danger zone for microorganisms to grow

■Good

when making food products

Preventing cross-contamination

Label requirement for food products

Training Allergen concerns of food products Rarely Available Occasionally Availab ■ Frequently Available

Availability of

EXEMPTION AND COMPLIANCE FOR FOOD SAFETY MODERNIZATION ACT PRODUCE RULE

Other Products

Beauty soaps; Beeswax

The produce is not

covered by the

rule since is not a

RAC

Does your operation

process, pack, or hold

produce that is not

considered as raw

Section 112.2(a)(3)

Availability of

Training

Allergen concerns of food products

products

Agency that regulates food

processing facility and food products

YES-

The produce is not

covered by the

Is produce for on

the farm and/or

personal

consumption?

Section 112.2(a)(2)

YES

Main Products

Baked Products; Donut and specialty

Breads; Peanut Butter; Deserts; Baking

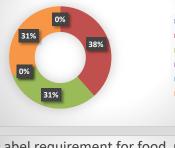
flour mix; Chili Oil; Spices; Chicken;

pastries; Salsa; Peach Salsa; Jams Spicy Jam; Egg; Honey; Cheese;

YES 1



Agency that regulates food processing facility and food products



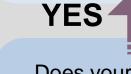


The produce is exempt, sections 112.(b)(2) and (3)

YES Does the RAC

intended for commercial processing with a kill agricultural commodity NO Section 112.2(b)(1)

Entrepreneur is not covered by this rule



Does your operation (3 year average) have less than \$25K annual food sale? Section 112.4(a)



Average of previous annual food sale is less than \$500K annually (Section 112.5); AND, vast majority of food sold directly to qualified end-user? Qualified End-User Section 112.3(c) is: The consumer of food; OR any restaurant and/or retailer that is located: no more than 275 miles from farm, and/or in the same state as the farm

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