

# The Effects of One-on-One HACCP Assistance Offered to Meat and Food Processors in Nebraska, Kansas, South Dakota, and Missouri.

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## Abstract

A survey of fifty "small" and "very small" meat and food processors in Nebraska, South Dakota, Kansas and Missouri was done to assess the effectiveness of one-on-one HACCP assistance provided by HACCP specialists from the University of Nebraska-Lincoln and Kansas State University. Processors were asked questions about their current operations, HACCP training, and what effects the assistance had on their operations. Thirty-four processors were not operating under HACCP prior to assistance from the universities. Following assistance, forty-four processors continue to operate under a HACCP program.

Thirty-six of the processors surveyed had personally attended an accredited HACCP course. Fourteen processors had not personally attended an accredited HACCP course and only five of the fourteen processors had sent at least one of their staff to an accredited HACCP course. The surveyed processors noted that the assistance increased the amount of records kept, created changes in production and sanitation practices to increase food safety, and augmented their HACCP plans to better fit their operations. Forty-seven processors stated that the HACCP assistance increased their knowledge of HACCP and its role in producing a safe product. Sixty-four percent of the processors experienced an increase in HACCP knowledge, twenty processors experiencing a moderate increase in HACCP knowledge, and 3 processors experiencing a small increase in HACCP knowledge. Awareness of food safety issues was increased in the areas of general awareness, product handling/processing, microbiology, sanitation, HACCP, temperatures, and regulations. Ninety-six percent of the surveyed processors found the assistance to be valuable for obtaining scientific and general information, assistance with HACCP plan design, technical support, and interpretation of regulations. Seventy-six percent of the processors stated that they "definitely" would use the assistance in the future for food safety issues or concerns, and 24% stated that they "probably" would use the assistance in the future for food safety issues or concerns.

## History and Method

The HACCP assistance program was developed at the University of Nebraska-Lincoln and Kansas State University in conjunction with South Dakota State University and the University of Missouri-Columbia. The program was created through a USDA grant entitled, "HACCP Implementation and Management for Small Meat and Food Processors in Four Midwest States". This program was designed to help USDA "small" and "very small" meat and food plants with the design and implementation of HACCP plans. HACCP specialists from the University of Nebraska-Lincoln and Kansas State University were hired to assist plants with the development, implementation, and maintenance of HACCP and Sanitation programs. The HACCP specialists conducted one-on-one meetings with plant personnel at the plants or universities.

An evaluation tool was developed with the help of the Agricultural Leadership, Education & Communication department at the University of Nebraska to determine the effectiveness of the one-on-one assistance program. A phone survey of all the facilities that received HACCP specialists in a one-year period, was conducted. Fifteen companies agreed to participate in the survey. Processors in the survey were asked a series of questions to determine the type and size of plant being operated, their experiences with HACCP, the value of the one-on-one assistance, and their willingness to use the assistance program in the future.

## Objective

The objective of the evaluation was to obtain information from plant personnel in meat and food processing businesses in Kansas, Missouri, Nebraska, and South Dakota in relation to:

1. The knowledge level that operators of meat and food processing operations have about HACCP and controlling food-borne hazards in their facility.
2. The implementation and adoption of HACCP and food safety systems in their food processing operations.
3. The attitudes and beliefs that meat and food processors have about food safety.
4. The skills that processors have implemented for the reduction of food-borne hazards in products that they produce.

## Plant Demographics

Plant Locations: Nebraska, South Dakota, Kansas, and Missouri

Plant Type: 37 Meat Processors  
6 Food Processors  
7 Meat and Food Processors

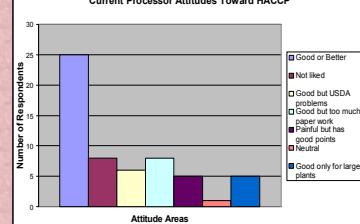
Size Classification: 35 Very Small  
15 Small

Type of Inspection: 19 State Inspected  
16 USDA/FSIS  
6 USDA Custom Exempt  
5 State Health Department  
2 FDA and State Health Department  
1 FDA  
1 USDA and State Health Department

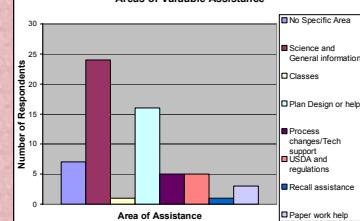
## HACCP Survey Questionnaire

1. Which of the following best describes your operation  
Meat processor  
Food processor
2. Which of the following best describes your current inspection system  
Full USDA-FSIS inspection  
Custom exempt USDA-FSIS inspection  
FDA inspection  
State meat inspection (SD, KS and MO only)  
State health department inspection (retail)
3. What classification does your operation fall into  
Very small – less than 10 employees  
Small – 10 to 500 employees  
Large – More than 500 employees
4. Are you currently operating using a HACCP plan?  
Y / N
5. Were you operating under a HACCP plan prior to our assistance?  
Y / N
6. Have your practices changed since our visit?  
Y / N  
If yes, please explain
7. Have you personally attended a HACCP training workshop?  
Y / N  
If no, has anyone in your company attended a HACCP training workshop?  
Y / N  
If the person being interviewed answers yes to either of the above questions ask the following question:  
Who organization offered the HACCP training workshop that you or another individual from your company attended?
8. Overall have you found our assistance to be valuable?  
Y / N  
In what ways has it been or not been valuable to your operation?
9. What other types of things, if any, would you like us to include in our assistance programs?
10. Did one-on-one consultation with us increase your knowledge of HACCP and its role in producing a safe food product?  
Y / N  
If yes, please rate your increase in knowledge using the following scale  
Large increase  
Moderate increase  
Small increase  
If no, please explain why?
11. Currently, what is your attitude towards HACCP?  
Is this different than your attitude before working with us?  
If yes, how so?
12. Since working with us has your awareness of general food safety issues increased?  
If yes, how has it increased?
13. Using the following scale rate how you would respond to the idea of using our assistance in regards to future food safety issues and concerns  
Definitely would  
Probably would  
Probably would not  
Definitely would not

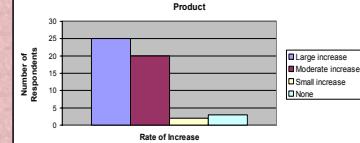
## Current Processor Attitudes Toward HACCP



## Areas of Valuable Assistance



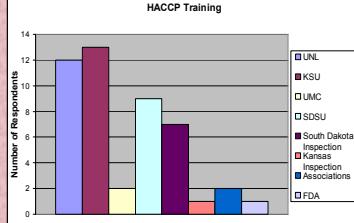
## Increase in Knowledge of HACCP and Its Role in Producing a Safe Product



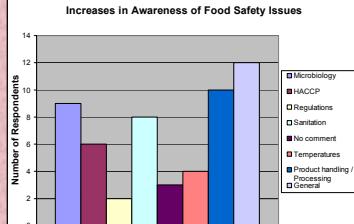
## Survey Summary

- Objective 1:**  
• 44 processors noted an increase in awareness of general food safety issues  
• 47 processors noted increases in HACCP knowledge with the one-on-one assistance
- Objective 2:**  
• Prior to one-on-one assistance 34 processors had not implemented HACCP  
• Following one-on-one assistance 44 processors were conducting HACCP  
• 14 processors had not attended an accredited HACCP course  
• 5 of the 14 had sent at least one employee to an accredited HACCP course
- Objective 3:**  
• 23 processors experienced a positive change in their attitude toward HACCP after one-on-one HACCP assistance  
• 48 processors felt the assistance was valuable to their operation  
• 38 (76%) said they "Definitely" use the one-on-one HACCP assistance in the future  
• 12 (24%) said they "Probably" would use the one-on-one HACCP assistance in the future
- Objective 4:**  
• 31 processors noted changes in their plant practices  
• Increased records kept  
• Production changes  
• HACCP plan changes  
• Sanitation changes

## HACCP Training



## Increases in Awareness of Food Safety Issues



## Conclusion

The one-on-one assistance program offered to small and very small meat and food processors was found to be valuable. Providing HACCP and food safety related information. Implementation and management of HACCP was made easier with one-on-one assistance. Changes in processors' activities were made to enhance food safety in the plants. Processors are willing to ask for the assistance in the future if HACCP or food safety issues arise.