

Implementing and Maintaining HACCP in your Facility

Tim Herrman

Professor, State Chemist and Director
Office of the Texas State Chemist



Structure for Organizing and Management of a HACCP Plan

- ❑ Who's in charge?
 - QA/QC function
 - Food safety group
 - Operations

Management Responsibility

❑ Two key elements

1. Management commitment to producing safe food through HACCP
2. Communication of this goal throughout the establishment

❑ Evidence of support

- “Statement of Corporate Policy” and commitment of resources
- On going review

3

HACCP Coordinator and HACCP Team

- ❑ The HACCP Coordinator provides leadership and guidance for the development and implementation of the HACCP plan
- ❑ Special skills: outlined in the preliminary steps
- ❑ Duties:
 - Identifying trainers
 - Writing instructions and check lists
 - Reviewing HACCP records

4

HACCP Team

- ❑ Selected by HACCP Coordinator and management
- ❑ Strong operations representation
- ❑ Outsourcing when lacking technical expertise
- ❑ Primary duty: develop and maintain HACCP plan and system

5

Strategy for Developing a HACCP Plan

- ❑ Plan carefully, avoid getting overwhelmed
- ❑ University assistance
- ❑ Review all operations, identify the approach first
- ❑ Develop a model plan for one product and one line
- ❑ Expand to entire plant covering all products/production lines

6

Implementing a HACCP Plan

- ❑ **Training**
 - Focus on knowledge and skills needed for the task
 - General overview of HACCP for all employees
- ❑ **Trial period**
 - Expect problems and be willing to review, evaluate and revise the plan
 - Initial validation (formal review)
- ❑ **HACCP team to meet regularly during implementation**

7

Managing a HACCP Program

- ❑ Coordination of food safety operations
- ❑ System for evaluating new products
- ❑ System for evaluating product/process changes
- ❑ Day-to-day management
- ❑ Periodic evaluation and revision

8

Why do HACCP systems fail?

❑ Inadequate documentation of the HACCP Plan

- Insufficient information for HA
- No rationale for CCPs
- No scientific justification for CLs
- No justification for monitoring frequency

Food Processing Institute (FPI)

9

Why do HACCP systems fail? (cont.)

❑ Poor management of the HACCP program

- Inadequate verification that the HACCP plan is being applied correctly and followed as written
- Lack of management support or employee buy-in
- Lack of appropriate recordkeeping or records
- Inadequate training
- Complacency

Food Processing Institute (FPI)

10

Elements of Success

- ❑ Top down commitment
- ❑ Partnership
- ❑ Interdisciplinary
- ❑ Training
- ❑ Realistic expectations
- ❑ Process

Food Processing Institute (FPI)

11

Results from the Feed Industry

- ❑ Hazards identified during HACCP plan development
 - Prohibited animal protein
 - Aflatoxin
 - Inclusion of wrong medication
 - Medication cross-contamination
 - Wrong labels

12

Results from the Feed Industry (cont.)

- CCPs identified during HACCP plan development
 - Bulk receiving
 - Mixer-batching
 - Bagged receiving
 - Bulk load out

13

Mill	Product Type	Species Type	Steps	Ingredients
1	Biscuits	Canine	20	14
2	Mash	Swine	20	44
3	Mash pellet	Turkey/swine	60	56
4	Mash	All	14	38
6	Mash pellet	All	18	36
7	Mash	Swine	15	29
8	Liquid	All	13	72
10	Mash pellet	Swine	14	30
12	Mash	Layers	22	30
13	Supplement	Ruminants	13	69
14	Mash pellet	Broiler	14	23

Average 20 40

Standard Deviation 13 19

14

Mill	Product Type	Chemical	Biological	CCPs
1	Biscuits	1	1	2
2	Mash	4	0	3
3	Mash pellet	6	1	6
4	Mash	6	1	5
6	Mash pellet	1	1	3
7	Mash	4	0	4
8	Liquid	3	1	5
10	Mash pellet	5	0	5
12	Mash	4	1	4
13	Supplement	4	1	5
14	Mash pellet	4	0	4
Average		3	1	4
Standard Deviation		1	—	1

15

Time Spent Developing HACCP Plans

	<u>Average</u>	<u>Std. Dev.</u>
Person hours spent on HACCP plan design	72.93	37.27
Person hours spent on HACCP training	24.43	22.20
Person hours spent monitoring facilities for compliance with HACCP plan	70.86	59.35
Person hours spent analyzing lab data related to HACCP plan	24.21	23.32
Person hours reviewing HACCP plan	16.36	17.01
Person hours spent keeping records associated with HACCP plan	59.50	53.26
Total Person Hours Related to HACCP Plan & Training	268.29	101.97

16

Other Insights

One CEO expected that HACCP would provide a marketing benefit. He found that the increased confidence of his employees resulted from their involvement in developing and implementing a HACCP plan. As a result, this confidence carried over into all areas of manufacturing, sales, and service and benefited all areas of the company, including increased sales, without having to actively promote their adoption of HACCP.

17

Contact Information:
tjh@otsc.tamu.edu

Tim Herrman
 Professor, State Chemist and Director
 Office of the Texas State Chemist