Feed Industry HACCP

# **Sanitation Standard Operating Procedures (SSOPs)**

#### **Tim Herrman**

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



TEXAS A&M

Feed Industry HACCP

### Introduction

- Sanitation is one of the essential prerequisite programs for the successful implementation and maintenance of a HACCP program.
- Good sanitation enhances product quality and shelf-life, reduces maintenance costs, and contributes to operational efficiencies.
- Grain handling standards apply to feed manufacturing and involve employee safety (29 CFR 1910.272 i) and the Current Good Manufacturing Practices (21 CFR 210, 225, 226) include sanitation elements including building and grounds, equipment, and equipment cleanout procedures.

Feed Industry HACCP

## **Sanitation and Standard Operating Procedures**

Sanitation is not limited to cleaning equipment. It also includes personnel practices, facilities, equipment design and operation, pest control, and warehousing.

3

TEXAS A&M

Feed Industry HACCP

## SSOPs – Food Safety Modernization Act

#### (o) Definitions

Preventive Controls definition: The term "preventive controls" means those risk-based, reasonably appropriate procedures, practices, and processes that a person knowledgeable about the safe manufacturing, processing, packing, or holding of food would employ to significantly minimize or prevent the hazards identified under the hazard analysis ...

- A. Sanitation procedures for food contact surfaces and utensils and food-contact surfaces of equipment
- B. Supervisor, manager, and employee hygiene training



Feed Industry HACCP

#### **FSMA Rule for Animal Feed**

#### Subpart B – Current Good Manufacturing Practices

- Sanitary operations
  - Buildings, fixtures, other physical facilities, cleaning compounds and sanitizing agents, toxic materials, toxic cleaning compounds, foodcontact surfaces, utensils, food contact surfaces of equipment, nonanimal food-contact surfaces, portable equipment
- Sanitary facilities and controls
  - > Water supply, cross-connections, sewage, toilets, hand-washing, rubbish
- Equipment and utensils
  - All plant equipment and utensils, design, construction and use of equipment and utensils, installation, contact surfaces, seams, holding, conveying, freezers and cold storage, instruments, compressed air
- Process control
  - > Overall sanitation, measures taken to destroy or prevent microbes

5

#### TEXAS A&M

Feed Industry HACCP

## **Employee Sanitary Practices**





















Feed Industry HACCP

## **Presence of Salmonella in Feed Manufacturing Facilities**

Source	Positive	Negative	Details
Surface	1	18	Load out
Conveyors	1	9	Bucket elevator
Cooler	0	6	
Other	0	5	

Results from 8 feed mills the lateral flow enzyme immuno-assay (EIA, Neogen Reveal)



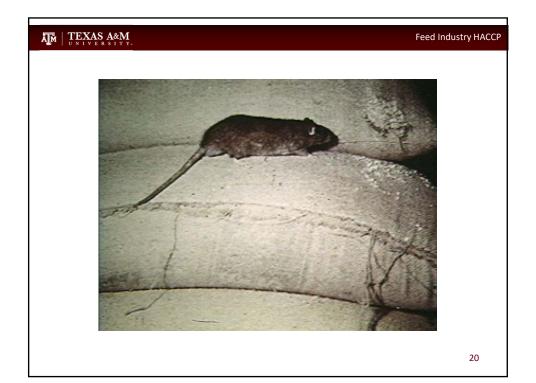


Feed Industry HACCP

## **Insect Population Survey Results**

Commercial food- and pheromone-baited pitfall traps and pheromone-baited sticky traps were used during 2003 to survey stored-product insect adults in eight participating feed mills in the Midwestern United States. Across the eight feed mills, 27 species of beetles (Coleoptera) and three species of moths (Lepidoptera) were captured in commercial traps.

19



Feed Industry HACCP

## **Summary**

- Sanitation requirements exist for the feed industry
- A sanitation program will control many potential biological, chemical and physical hazards
- Sanitation is an essential prerequisite program
- Written SSOPs should include at least:
  - Detailed description
  - Corrective actions
  - Daily records

