



Animal Feed Safety System



Presentation by
**Center for Veterinary
Medicine**



Background

- Feed safety programs have been responses to specific concerns
 - FDA now taking broader view
- Formed AFSS Team to analyze system, suggest changes
- Progress reported in “Framework Document”
 - <http://www.fda.gov/AnimalVeterinary/SafetyHealth/AnimalFeedSafetySystemAFSS/ucm196795.htm>



AFSS Principles

- Industry responsible for safe feed
- AFSS covers all parts of feed industry
- Uses risk-based decision making
- FDA will use resources to address greatest hazards
- FDA will support effort through research



Identifying Risks

- FDA defines hazards as:
biological...chemical...physical
agents...condition of feed
 - that can cause illness, injury to animals,
humans
- Without proper controls, hazards become
risks



Feed System Components

- AFSS Team analyzed current regulations, policies
- Identified components, gaps, developed responses to gaps
 - for information about work of AFSS:

www.fda.gov/AnimalVeterinary/SafetyHealth/AnimalFeedSafetySystemAFSS/default.htm



Component A: Safety of Ingredients

- GRAS, Food Additive Petition ingredients listed in FDA regulations
 - but other ingredients are not
- AFSS response – more formal role for FDA with Association of American Feed Control Officials
 - group lists ingredients in *Official Publication*



Component B: Risks from Ingredients

- Determining which risks are serious, so they can be addressed
- AFSS uses risk-ranking system
- FDA also developing process to determine when to develop regulatory methods
 - for detecting presence of feed hazards



Component B: Feed Safety Regulatory Requirements

- All parts of feed chain must be covered
 - mixing, manufacturing, packaging, storing, distributing
- AFSS Team recommends process control regulations
 - also recommending cGMP rule update, combining rules for licensed, unlicensed facilities



Component D: Reporting Unsafe Feed

- Congress called for “Reportable Food Registry”
- Rule under development for reporting certain feed records



Component E: Regulatory Oversight

- Find best use for limited inspection resources
- Using risk-based approach
 - already in use for FDA-licensed feed mills, and for BSE rule compliance
- Considering 3rd party inspections



Component F: Education and Outreach

- Training of inspection personnel
- Education, outreach to regulated industry
 - so rules can be properly implemented



FDA Food Safety Modernization Act

- Globalization
 - 15 percent of U.S. food supply is imported
- Food supply more high-tech and complex
 - More foods in the marketplace
 - New hazards in foods not previously seen
- Shifting demographics
 - Growing population (about 30%) of individuals are especially “at risk” for foodborne illness



Inspection, Compliance, and Response

- Mandated inspection frequency
 - Considering new ways to inspect
- New tools
 - Mandatory recall
 - Expanded records access
 - Expanded administrative detention
 - Suspension of registration
 - Enhanced product tracing
 - Third party laboratory testing



Enhanced Partnerships: Vital to Success

- Reliance on inspections by other agencies that meet standards
- State/local and international capacity building
- Improve foodborne illness surveillance
- National agriculture and food defense strategy
- Consortium of laboratory networks
- Easier to find recall information



Priorities

- **Prevention**
 - Mandatory preventive controls for facilities (FR 18 months)
 - Produce safety standards (FR 2 years)
 - Intentional contamination (FR 18 months)
- **Inspection, Compliance, and Response**
 - Administrative detention (IFR 120 days)
 - Recall (Upon enactment)
 - Suspension of registration (180 days)
- **Imports**
 - Foreign supplier verification program (Guidance and FR 1 year)
 - Accredited third-party certification program (FR 2 years)
 - Mandatory certification for high risk foods (Upon enactment)



Survey of Feed Contamination Incidents Causing Animal Poisoning

- Gary Osweiler, DVM, PhD, DABVT
Iowa State University
College of Veterinary Medicine
February 8, 2008



Deliverables - General

- one 6-month report with an executive summary and a database of feed contamination incidents that were reported to various state diagnostic laboratories within the past 5 years
- database in access or excel spreadsheet format



Deliverables - Specific

- 1. Where the incident occurred
- 2. Was there a contaminant found?
- 3. What was the level found?
- 4. What type of feed did it affect, e.g. liquid, hay, pelleted?
- 5. Animal species affected
- 6. The number of animals affected
- 7. The disposition of the feed
- 8. The disposition of the animals



Initial Responses

- reporting of toxicological results that identify location by state
- concern about difficulty of routinely collecting the needed information
- concern about variability of methods used to make a diagnosis
- 20/41 labs expressed positive interest in participation in survey
- allowed reporting by 6 regions



Top 10 Diagnoses

• Copper		113
• Cantharidin	95	
• Deoxynivalenol		67
• Ionophores	46	
• Fumonisin	35	
• Urea/NPN		35
• Nitrate		26
• Organophosphates	22	
• Aflatoxins		16
• Ergot		<u>7</u>
TOTAL		446



Ruminant Toxicoses

BOVINE

- NPN 34
- Ionophores 24
- Nitrate 23
- Copper 14
- Organophosphates 8
- Aflatoxin 6
- Ergot 4
- Cocklebur 3
- Arsenic 2
- Selenium 2
- Fluoride 2
- Bifenthrin 1
- Carbamate 1
- DON 1



Next 23 Diagnoses

- Carbamates 4
- Arsenic 3
- Cocklebur 3
- Lead 3
- Zearalenone 3
- Ethyl glycol 2
- Fluoride 2
- Gossypol 2
- Oxalate 2
- Roquefortine 2
- Bifenthrin 1
- Jimson weed 1
- Penitrem A 1
- DDGS -NOS 1
- Nylon fibers 1
- Salt 1
- Sulfamethazine 1
- Swainsonine 1
- Thlaspi 1
- TEHC 1
- Vit D3 1
- Zn Phosphide 1



Equine & Swine Diagnoses

EQUINE

• Cantharidin	94
• Fumonisin	23
• Ionophores	5
• Selenium	1
• Swainsonine	<u>2</u>
TOTAL	128

SWINE

• Deoxynivalenol	19
• Fumonisin	3
• OP Insecticides	3
• Zearalenone	2
• Aflatoxin	1
• Arsenic	1
• Copper	<u>1</u>
TOTAL	30



Conclusion

- AFSS Team leading change in way FDA works to ensure safety of animal feed
 - from specific responses, to comprehensive plan
- New system – risk-based, applies throughout feed chain
- FSMA supports established direction
- More work needs to be done