

# Slowing the Spread of Foreign Animal Diseases: An Approach to Biosecurity for Feed in the U.S



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**American Feed Industry Association**

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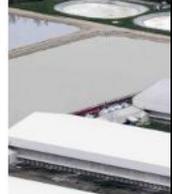
SPECIES ▾

- 📍 Chicken
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- 📍 Chickadee

This map tracks avian influenza outbreaks that have occurred since December 2014. Filter the map view by bird species infected, AI strain, type of operation, region or date confirmed. Click on each map marker to view key information on that case, as well as multiple cases in the same county. Scroll down below the map for a listing of the markers. Visit <http://www.WATTAgNet.com> for the latest reports on avian influenza outbreaks worldwide.

# Minnesota declares state of emergency over bird flu in poultry

CHICAGO | BY P.J. HUFFSTUTTER



An egg-producing chicken farm in Minnesota, April 23, 2015. REUTERS/JOE AHLQUIST

Minnesota declared a state of emergency over an avian flu that has led to the closure of several poultry farms, followed Wisconsin's announcement.

The highly pathogenic H5N2 virus was first detected in 16 counties and affected several other areas.

State health officials said the outbreak poses a risk for farm workers and others who have had contact with infected birds.

"There's no reason for anyone to panic over this health," Governor Mark Dayton said.

## Birdemic: Iowa becomes 3rd state to declare emergency over avian flu outbreak

Published time: 1 May, 2015 23:51

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APR 20 2015, 5:52 PM ET

# Wisconsin Declares Bird Flu Emergency

by MAGGIE FOX and NBC NEWS

Wisconsin has declared a state of emergency over H5N2 avian flu. Reuters - file

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Wisconsin Governor Scott Walker declared a state of emergency Monday because of an outbreak of H5N2 bird flu that kills poultry, activating the state's National Guard to help fight the infection.

Wisconsin is one of about a dozen U.S. states to be hit by the highly pathogenic strain of H5N2, which experts believe is spread by migrating waterfowl. Canada has been affected, also.

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# HPAI Economic Impact

- 15,693 fewer jobs
- \$US2.6 Billion in lower output
- \$US981.0 Million in lower Value-Added
- \$US248.6 Million less federal tax receipts
- \$US136.1 Million less state and local tax receipts

*Economic Impact of Highly Pathogenic Avian Influenza (HPAI) on Layers in the U.S.,  
FarmEcon LLC, Carmel, IN. June 29, 2015*



# PEDV IN THE U.S.



*Farm Journal, JUNE 5, 2014*

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HOME > HEALTH > CAN FEED INGREDIENTS SPREAD PEDV?

## Can Feed Ingredients Spread PEDV?

Source: Feedstuffs

Feb 12, 2014

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More About: Porcine Epidemic Diarrhea Virus (PEDV)

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Diagnostics to Assess the Role of PEDV on Swine Farms

What are the Impacts of the Farm Bill, Canadian PEDV Outbreak?

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Feedstuffs is reporting on questions raised this week about whether or not porcine epidemic diarrhea virus (PEDV) can

be spread via feed ingredients. Following the first discovery of PEDV in Canada, and understanding that the primary method of transmission of this virus is "fecal-oral," Ontario-based feed producer Grand Valley Fortifiers, with the assistance of South West Ontario Veterinary Services announced Feb. 9 that it has "moved exclusively" to produce and sell nursery pig feeds that do not contain animal byproducts, according to Feedstuffs.

Grand Valley Fortifiers said it made its decision based on a statement from Steve Dritz of Kansas State University, which said "The magnitude of risk that swine feed can be a potential vector for porcine epidemic diarrhea virus transmission is currently unknown. However, the Kansas State University Swine Nutrition team believes at this time it is prudent for pig producers be knowledgeable of feed ingredients that are in their swine rations. Also, the K-State team has provided example nursery diet options without porcine origin ingredients. These options range from removal of all porcine origin feed ingredients to removal of specific protein based ingredients from nursery diets."



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## Killer Pig Virus Wipes Out More Than 10 Percent Of Nation's Hogs, Causing Spike In Pork Prices

Reuters

Posted: 04/27/2014 6:00 am EDT | Updated: 06/27/2014 6:59 am EDT



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REUTERS

By Meredith Davis and Theopolis Waters

CHICAGO, April 27 (Reuters) - John Gohl, a hog nutritionist in Shakopee, Minnesota, knows a farmer in his state who lost 7,500 piglets just after they were born. In Sampson County, North Carolina, 12,000 of Henry Moore's piglets died in three weeks. Some 30,000 piglets perished at John Prestage's Oklahoma operation in the fall of 2012.

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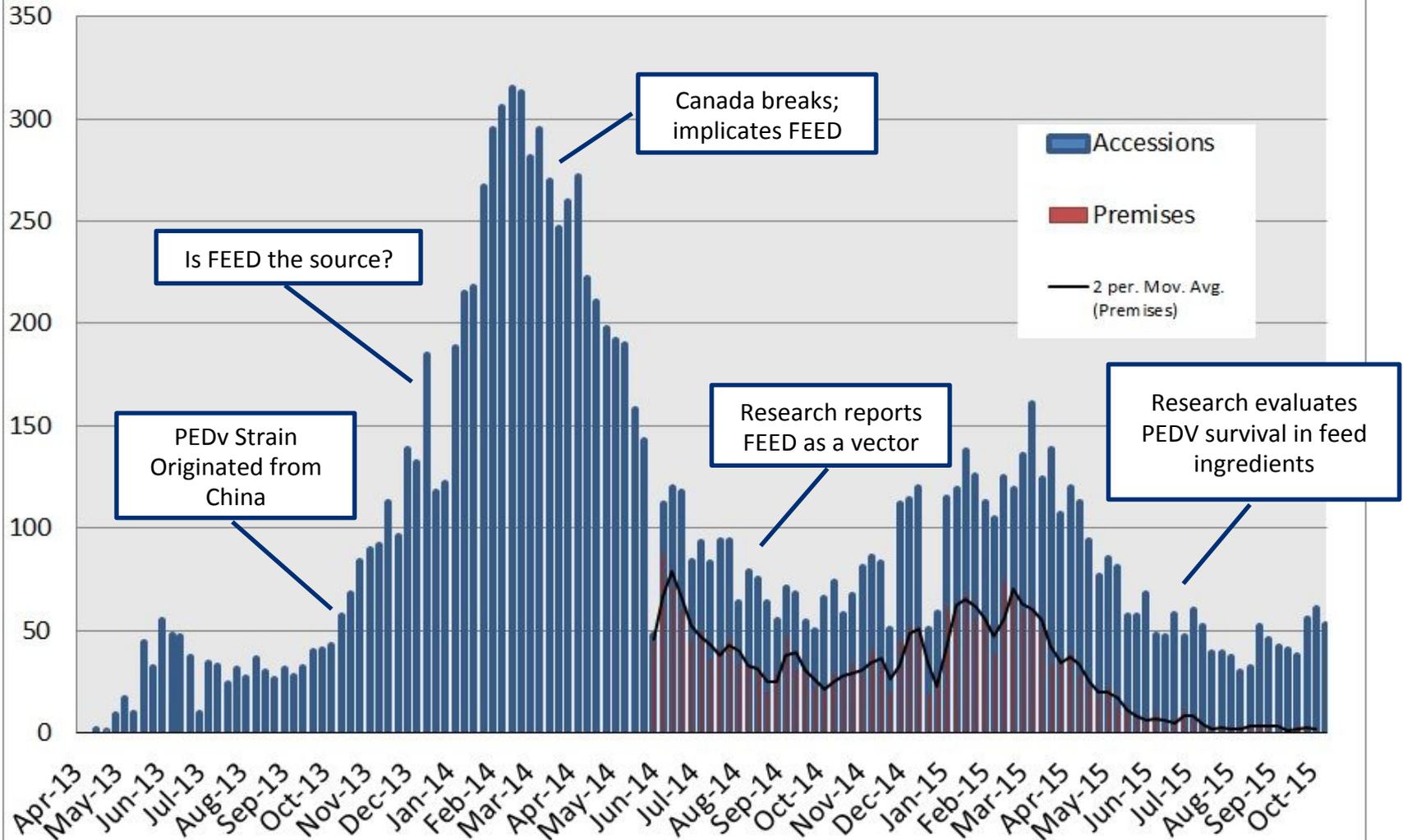
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# New PEDv Case Reports by Week



<https://www.aasv.org/aasv%20website/Resources/Diseases/PorcineEpidemicDiarrhea.php>



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Fort Collins, CO 80526  
September 2015

## Risk that Poultry Feed made with Corn— Potentially Contaminated with Eurasian- North American Lineage H5N2 HPAI Virus from Wild Migratory Birds—Results in Exposure of Susceptible Commercial Poultry



# USDA Analysis and Results

- 1) The likelihood that a corn pile becomes contaminated with EA/NA H5N2 HPAI virus when corn is stored on the ground depends on:
  - species of wild birds attracted to corn piles
  - frequency with which they feed from the piles
  - HPAI prevalence in those wild bird species
- 2) No findings of the H5N2 HPAI virus in 2,216 tests of waterfowl fecal matter (*MN State Depart. Natural Resources, 29 April 2015*).
- 3) No reports of isolation of this virus in wild migratory waterfowl in Minnesota (*3,000 environmental samples, 15 June 2015*).

**“We estimate that there is a *very low to low* likelihood that a corn pile will become contaminated with EA/NA H5N2 HPAI virus in feces from wild migratory birds during the fall and spring seasons.”**

# Animal Feed as a Source of Contamination

 Pathogens may be transmitted through a variety of ways (APHIS, 2011). These include the following:

- Airborne transmission
- Direct animal to animal contact
- Semen
- Human contact including dirty boots, clothing or hands.
- Vectors including rodents, feral animals and insects
- Vehicles and other fomites
- **Feed**, including water
- Animal manure and soiled bedding

# Impact of PEDV on AFIA Members

AFIA completed a survey requesting input from its members on actions that AFIA should take in regards to the impact of *porcine epidemic diarrhea virus (PEDV)*. **Ninety-eight percent** of responding members were **impacted by PEDV**. Based on the responses by members, the direction and action needed by AFIA staff were clear:

- ✓ **Update biosecurity guidance** to address specific needs for the feed industry to control the spread of viruses or pathogens, such as PEDV, that may be detrimental to animal health.
- ✓ **Work with industry leaders** to develop intervention strategies to prevent or minimize of spread of animal disease.
- ✓ AFIA needs to provide a **stronger voice** for its members on the impact of feed on the spread of PEDV.

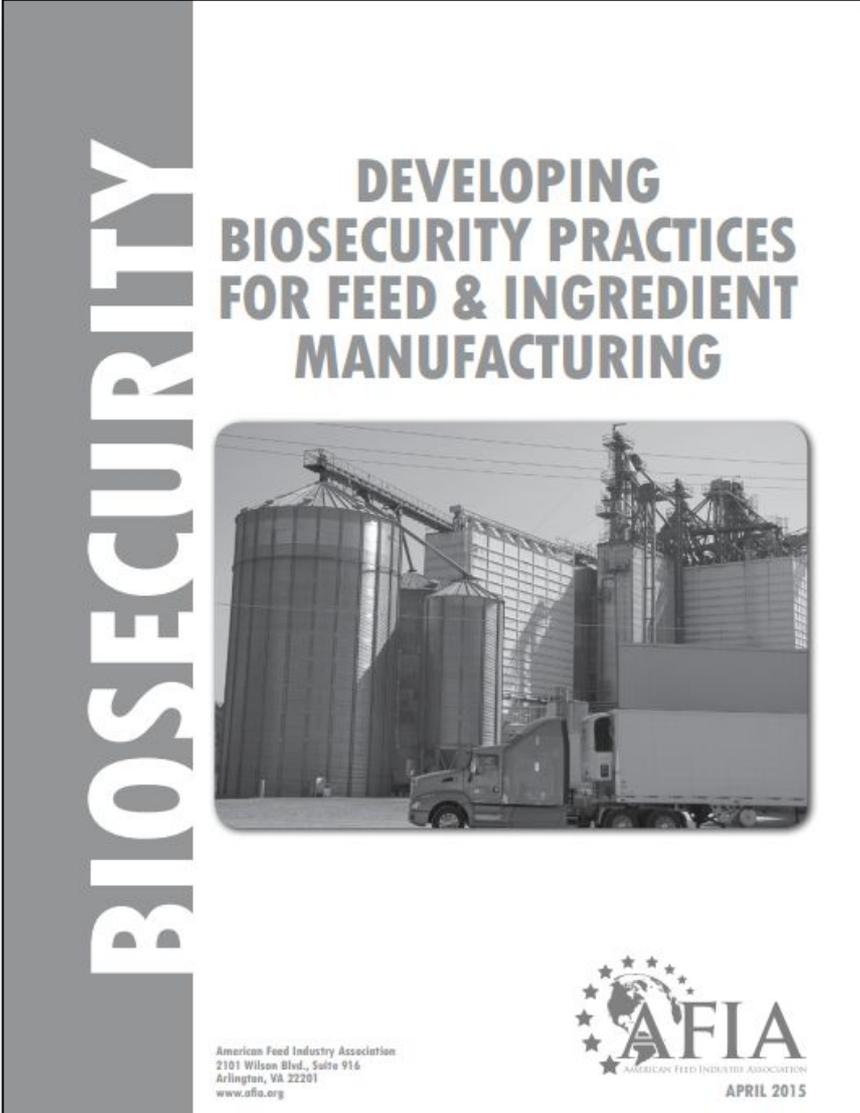
## Process:

Formed a Task Force for input and direction with 17 members (scientists from the feed industry and fellow industry associations – AASV, NGFA, NPB, NPPC, NRA).

## Purpose:

Provide feed and ingredient manufacturers with recommendations to develop a biosecurity plan to help control the potential spread of animal disease through the manufacturing, transport and use of feed and feed ingredients.

[http://www.afia.org/rc\\_files/645/guidance\\_for\\_developing\\_biosecurity\\_practices\\_2015.pdf](http://www.afia.org/rc_files/645/guidance_for_developing_biosecurity_practices_2015.pdf)



**BIOSECURITY**

**DEVELOPING  
BIOSECURITY PRACTICES  
FOR FEED & INGREDIENT  
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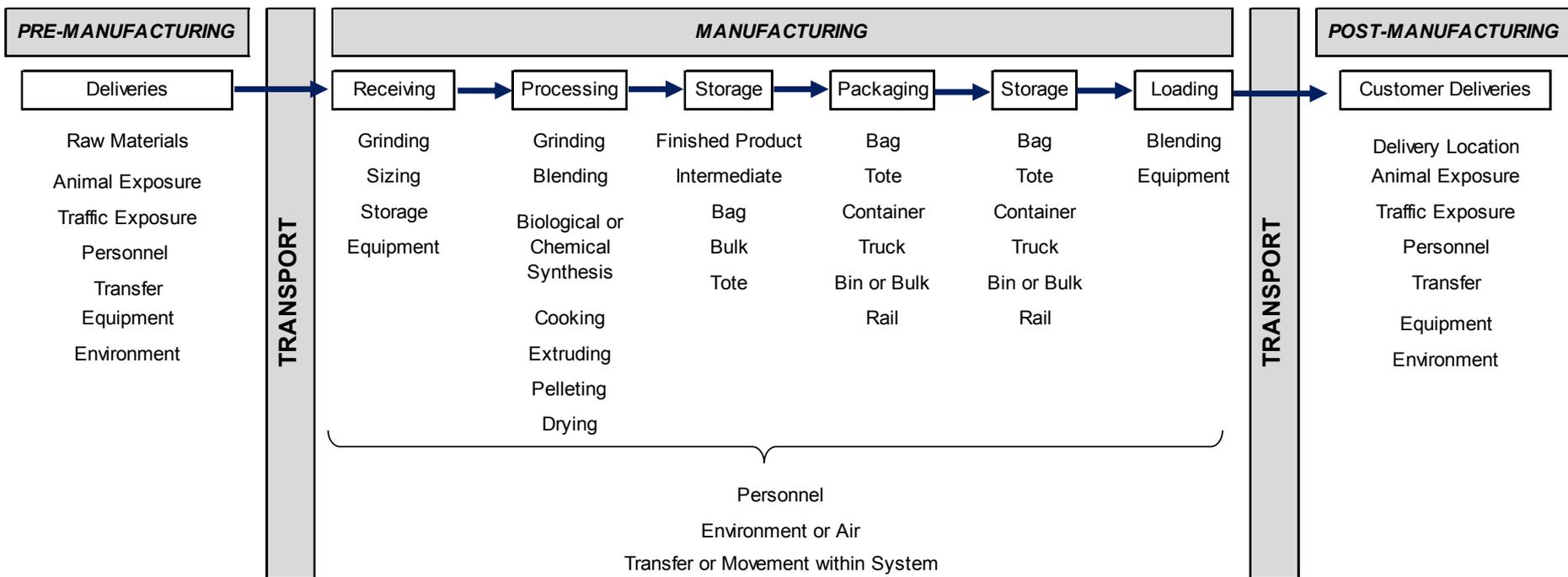


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**AFIA**  
AMERICAN FEED INDUSTRY ASSOCIATION  
APRIL 2015

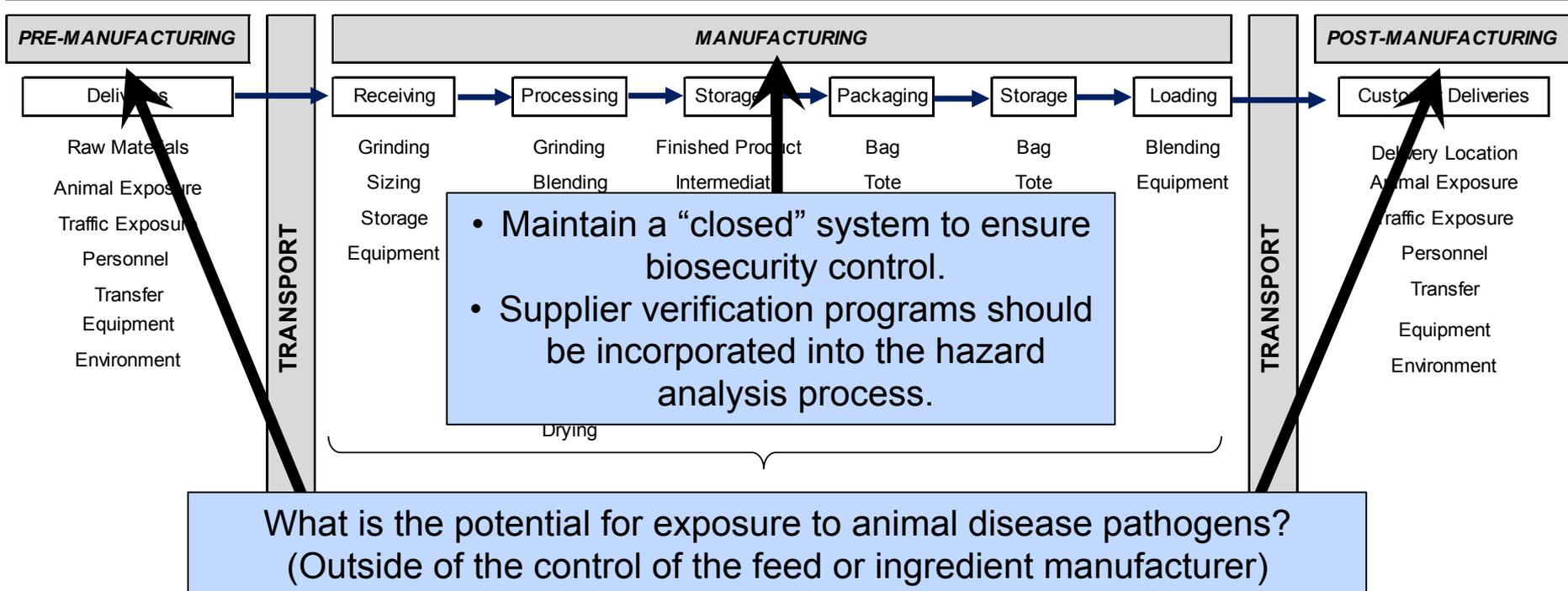
# Understanding the Points of Exposure is Important for Biosecurity

**FIGURE 1. MANUFACTURING PROCESS FLOW CHART FOR FEED AND INGREDIENTS**



# Understanding the Points of Exposure is Important for Biosecurity

**FIGURE 1. MANUFACTURING PROCESS FLOW CHART FOR FEED AND INGREDIENTS**



# Feed Manufacturer's Responsibility

The **feed manufacturer is responsible for biosecurity of the feed chain**, which includes selecting, receiving and processing of ingredients into the complete feed through to final feed delivery or until the livestock producer takes possession of the feed.

- Biosecurity Plan should be **science-based**.
- Biosecurity Plan should be **flexible** enough to allow some modification depending on circumstances, yet specific for the facility.
  - Incorporate **new practices or processes** for new foreign animal diseases
  - Updated with **more effective actions** or processes



# Developing a Biosecurity Plan

**Development of a biosecurity plan begins by assessing biosecurity risks.**

**Step 1: Identify and prioritize** the pathogenic agents of greatest concern to the facility.

Become familiar with their pathogenesis, ecology, and epidemiology (e.g., transmission, susceptible species and age groups, and environmental factors favoring transmission).

**Step 2: Conduct an assessment** of the facility.

How can the facility increase the risk of disease transmission? (e.g., layout, traffic patterns, geography, and staffing/personnel)

**Step 3: Implement processes and procedures** that eliminate, prevent, or minimize the potential impact of animal disease. (biosecurity measures)

# Recommended Biosecurity Practices

**Supplier Verification Program** – Insure that supplier has an adequate program to control contamination, including the potential risks from animal disease

**Ingredient Receiving** – Implement preventive controls for reasonably foreseeable hazards from ingredients and their delivery to ensure the control the introduction of animal disease into the feed chain

**Employees, Visitors and Drivers** – Control the access of people throughout a facility

**Manufacturing Area** – Implement processes and procedures to prevent feed contamination with animal disease during manufacturing

**Shipments for Customer Deliveries** – Transport finished products or ingredients from a secure facility to a customer without contamination or spread of animal disease

# Guidance for Developing Biosecurity Practices for Feed and Ingredient Manufacturing

The effectiveness of a biosecurity plan depends upon:

- ✓ Culture of the facility to drive the program
- ✓ Commitment of management to implement the plan
- ✓ Commitment of employees to follow the plan
- ✓ Continuous improvement of the plan
- ✓ Communication with employees, customers and industry associates



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