

Advancements in Compartmentalization and Regionalization - Opportunities, Relationships, Information and Challenges

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Livestock Sector Perspectives and Concepts for Discussion

How might the livestock sector use higher health compartments in locations where the cost of production makes it a potential useful option?

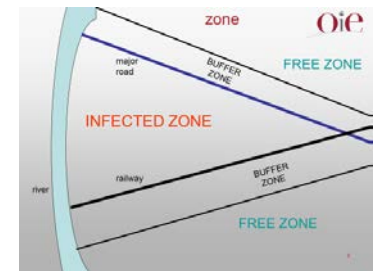
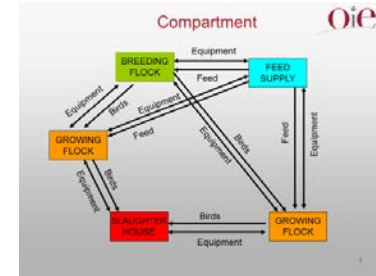
- ❖ Obstacles and drivers - logistics, tools, economics, business and sector structures, policy
 - ❖ Business continuity
 - ❖ Zoning/regionalization versus compartmentalization
 - ❖ Country, regional, international
 - ❖ Innovations, processes, procedures, verification
 - ❖ Lessons learned and adaptation
 - ❖ Not a one size fits all – endemic/free, disease specifics, sector differences
- Some key issues and advancing the discussion

World Organisation for Animal Health (OIE) Terrestrial Animal Health Code Chapters 4.3 & 4.4

Compartment - one or more establishments under a common biosecurity management system containing an animal subpopulation with a distinct health status with respect to a specific disease or specific diseases for which required surveillance, control and biosecurity measures have been applied for the purpose of international trade.

Zone/region – a clearly defined part of a country containing an animal subpopulation with a distinct health status with respect to a specific disease for which required surveillance, control and biosecurity measures have been applied for the purpose of international trade.

- Surveillance, disease specifics, epidemiological factors, production systems, infrastructures and biosecurity practices applied...
- Done in concert with the many other aspects of FMD prevention, response, control or eradication
- Requires private sector and state/province and national government collaboration
- Requires clear, consistent communication and consumers comfortable
- Risk-based solutions based on scientific data, national and international standards, industry realities



● Calving



6-8 mo

● Weaning



● 80% of steers

● 65% of heifers

● Stocker



3-9 mo

● 30-35% of heifers

● 20% of steers

● 3 to 7 mo on feed

● 3 to 5 mo on feed



● Feedlot

● Harvest and Fabrication



● Harvest at 13-18 mo

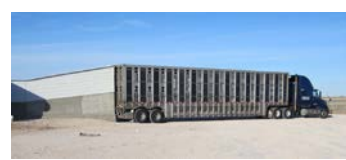
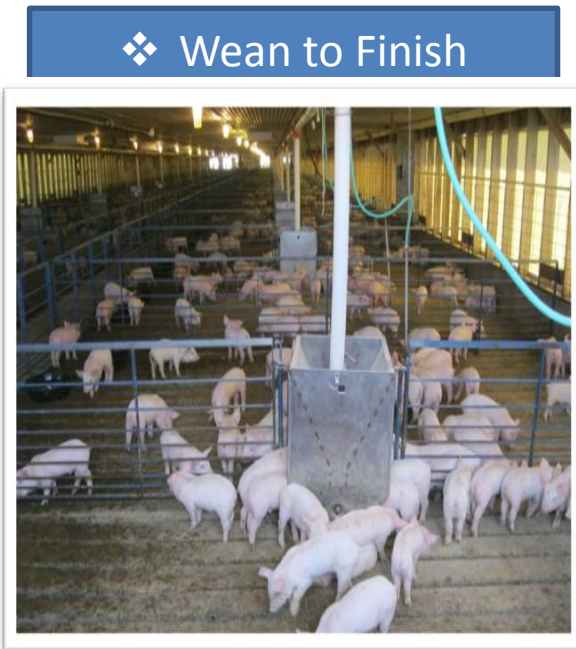
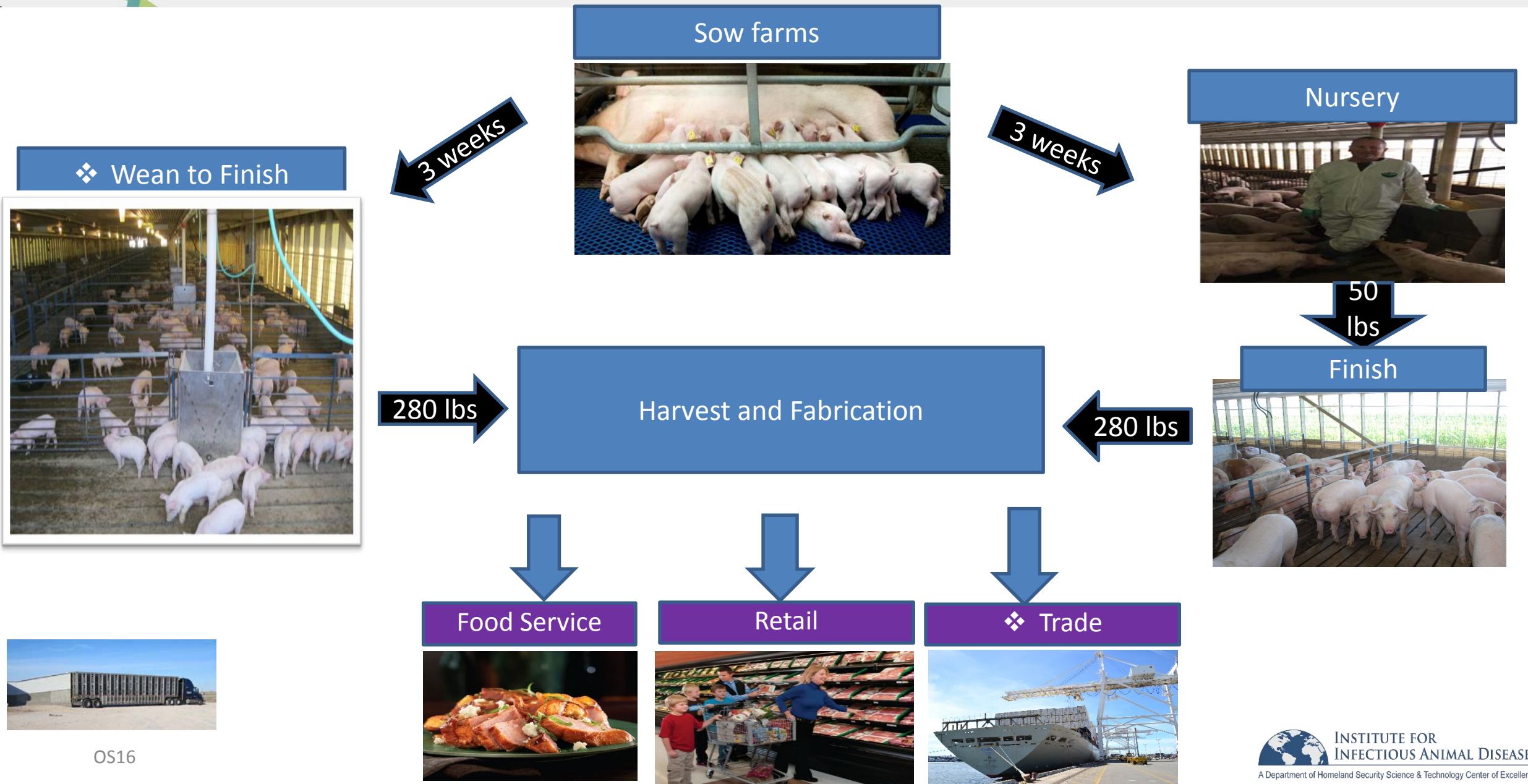
● Food Service



Trade

● Retail



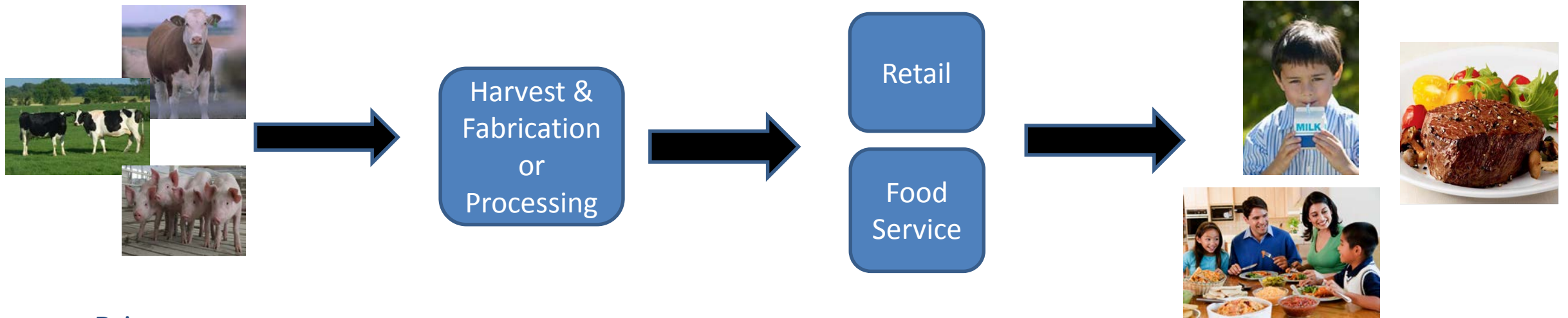


OS16



MILK

❖ Requires collaboration along entire commodity chain



Drivers:

- Some shared needs
- Unique pressures differences along all stages of livestock value chain, between and within
- Different business models and operational structures
- Business contracts and customers
- Sector economics, economic impacts on other livestock and agriculture sectors
- Business continuity
- Rural communities, food security, state and national economies

U.S. Secure Food Supply Plans and Business Continuity

Goals of the Secure Food Supply Projects – for affected, not *infected* monitored premises

- Avoid interruptions in animal and animal product movement to commercial processing from premises with no evidence of FAD infection.
- Provide a continuous supply of wholesome food to consumers.
- Maintain business continuity for producers, transporters, and food processors through response planning.

Continuity of business:

- The management of non-infected premises and non-contaminated animal products in the event of an FAD outbreak.
- Provides science- and risk-based approaches and systems as a critical activity in any FAD response.
- Helps agriculture and food industries maintain typical business or return to business during a disease response, while the risk of disease spread is effectively managed.

Common Components of Secure Food Supply Plans

- Voluntary pre-outbreak preparedness
- Biosecurity
- Surveillance
- Movement permit guidance
- Epidemiology questionnaires
- Risk Assessments
- Pre-and Post-outbreak training

USDA funded. Developed via private sector, academia and government collaboration

- ❖ Science- and risk-based plans intended to:
 - a) maintain business continuity
 - b) minimize disease spread, and
 - c) provide a continuous supply of these products to consumers.
- ❖ Each contains similar components customized to species specific needs: biosecurity, surveillance, communication, data management, managed movement, management of infected premises.
- ❖ Risk Assessments
 - Highly Pathogenic Avian Influenza
 - Egg, Turkey, Broilers
 - Foot-and-Mouth Disease
 - Beef, Milk, Pork

Secure Milk Supply:

<http://securemilksupply.org/>

Secure Pork Supply:

<http://www.securepork.org>

Secure Beef Supply:

<http://securebeef.org/>

Secure Egg Supply:

<http://www.secureeggssupply.com/>

Secure Turkey Supply:

<http://www.secureturkeysupply.com/>

Secure Broiler Supply:

<http://www.securebroiler.com>

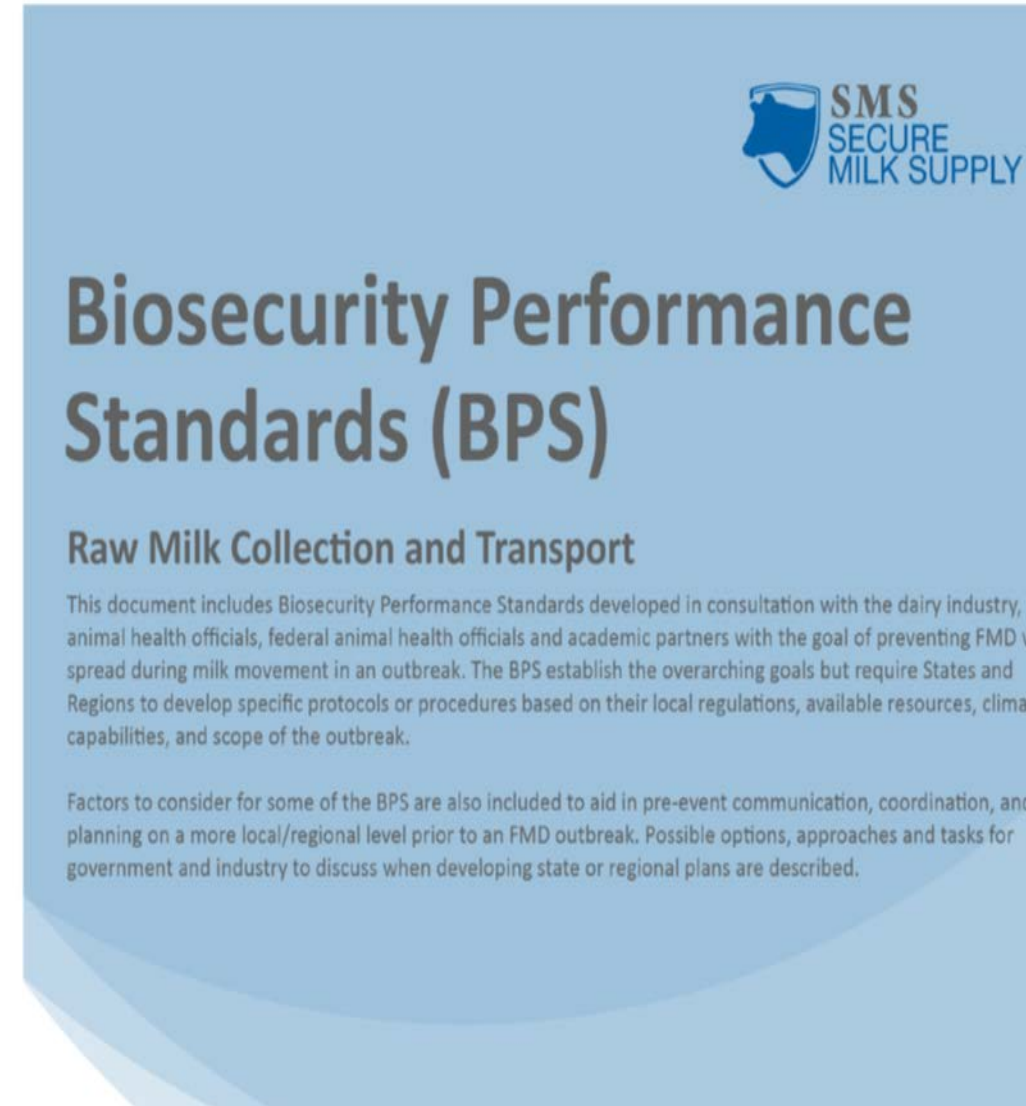
https://www.aphis.usda.gov/animal_health/emergency_management/downloads/generic_sfs_plans.pdf

<http://www.cfsph.iastate.edu/Secure-Food-Supply/>

- ❖ Biosecurity performance standards (BPS's), developed in collaboration with private, public and academia.
- ❖ BPS's are a list of biosecurity measures, which when performed correctly, will help reduce disease introduction and spread through best practices and standard operating procedures (SOPs).
- ❖ Plus additional specific biosecurity components in each species secure supply plans.
 - ✓ ex. The biosecurity recommendations in milk, pork and beef are based on the known exposure routes for FMD.
 - ✓ ex. Secure Milk has BPS's for dairy premises, milk haulers, and processing plants to implement during an FMD outbreak.
 - ✓ ex. Secure Beef is developing BPS's and surveillance plans (herd health monitoring) for feedlots, transporters and packer/processors.



Audits



SMS
SECURE
MILK SUPPLY

Biosecurity Performance Standards (BPS)

Raw Milk Collection and Transport

This document includes Biosecurity Performance Standards developed in consultation with the dairy industry, state animal health officials, federal animal health officials and academic partners with the goal of preventing FMD virus spread during milk movement in an outbreak. The BPS establish the overarching goals but require States and Regions to develop specific protocols or procedures based on their local regulations, available resources, climate capabilities, and scope of the outbreak.

Factors to consider for some of the BPS are also included to aid in pre-event communication, coordination, and planning on a more local/regional level prior to an FMD outbreak. Possible options, approaches and tasks for government and industry to discuss when developing state or regional plans are described.

Turkey:

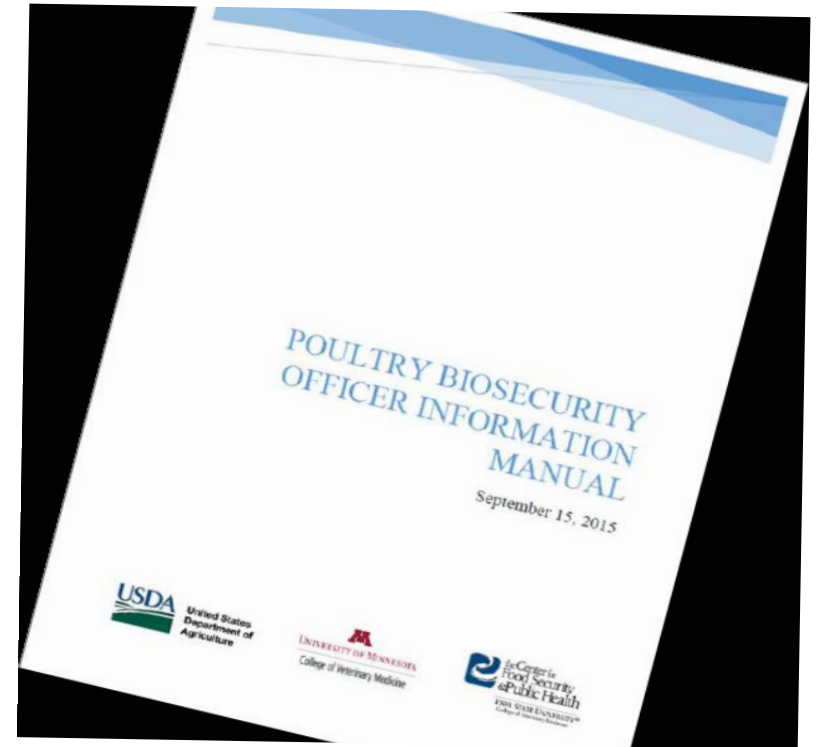
- Created a committee of industry experts and stakeholders
- Reviewed industry biosecurity plans and created a checklist that was evaluated and ranked in importance by experts to establish minimum biosecurity standards
- Epidemiologic questionnaire to determine exposure risks developed with support of industry and academic partners

Broiler: promotes food security and animal health through continuity of market planning prior to a HPAI outbreak.

http://www.securebroilersupply.com/wp-content/uploads/2015/08/SBS-DRAFT_2015.08.05.pdf

- National Poultry Improvement Plan

<http://www.poultryimprovement.org>



Poultry Enhanced Biosecurity for Poultry Producers

US Poultry & Egg Association

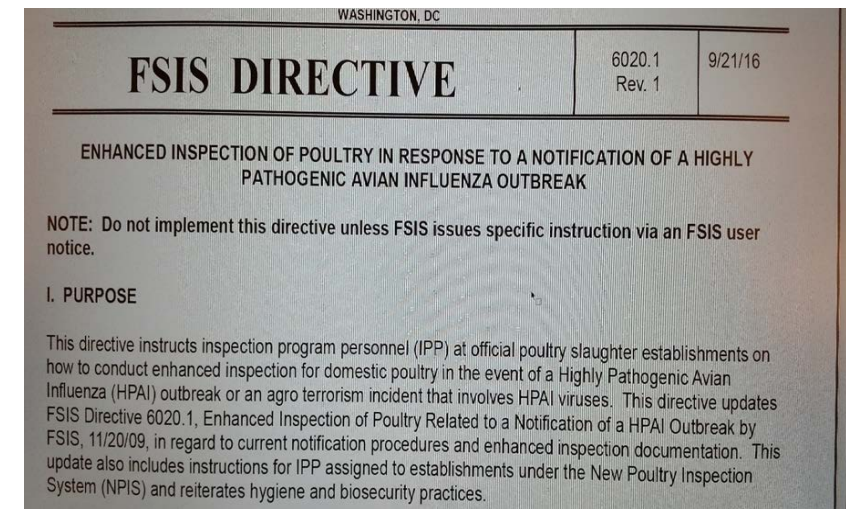
<http://www.poultrybiosecurity.org/>

Poultry Industry Lessons Learned

So that business can continue as best it can:

- How to quickly define high health compartment
- Knowledge of movements into compartment or zone at early stages of outbreak
- Defined risk area
- Understanding what is ok to move
- Information available immediately to retailers/food service channels & consumers
- Must have very clear instructions from FSIS (federal food safety regulators) on cleaning/disinfection at plant
- State Animal Health Officials must have rapid access to laboratory test results so that they can make timely permitted movement decisions, etc.
- Shifted production within zone for domestic product; outside HPAI zone for export

- ❖ Know international markets will shut immediately
- ❖ Therefore interested in using zones and compartments to concentrate on parts of industry not infected
- ❖ Species differences because of movements



SUCCESSFUL IMPLEMENTATION REQUIRES

- * PROCESSES
- * VERIFICATION
- * PLANNING
- * RELATIONSHIPS
- * AGREEMENTS
- * INDUSTRY DRIVEN
- * GOVERNMENT COLLABORATION & OVERSIGHT
- * ENHANCED BIOSECURITY
- * DATA & REAL-TIME ACCURATE INFORMATION
 - standardized messaging
 - agree on data to share and parameters around that
 - better if pre-existing systems and daily use
 - industry/state/federal
- * ACCURATE NEGATIVE TESTS
 - speed of commerce, surge capacity, transparency, competent authority to verify
- * RETAILERS & CONSUMERS MUST ACCEPT
- * COST/BENEFIT
- * CONTINGENCY PLAN for “after the dust settles” (exit plan)



Food for Thought – Commuter Herd Agreements

- Outline parameters for moving between States
- Permitted movement
- For breeding herds under normal operations, no change of ownership
- Annual
- Federal authorities provide definition/criteria for regulatory diseases = standardization, consistency & unification for movement requirements
- States commonly include other diseases
- Typically address any specific testing required, animal ID and documentation (e.g. veterinary certificate, test results, etc.)



COLORADO/NEW MEXICO COMMUTER CATTLE AGREEMENT

The State Veterinarian's office must receive applications at least **TWO WEEKS** prior to movement. **All necessary test information, including Trichomoniasis test results for bulls 12 months of age and older, MUST accompany the application.** If you have purchased cattle from another producer please include those test results. Your application will be returned if all test information is not furnished or dates are not within guidelines.

The following Commuter Cattle Agreement, when completed and signed by the owner and the State Animal Health Officials of Colorado and New Mexico will allow for the movement of beef herds and their offspring.

The animals being moved **MUST BE ACCOMPANIED** by a Certificate of Veterinary Inspection and a Brand Inspection Certificate issued prior to movement, as well as a copy of this Commuter Cattle Agreement. This number is also to be written on the Certificate of Veterinary Inspection.

This permit must be renewed in writing on a YEARLY BASIS.

Commuter permits are for bonafide breeding herds only – NO TRADER CATTLE.

BY TYPING OR SIGNING YOUR NAME ON THE SIGNATURE LINE, YOU ARE VERIFYING THAT ALL PROVIDED INFORMATION IS CORRECT.

INSTRUCTIONS: Sections I and II are to be completed by the herd owner. Section III will be completed by the State Veterinarians.

COLORADO: DR. KEITH ROEHR, STATE VETERINARIAN

305 INTERLOCKEN PARKWAY

BROOMFIELD, CO 80021

PHONE: 303-869-9130 FAX 303-466-8515

E-MAIL patricia.menchaca@state.co.us

NEW MEXICO: ELLEN MARY WILSON, D.V.M., STATE VETERINARIAN

300 SAN MATEO BLVD NE, STE 1000

ALBUQUERQUE, NM 87108

PHONE: 505-841-6161 FAX 505-841-6160

statevet@nmlbonline.com E-MAIL:

PLEASE E-MAIL, FAX, OR MAIL APPLICATION TO THE STATE VETERINARIAN'S OFFICE IN THE STATE OF ORIGIN.



PROCESS VERIFIED PROGRAM

TRANSPARENCY FROM FARM TO MARKET

The USDA Process Verified Program (PVP) is a verification service that offers applicants a unique way to market their products using clearly defined, implemented & transparent process points. A detailed Quality Manual documents how a company meets internal or external requirements. The process points can vary widely by industry & product & can cover production practices, services & quality factors such as size, breed, age & much more. Applicants choose which process points to adhere to, allowing them to assure customers of their ability to provide consistent quality products that meet specific requirements.

DEVELOPMENT

A company calls AMS & presents the process points they want verified. AMS evaluates the company's proposed process points & determines if AMS can verify them through the USDA Process Verified Program. All process points must be verifiable, auditable, feasible & factual.

REVIEW

Once all required documentation is submitted, AMS auditors conduct a desk audit to ensure all program requirements are accounted for & documented in their Quality Manual. The complete application is submitted to a Program Review Committee, which reviews all process points & approves the application.

ON-SITE AUDIT

The on-site audit process can last anywhere from a day to a week depending on the number & scope of process points & the size & complexity of the operation. AMS auditors conduct an on-site audit of all phases of the operation that impact process verified points.

AUDITING ANTIBIOTIC USE: For example, if a company wants to verify that they are raising their poultry without antibiotics, AMS auditors verify hatching, feed mill & on-farm records & processes to ensure that the company is meeting their processes for antibiotic use.

AUDITING ANTIBIOTIC USE FEED

Auditors visit the feed mills to ensure that feed does not include antibiotics, review ration & testing records & ensure that requirements included in their Quality Manual are followed.

AUDITING ANTIBIOTIC USE HATCHING

Auditors visit the hatcheries to ensure poultry are not administered antibiotics, before hatching (in ovo, in the egg) or after hatching.

AUDITING ANTIBIOTIC USE FARM

Auditors visit the farm where the poultry are raised to determine if there are any antibiotics on-hand or in use. Sick poultry must be treated for any illness, but poultry treated with antibiotics must be removed from the program to ensure the integrity of products being produced without antibiotics.

APPROVAL

If all goes well with the desk & on-site audits, the company is approved to be a part of the program & may use the "USDA Process Verified" shield on their products. For new programs, approval lasts for one year but a surveillance audit is conducted within six months of the initial on-site audit. After the first year, on-site audits are conducted annually.

SOURCES

Process Verified Program: processverified.usda.gov
November 2015, Agricultural Marketing Service
USDA is an equal opportunity employer & provider.

Food for Thought – Verification of Process

- Industry initiated, voluntary
- U.S. Government, USDA Agricultural Marketing Service (AMS) oversees
- Process verification for production methods and marketing claims
- Documented quality management systems
- Third party audits by auditors approved by AMS
- \$\$\$
- Requires significant time to establish



<https://www.ams.usda.gov/services/auditing/process-verified-programs>

Food for Thought – Government Agreements

New international cooperation on animal diseases

Tuesday, May 24, 2016 - 00:00

Hon Nathan Guy
Primary Industries

The Government has signed three new agreements to work closely with and support other countries in the event of animal disease outbreaks, Primary Industries Minister Nathan Guy has announced today.

"As a Government we are working extremely hard to protect our borders and the primary sector from natural threats. An important part of that is international cooperation in case there is a major incident," says Mr Guy.

Recognition of zoning principles for foreign animal disease outbreaks signed with Australia, Canada and the USA. This will manage biosecurity risks while minimising trade disruptions in the event of a foreign animal disease outbreak.

International Animal Health Emergency Reserve Agreement signed with Australia, Canada, Ireland, the UK and the USA. An undertaking to provide supplementary emergency response personnel from unaffected signatory countries.

A vaccine sharing arrangement in the event of an FMD outbreak signed with Australia, Canada, Mexico and the USA. This enables access to FMD vaccines held in the vaccine bank of an unaffected signatory country.

Recognition of zoning principles for foreign animal disease outbreaks signed with Australia, Canada and the USA. This will manage biosecurity risks while minimising trade disruptions in the event of a foreign animal disease outbreak.

"Sharing personnel during critical times will help participating countries respond more quickly to an outbreak. It also gives us access to additional experience in outbreak management and response.

"Having arrangements in place to continue safe trade from disease-free areas during an outbreak is good news for exporters.

"While New Zealand is well-prepared for FMD and has its own vaccine bank, the arrangement will give us rapid access to additional vaccine doses, should we require them.

- ❖ Relationships established
- ❖ Agreements developed prior to FAD optimal
- ❖ Follow OIE standards, where exist
- ❖ Science-based
- ❖ Talk to industry

Data and Innovative Tools



AgConnect

Multifaceted Integrative
Technology and Effort

- AgConnect is a technology umbrella
 - Easily accessible data fusion
 - Data owner controlled data sharing
 - Decision support tools with analytics
 - Novel geospatial views
 - Customizable mobile data collection
 - Robust security

Combination of tools intended
to help daily operations and
during disease events

- Livestock Owners
- Veterinarians
- State Animal Health
Authorities
- Federal Animal Health
Authorities

Animal Agriculture and Wildlife

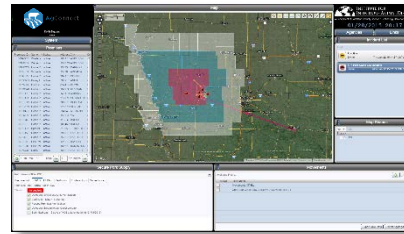


AgConnect

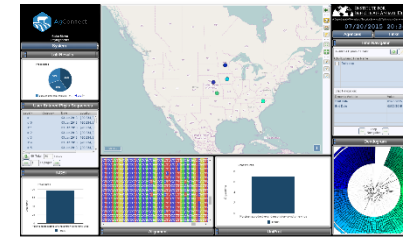
PERSPECTIVES

Biosurveillance

- Humans as Sensors
- Mobile Technologies
- Data Aggregation and Baseline
- Anomaly Detection

Response and Business Continuity

- Data Fusion
- Disease Status Monitoring
- Control Zone Management
- Traceability

Phylogenetics

- Data Consumption
- Sequence Alignment and Comparison
- Tree Construction and Visualization
- Time/Space Analysis

Laboratory Capacity

- Embedded Models
- Comparative Analysis
- Cost Tracking
- Resource Management and Prioritization

CAPABILITIES

Mobile Certificate of Veterinary Inspection - mHealth



- Freely available for download from each of the different app stores
- Provides an easy-to-use tool for digitally filling out and submitting CVIs
- Paper-based forms can be printed directly from the mobile device to a printer
- Store-and-forward capability allows for use even in very remote locations
- Some states allow for automated importing of generated CVIs

PROTECT ANIMAL HEALTH AND WELFARE
IMPROVE PUBLIC HEALTH AND FOOD SECURITY
REDUCE ZOOLOGICAL RISK

OS'16

European Commission for the Control
of Foot-and-Mouth Disease



Premises and Inventories

AgConnect Business Continuity System
Premises Inventory

Premises ID	Site Name	Inventory	# Groups	Invent
007LHF	Johnny Pork F 1006	1	14 Apr	
007LHG	Johnny Pork F 8	2	23 May	
007LJK	Johnny Pork F 1005	1	21 Apr	
007LVA	Johnny Pork F 945	1	24 Mar	
007KCV	Johnny Pork F 8	2	29 Apr	
007LGG	Johnny Pork F 8	1	16 Mar	
007YNEF	Johnny Pork F 126	1	23 May	
007YCI2	Johnny Pork F 531	1	23 May	
007YCH5	Johnny Pork F 1265	2	23 May	
007YOC5	Johnny Pork F 724	1	14 May	
008VNE	Johnny Pork F 943	1	10 Mar	
008VNE	Johnny Pork F 354	1	21 Apr	
008VNE	Johnny Pork F 580	1	21 Apr	
008VNE	Johnny Pork F 1212	1	07 Apr	
008VNE	Johnny Pork F 1200	2	12 May	
008VNE	Johnny Pork F 948	1	14 Apr	
008VNE	Hog Building 2307	1	26 Feb	
008VNE	Home Place 1195	1	28 Apr	

Movements

AgConnect Business Continuity System
Premises Inventory

Premises ID	Site Name	Inventory	# Groups	Invent
007LHF	Johnny Pork F 1006	1	14 Apr	
007LHG	Johnny Pork F 8	2	23 May	
007LJK	Johnny Pork F 1005	1	21 Apr	
007LVA	Johnny Pork F 945	1	24 Mar	
007KCV	Johnny Pork F 8	2	29 Apr	
007LGG	Johnny Pork F 8	1	16 Mar	
007YNEF	Johnny Pork F 126	1	23 May	
007YCI2	Johnny Pork F 531	1	23 May	
007YCH5	Johnny Pork F 1265	2	23 May	
007YOC5	Johnny Pork F 724	1	14 May	
008VNE	Johnny Pork F 943	1	10 Mar	
008VNE	Johnny Pork F 354	1	21 Apr	
008VNE	Johnny Pork F 580	1	21 Apr	
008VNE	Johnny Pork F 1212	1	07 Apr	
008VNE	Johnny Pork F 1200	2	12 May	
008VNE	Johnny Pork F 948	1	14 Apr	
008VNE	Hog Building 2307	1	26 Feb	
008VNE	Home Place 1195	1	28 Apr	

Diagnostic Testing

AgConnect Business Continuity System
Premises Inventory

Accession ID	Test Name	Result
2014000377	EM + Electron Microscopy	Open Reading Frame
2014000378	EM + Electron Microscopy	Open Reading Frame
2014000379	EM + Electron Microscopy	Open Reading Frame
2014000380	EM + Electron Microscopy	Open Reading Frame
2014010445	EM + Electron Microscopy	Open Reading Frame
2014010446	EM + Electron Microscopy	Open Reading Frame
2014010447	EM + Electron Microscopy	Open Reading Frame
2014010448	EM + Electron Microscopy	Open Reading Frame
2014010449	EM + Electron Microscopy	Open Reading Frame
2014010450	EM + Electron Microscopy	Open Reading Frame

State Animal Health Officials Data

AgConnect Business Continuity System
Premises Inventory

State	Animals Inspected per Month
06/01/2014	~100
08/01/2014	~450
09/01/2014	~550

Other Tools

General
Entry Permit #
Inspection Date: 4/20/13
Shipment Date
Large Animals / Small Animals

Sections
Consignor
Consignee
Carrier
Statements
Animals
Certifying Vet

Consignor Information
First Name, Last Name, Business Name, Physical Address of Animals, City, State, Zip Code, County, Phone Number, Consignor's Address (if different), Location ID#

AgConnect Exercise August 2-3

College Station, Texas TAMU Emergency Operations Center (EOTC)



Using

- Real time data collection utility
- Industry specific databases (ICE)
- State Animal Health Agency databases (USA Herds)
- Diagnostic Laboratory Linkages
- Secure Pork Supply Movement Concepts
- Data Visualized between states

To Assist in Business Continuity Decision making related
to necessary movements in a bio-secure fashion

- ❖ Business Continuity and Emergency Response
- ❖ Data-driven exercise focused on technical function and utility
- ❖ Used real industry daily operational data
- ❖ Notional scenario was a high-consequence porcine disease affecting Kansas, Colorado, Indiana, Iowa



AgConnect Exercise August 2-3

College Station, Texas
TAMU Emergency Operations Center (EOTC)



Business Continuity Injects;

- Cull sows to slaughter
- Fat finished hogs to slaughter
- Sow farm (weaned pigs) to Finish facilities
- Replacements gilts
- Overstock movements (finish pigs)
- Free zone to Free zone interstate movements
- Buffer zone to Surveillance zone move
- Both interstate and intrastate moves

- Based on swine industry working group identification of business critical needs

- ❖ Worked through various commercial swine controlled movement requests necessary for business continuity during this hypothetical swine disease outbreak.

Colorado Players



The Exercise involved 60 participants from 18 organizations

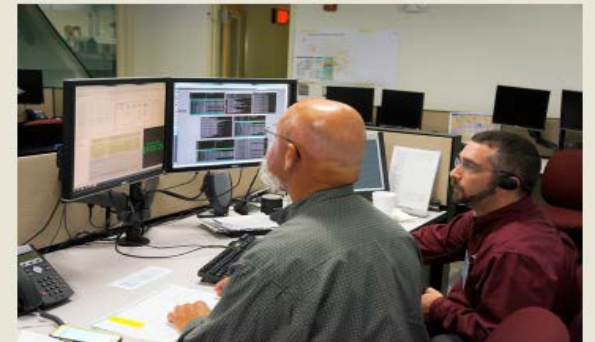
- Iowa Department of Agriculture and Land Stewardship
- Indiana State Board of Animal Health
- Colorado Department of Agriculture
- Kansas Department of Agriculture
- Texas Animal Health Commission
- USDA APHIS Veterinary Services
- Department of Homeland Security
- National Pork Board
- American Association of Swine Veterinarians
- Swine Health Information Center
- Texas Pork Producers Association
- JBS Live Pork
- AMVC
- Center for Food Security and Public Health
- Texas A&M Veterinary Medical Diagnostic Laboratory
- Institute for Infectious for Animal Diseases
- Texas Center for Applied Technology
- Texas A&M University System



Industry Presentation on Business Continuity Needs



Sim Cell Control Area – TAMU Exercise technology



Secure Pork Supply Database and Permit Concept

The screenshot displays a web browser window titled "Site-Specific Biosecurity" with the URL www.surveymonkey.com/s/32097533-3/5fd03050-hz7d. The page features the "SPS SECURE PORK SUPPLY" logo and the heading "Site-Specific Biosecurity Plan Submission (Exercise)". Below the heading, there is a form with the following instructions: "Use this form to submit the Site-Specific Biosecurity Plan for a site." The form contains three numbered steps: 1. "Please select the premises this plan is for," with radio buttons for "New Site" and "Existing"; 2. "Who is the person responsible for this plan?," with a text input field containing "Name: Station"; 3. "Please, upload a copy of the Plan," with a file upload area. The background shows a dashboard with "AgConnect" and "INSTITUTE FOR INFECTIOUS ANIMAL DISEASES" logos, a "Map Shapes" sidebar with various zones, and a "Lab Results" section.

Movements from Infected Premises to Iowa – real data

The screenshot displays the AgConnect web interface. The central map shows Nebraska and Iowa with several yellow circular markers representing infected premises in Nebraska. Blue arrows indicate movement paths from these premises to various locations in Iowa. A prominent green arrow points from a premise near Kearney, Nebraska, towards the northeast. The interface includes a sidebar with 'Incidents' (listing 'FMD of swine byssid in Ireland', 'Swine incident', and 'Mayflower'), a 'Map Shapes' panel with various zones (e.g., 'Iowa Quarantine Zone 1', 'Iowa Quarantine Zone 2'), and data tables for 'Movements', 'Premises', and 'SAHO Accessions'. The bottom of the screen shows a Windows taskbar with the time 4:06 PM on 10/26/2016.

Destination of Exposed pigs

The screenshot displays the AgConnect software interface. At the top left, the AgConnect logo and '2016 Executive Industry Conference' are visible. The main map area shows a geographical view of the United States with numerous yellow and blue markers representing pig locations and movements. A blue banner at the top of the map reads 'Pigs are leaving this region'. To the right of the map is an 'Information' panel with a 'Layers' tab, listing various data layers such as 'Stops', 'Countries', 'Inventory - States', and 'Movements - Flow to Summary'. Below the layers list is a 'Legend' section with color-coded lines for 'To Nursery', 'To Finisher', 'To Farrow', 'To Plant', and 'Infected'. A 'Map Chapers' panel on the far right shows a 'State House' layer. At the bottom, there are three panels: 'Priorities' with a filter list, 'Movements' with a filter list, and 'Lab Results' which contains a line graph titled 'Test Results by Premises' showing 'Positive', 'Negative', and 'Suspect' results over time.

AgConnect
 Colorado Exercise Exercise
 System

Incidents

- Mayflower CSF Incident
 Mon Aug 01 14:43:55 CDT 2016
- Deerview Incident
 Mon Aug 01 13:43:56 CDT 2016

Map Shapes

- Buffer Zone
- Safe Route
- Surveillance Zone
- Infected Zone

Lab Results

Test Results by Premises

Premises ID	Name	Category	Status
005GRUP	Mountain Pra	Commercial E	active
005GRNH	Mountain Pra	Commercial E	active
005GRDF	CRESTED BL	Production U	active
005GRR9	Mountain Pra	Commercial E	active
AN5GRDY6	Adventures, Bn	Production E	active

114 Total, 50 /page
 1 / 13 pages

Close up

AgConnect
 Colorado Exercise Exercise
 System

Map

Information Layers

- Wilkinson Iowa 20 km Surveillance Zone
- Wilkinson Iowa 10 km Control Zone
- Iowa Quarantine Zone 1 (Refused)

Premises - Locations

ID	Description
005GRUP	Mountain Pra
005GRNH	Mountain Pra
005GRDF	CRESTED BL
005GRR9	Mountain Pra
AN5GRDY6	Adventures, Bn

Movements

Available Filters:

- 005GRUP Southwest Park to 005GRDF Hersched (AMVIC)
- ALL
- All Copy
- Tx to IA Movements (URS)
- Default to IA Movements Last 2 Weeks (URS)
- 005GRDF Deer Creek to 005GRUP Herb
- 005GRDF Deer Creek to 005GRDF Herb

Premises

Available Filters:

- Wilkinson Premises (URS)
- All Prem in IA
- Wilkinson 1 km Infected Zone
- Wilkinson Buffer Zone
- Wilkinson 20 km
- 005GRDF Deer Creek
- 005GRDF Deer Creek and Herb (URS)

Secure Pork Supply

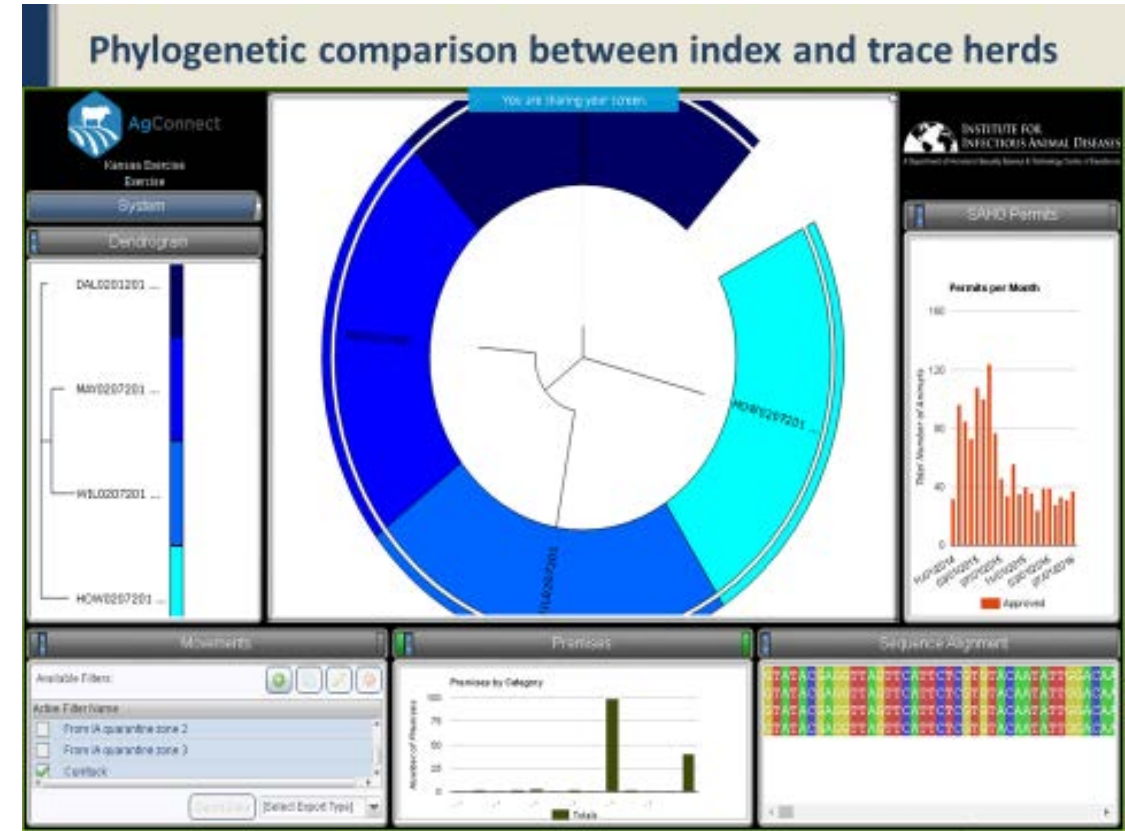
Select a Premise:

Premises Info: Status: Biosecurity Plan: Audit: Epidemiology: Surveillance

Premises: 005GRDF - Bear Grove

Status: **Not Available**

- Uploaded SPS Biosecurity Audit
- Biosecurity Audit Date = 1 year old
- Fenced Biosecurity Audit
- Uploaded Epidemiology Questionnaire
- Submitted Last 15 days of ACS data by building (8/12/2016)



❖ Following each of the requested movement scenarios, state animal health officials and industry representatives came together for discussions to determine if the requested realistic movements could occur and how AgConnect® assisted with their decisions.

Requested Move – wean pigs (Iowa) to Finish (Indiana)

The screenshot displays the AgConnect web application interface. At the top, a navigation bar shows the user is sharing their system. The main content area is divided into several panels:

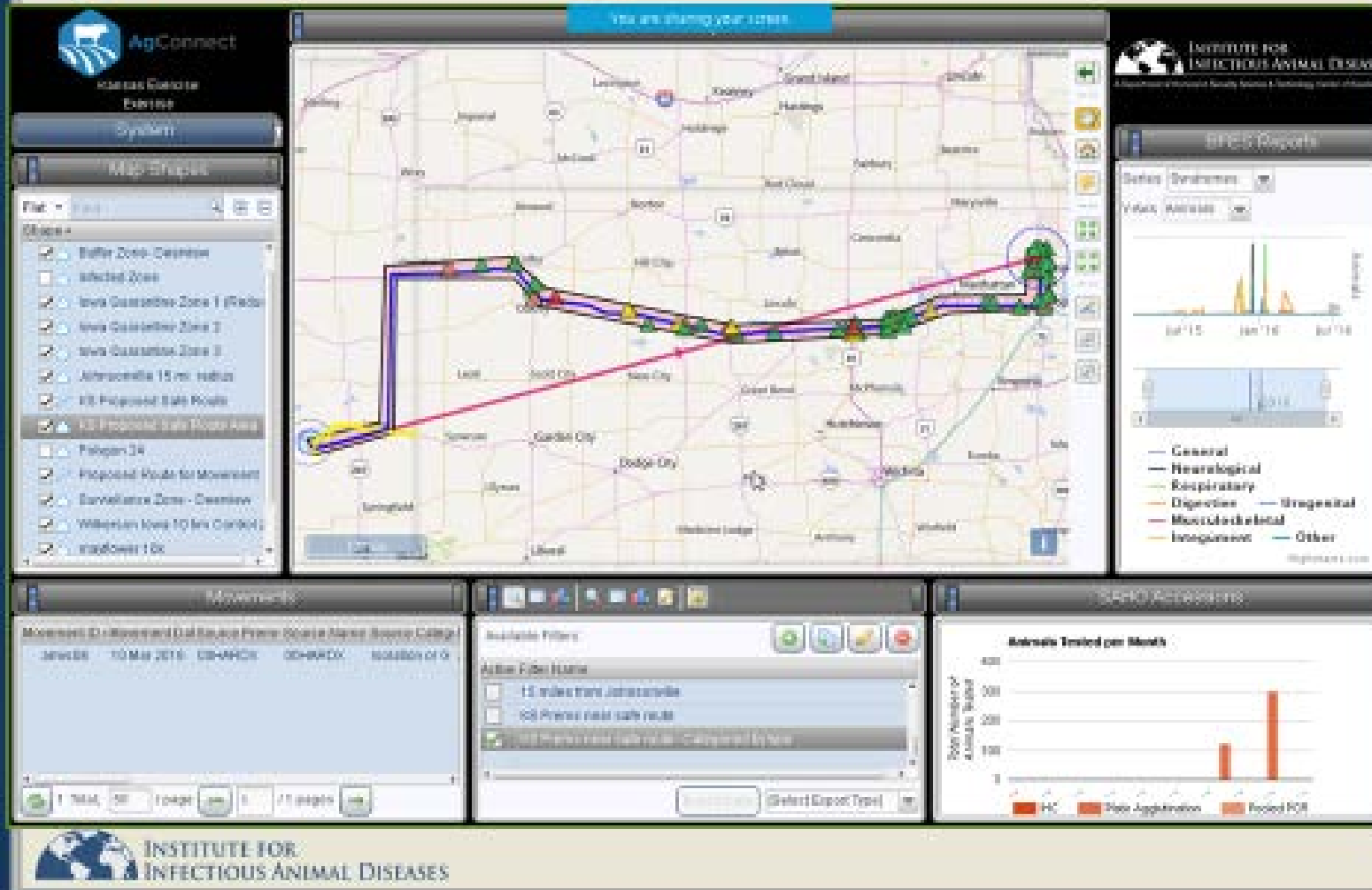
- Map:** A central map showing the movement of wean pigs from Iowa to Indiana. A blue arrow indicates the direction of travel across state boundaries.
- Information - Layers:** A table listing movements with columns for Source, Destination, Description, and Status.

Source	Destination	Description	Status
08020WPC	08020WPC	Date: 2016-03-09 18:00:00-08 (no value)	3,400
- Information - Floor Out Summary:** A table showing a summary of floor out movements.

ID	Description
08020WPC	Total Animals Out - 24,800
- Information - Location:** A table listing locations with columns for ID and Description.

ID	Description
08020WPC	Location Address
	Category: site
	Species: Pigs
	Contact: Jim Swander
	Phone: 712.244.8882
	Email: jim.swander@genus.com
- Map Shapes:** A panel on the right side of the map showing various map shapes and layers, including "Buffer Zone - Distance", "Infectious Zone", and "Iowa Quarantine Zone 1 (Pre)".
- Incidents:** A sidebar on the left showing a list of incidents with details such as "Wildfire in Iowa Incubated" and "Bovine Incident".
- Movements:** A bottom-left panel with available filters and active filter themes.
- RFES Reports:** A bottom-middle panel with filters for State, County, Date, Fractional ID, and Species.
- SAHD Accessions:** A bottom-right panel with filters for Post Mortem Test Name, Test Species, Test Pos. Cont., Test Neg. Cont., Test Boxed, and Test Date.

Safe Route Creation



- ❖ Used industry truck driver routes & premises locations data
- ❖ Used State Animal Health Officials' data
- ❖ Used GPS

Safe Route Close Up

You are sharing your screen.

Information | **Layers**

KS Proposed Safe Route Area

Premises - Locations

ID	Description
	Route (Not valid)
	Category (Production Unit)
	Species (Not valid)
	Control (Not valid)
	Phase (Not valid)
	Status (Not valid)
	Safe Route (Not valid)
	Species (Not valid)

View these [results](#) in a spreadsheet

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Final Hotwash



The state veterinarians and industry representatives concluded that AgConnect:

- ❖ was able to quickly translate information to visualization for situation awareness
- ❖ an important aspect of success was the ability for the swine industry to directly share operational and geospatial information directly through the system.
- ❖ State Veterinarians were also able to inform each other by sharing geospatial visualizations of their outbreak control efforts and status through AgConnect
- ❖ participants agreed on the tool's value of using live, real-time data and novel technology solutions to support decision-making.

Final Industry Perspectives

- ❖ Works best if the data systems are used daily so that real-time information is available and users already know system when there is a FAD
- ❖ Ability to connect information from various systems
- ❖ System should provide added value to users
e.g. Improve daily livestock operations
e.g. SAHO uses
- ❖ Agreed upon parameters for data sharing prior to an event
- ❖ Producers are reluctant to provide everything (and volume would overwhelm receiver)
- ❖ Producers will provide what is needed as long as it is justified
- ❖ Contractually there is a driver for doing what it takes to keep things moving (e.g. forward contracting) – compartmentalization could be an option

Successful advancement and use of these compartments and zones will require focused collaborations at national and international levels between livestock owners, livestock marketing/value chain, veterinarians, scientific experts, animal health authorities and international bodies.

Emergency Operations Training Center





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Cattlemen's Beef Association for their pictures

Thank you