Canadian Animal Health Surveillance System
CAHSS
November 24 2015

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NATIONAL FARMED ANIMAL HEALTH AND WELFARE COUNCIL

Purpose

- Background on the Canadian Animal Health Surveillance System (CAHSS), a collaborative initiative on animal health surveillance in Canada

- Review of accomplishments to date and next steps

Background:

The NFAHWC would like to address some major weaknesses in the present surveillance system in organization and decision making, and in information and data sharing.

Surveillance in a time of transition in farmed animal health (2011)

Collaborative Governance the Best Approach:

- Several successful components operating well
- Informal networking established through several initiatives
- Recognized need for national leadership/coordination
- Raised profile required
- Opportunity to create an environment for success
- May lead to developments in other sectors

Canadian Animal Health Surveillance System

- Distributed/federated network of networks
  - Functioning independently but connected
  - United by a common purpose and protocol
  - Unified under a common Directors Group, enabled by a Champions Group, supported by a coordinator and secretariat
- Encouraging innovation and creative solutions
  - Supporting the Emergency Management Framework
  - Answering the question, what can this national collaboration do, that no one else can?
  - Building from the ground up
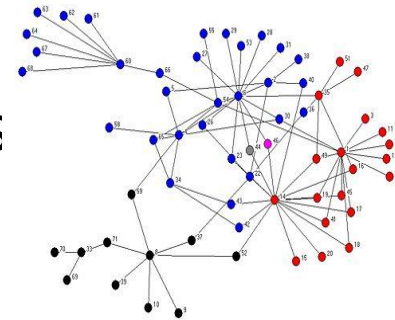
Authorities

- The new governance model will operate within existing regulatory authorities and frameworks
  - Bringing established networks together on a voluntary basis, encouraging development of new networks and enhancement of all networks.
  - Looking for innovative solutions to defragment animal health delivery and remove artificial barriers imposed by a variety of regulatory authorities

Costs

- Coordinator – supported initially by CFIA
- Secretariat – supported initially by AAFC
- Participating networks – maintain own costs
- Projects – funding programs of the day

Canadian Animal Health Surveillance System (CAHSS)

Surveillance means the systematic ongoing collection, collation, and analysis of information related to animal health and the timely dissemination of information so that action can be taken.

Includes reportable, notifiable, production limiting, emerging and zoonotic diseases in animals

Includes early detection, surveillance to provide evidence of disease freedom, surveillance to establish baselines and measure effectiveness of control measures

Network includes all who may contribute to or all who may be affected by animal health surveillance decisions

CAHSS Outcomes

- Strengthened Animal Health Surveillance
  - Enhanced, integrated early warning system for emerging diseases
  - Surveillance priorities appropriately balanced between animal health, public health and market access needs
  - Efficient use of pooled surveillance resources
  - Coordinated national level surveillance initiatives
- Strategic Use of Technology
  - Increased shared use of CAHSN and other data platforms as appropriate
  - Attention to data standards and data integrity
  - Collaborative development of data tools such as, mapping and spatial analysis, data collection apps, network analyses, analytical tools
- Enhanced Ability to Respond to Emergencies
  - Surveillance is part of all aspects of emergency management – prevention, preparedness/detection, response and recovery
  - Ability to quickly activate coordinated surveillance network of animal health and public health specialists, academics, laboratory directors, private practitioners and producers in response to animal health emergencies
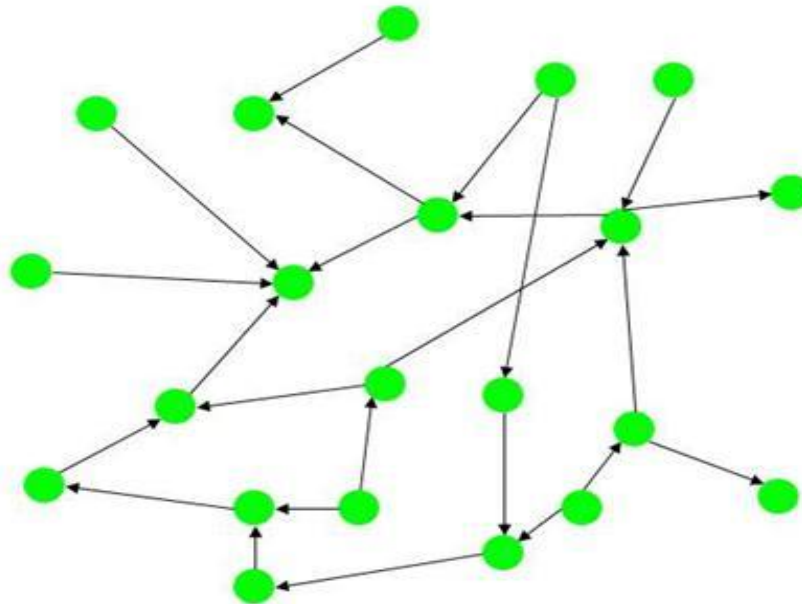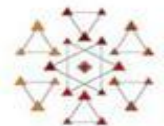
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Governance

Where we want to be……

Distributed/Federated

- Largely autonomous
- Connected by protocol
- Stable relationships
- Diverse **and** uniform
- Growth from any point in any direction

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Purpose Statement

A shared national vision leading to effective, responsive, integrated animal health surveillance in Canada.

- "Shared" implies collaboration and partnership
- "Vision" means that which is conceived looking towards the future
- "Effective" means the surveillance achieves what we set out to do (e.g. meets the objectives)
- "Responsive" means responds readily and sympathetically to needs, appeals, efforts influences, etc., whether it is a need of livestock producers or Canadian agriculture, public health, wildlife and ecosystem health or Canadian society in general
- "Integrated" means collective wisdom, and where it makes sense, we pull together people, activities, information, data, etc. to fill gaps, to create efficiencies and to build on each other's work
- "Animal" includes domestic livestock, companion animals, wildlife, fish and bees, among others

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Core Principles

- Ten core principles established to guide network practices and organization

- Principles of Practice relate to:
  - Importance of animal health, public health and economic prosperity
  - Scientific rigour in what we do
  - Openness, collaboration and innovation
  - Resolving conflict
  - Exchanging information within the network
  - Communicating information

- Principles of Organization relate to:
  - Eligibility for membership
  - The right to self-organize around any event or activity consistent with the shared purpose
  - Decision-making
  - Authority of members to manage their own roles and resources, while consulting with other network members who might have an interest

Core Participants

Champions:

- Enable the work of the CAHSS Directors and networks
  - High level guidance, foster innovation, strategically leverage resources as required

Directors:

- Representing network members in matters affecting the whole network and in collaboratively implementing purpose, principles, structure, functions and activities of CAHSS
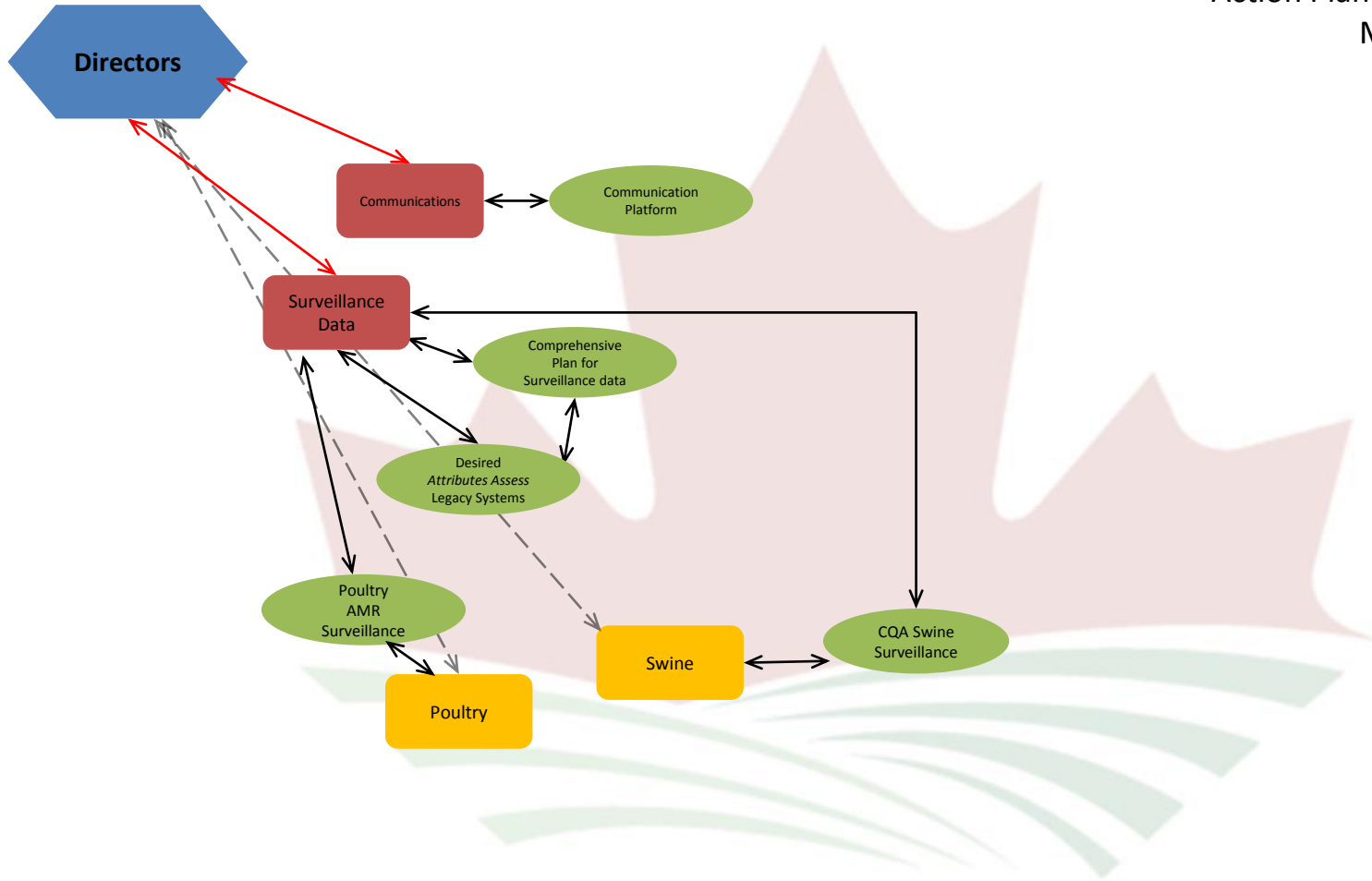
Members:

- Self-organizing, self-governing groups and individuals assembled to develop strategies and work collaboratively on initiatives and activities that are consistent with the CAHSS Purpose and Principles

Progress to Date

- Building the infrastructure
  - Achieving consensus on needs, purpose, principles, participants, structure, activities and harvest

- Six Month Report and Action Plan
  - Prepared at end of June, covering activities and accomplishments from January 2015, and next steps
  - To be updated every six months

- Populating the network
  - Starting with swine and poultry, planning stage
  - Needs to be staged in, to orient new network groups and to assist already existing groups to establish linkages and relationships

- Four projects agreed to by Directors at June 2015 workshop
  - Communications: internal and external communications for CAHSS
  - Poultry: electronic recording of disease and antimicrobial usage
  - Swine: electronic recording of quality assurance data
  - Surveillance Data: determining what we need, assessing what we have and developing a comprehensive data plan

CAHSS Network
Action Plan from Face to Face Meeting

Directors

Communications — Communication Platform

Surveillance Data

Comprehensive Plan for Surveillance data

Desired *Attributes Assess* Legacy Systems

Poultry AMR Surveillance

Poultry

Swine

CQA Swine Surveillance

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Next Steps

- Work will continue on the four selected projects as well as on CAHSS infrastructure

- Workshops planned for swine and poultry in February 2016
  - Share information on surveillance activities
  - Identify potential gaps and inefficiencies in surveillance, and potential areas to develop more effective, responsive and integrated surveillance
  - Look at effective communications of surveillance activities and effective response

- Establishment of swine and poultry network groups
  - Based on the outcome of the workshops in February, network groups will be linked in or established to support agreed upon activities

- Considering proof-of-concept projects to learn about, test and compare some integrated animal health information systems.
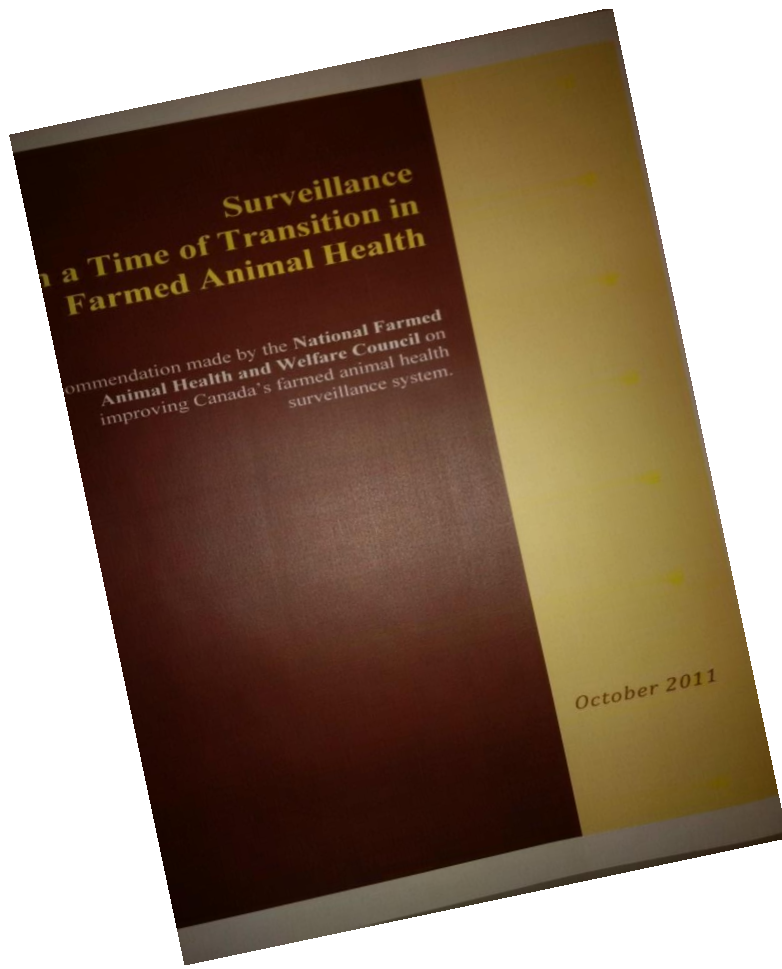
Thank you

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CAHSS Communications working group

Priority-
get information out this fall

PowerPoint and written material

– Different audiences and venues

– Information and updates
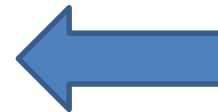
– Membership promotion

Surveillance
n a Time of Transition in
Farmed Animal Health

ommendation made by the **National Farmed**
Animal Health and Welfare Council on
improving Canada's farmed animal health
surveillance system.

October 2011

CAHSS Communications working group

On-going

Website host

Logo and "branding"

Information sharing

Communications Strategy

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CAHSS: Interoperability & Integration Project

NFAHWC Forum

November 24, 2015

The core information management problem identified by the CAHSS Directors Group:

- How do we make animal health surveillance systems work together in the "Network of Networks" approach?
  - **Interoperability**: Systems need to operate effectively for multiple users;
    - Provide useful, timely information for the users.
    - Allow for effective & efficient analyses
    - Avoid duplication & excessive effort
  - **Integration**: Systems need be able to integrate with other systems & into larger networks
    - Use common standards & methods

The approach proposed by the CAHSS directors group:

- Identify the necessary *attributes* systems must have to be most useful **&** link into broader networks.

- The Attribute development
  - Experience & expertise within the CAHSS Directors
  - Input & facilitation from national & international experts in animal health surveillance
  - Review of other networks & approaches around the globe.

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The Desired Attributes of an Integrated National Data System should reflect the philosophy and values of CAHSS

- Ground up, "local" approach

- Focus on data providers.

- Flexible, effective & efficient for all users

- Minimum, meaningful information collected

- Easy, effective analyses & reporting

- Sustainable

- Timely

- Smart use of technology; easy data entry, fast reporting

- Bilingual

- Operate & integrate with other systems, broader networks

Project proposal; How to apply the desired attributes for improved animal health surveillance.
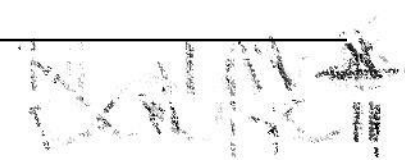
- Many systems in place or in development, lots of new technology, lots of new methods, landscape is continually changing. How do we choose which systems we'd like to use? The current proposal, under development:

- **A systematic, simplified approach to evaluating new and existing systems. The intent is to understand the current surveillance environment may work better.**

  – Adapt existing assessment tools with the proposed attributes
    - Examples: SERVAL, OASIS
  – Make the tools available for flexible, rapid assessments
    - Use each surveillance systems objectives to identify & prioritize the necessary attributes.
  – Encourage existing & developing systems to utilize the tools for self assessment
  – Evaluate the interoperability and integration of participating systems from the assessment outcomes.

Analysis

Assessment

Action

SERVAL assessment example (J.A. Drewe et al, 2015)

Surveillance Objectives

Attributes	Monitor Disease Prevalence	Detect for Disease Control	Emerging Disease Detection	Freedom from Disease	Changes in Population at risk
Cost					
Data analysis					
Data collection					
Data management					
Flexibility					
Multiple utility					
Participation					
Stability & Sustainability					
Timeliness					

CAHSS poultry project

CAHSS poultry project

- Proposal to national feather boards Sept/15
    - AMU/AMR Working Group
- Response expected in Dec/15
- A "flock sheet" must be completed for every flock going to slaughter
    - Handwritten, but fillable PDF available
    - Demographic information + AMU
    - Mortality data + denominator
    - Harvest data electronically?
- National flock AMU data from on-farm food safety projects?

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Feuille d'information sur le troupeau

Nom du producteur/entreprise : _____ Code producteur/# quota : _____

N° de poulailler : _____ Espèce : _____ Catégorie/sexe : _____ Âge des oiseaux : _____

Nb d'oiseaux placés : _____ Nb expédiés : _____ Taux de mortalité (%) : _____ Kg/oiseau : _____

Certification PASAF (PPC)/PSAF (ÉDC) : ☐ Oui ☐ Non   Densité : _____ ☐ kg/m^2 ☐ lb/pi^2 ☐ kg/pi^2

Section A – Information sur les médicaments et les vaccins

			Si oui
1)	Des médicaments ou des vaccins ont-ils été administrés au couvoir?	☐ Oui ☐ Non	A, D, E *
2)	Des vaccins ont-ils été administrés à la ferme?	☐ Oui ☐ Non	A, B, D, E
3)	Des maladies ou des syndromes ont-ils été diagnostiqués dans le troupeau?	☐ Oui ☐ Non	G
4)	Des médicaments ont-ils été administrés dans le cadre d'un traitement?	☐ Oui ☐ Non	A à G *
5)	Les rations contenaient-elles, dans les 7 jours précédant l'expédition dans le cas des poulets et dans les 14 jours précédant l'expédition dans le cas des dindons, des médicaments assortis d'une période de retrait?	☐ Oui ☐ Non	A, D, E *
6)	Des médicaments dont l'utilisation est en dérogation des directives de l'étiquette ont-ils été utilisés dans la moulée?	☐ Oui ☐ Non	A, D, E *
7)	Des médicaments de catégorie I (ex. ceftiofur - Excenel™, enrofloxacine - Baytril™) ont-ils été utilisés à la ferme de manière <u>préventive</u>?	☐ Oui ☐ Non	A à F *

*Inclure les ordonnances de tous les médicaments utilisés en dérogation des directives de l'étiquette

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Flock Information Reporting Form

Producer/Enterprise Name: _____ Producer Code/Quota: _____

Barn #: _____ Species: _____ Category/Sex: _____ Age of Birds: _____

Birds Placed: _____ # Birds Shipped: _____ Mortality Rate (%): _____ Kg/Bird: _____

CFC OFFSAP/TFC OFFSP Certification: ☐ Yes ☐ No Grow-out density: _____ ☐ kg/m² ☐ lb/ft² ☐ kg/ft²

Section A – Medication and Vaccine Information		If yes:
1) Were medications or vaccines administered at the hatchery?	☐ Yes ☐ No	A, D, E *
2) Were vaccines administered on-farm?	☐ Yes ☐ No	A, B, D, E
3) Were any diseases or syndromes diagnosed during the flock?	☐ Yes ☐ No	G
4) Were any medications administered for treatment?	☐ Yes ☐ No	A through G *
5) Did the rations prior to shipment in the last 7 days for chickens or in the last 14 for turkeys have any feed medications with a withdrawal period?	☐ Yes ☐ No	A, D, E *
6) Were any extra-label medications used in the feed?	☐ Yes ☐ No	A, D, E *
7) Were any Category I medications (e.g., ceftiofur - Excenel™, enrofloxacin - Baytril™) used on-farm in a <u>preventive</u> manner?	☐ Yes ☐ No	A through F *

*Attach prescriptions for all extra-label medication use

Record any "Yes" answers in the table below (use the guide above to fill in the columns):

Question # (i.e. 1-7 above)	(A) Medication or Vaccine Name	(B) First treatment date	(C) Last treatment date	(D) Withdrawal Period (days)	(E) Safe marketing date (if any)	(F) Dose	(G) Disease or Syndrome & flock recovery (initials)

Section B – Feed Withdrawal and Loading Information

Planned catching time:	M	D	Time	AM PM	Actual start of catching:	Time	AM PM
Planned processing time:	M	D	Time	AM PM	Time of last access to water:	Time	AM PM
Was the feed supply disrupted in the last 48 hours?	☐ Yes ☐ No				Feed withdrawal time provided by the processor:	Time	AM PM
Time feed was no longer accessible:	M	D	Floor #1 Time	AM PM	Floor #2 Time	AM PM	Floor #3 Time	AM PM

Provide any additional comments on flock condition during the brooding/grow-out period and/or the catching process on a separate sheet of paper if desired.

Additional Comments: _____

I confirm that, to the best of my knowledge, the information contained on this flock information reporting form is accurate and complete and that any diseases that were diagnosed in the flock as a result of laboratory tests and/or readily observable clinical signs have been identified and reported on this form.

Producer's Signature: _____

Note: This information is confidential between the producer and the processor.

Version 6.0

Flock Information Reporting Form

Producer/Enterprise Name: _____ Producer Code/Quota: _____

Barn #: _____ Species: _____ Category/Sex: _____ Age of Birds: _____

Birds Placed: _____ # Birds Shipped: _____ Mortality Rate (%): _____ Kg/Bird: _____

CFC OFFSAP/TFC OFFSP Certification: ❑ Yes ❑ No Grow-out density: _____ ❑ kg/m² ❑ lb/ft² ❑ kg/ft²

Section A - Medication and Vaccine Information		If yes:
1) Were medications or vaccines administered at the hatchery?	❑ Yes ❑ No	A, D, E *
2) Were vaccines administered on-farm?	❑ Yes ❑ No	A, B, D, E
3) Were any diseases or syndromes diagnosed during the flock?	❑ Yes ❑ No	G
4) Were any medications administered for treatment?	❑ Yes ❑ No	A through G *
5) Did the rations prior to shipment in the last 7 days for chickens or in the last 14 for turkeys have any feed medications with a withdrawal period?	❑ Yes ❑ No	A, D, E *
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7) Were any Category I medications (e.g., ceftiofur - Excenel™, enrofloxacin - Baytril™) used on-farm in a <u>preventive</u> manner?	❑ Yes ❑ No	A through F *

*Attach prescriptions for all extra-label medication use

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Swine Disease Surveillance

Swine Disease Surveillance

PEN OR INDIVIDUAL TREATMENT RECORDS FOR ALL PIGS BEYOND THE WEANING PHASE
(This form can be used for growers, finishers, sows and barbecue pigs)

I.M. – in the muscle   I.W. – in the water   I.V. – in the vein   S.Q. – under the skin

Date	Animal or pen ID	Number of animals	Product name	Reason the product was used	Amount given and the route used	Who gave it	Weight of the treated pig	Withdrawal time in days	Not to go before (date)	Treatment result	Needle broken?
Dec 24		2	Pen strepmit	strep	5cc IM	BR	varias	10		cured	X
Dec 25		2 streps	strep vac	strep	3cc im each	KW		10		cured	X
Dec 27		1	strep vac	strep	5cc IM	BR		10		cured	X
Dec 28		1	strep vac	strep	5ccIm	BR		5		cured	X
Jan 4		1	strep vac	strep	5cc IM	BR		5		cured	X
Jan 5		1	Exenal	strep	3cc Im	BR	45 lbs	1		cured	X
Jan 5		1	strep vac	strep	5cc IW	BR	40 lbs	5		cured	X
Jan 14		1	strep vac	strep	5cc IW	BR	35 lbs	5		cured	X
Jan 18		1	strep miv	strep	5cc IM	BR	30	5		cured	X
Jan 19		2	strep miv	strep	5cc IM	BR	4/5	5		cured	Y
Jan 21	Prolaspe Grower	1	exenel	strep	2cc IM	KW	40	1		cured	X
Jan 27	1	4	exenel	strep	2cc IN	BR	varias	1		cured	X
Jan 28		4	exenel	strep	3cc Im	BR	varias	1		cured	X
Jan 29		2	exenel	strepes	3cc IM	KW	30	1			X
		2		strep	2cc IM	KW	30	1			X

Canadian Pork Council
Conseil canadien du porc

	01/06/2015 30/06/2015	01/07/2015 31/07/2015	01/08/2015 31/08/2015	01/09/2015 30/09/2015	01/10/2015 31/10/2015	01/11/2015 02/11/2015	Total
Recorded deaths							
Unclassified	.	.	.	.	1	.	1
BELLY RUPTURE	.	.	.	1	.	.	1
BLOATED	.	.	.	1	3	.	4
DIARRHEA	.	.	.	.	.	.	.
GREASY PIG	.	.	.	.	.	.	.
INJURY	.	1	.	1	.	.	2
JOINT INFECTION	.	.	.	.	.	.	.
MENINGITIS	.	.	.	.	1	.	1
OTHER	.	.	.	.	1	.	1
PNEUMONIA	.	.	.	.	.	.	.
PROLAPSE	.	.	.	.	1	.	1
STOMACH ULCER	2	1	.	4	2	.	9
STRESS SYNDROME	.	.	.	.	.	.	.
SUDDEN DEATH	36	46	48	52	63	.	245
TAIL BITING	.	.	.	.	.	.	.
UNKNOWN	1	12	9	8	11	.	41
UNTHRIFTY	47	9	18	41	63	.	178
Total recorded deaths	86	69	75	108	146	.	484
Mortality rate	2.05	2.20	1.15	10.18	2.10	.	2.22

Current Industry Swine Surveillance Projects:

- CSHIN – communication network
  - Quebec (RAIZO - govt), Ontario (OAHN - govt), Western Canada (CWSHIN)
- CWSHIN Surveillance Data System
  - Practice Surveillance
- AMU Projects
  - Quebec – MAPAQ and EDPDQ
  - Ontario – OSHAB (OSH?)
- PRRS Projects:
  - Quebec
  - Ontario – ARC&E

CAHSS Swine Project(s)

- Propose to organize a CAHSS swine disease surveillance working group
  - Include stakeholder groups – producers, practicing veterinarians, government
- Hold a two day workshop to determine surveillance priorities moving forward.

Questions?

What is Innovative About CAHSS?

And What are the Next Steps?

NFAHWC Forum

November 24, 2015

How is CAHSS innovative?

- A shared purpose holding together independent nodes
- True partnership and collaboration, we are all leaders
- Openness and playfulness
- Living, able to change according to need
- Creating new ideas, experimenting, trying new things and taking risks
- Client focus, starting at the producer level
- Cross-functional teams

What can we do together that we cannot do alone?

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Needs

1. Advise on national animal health surveillance priorities
2. Facilitate data gathering
3. Help people exchange and use information
4. Help make information easily accessible
5. Help remove artificial barriers to animal health surveillance

Data and information underpin many of these needs.

# *What do we mean by "data" and "information"?*

WHAT IS DATA?

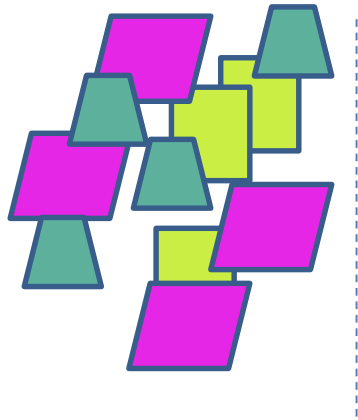DATA

- **Noise** becomes **Data** when it can be *discerned* and *differentiated* by the mind

WHAT IS INFORMATION?

- **Data** becomes **Information** when it is *assembled into a coherent whole* which can be related to other information in a meaningful way.

INFORMATION

When data are not integrated, information becomes incoherent and confusing
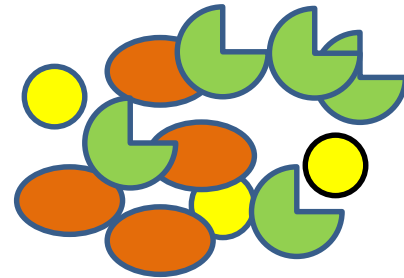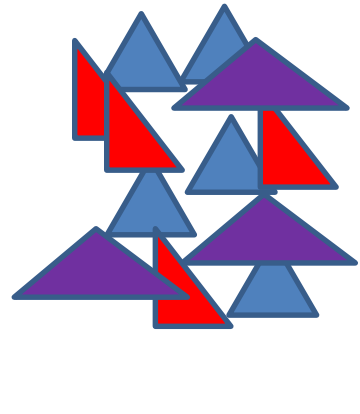
Data System 1

Data System 2

Data System 3

What can CAHSS do to help improve animal health surveillance data and information in Canada?

- Life would be so much easier if we could all agree to write things down in the same way!
    - The lack of integrated data or interoperable data systems is a key impediment to the work of a network of networks
    - The inability to add value to datasets because they cannot be readily collated and analysed is a constant source of frustration

- **CAHSS Directors believe integrated, interoperable, web based data systems are critical to the long term success of our collaboration on national animal health surveillance**

An Integrated National Data System should be useful to everyone and reflect the philosophy and values of CAHSS

- Ground up, "local" approach
- Focus on data providers.
- Flexible, effective & efficient for all users
- Minimum, meaningful information collected
- Easy, effective analyses & reporting
- Sustainable
- Timely
- Smart use of technology; easy data entry, fast reporting
- Bilingual
- Operate & integrate with other systems, broader networks

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What can CAHSS do to help improve animal health data and information in Canada?

- **A proof-of-concept for a few selected integrated data systems. The intent is to try them out in the Canadian environment to see if one or more would be useful to us**
  - Focus on producer level data collection
  - Simple, fast data analysis & reporting for all users
  - Examples could include Omnisys, IIAD, Global Vet Link
- **An effective assessment of the new and existing systems**
  - Adapt & use existing animal health surveillance assessment tools to evaluate existing & developing systems
- The timing is right!
  - Need something tangible to work on, need to move beyond planning
  - Need some fun and excitement, to energize the group as we do the hard work of building a collaboration
  - Need to move beyond limiting beliefs, everybody supports integrated information but many are discouraged
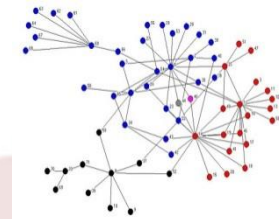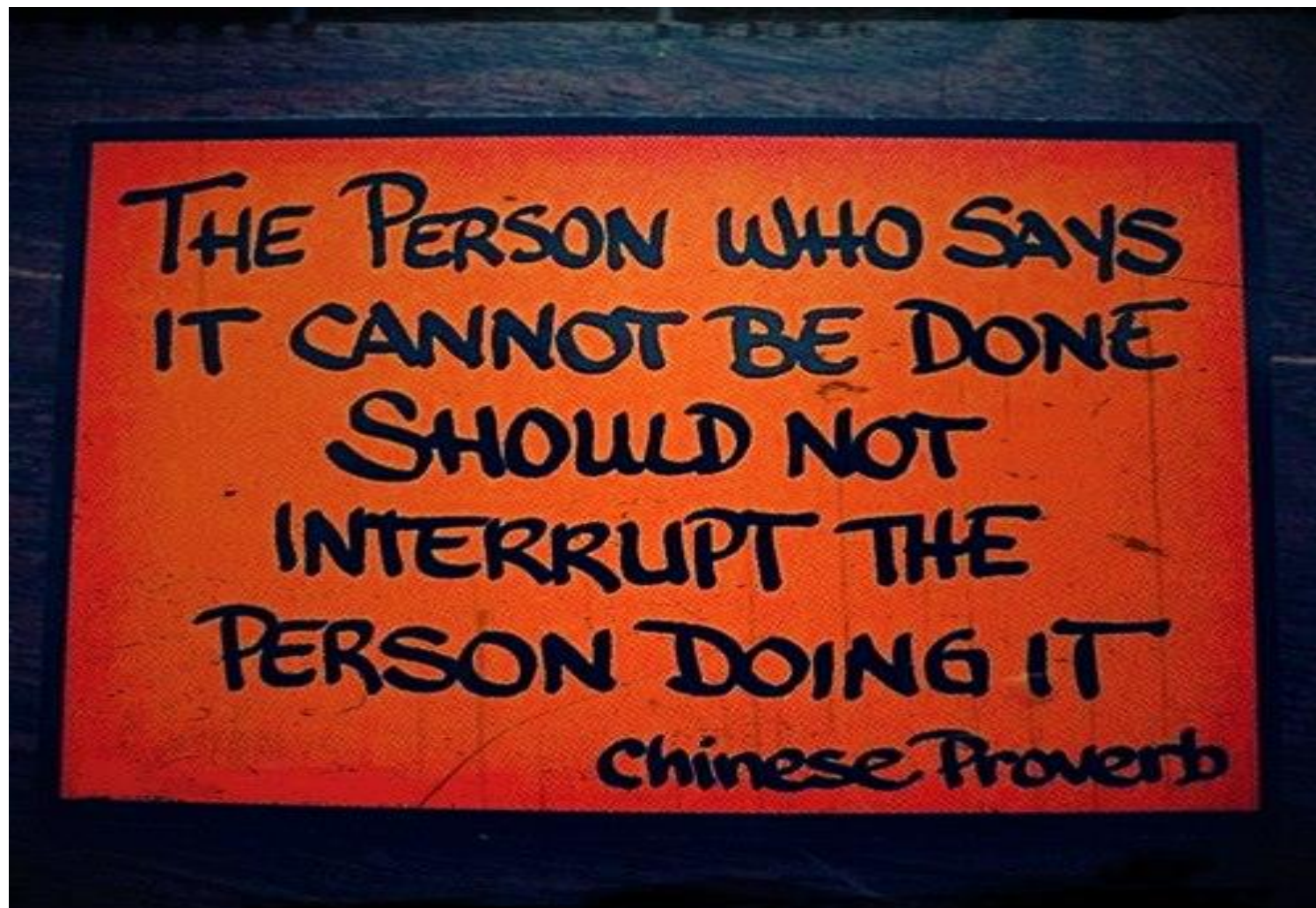
This is something CAHSS can do which cannot be done in isolation

What we would like to ask you...

Any suggestions regarding

1. Data system attributes?

2. The proof-of-concept process?

3. Your own involvement?

Thank you