Farm Biosecurity Made Simple in the Face of AI and Other Challenges

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FALL 2016
WHAT DID WE TALK ABOUT LAST YEAR?

The worst animal disease outbreak in US history!
WHAT DID WE TALK ABOUT LAST YEAR?
The worst animal disease outbreak in US history!

• The virus

1. What was the virus name?
WHAT DID WE TALK ABOUT LAST YEAR?
The worst animal disease outbreak in US history!

- The virus
- The source of the virus

2. What wild animal is a carrier of Avian influenza?
WHAT DID WE TALK ABOUT LAST YEAR?
The worst animal disease outbreak in US history!

- The virus
- The source of the virus
- The map with the flyways

3. What is the name of the Flyway Georgia and Tennessee are in?
WHAT DID WE TALK ABOUT LAST YEAR?
The worst animal disease outbreak in US history!

- The virus
- The source of the virus
- The map with the flyways
- The signs

4. What is one of the symptoms of AI in chickens?
WHAT DID WE TALK ABOUT LAST YEAR?

The worst animal disease outbreak in US history!

• The virus
• The source of the virus
• The map with the flyways
• The signs

• The response

5. What would happen to your chickens if they were diagnosed with Avian influenza?
WHAT DID WE TALK ABOUT LAST YEAR?

The worst animal disease outbreak in US history!

• The virus
• The source of the virus
• The map with the flyways
• The signs
• The response

• ENTRY BIOSECURITY!
## ENTRY BIOSECURITY: SIGN IN LOG

<table>
<thead>
<tr>
<th>DATE</th>
<th>NAME</th>
<th>REASON</th>
<th>FROM</th>
<th>Entered House</th>
<th>IN/OUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/7/2016</td>
<td>John Smith</td>
<td>Service</td>
<td>Office</td>
<td>1,2</td>
<td>11-12am</td>
</tr>
<tr>
<td>11/7/2016</td>
<td>LISA BLACK</td>
<td>FARM AUDIT</td>
<td>ABC FARM</td>
<td>2 ONLY</td>
<td>1:15PM</td>
</tr>
<tr>
<td>11/9/2016</td>
<td>Bill Wand</td>
<td>Generator repair</td>
<td>General Co.Inc</td>
<td>n/a</td>
<td>4am-6am</td>
</tr>
<tr>
<td>11/14/2016</td>
<td>John Smith</td>
<td>Service</td>
<td>Office</td>
<td>1,2</td>
<td>9-10am</td>
</tr>
</tbody>
</table>
FARM ENTRY BIOSECURITY: SIGNAGE
FARM ENTRY BIOSECURITY: VEHICLES
ENTRY BIOSECURITY:
VISITORS

2015
HOUSE ENTRY BIOSECURITY
GROWER AND EMPLOYEES: FOOT WEAR
HOUSE ENTRY BIOSECURITY
GROWER AND EMPLOYEES: FOOT BATHS
OTHER HIGH RISKS:
WHAT DID WE TALK ABOUT LAST YEAR?

The worst animal disease outbreak in US history!

• The virus
• The map with the flyways
• The signs
• The devastation
• The response

• ENTRY BIOSECURITY!

BUT NOTHING HAPPENED, RIGHT?
INDIANA: H7N8
January 2016
10 farms
1 HPAI
414K birds lost
Zones lifted
38 days after first Diagnosis
MISSOURI: H5N1
May 2016
1 farm
LPAI
LPAI viruses
In the South

2016
Migratory Waterfowl

H5N8
Fall 2016: NOW!

H5N2
ALASKA
AI Threat

The threat is still here.

BUT WE HAVE A STORY TO TELL.
BIOSECURITY MAKES A DIFFERENCE!
Contagious Diseases

LT
Mycoplasma (MG, MS)
Where do those diseases come from?

<table>
<thead>
<tr>
<th></th>
<th>LT</th>
<th>MS</th>
<th>AI</th>
</tr>
</thead>
<tbody>
<tr>
<td>WILDLIFE (waterfowl)</td>
<td></td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>NON COMMERCIAL POULTRY</td>
<td>√</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>COMMERCIAL LAYERS</td>
<td>√</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>SOME VACCINATED BREEDERS</td>
<td></td>
<td></td>
<td>√</td>
</tr>
</tbody>
</table>
How are those diseases spread?

<table>
<thead>
<tr>
<th>CONTAGIOUS DISEASES</th>
<th>LT</th>
<th>MS</th>
<th>AI</th>
</tr>
</thead>
<tbody>
<tr>
<td>On two legs! Visitors!</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Common mortality disposal</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Contaminated vehicles/equipment</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Mismanagement of contaminated litter</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Rodents, insects</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Airborne</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
What happened in GA since this past year?

NE GA MS cases/month

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>3.6</td>
<td>7.6</td>
<td>7.8</td>
<td>5.2</td>
<td>3.6</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
2014-2016 Monthly cases of VLT, GA
Biosecurity: Prevention and Containment

- Case of AI, MS, LT
- Effort should be to 1 prevent introduction
- But if you get a disease, 2 contain it.
Prevention: Avoiding disease

- Change clothes and footwear coming back in
- Disinfect everything going in

Please continue doing this!
Containment=Preventing Spread

- Change clothes and footwear going out
- Disinfect everything going out
- Litter and Mortality are highly contaminated

If you get a disease, contain it!
Broilers: Biosecurity score

Before fall 2015: Average score = 4

After fall 2015: Average score = 9.3
Breeders: Biosecurity score

Average of scores
Before fall 2015: 6.2
After fall 2015: 8.8
<table>
<thead>
<tr>
<th>Implemented or reinforced?</th>
<th>BROILERS</th>
<th>BREEDERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AI specific grower meeting?</td>
<td>86%</td>
<td>88%</td>
</tr>
<tr>
<td>Foot pans dry</td>
<td>79%</td>
<td>75%</td>
</tr>
<tr>
<td>Foot pans wet</td>
<td>43%</td>
<td>81%</td>
</tr>
<tr>
<td>Disposable boots</td>
<td>100%</td>
<td>94%</td>
</tr>
<tr>
<td>Dedicated boots</td>
<td>79%</td>
<td>88%</td>
</tr>
<tr>
<td>Sign in log</td>
<td>86%</td>
<td>88%</td>
</tr>
<tr>
<td>Coveralls</td>
<td>57%</td>
<td>88%</td>
</tr>
<tr>
<td>Visitor control nn essential</td>
<td>79%</td>
<td>94%</td>
</tr>
<tr>
<td>Visitor control essential</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
What made you change your behavior?

- Disease/Devastation/Depopulation/Mortality: 23%
- Meetings: 16%
- Financial Losses: 61%
Wet foot baths?

- 23 tested, 16 no growth, 7 had bacterial growth
- In the process of testing more of them
Now what?

• There is no doubt that we are more biosecure
• MS incidence down, No LT
• Lets make this permanent!
Poultry Owner—Initial 1–5 and sign below:

1. At the time of the outbreak, there was, to the best of my knowledge, a biosecurity plan that was followed to prevent the introduction of HPAI.

2. I understand that the poultry on the premises will be depopulated in the most humane manner possible with a depopulation goal of 24 hrs.

3. I will provide barn and mortality records that verify the current inventory of poultry and
1 LINE OF SEPARATION
2 PERIMETER BUFFER AREA

Coveralls, hairnets and boots must be worn by all non-Wayne Farms personnel!

No equipment allowed on or in this operation that has not been approved!
3 PERSONNEL
5 EQUIPMENT AND VEHICLES
6 DEAD POULTRY DISPOSAL
7 MANURE AND LITTER MANAGEMENT
9 FEED AND REPLACEMENT LITTER
10 REPORTING MORTALITY AND MORBIDITY
Summary

• AI did not happen in TN, AL or GA, but the threat is still here
• Better prevention measures helped us with our MS cases, possibly our LT cases
• Stop the spread of disease; PREVENT & CONTAIN!
• The result is in your pocket book!
• All in, ALL THE TIME!
Question...

What if we get a first case of LT tomorrow in CLEVELAND, TN?
What will it look like?