



If you have any questions or comments about this newsletter, or if you have any ideas for future articles, please contact the Growing Forward Biosecurity Program office in Edmonton at: 780-422-6630. This is a toll-free call through the Government RITE line by dialing 310-0000-780-422-6630

In the end, there may be no effective way of completely preventing transmission of certain zoonotic diseases like influenza. But by thinking beyond boots and coveralls, we can reduce the risk.

For more information on respirators vs. masks:

http://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/RespSource3.html



Figure 4. Children can also be a source of infection for livestock and should follow the same biosecurity protocols as adults.

PRECONDITIONING PAYS

**By Ron Clarke, DVM
Consultant, AB.VMA Biosecurity Project**

Ask a swine producer about the value of biosecurity and biosecurity protocols for an average herd, and a lengthy discussion follows. Ask the average cow-calf producer the same question and the response is much shorter, if at all. The primary difference can be semantics. The swine producer relates biosecurity to disease control under conditions of confinement rearing. The cow-calf producer probably relates it to doing the things the way things need to be done when cows are spread over acres of grass in fresh air. Come fall, however, many producers should rethink preconditioning.

Preconditioning pays for the same reasons it always has, but producers must start with uniform groups of calves and sell the fact calves have been preconditioned. The whole process starts with producers working with a veterinarian.

With greater attention given to beef quality and safety, good animal husbandry practices and preventive health measures have become increasingly important. Documentation is key when it comes to capturing benefits of a preconditioning program. Prospective buyers need verification that a program was followed and that vaccines were used in compliance with Verified Beef Production Guidelines. They need more proof than just the seller saying the cattle have had their shots.

Healthy cattle have better average daily gains, have higher quality carcasses and go to market with reduced treatment costs. Most importantly, healthy cattle go a long way down the road in meeting the beef industry's most important goal; satisfying customer demand for quality and the fact they were "raised right."



Distributed compliments of the Alberta Biosecurity Champions

ALBERTA BIOSECURITY CHAMPIONS

Alberta Biosecurity Champions

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CHAMPIONS IN PROFILE

Biosecurity "For All Producers Great and Small"

Ana Ulmer-Franco, DVM, MSc, PhD

Alberta Agriculture & Rural Development

It was during the years working as a field veterinarian in the largest integrated broiler company in Colombia (South America) that biosecurity practices became part of Ana's life. At the time she worked with a team of close to 40 farmers and a support crew who looked after 600,000 broiler chickens per cycle. "I was lucky to have been given the challenge and opportunity to work in the Colombian Pilot Area for



Eradication and Control of Newcastle Disease (ND)". Flocks in this specific area faced complicated disease challenges, and ND was only one of them. Keeping healthy flocks was not an easy task in this densely populated region in which different companies raised broilers and commercial layers ("Did I mention all the barns were open-sided allowing air to freely move through the wired walls?"). In addition, every neighbour kept free-roaming birds in their backyards. Ana initiated a producer-oriented education program with her team and strict biosecurity protocols were implemented on each farm. "It took them a few production cycles to observe a change in their flocks but once bird health and performance improved, along with their bonus payments, biosecurity became their creed". After 3 years working with broilers Ana was transferred to supervising a team rearing broiler breeder pullets, "Biosecurity was even stricter but our farmers understood why and were happy and proud to follow the rules and to make sure everyone involved did the same". Ana enjoyed living in the beautiful Colombian countryside where she kept a small flock of 20 African sheep (known as Camuros). Soon she found herself applying in her small hobby farm the basic biosecurity concepts that the 6-million-broilers-per-month company embraced.

Born and raised in Colombia, Ana graduated as Veterinary Doctor and Animal Scientist in 2001 and after working with the poultry industry she moved to Canada in 2005 to pursue her graduate education. She completed both her MSc and PhD (incubation and chick health) at the University of Alberta. Ana fell in love with Alberta and its people,

Growing Forward Biosecurity Program is accepting applications for 2012/2013

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Growing Forward
A federal-provincial-territorial initiative



BIOSECURITY
NEEDS 'U'!

Hazard identification and risk assessment key to biosecurity programming

Planning and developing a sound biosecurity program for any business starts with identifying where potential disease hazards or breaches in biosecurity exist and estimating the level of risk associated with each hazard.

PADRAP is one of the tools veterinarians can use.

The American Association of Swine Veterinarians' (AASV) Production Animal Disease Risk Assessment Program (PADRAP) was initiated in 2006. Iowa State University College of Veterinary Medicine, Food Supply Veterinary Medicine provides program coordination to develop, manage and promote disease risk assessment tools and databases of completed risk assessments held by AASV.

PADRAP is an epidemiologically based initiative to help producers and veterinarians manage disease risks faced by the North American swine industry. It offers a set of risk assessment questionnaires, databases and reports for measuring and benchmarking disease risks.

Though initially developed as a porcine reproductive and respiratory syndrome (PRRS) risk assessment tool, PADRAP easily accommodates risk assessments for other swine disease, all stages of production and other species.

PADRAP can be used:

1. To evaluate current biosecurity protocols and/or to develop new biosecurity protocols to avoid risk.
2. To demonstrate improvement in biosecurity over time to help justify expenditure of resources on measures to improve biosecurity.
3. As an aid in the decision to initiate disease elimination projects and identify modifiable risk factors that increase the likelihood of success.
4. As part of due diligence for purchases or contracting agreements.

For further information contact your veterinarian or:

<http://vdpambi.vdl.iastate.edu/padrap/default.aspx>

Courtesy of:

Ron Clarke, DVM

Consultant AB.VMA Biosecurity Project

after marrying a Canadian she happily said “now I’m stuck near the North Pole and I’m happy about it”. Ana recently joined the Animal Health Branch of Alberta Agriculture and Rural Development as Animal Health Programs Coordinator, teaming with Carolyn Jamieson (Program Administrator) and Dr. Hernan Ortegon (Section Head).

In her new position, Ana is involved with the Growing Forward Biosecurity program. Growing Forward is a Federal, Provincial, Territorial initiative developed to create a profitable and competitive agricultural sector in Canada. The Biosecurity program supports producers, not-for-profit organizations and farm service providers in creating awareness of biosecurity and in the implementation of measures that prevent diseases from entering and/or spreading from farm to farm.

Ana is also the new team leader for the Alberta Biosecurity Champions, a group comprised of producers, industry representatives, farm service providers, academic and veterinary organizations directly or indirectly involved with animal agriculture and related industries. Among other activities, the Biosecurity Champions share information on biosecurity initiatives and development and implementation of biosecurity plans, distribute items that promote on-farm biosecurity, and produce a Newsletter highlighting current topics and key issues in animal disease prevention and control.

For more information or to share your ideas and stories, please contact us at

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Website: <http://www.agric.gov.ab.ca/biosecurity>

DON'T SNEEZE IN MY BARN

By Julia Keenlside, DVM, MSc.

Alberta Agriculture & Rural Development

Often when we talk about biosecurity, we focus on infected animals and contaminated clothing or equipment as high risks. The 2009 H1N1 pandemic influenza outbreak showed us that we need to consider one other risk: people themselves carrying disease.

Diseases that can be transmitted between animals and humans are referred to as “zoonotic” diseases. Usually we consider that animals are sources of disease for humans (eg rabies, Salmonella) and that humans are somehow cleaner. Maybe it’s time to rethink that assumption.

During the 2009 outbreak of pandemic H1N1 (pH1N1) influenza, there was evidence from several countries that people had been responsible for the introduction of the virus into both swine and turkey barns. While it is always difficult to prove how a virus entered a barn, in a few cases there were reliable records of barn workers being ill a few days before the pigs or birds. When the barn is very biosecure and no new stock were introduced, this is very suggestive.

There were also several cases of pH1N1 infection reported in pet cats, dogs and ferrets. In some cases, there were no reported illnesses in



Figure 1. Pigs can shed influenza viruses without looking sick.

But people can shed the influenza virus in their nasal secretions before they show any symptoms, and after they have recovered. And some infected people never show any symptoms at all. While keeping sick people out of barns will clearly help, it is not 100% effective. Pigs can also be infected with influenza without exhibiting any signs of illness, and can shed the virus for a couple of days before getting sick.

Some experts have suggested that everyone going into swine and poultry barns wear masks, protective eyewear and gloves in addition to changing clothes and boots. Public health officials have also suggested this to protect workers from getting any swine or poultry influenza viruses. There is concern that when influenza viruses from pigs, birds and people mix, they can form new pandemic viruses.



Figure 3. Veterinarians often wear masks or N95 respirators plus eye protection and gloves when handling sick pigs.

swine and poultry barns be vaccinated for seasonal influenza. This may not completely protect people from a new strain, but it might reduce spread.

www.agric.ab.ca/biosecurity

the owners. But in a few cases, the owners tested positive for pH1N1 before their pets did, suggesting that they brought the disease home to their pets.

In one swine barn, two workers had flu-like symptoms on the weekend. They tested positive for pH1N1. Because of concern over infecting the pigs, they did not return to work that week. They worked in a very well run and biosecure barn, where all staff and visitors routinely showered and changed all their clothes before entering. No new animals came into the barn during this time and there were no birds, rodents or pets in the barn. Yet in spite of all this, the pigs became ill a few days later with the same pH1N1 virus.

Clearly the people infected the pigs in this case. Influenza was getting around some of the best biosecurity protocols, so more needed to be done. Now many swine and poultry barns have protocols that restrict sick people from entering the barn. Staff who are ill are told to stay home until they are better.



Figure 2. Humans can infect swine and poultry with influenza viruses.

A standard surgical mask will reduce the amount of aerosol spread from the wearer, and therefore will reduce the risk to the animals. But because masks do not seal around the face, this is not complete protection. Masks are not designed to protect the wearer from aerosol infection, so they cannot be relied upon to protect the workers from animal disease.

To completely protect both animals and people, a respirator must be used. Respirators can be disposable paper (eg. N95) or reusable plastic. Some respirators can look like paper masks, but they differ mainly in being able to form a complete seal around the face. Respirators can filter aerosols. People must be trained on their proper use, and they must also be fit-tested to each user. The biggest drawback of masks and respirators is that they are uncomfortable. People find it hard to wear them consistently, especially while doing physical labour.

Some countries have also recommended that all workers in swine and poultry barns be vaccinated for seasonal influenza. This may not completely protect people from a new strain, but it might reduce spread.