WASHINGTON, Nov. 25, 2015 - Today, the U.S. Department of Agriculture’s Food Safety and Inspection Service (FSIS) released a final rule establishing an inspection program for fish under the order Siluriformes, including catfish. The final rule, which applies to both domestically-raised and imported Siluriformes fish, was developed in order to implement provisions required by the 2014 Farm Bill. The rule will become effective in March 2016.

“FSIS is committed to a smooth and gradual introduction to the new inspection program, which was mandated by the 2014 Farm Bill,” said Al Almanza, USDA Deputy Under Secretary for Food Safety. The March 2016 effective date of the rule begins an 18-month transitional implementation period for both domestic and international producers. On the March 2016 effective date, all Siluriformes fish, including catfish, will be under the regulatory jurisdiction of FSIS and no longer regulated by the U.S. Food and Drug Administration (FDA). Before the effective date of the final rule, countries currently exporting product to the United States must provide a list of establishments that currently export, as well as written documentation of their regulatory authority.

During the transitional period, FSIS will conduct inspection during all hours of operation at domestic establishments that slaughter and process Siluriformes fish, similar to inspection provided at meat and poultry slaughter and processing facilities, while also providing the establishments with close guidance to ensure that they understand FSIS’ requirements. During this time, inspection program personnel will also be assigned to visit domestic Siluriformes fish processing establishments, at least once per quarter.

During the 18-month transitional period, FSIS will re-inspect and conduct species and residue sampling on imported Siluriformes fish shipments at least quarterly at U.S. import establishments on a random basis. Also, during the transitional period, countries wishing to continue exporting product to the United States after the transitional period must apply for an equivalency determination. Applications for equivalency must be complete by the end of the 18-month transitional period. FSIS will assist countries with their equivalency applications. Countries that submit completed documentation demonstrating equivalency by the 18-month deadline will be able to continue exporting to the United States while the agency conducts a full equivalency evaluation, which includes an on-site audit. Following the 18-month transitional period, inspection program personnel will continue to conduct inspection during all hours of operation at domestic slaughter and processing establishments, at least once per shift at processing-only establishments, which is similar to requirements for other food products that FSIS regulates. Also beginning at the end of the 18-month transitional period, FSIS will re-inspect and conduct species and residue tests on all incoming shipments.

The final rule can be found online at: http://www.fsis.usda.gov/wps/portal/fsis/topics/regulations/federal-register/interim-and-final-rules.
EXECUTIVE VICE PRESIDENT’S COLUMN

 Thoughts on the Accomplishments of Federal Veterinarians

By M J Gilsdorf, DVM

I recently read memorial remarks by Dr. Russ Currier about the life of Dr. David Dressen, a former federal veterinarian, state veterinarian and academician. It got me to thinking about us as federal veterinarians and our accomplishments. As a federal veterinarian, you get a decent wage, benefits, and time off for sickness and vacation. These are valued benefits. Rarely, however do you, as a federal veterinarian get recognized for the tremendous accomplishments you provide on a daily basis to the nation. These accomplishments are varied and numerous and contribute greatly, in my opinion, to the economic and health successes of the nation.

Many citizens don’t know that veterinarians were in the fore-front of efforts to suppress malaria and yellow fever in the United States. Federal veterinarians have prevented the importation of foreign animal diseases such as foot-and-mouth disease, African swine fever, highly pathogenic avian influenza, and others into the US for more than 100 years. These accomplishments have allowed citizens to spend less time and money on food and health which allowed them to research and develop the technology and economy we enjoy today.

Tuberculosis (TB) remains a leading cause of morbidity and mortality in developing countries. It is not an issue in the US because federal veterinarians have reduced the transmission of tuberculosis in foods and animals by reducing the prevalence in livestock and inspecting each animal for TB lesions at slaughter.

According to the World Health Organization, highly pathogenic avian influenza worldwide is one of the most difficult challenges ever faced by public health and animal health officials in the modern global context. U.S. federal veterinarians have worked with others around the globe to prevent a world-wide influenza pandemic. In addition they have eliminated Bovine Spongiform Encephalopathy from the U.S., eliminated brucellosis from domestic livestock in the U.S., ensured animal vaccines are safe and effective, assisted with conducting epidemiological investigations to find the sources of public health outbreaks, investigated disease outbreaks in wildlife and implemented control measures, develop strategies to prevent emerging diseases, and numerous other activities to protect the nation.

I hear from members on a weekly basis about the struggles they endure to ensure they accomplish the agencies’ missions and goals of protecting the nation’s animal health, animal welfare, food safety, and human health. Just last week, I heard from a newly hired veterinarian who was extremely concerned about the lack of training they received during orientation and their struggles to discern how best to accomplish their duties and responsibilities. Others complain about workloads.

(Continued on Pg. 6, “EVP Column…”)

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Federal Veterinarian (ISSN 0164-6257)
1910 Sunderland Pl., N.W.
Washington, D.C. 20036-1608

is published monthly except bimonthly in Nov-Dec and May-June by, and in the interest of, the National Association of Federal Veterinarians to whom it is mailed free. Periodicals postage paid at Washington, D.C. Correspondence should be addressed to:

Executive Vice President
National Association of Federal Veterinarians
1910 Sunderland Pl., N.W.
Washington, D.C. 20036-1608

The annual subscription rate is $50.00 for United States and Canada and $70.00 for foreign mailing, payable by January 1 each year. Subscriptions are not available to those eligible for membership.

Any veterinarian employed full time by the federal government may become an active member (non DoD dues $234.00 annually, payable by January 1 each year. Subscriptions are not available to those eligible for membership.

Associate membership may be granted to active members when they retire from federal service. Associate members pay no dues. Associate mailed subscriptions are $25.00 per year.

The National Association of Federal Veterinarians is a non-profit corporation and the purposes for which it is formed are to promote the veterinary profession, to improve the professional efficiency and material interests of the members, to acquaint the public with the activities of veterinarians in the federal service, and to cooperate with the American Veterinary Medical Association, the United States Animal Health Association and other similar groups with common interests.

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(Continued on Pg. 6, “EVP Column…”)

Thoughts on the Accomplishments of Federal Veterinarians
By Allan Hogue, DVM

Animal Care stepped up in response to the need demonstrated when Hurricane Katrina struck Louisiana and Mississippi in 2005. The media flooded the news with images of pets and their owners on rooftops in the floodwater. The public was shocked and outraged that our nation was ill prepared to help. First responders learned that people would not evacuate unless provisions are available for all their family members, including pets. Federal and State governments quickly passed legislation to support pets in disasters. Through the ensuing 10 years, Animal Care, with support from Congress, has provided animal welfare expertise to ensure the needs of pets and their owners are addressed when disaster strikes.

There are numerous organizations at the local, state, and national level with capabilities essential for animal emergency response, but no single organization has all of the requisite skills and legal authority. Within States, the State Department of Agriculture, the Board of Animal Health, or the State Emergency Management Agency may have the mandate for animal emergency management.

Since Hurricane Katrina, the leading national animal welfare organizations formed the National Animal Rescue and Shelter Coalition (NARSC) with a common set of standards and procedures. States organized the National Alliance of State Animal and Agriculture Emergency Programs (NASAAEP) to facilitate effective coordination of animal needs. At the Federal level, Animal Care formed a partnership with FEMA and other Federal Agencies, to maintain a collaborative network of animal response organizations with a common playbook.

Animal Care supports exercises to enhance preparedness. Animal Care sponsored the Multi-jurisdiction Animal Resource Coordination (MARC) Exercise in cooperation with the University or Georgia in 2012, with 11 States participating. The MARC Exercise was repeated in 2014 in cooperation with the University of Kentucky and 24 States participated. The MARC Exercises tested States abilities to request external resources and the after action review indicated a need to continue to train and exercise resource coordination and prioritization in a scenario where State needs exceeds their capabilities.

Animal Care funds a collaboration of national subject matter experts to compile and publish best practices in animal emergency management. The NASAAEP Best Practice Documents address a wide range of topics including: Animal Decontamination, Animal Evacuation and Transportation, Animal Search and Technical Rescue, Disaster Veterinary Care, Emergency Animal Sheltering, Planning and Resource Management, Preparedness and Community Outreach, and Zoo Disaster Preparedness. All of these documents are available to assist response organizations and state and local governments in their efforts to mitigate the effects of natural disasters and other animal emergencies (www.nasaaep.org).

Animal Care partners with the zoo community to enhance preparedness and build response capabilities. This collaboration resulted in the Flu in the Zoo exercise, the Zoo Ready Program, Incident Command training for zoo personnel, and the establishment of the Zoo and Aquariums All Hazards Preparedness, Response, and Recovery Center (ZAHFusion Center). The ZAHFusion Center is a conduit for dissemination of information to the managed wildlife community on the five critical National Preparedness mission areas: Prevention, Protection, Mitigation, Response, and Recovery.

When Highly Pathogenic Avian Influenza struck commercial poultry in the United States last year, Animal Care recognized that zoos and animal exhibitors also held vulnerable bird collections. Animal Care and Veterinary Services engaged experts in the managed wildlife community through the ZAHFusion Center to create a Concept of Operations (ConOps) document as a guide to response activities in zoos and animal exhibitor facilities. Animal Care, Veterinary Services, and the ZAHFusion Center also planned and conducted an avian influenza virtual exercise to test and improve the coordination of response efforts. Five zoos and three states participated in that exercise held in October 2015.

The progress made by the animal response community since 2005 has been tremendous. The United States is much better prepared to respond to the needs of animals during a disaster and Animal Care is proud of its collaborative efforts to build and sustain the Nation’s animal emergency response capability.
Emerging Infectious Diseases
Volume 22, Number 3—March 2016
Letter to the Editor:

Middle East respiratory syndrome coronavirus (MERS-CoV) acquired from animals causes severe pneumonia in humans, with some chains of human-to-human transmission, leading to large outbreaks. MERS-CoV is a cause of concern for global public health. The only natural host of MERS-CoV identified so far is the dromedary camel (Camel dromedarius), and transmission from camels to humans has been documented. The geographic distribution of MERS-CoV in dromedaries extends beyond the Arabian Peninsula (where human cases have been reported) to North and East Africa (where human cases have not been reported).

However, MERS-CoV from a camel in Egypt and MERS-CoV from a human were phenotypically similar in tropism and replication competence in ex vivo cultures of the human respiratory tract.

Our previous study demonstrated no evidence of MERS-CoV infection in Bactrian camels in Mongolia. The question whether MERS-CoV is endemic in camels in Central Asia remains unanswered. MERS-CoV RNA was detected in swab samples from camels in Iran, which had been imported from Pakistan; however, where the infection was acquired is unclear.

In Asia, Kazakhstan is of particular interest because large populations of 2 major camelid species overlap: 90% Bactrian (Kazakh breed including 3 ecotypes) and ~10% dromedary (Arvana breed from Turkmenistan) and their hybrids. To determine whether MERS-CoV is present in camels in Kazakhstan, we conducted a seroepidemiologic survey.

During February–March 2015, blood was collected from 550 female camels (455 dromedary, 95 Bactrian) in 2 regions, Almaty and Shymkent. Dromedaries were sampled in the cities/villages of Kyzylorda (105 animals from 2 herds), Zanakorgan (35 animals from 1 herd), Sholakkorgan (110 animals from 2 herds), and Akshiy (205 animals from 4 herds). Bactrian camels were sampled in Sholakkorgan (40 animals from 1 herd) and Kanshengel (55 animals from 1 herd).

Given the uniformly high seroprevalence of MERS-CoV infection among dromedaries in Africa and the Arabian Peninsula, the lack of infection in dromedaries in southern Kazakhstan was surprising. Because genetically diverse MERS-CoV from Africa remains antigenically conserved with viruses from the Arabian Peninsula, the lack of antibodies is probably not explained by antigenically divergent strains. Feral dromedaries in Australia, which originated from animals imported from Afghanistan or Pakistan during 1840–1907, are also seronegative for MERS-CoV. In contrast, bovine-like coronavirus seems to be present in dromedaries everywhere (including Kazakhstan and Australia).

Dromedaries are clearly a natural host of MERS-CoV. However, the finding that MERS-CoV is not endemic in dromedaries in all geographic regions suggests the possibility that dromedaries may not be the ultimate natural reservoir (i.e., the long-term host of a pathogen of an infectious disease). Topography (i.e., mountain chains) may limit camel movements from the Middle East or Africa to Central Asia, although such interchange certainly occurred centuries ago as a consequence of the silk-trade routes through southern Kazakhstan.

The findings that MERS-CoV is not universally endemic in dromedaries raises the hypothesis that certain species of bats or some other animal, the environment, or both, may constitute a maintenance community and be the true natural reservoir of MERS-CoV and that the virus spills over to camels and is maintained within camels for varying periods of time. Further studies on the epidemiology of MERS-CoV infection among camels from central Asia are warranted.
"African Swine Fever is a man-made disease"

Source: Pig Progress

Is African Swine Fever a threat to Europe's pig production? The knowledge can be found at Germany’s Friedrich-Loeffler-Institut. For scientists Dr. Klaus Depner and Dr. Sandra Blome, the virus has few secrets left. “Most problems are a matter of human misbehaviour.”

If there is one take-home message to report after having spoken to two of the leading scientists on African Swine Fever, it should be that the major threat with regard to the virus is not the virus itself, but how humans deal with it.

Dr. Klaus Depner, head of the International Animal Health Team at the Friedrich-Loeffler-Institut (FLI) on the island Riems in northern Germany, has to admit that even he as expert needed some time to understand the disease.

He tells Pig Progress in an exclusive interview, “I have worked for about four years in Africa in the 1990s; that is where I first encountered the disease, albeit under African conditions. I really started actively observing it when it came to Georgia in 2007. My biggest mistake was that I copy-pasted all my knowledge about Classical Swine Fever (CSF) to African Swine Fever (ASF). But one has to forget about CSF when studying ASF. The mechanisms of the disease transmissions are not the same.”

Telling the difference is difficult

His colleague, head of the German national reference laboratory at the FLI, Dr. Sandra Blome, comments. “In both cases the pigs get very sick and the losses are exactly the same. If I would have two infected pigs next to each other, I would not be able to tell the difference on the basis of clinical signs. I will only know which virus infected the pig once I have done the diagnosis in the lab.”

Same name, same clinical signs, but ASFv has a different way of behaving and spreading. Such is the lesson that the two learned having worked on ASF intensively since it appeared into Europe having been first introduced in Georgia and Armenia in 2007, after which it spread through Russia and Ukraine to get a presence in the Baltic States (Estonia, Latvia, Lithuania) and Poland as from 2014.

Two virus spreading models

Trials at the FLI showed that there is no difference in the way the ASF virus affects wild boars or domestic pigs. Logically, one of the major questions that the researchers had when ASF was introduced in 2007 in the Caucasus was: how would the virus spread and behave in wild boars?

Depner: “Essentially, we had two hypotheses. The first one was that the disease in wild boars would die out due to the high virulence of the virus.”

Blome: “Roughly, the animals get sick four days after infection.”

Depner: “Usually death will follow within three to six days. This means that almost all infected hosts will die very quickly, which means that the virus will cease to exist very soon because it kills its host. In that case, we would not have to worry, ASF would do its job extinguishing itself.”

Blome, however, points to the fact that ASF virus is not that contagious. High viral loads are found in blood, but saliva or faeces contain less virus: “We overestimated the contagiousness of African Swine Fever. The disease moves very slowly. When looking at affected wild boar populations, most of them have not been significantly reduced. The virus doesn’t spread that quickly at all.”

Model of how rabies spreads in foxes

The second model the researchers thought of was of how rabies spreads in foxes. Depner: “Rabies has been absolutely fatal in foxes, it kills all of them. And it has been spreading rapidly from east to west. We thought we might see this phenomenon, with a fast movement of disease. But no – ASF did not behave like rabies with foxes.”

Blome adds, “Wild boars shed the virus mainly when they are very sick and in the final stage of the disease. When the animals have high fever it’s in their character to stay where they are, and they are certainly not going to walk very far when they feel bad.”

Depner: “So what we have here is a virus that is very stable in its environment without fast movement. It neither dies out, nor moves. Undisposed carcasses of infected wild boars remain infectious for a long time in the environment and become a source of infection for healthy animals.”

The human role

Still, ASF did spread from the Caucasus until the Baltics and Poland. The question now is how. Soft ticks and insects are unlikely to have transmitted the virus, the scientists say. In fact, they have little doubt identifying about the real reason behind most of the ASF outbreaks: negligence.

Participating in recent ASF monitoring missions in Eastern Europe, Depner has a good idea of what has likely occurred. He says, “Often it was a matter of human misbehaviour. What happened is that infected meat made it to the market. When many pigs started to die, they were sent to slaughter. Pig prices dropped, cheap meat entered the market and the meat made its way into homes – and into suitcases. This is how the virus dispersed. The virus spreads (Continued on Pg. 8, "African Swine…")
that are too great as they work multiple positions to cover for chronically vacant or lost positions. In addition, many agency leaders expect employees to donate time. (See the article on CEO beggars and sucker culture). These are issues we need to help the agencies resolve.

Another trend that has occurred in many federal agencies is reorganization. These well-intended reorganizations have created massive confusion to employees in most cases. Employees, in those agencies, don’t understand what their new roles require and in many cases agency leaders have failed to provide them with the information they need to be effective within the new structure. This confusion will continue until the employees define their own roles or leaders step up and provide better guidance. In most cases, the leaders just need to listen to the employees to better understand what help they need.

We will continue to spread the word on the value of federal veterinarians. Please send us your own examples to help us improve our cause.
In a new technical report, the American Academy of Pediatrics (AAP) says unnecessary use of antibiotics in food-producing animals is endangering medicine's ability to treat life-threatening infections in young patients.

The report, "Nontherapeutic Use of Antimicrobial Agents in Animal Agriculture: Implications for Pediatrics," calls antimicrobial drug resistance a growing public health crisis and points to a common farming practice as a contributing cause. According to the AAP, adding antibiotics to the feed of healthy livestock to promote growth, increase feed efficiency or prevent disease among herds in crowded conditions often leaves the drugs ineffective when they are needed to treat infections in people.

More than 2 million Americans become ill with antimicrobial-resistant infections each year, with more than 23,000 resulting deaths, according to the federal statistics cited in report. For most types of infections reported to the Center for Disease Control and Prevention’s Foodborne Diseases Active Surveillance Network in 2013, the highest incidence was among children younger than 5 years old.

"Children can be exposed to multiple-drug resistant bacteria, which are extremely difficult to treat if they cause an infection, through contact with animals given antibiotics and consuming the meat of those animals," said lead author Jerome A. Paulson, MD, FAAP, the AAP’s immediate past chair of the executive committee of the Council on Environmental Health.

"Like humans, farm animals should receive appropriate antibiotics for bacterial infections," Dr. Paulson said. "However, the indiscriminate use of antibiotics without a prescription or the input of a veterinarian puts the health of children at risk."

The AAP report stresses the importance of preserving antibiotics to treat illness in humans and animals. The authors express concern that a voluntary Food and Drug Administration initiative and measures proposed by members of Congress to reduce the drugs' nontherapeutic use have met with opposition from the agriculture and farming industry. The report will appear in the December 2015 issue of Pediatrics.
along the main roads, the transport routes. This spread bears a 100% human mark.”

**ASF despite tight biosecurity**

Blome adds: “We’ve seen examples of farms that said to apply tight biosecurity and still got infected with ASF. After careful examination it turned out that the biosecurity measures were by far not so efficient as declared.”

Humans can be identified as having aggravated the situation ever since as well. Since wild boars have often been thought to be spreading the virus, in several countries attempts were launched to eradicate them – with the result that sounders were chased across borders, the researchers say.

In addition, the occurrence of ASF in the Baltic states Latvia, Lithuania and Estonia, bear a significant human characteristic. The virus can maintain itself in the country’s wild boar population as without humans wild boar cannot survive so far north. Depner explains: “The density of wild boars was established artificially in the Baltic states by humans, for hunting purposes. For survival, the wild boars are completely dependent on humans, as temperatures in winter can reach as low as -20°C for weeks. So feeding does take place to keep the animals alive.”

**Any reason to worry?**

Germany also has a flourishing – naturally occurring – wild boar population, so in theory it would be a great country for ASF to spread in the wild boar population. Despite 600,000 heads having been hunted last year, the numbers only appear to grow. Still, ASF shouldn’t worry pig producers in Europe, as long as proper biosecurity is taken into account. Changing clothes, working hygienically and making sure nothing from the outside reaches the inside. With limited backyard farming and no swill feeding allowed in the EU, the pig industry would have to be safe from ASF. In order to further reinforce this message, on parking places at the major inbound motorways in Germany, posters have been hung up in four languages to warn truck drivers not to throw garbage out into the environment.

Depner strongly rejects the suggestion, as if the European authorities would not be taking the disease seriously enough. He says, “We do not underestimate ASF, on the contrary, we do a lot of work! What we can also see is that every outbreak of the disease is reported – even stronger, in the Baltics and Poland, most of the outbreaks in domestic pigs were reported by farmers, proving that passive surveillance works very well. That goes to show that all the services are well-prepared, and that veterinarians and farmers are doing excellent work to contain the virus.”

**Warthogs and wild boars at FLI**

The Friedrich-Loeffler-Institut is the German federal research institute for animal health with a major advisory function for the country's ministry of agriculture. With five locations spread out over Germany, the main building in the island Riems focuses on viruses in all kinds of production animals. The facility has trial sites in very many different levels of biosecurity and is certified to do all kinds of trials to learn more. Diseases which are studied in pigs include Foot-and-Mouth Disease, Porcine Epidemic Diarrhoea, Classical Swine Fever and African Swine Fever. Apart from pigs, the institute uniquely also has wild boars and warthogs on-site especially to learn more about the effects of ASF. Warthogs are difficult to keep in captivity and are even likely to attack. Wild boars in captivity – although genetically largely the same as pigs – are very calm and gentle, but are still capable of attacking people.

**Picture Source:** Pig Progress

**Biographies**

**Dr. Sandra Blome** is a veterinarian by profession. She studied at Leipzig University, Germany and specialised in animal disease control. From 2004-2008 she worked as a senior scientist at EU and OIE Reference Lab for CSF at the University of Veterinary Medicine, Hanover, Germany. Blome joined the Friedrich-Loeffler-Institut (FLI) in 2008. She is now head of the German national reference laboratory for CSF and ASF.

**Dr. Klaus Depner** graduated in veterinary science at the School of Veterinary Medicine, Hanover, Germany in 1988, after which he completed his doctoral thesis in virology. He spent four years in Namibia as head of the virology lab at the CVL in Windhoek. He also worked for the FAO in Rome, Italy and the DG-Sanco in Brussels, Belgium. Since 2010 he has headed the International Animal Health Team within the FLI’s Institute of Epidemiology.

Report on the Investigation of the Nineteenth Case of Bovine Spongiform Encephalopathy (BSE) in Canada

November 2015

Details of the BSE Case

A sample taken from a cow in Alberta, Canada was identified as positive for Bovine Spongiform Encephalopathy (BSE). The case animal was reported by the owner to have been non-ambulatory (downer) in the days preceding its death. After consultation between the producer and the local veterinary practitioner it was determined that the animal met the inclusion criteria of Canada's National BSE Surveillance Program. The animal was euthanized on February 4, 2015 and arrangements were made to collect and submit appropriate tissue samples for evaluation.

As per Transmissible Spongiform Encephalopathies (TSE) ISO quality assurance (QA) guidelines, homogenates and samples were forwarded to the CFIA and OIE (World Organisation for Animal Health) BSE Reference Laboratory in Lethbridge, Alberta. The sample was confirmed as BSE positive using the OIE Immunoblot (SAF and mAB 6H4) test on February 11, 2015. In addition to the OIE Immunoblot, the National BSE Reference Laboratory evaluated the sample using the Prionics-Check Western® rapid test, Hybrid Western Blot, the Prionics Check PrioSTRIP® rapid test, and the BioRad TeSeE ELISA. All test results were determined to be positive. Hybrid Western Blot results characterized the case as C-type (classical) BSE.

The carcass was secured at the sampling site, obtained by and transferred to CFIA's laboratory in Lethbridge for incineration. No part of the carcass entered the human food supply or animal feed chain.

Investigation Summary

Case #19 was a case of classical BSE in a Black Angus beef cow, 5 years and 10 months of age at time of diagnosis. It was born in March 2009, 20 months after the enhanced feed ban was implemented. A previous case of BSE was diagnosed on the same birth farm from an animal born in 2004.

As for other cases of classical BSE in Canada and in other countries, feed-borne infection is the most likely source of BSE in this case. BSE case #19 was born shortly after the enhanced feed ban was implemented, which may suggest residual feed contamination on-farm or off-farm as the source of infection. No significant events could be linked with this case but the potential for the carry-over of a small amount of residual contaminated feed could not be discounted. Considering the stringent safeguards implemented from 2007 to ensure that SRMs are excluded from the entire terrestrial and aquatic animal feed chains as well as fertilizer, together with the rigorous inspection oversight by the CFIA the contamination of both prohibited and non-prohibited materials with SRM at either a slaughter establishment or a rendering facility, would in all likelihood, be highly improbable. As a result, the carry-over of a small amount of residual contaminated feed associated with the earlier case (#17) on the same birth farm is the most plausible explanation for BSE case #19.
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Claim Number: 1615557  
Claim Status: Open - Insured is the subject of an OIG investigation.  
Paid to Date: $66,894

### Claimant Employer: National Archives  
Claim Number: 1633701  
Claim Status: Open - Insured has been issued a notice of proposed removal.  
Paid to Date: $28,494

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Claim Number: 1034578  
Claim Status: Closed - Insured fired as a result of IG investigation into improper government spending even though he wasn’t even a subject of the investigation. Litigated by the attorneys provided by the FEDS policy and prevailed in getting job back.  
Paid to Date: $200,000

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KSU research team discovers novel pestivirus affecting swine

Source: Kansas State University, 12/02/2015

Researchers at Kansas State University’s Veterinary Diagnostic Laboratory have discovered a virus that’s been a real pest for pigs and hope the diagnostic tests they’ve developed to detect the virus are a step toward understanding the disease.

The researchers identified the virus as a member of the aptly name pestivirus family. A sample submitted to the lab by a veterinarian in North Carolina came from a swine herd where uncontrollable shaking, or intention tremors, was observed and resulted in the death of nearly 700 pigs.

Virus symptoms included tremors, says Benjamin Hause, a clinical assistant professor in the university’s College of Veterinary Medicine. “The veterinarian described the tremors as similar to those seen with Parkinson’s disease in humans — but more severe,” Hause says. “A recent report described pigs born with congenital tremors caused by a novel pestivirus similar to one we identified this past summer, but this current situation involved older pigs with disease onset from 5 to 14 weeks of age. This has a significant economic impact, especially in a situation like this where 700 animals had died.”

Historically, the pestivirus family has been associated with important livestock diseases such as bovine viral diarrhea in cattle, border disease in sheep and classical swine fever virus. Pestivirus infections of pigs have caused a wide range of clinical symptoms, including neurological disease. Hause’s research sheds new light on the pathology associated with this newly described virus.

Diagnostic test holds promise

Earlier this year, Hause and colleagues at the KSU Veterinary Diagnostic Laboratory identified and characterized a proposed new species of pestivirus, named atypical porcine pestivirus or APPV. It was identified through metagenomic sequencing of swine serum samples submitted to the diagnostic lab. This work, “Discovery of a novel putative atypical porcine pestivirus in pigs in the USA,” was published in the Journal of General Virology in October.

“While we identified a novel, highly divergent pestivirus in swine samples and went on to show that the virus was widely distributed in the U.S. swine herd, we had no idea what, if any, disease was caused by this virus,” Hause says.

The lab tested samples submitted from two separate outbreaks of grower pigs with uncontrollable tremors in North Carolina.

“While we do not know how often this virus causes clinical disease, I have spoken to other veterinarians who have reported seeing similar symptoms in herds they care for,” Hause says. “We’re hoping the diagnostic tests that we’ve developed to detect this virus lay the groundwork to improving our understanding of disease caused by APPV.”

The KSU Veterinary Diagnostic Laboratory has developed quantitative reverse transcript polymerase chain reaction and immunohistochemistry assays to detect APPV in swine samples.

NAFV Recommends:
Arresting Contagion
Science, Policy, and Conflicts over Animal Disease Control
Written by Alan L. Olmstead; Paul W. Rhode

Over sixty percent of all infectious human diseases, including tuberculosis, influenza, cholera, and hundreds more, are shared with other vertebrate animals. Arresting Contagion tells the story of how early efforts to combat livestock infections turned the United States from a disease-prone nation into a world leader in controlling communicable diseases. Alan Olmstead and Paul Rhode show that many innovations devised in the fight against animal diseases, ranging from border control and food inspection to drug regulations and the creation of federal research labs, provided the foundation for modern food safety programs and remain at the heart of U.S. public health policy. Available now.
**Veterinary Happenings**

Notify NAFV of Promotions, Reassignments, Transfers, Awards, Retirements, etc. for members not listed in the “Veterinary Happenings” column so they may be included in a future issue. The following information was received by NAFV.

**USDA FSIS Members**
- **Dr. Barry Pittman**, Salt Lake City Utah, UT, Retirement, 10/03/15
- **Dr. Fawzy Wasif**, Monroe, NC, Retirement, 10/31/15
- **Dr. Vicki Rader**, Barron, WI, Retirement, 10/31/15

**USDA APHIS Members**
- **Dr. Donald Beckett**, Lakewood, CO, Promotion, 11/15/15
- **Dr. Nancy Hannaway**, Fort Collins, CO, Promotion, 11/15/15
- **Dr. Hallie Hasel**, Austin, TX, Promotion, 11/01/15
- **Dr. Kellie Hough**, Riverdale, MD, Promotion, 11/23/15
- **Dr. Jean Ray**, East Landing, MI, Promotion, 10/18/15

**Welcome New Members**
- **Dr. Monique Wiggins**, ILL ‘03, Loganville, GA
- **Dr. David Carter**, GS-12, TUS ‘78, Chapin, SC (Recommended by Dr. Angela McIntyre)
- **Dr. Stephanie Larson**, ISU ‘95, Independence, IA (Recommended by Dr. Kelsey Ness)
- **Dr. John Krieger**, GS-12, WSY ‘92, Kelso, WA
- **Dr. Johhn McConnaughhay**, GS-13, KSU ‘86, Hastings, NE (Recommended by Dr. Don Altenhofen)
- **Dr. Allan Hogue**, GS-15, ISU ‘81, Potomac, MD
- **Dr. Heidi Broyles**, GS-12, MO ‘09, Klamath Falls, OR

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Email Changes of Address to: mbarros@nafv.org

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