

Big Money

Avian Influenza Costs Turkey Producers Almost \$15M To Date

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When the first episode of Avian Influenza was diagnosed the week of March 1, 2015 in Minnesota, the diagnosis took everyone by surprise.

The surprise among those of us associated with animal agriculture was primarily due to the fact that poultry production has always been the epitome of biosecurity. Visits to poultry farms are by appointment only and change of clothes and/or protective garments and disposable plastic boots are the norm.

The first diagnosis in South Dakota took place the first week of April followed by nine additional sites in the same timeframe. Turkey farms were hit the hardest in both states. In April, officials identified a Cooper's hawk with the virus in western Minnesota, which was the first known wild infection in the state.

On July 10, the Minnesota DNR confirmed that a chickadee delivered to a wildlife rehabilitation center on June tested positive for Avian Influenza. For the first time Avian Influenza has been found in a songbird. So far, most detections had been in water fowl, which seem to be immune and thus, more likely to spread the virus. This has led to a concern of what might happen this fall when migratory waterfowl head south to their winter quarters.

ECONOMIC IMPACT

Both eggs and turkey production make significant contributions to South Dakota's economy. In 2014, the state's laying hen farms produced 752 million eggs worth almost \$63.3 million.

The state turkey farms raised 4.5 million birds with a total value of almost \$139 million.

At the present time only one farm of layer chickens was diagnosed. As of the first week of June nearly half million turkeys have been affected on nine farms and nine different counties in South Dakota.

Since Avian Influenza affected nearly 11 percent of the commercial turkeys produced in the state, the economic impact can be estimated at close to \$15 million.

To put this into perspective, Minnesota led the country in turkey production in 2014, with 45.5 million turkeys and an economic value of \$866 million. As of early May 2015, the disease had been confirmed on 85 Minnesota turkey farms, resulting in the direct loss of nearly 5.7 million birds.

Oddly enough this represents 12.5 percent of the turkey population in Minnesota a figure only slightly off the 11 percent losses in South Dakota.

These dollar figures for bird losses in the state do not take into account the fact that the affected facilities will have to remain empty while they undergo a rigorous disinfection and cleaning process.

An 11 percent reduction in the population of turkeys in South Dakota will surely have ripple effects.

Reductions in farm supplies and feed purchases, and employee layoffs at farms and poultry processing plants will certainly affect local businesses.

A 1.8 REDUCTION FACTOR

The University of Minnesota conducted this year an emergency economic analysis and determined that this reduction in the local economic



IMAGE: METRO GRAPHICS

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output from the poultry industry can be quantified by a 1.8 reduction factor.

That is to say that the \$15 million resulting from direct turkey sale losses could have a collective economic impact in all nine counties of \$27 million.

In its analysis, the University of Minnesota also found that each job lost in poultry, negatively affected 2.1 jobs in the state overall.

How this outbreak will evolve over time, is anyone's guess. The losses are substantial for South Dakota overall, as well as, for local businesses and communities that support this industry.

The Avian Influenza outbreaks have shown that in spite of very stringent biosecurity measures adapted by the poultry industry, animal agriculture is still vulnerable to disease outbreaks.

This time it was poultry, but there might be other instances in the future where other livestock species could be affected by disease.

It is important to remain vigilant and report any suspicious animal health problems (farmed or wildlife!) to the proper authorities.

SDSU ANIMAL DISEASE RESEARCH & DIAGNOSTIC LABORATORY

In response to the outbreak, SDSU Extension is taking part of a multi-state approach to provide research-based

information and resources to families.

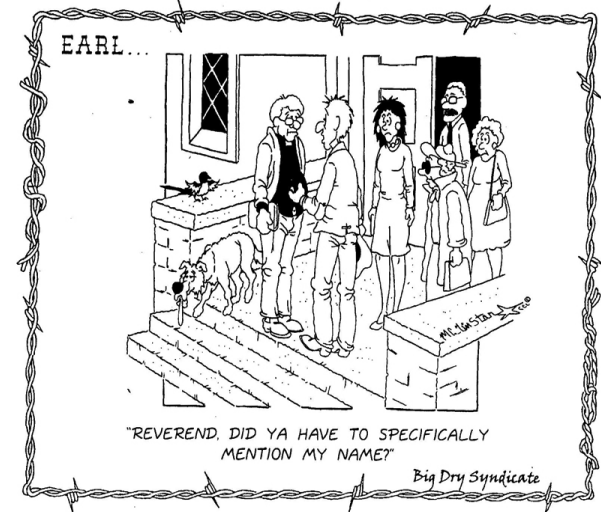
The state is also very fortunate to have within SDSU the South Dakota Animal Disease Research and Diagnostic Laboratory which has been very helpful up to this point.

This lab is one of fewer than 40 veterinary diagnostic laboratories in the nation accredited by the American Association of Veterinary Laboratory Diagnosticians.

The lab has performed Diagnostic Testing for Avian Influenza in over 5,000 samples in backyard birds, commercial sites and wild birds. This testing has been ongoing since March 2015 and occurs on weekends, holidays and evenings, plus during regular hours with emergency "on call" staff do the testing.

The South Dakota Animal Disease Research and Diagnostic Laboratory consults daily with the Board of Animal Health in Minnesota and South Dakota and has tested samples in Nebraska, South Dakota, North Dakota, Iowa and Minnesota.

Alvaro Garcia is the SDSU Extension Agriculture and Natural Resources Program Director and Professor.



Record Number Certified Under Program

WASHINGTON — The U.S. Department of Agriculture (USDA) announced that over 98.2 percent of producers have met the 2014 Farm Bill requirement to certify conservation compliance to qualify for crop insurance premium support payments.

Implementing the 2014 Farm Bill provisions for conservation compliance is expected to extend conservation provisions for an additional 1.5 million acres of highly erodible lands and 1.1 million acres of wetlands, which will reduce soil erosion, enhance water quality, and create wildlife habitat.

"This overwhelming response is a product of USDA's extensive outreach and the commitment of America's farmers to be stewards of the land," said Agriculture Secretary Tom Vilsack. "By investing in both American farmers and the health of our productive lands, we are ensuring future generations have access to fertile soil, healthy food supplies, and a strong rural economy."

USDA has gone to extraordinary lengths to ensure that every impacted producer knew of the June 1, 2015 deadline to certify their conservation compliance. For example, all 2015 crop insurance contracts included conservation compliance notifications. USDA has sent out more than 50,000 reminder letters and postcards to individual producers, made over 25,000 phone calls, conducted informational meetings and training sessions for nearly 6,000 stakeholders across the country, including in major specialty crop producing states with affected commodity groups, and more. Since December 2014, USDA collaborated with crop insurers to ensure they had updated lists for agents to continue contacting producers to also remind them of the filing deadline.

Of the small number of producers who have not certified their conservation compliance, USDA records suggest the majority are no longer farming or may have filed forms with discrepancies that can still be reconciled. The Farm Service Agency is proactively reaching back out to all of these producers before their sales closing date and working with individuals facing extenuating circumstances who have not filed the form in order to assist them with certifying compliance.

"I've asked the agencies to contact the producers again before their sales closing date," said Vilsack. "I want to ensure that every producer that turned in an AD-1026 by June 1, 2015, knows they can still make corrections and remain eligible for premium support."

USDA is providing additional flexibility to help the newly insured producers to certify their conservation compliance. For example, producers, who began farming or ranching after June 1, or producers who have not participated in USDA programs prior to June 1, can file an exemption to the conservation compliance certification for reinsurance year 2016 and still be eligible for the crop insurance premium support.

The Highly Erodible Land Conservation and Wetland Conservation Certification form (AD-1026) is available at local USDA Service Centers or online at www.fsa.usda.gov/AD1026form.

Apps For Farm, Ranch Program Sought

HURON — Applications are currently being accepted for the South Dakota Farm & Ranch Recognition program. Farm and ranch families who have enjoyed ownership of their South Dakota farm or ranch for 100 or 125 years have the opportunity to apply and be honored on Thursday, Sept. 3, during the South Dakota State Fair in Huron.

Agriculture has long been the foundation of South Dakota history. The South Dakota Farm Bureau (SDFB) and the South Dakota Department of Agriculture (SDDA) would like to recognize and honor these South Dakota families.

To qualify as a South Dakota Century Farm or Ranch, a family must have retained continuous ownership of at least 80 acres of original farmland for 100 years or more. Quasiquintennial Farms and Ranches, those that have been continually owned for 125 years or more, will also be recognized.

Application forms are available online at www.sdfb.org by clicking "All About Ag" and then "Century-Quasiquintennial Farm & Ranch Program" or call the SDFB at (605) 353-8052. The deadline to apply is Thursday, Aug. 13. Documentation of the original date of purchase must be included with the application.

The South Dakota Farm & Ranch Recognition program was initiated in 1984 by the SDFB. Since then, the SDDA has joined in recognizing these South Dakota families. The program has recognized 2,770 century farms and ranches and 250 quasiquintennial farms and ranches thus far.

SDSU Extension: Early Action Against Pinkeye Recommended

BROOKINGS — Warm weather has many cattle producers concerned about pinkeye, the common name for infectious bovine keratoconjunctivitis (IBK), which is one of the most common and economically damaging cattle diseases.

"Pinkeye is a contagious disease causing inflammation of the cornea and conjunctiva. If left untreated, severe damage to the eye may occur," said Janna Kincheloe, SDSU Extension Research Associate.

Each year, cattle producers lose an estimated \$150 million due to reductions in weight gain, decreases in milk production, treatment costs and potential price discounts for affected animals.

Kincheloe added that the climate this growing season is optimal for pinkeye. "Moist conditions and lush forage can create optimal conditions for pinkeye, as wet weather typically increases the incidence of face flies that irritate eyes and help spread the disease," she said.

In addition, tall grass can irritate eyes when cattle lower their heads to graze.

Preventing the disease typically requires a multi-pronged approach, explained Russ Daly, Professor, SDSU Extension Veterinarian. "The most effective way to deal with pinkeye is to stay ahead of it by integrating prevention with broad-based treatment strategies developed in conjunction with

a veterinarian as part of a herd health management plan," Daly said.

He explained that an effective plan often includes vaccination, fly control and managing the grazing environment. He also noted that it takes approximately 4 to 6 weeks to get maximum immune response from vaccine, so producers should plan accordingly and vaccinate prior to observing a disease outbreak in the herd.

In some cases, veterinarians may recommend using sterile swabs to take samples from affected eyes in order to grow the causative bacteria for an autogenous vaccine.

"Autogenous pinkeye vaccines, as well as over-the-counter vaccines, have not uniformly resulted in complete protection from the disease, but may be useful in certain situations," he explained.

Daly added that even if preventative measures are in place, it is important to be able to detect and treat pinkeye early.

Below, Daly and Kincheloe list some signs of early, active and healing stages of the disease as well as some specific treatment recommendations.

PINKEYE DETECTION & TREATMENT

- **Early stage:** Clinical signs of pinkeye are consistent. Within the first three to five days of infection, cattle blink frequently and have excessive tearing and there is

redness in the conjunctiva (white part) of the eye.

"Cattle in this beginning stage will often seek shade, typically decreasing the time they spend grazing," Daly explained.

Pain may also contribute to reduced feed intake. After a day or two, he explained that these signs progress to a small ulcer in the center of the cornea which appears as a small white spot. "The cornea develops a cloudy blue-grey appearance due to inflammation. One or both eyes may be affected, and the eye(s) are often held shut due to pain," he said.

- **Treat early:** The key to treating pinkeye effectively is to treat early. "The goal of early pinkeye detection and treatment is to eliminate the causative agent (most typically *Moraxella bovis* bacteria) by using long-acting antibiotics, often tetracycline," Daly said.

Kincheloe added that commercially available, non-antibiotic antibacterial topical treatments may also be effective in helping to alleviate pain and discomfort and speed the healing process. "Producers should consult with their veterinarians to determine optimal treatment strategies for individual situations," she said.

- **Active Stage:** If left untreated in the early stage of the disease, the ulcer will continue to spread across the cornea, and the eye will become increasingly cloudy.

"Blood vessels from the outside of the cornea begin to grow to help with healing, which gives the cornea the classical pink appearance," Daly said.

He explained that the ulcer will eventually cover most of the cornea and the inflammation will spread to the inner parts of the eye. If this occurs, the inside of the eye fills with a pus-like substance called fibrin that gives the eye a yellow appearance.

Rupture of the eyeball is rare but may occur with a severe infection.

In order to prevent any further damage, aggressive treatment with long-acting antibiotics is critical at this stage of the disease. Additionally, Daly said there is some evidence supporting the use of injectable penicillin in the external layer of the bulbar conjunctiva (white of the eyeball). "A veterinarian should perform this procedure, as improperly placed injections may be ineffective and result in further damage to the eye," he said.

Protecting the eye from sunlight by applying an eyepatch can also be very important since ultraviolet rays can activate enzymes that can increase eye damage. "This will also reduce shedding of bacteria," he said.

He added that if the animal is in a pasture situation where keeping the patch on can be a challenge, construction adhesive can be used

instead of the traditional eyepatch adhesive. However, it may be necessary to catch the animal to remove the patch. Also, it is more difficult to monitor or administer additional treatment to eyes covered with a patch.

Some veterinarians may prefer to suture the eyelid shut if the corneal ulcer is deep and appears likely to rupture. When treating eyes, one should wash hands or change gloves between affected animals to avoid spreading the bacteria further.

- **Healing Stage:** Once the causative agent is eliminated, the ulcer is quickly covered by epithelium and the eye becomes less painful. Excessive tearing and blinking will subside and blood vessels will recede, but Kincheloe said the eye may continue to be a cloudy blue color for one to two weeks.

Once this healing occurs, she explained that the eye no longer requires antibiotic treatment. "Clearing of the edema will begin at the outside edge of the cornea and sight will begin to return," Kincheloe said.

The eyes of most infected cattle heal within 60 days, but may result in a white scar that can remain for the lifetime of the animal.

For more information about the disease, please search www.igrow.org or contact your area SDSU Extension Cow/Calf Field Specialist.