

With bird flu spreading, USDA starts on potential vaccine

April 22 2015, by Steve Karnowski



In this 2012 photo provided by Bethany Hahn is a flock of turkeys at a Minnesota poultry farm. Midwestern states are struggling to contain a virulent strain of bird flu that has doomed millions of turkeys and chickens since March. (Bethany Hahn via AP)

The U.S. Department of Agriculture is working on a vaccine to counter a deadly strain of bird flu, as losses to poultry producers mount.

A pure "seed strain" would target the H5N2 virus—which has already cost Midwest turkey and chicken producers millions of birds since early March—as well as some other highly pathogenic viruses in the H5 family that have been detected in other parts of North America. If the USDA decides the vaccine is necessary to stop avian influenza, it will provide that seed strain to drug manufacturers.

The process, though, is fraught with questions about which birds would get the vaccine, how it might affect exports and whether it would be effective against the rapidly spreading strain.

WHY PRODUCERS WANT A VACCINE

USDA officials have said the H5N2 virus could be a problem for the poultry industry for several years. The virus had already killed or led authorities to order the culling of nearly 2.3 million turkeys before it was confirmed Monday at an Iowa egg-laying operation with 3.8 million hens. And on Tuesday and Wednesday, five more turkey farms with more than 500,000 birds were added to the list.

The virus could reappear this fall when the wild waterfowl that are believed to carry it fly south for the winter. Another concern is that it could spread to big poultry-producing states in the East.

While government agencies and producers would much rather see tight biosecurity and other current strategies succeed, they want to have another tool available, said Dr. T.J. Myers, an associate deputy administrator for veterinary services with the USDA's Animal and Plant Health Inspection Service.

WHERE THE VACCINE STANDS

The USDA's Southeast Poultry Research Laboratory in Athens, Georgia,

is developing the seed strain, which is essentially a pure virus sample that could be the foundation for producing an effective vaccine. The center's director, Dr. David Swayne, said it has already gone through a couple of rounds of lab testing, and that animal experiments will begin in early May to determine whether it's an effective strain to use. If those tests are successful and the USDA decides to put a vaccine into production, it would turn to the private sector to make it.

WHAT IT WOULD COST?

Dr. John Clifford, the USDA's chief veterinary officer, said it's not clear how much a vaccine would add to the cost of producing birds, but doesn't expect it would be much. It might be used mainly on the more expensive birds, such as those used for breeding, he said.

For turkey producers, the price of the vaccine could be minor compared to the cost of losing entire flocks, according to Steve Olson, executive director of the Minnesota Turkey Growers Association and the Chicken and Egg Association of Minnesota. But a vaccine might be too expensive for the broiler chicken industry, where profits per bird are small.

WHY THE USDA MIGHT DECIDE AGAINST A VACCINE

Introducing a vaccine raises a lot of questions, Myers said, including which poultry would get it, in what kind of settings, whether it would be effective in stopping the disease and potential negative effects on poultry exports.

James Sumner, president of the Georgia-based USA Poultry and Egg Export Council, said some countries might regard vaccine use as a reason to bar imports from the U.S. The vaccine could mask any viruses that poultry are carrying, because tests for the disease look for antibodies—the same antibodies that vaccines trigger a body to produce,

he said.

Dr. Kyoungjin Yoon, an avian influenza expert at Iowa State University, said human experience shows flu vaccines don't always match well with viruses in circulation. Vaccine-induced immunity could also slow the detection of outbreaks, Yoon said. One of the main symptoms is that flocks start dying off quickly.

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