

Poultry HEALTH REPORT

A National Institute for Animal Agriculture Publication

Fall 2005

DeHaven Says U.S. Poultry Safeguards in Place

House Committee on Agriculture Chairman Bob Goodlatte chaired a hearing on Nov. 16 to review issues related to the prevention, detection, and eradication of avian influenza (AI). The purpose of the hearing was to look at the animal health aspects of AI and educate members about the current preventative measures employed by U.S. Department of Agriculture (USDA) and the U.S. poultry industry. The Committee heard from USDA Animal and Plant Health Inspection Service (APHIS) Administrator Ron DeHaven, who testified about protecting the U.S. from the introduction of Asian bird flu and the safety of our nation's poultry products.

"The take away from this hear-

ing is clear: the news regarding poultry health and food safety in this country is good news," said Chairman Goodlatte. "Asian bird flu is not in North America and we are taking action to prevent its introduction. Also, consumers can be assured that properly prepared poultry is as safe today as it has always been."

Recently, media and governments worldwide have raised widespread concern about the prevalence of AI in the international community. Although domestic and international agencies work vigorously to prevent, detect and eradicate AI, these recent reports and discussions have come at significant cost to the U.S. poultry industry. Chairman Goodlatte noted that recent estimates suggest that disruptions in poultry consumption associated with AI are costing the U.S. poultry industry some \$88 million per month.

"My own experience with poultry producers is that concern about avian influenza pre-dates the current attention to the issue. It is my understanding that low pathogenic avian influenza has been observed for nearly a hundred years," said

Chairman Goodlatte.



Dr. Ron DeHaven

"Consequently, producers and processors have developed strategies for managing this problem and continually invest considerable time and resources to prevent introduction of AI into their flocks. For the agriculture community, AI is a well-understood challenge that is already a part of their production routine."

The U.S. poultry industry and APHIS have a variety of safeguards in place to detect, prevent and eradicate diseases in the domestic poultry/bird population. APHIS maintains trade restrictions on the importation of live poultry, birds and unprocessed poultry products from all affected countries as well as implementing quarantines and testing on imported birds from countries not known to have AI infections.

"The National Strategy for Pandemic Influenza, announced by President Bush on November 1, reflects the importance of these proactive measures on the animal health front," said DeHaven in his

"Asian bird flu is not in North America and we are taking action to prevent its introduction. Also, consumers can be assured that properly prepared poultry is as safe today as it has always been."

testimony. "The President requested \$91.35 million in emergency funding for USDA to further

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intensify its surveillance here at home and to deliver increased assistance to countries impacted by the disease, in hopes of preventing further spread of avian influenza."

APHIS and the states also operate a surveillance program that targets AI and other diseases in U.S. poultry flocks. Every year, more than one million tests that have proven effective in screening for avian diseases are conducted. Additionally, biosecurity measures employed by producers on the farm not only help producers maintain

healthy flocks but also help to prevent the spread of avian diseases.

In addition, APHIS has emergency action plans in place to coordinate efforts with the states if AI is detected in a flock. These state-level emergency response teams remain on standby and are typically on site within 24 hours of detection and proceed with appropriate action that may include destruction of the affected flock, state quarantines or movement restrictions. USDA also maintains a bank of AI vaccine for poultry. While wide-scale vaccination is not an effective safeguard against AI, vaccination could be used in response to detection to create barriers against further spread of the disease.

"To continue strengthening our domestic activities, \$73 million of the USDA emergency funding is needed for stockpiling animal vac-

cine, surveillance and diagnostics, anti-smuggling and investigative efforts, research and development, planning and preparedness and staffing and management," added DeHaven. "The objective of all these efforts will be to prevent, control and eradicate any future findings of the H5 and H7 strains of avian influenza" in the U.S. commercial poultry industry and live bird marketing system.

According to Administrator DeHaven, if AI is discovered by the surveillance system in the U.S., the emergency response team would work to quickly contain and eradicate the outbreak. All poultry meat and egg products for human consumption are federally inspected for signs of disease both before and after slaughter. All of these safeguards contribute to a safe and wholesome U.S. food supply. ●



Poultry Health Report

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USDA Receives Funding for Avian Influenza Prevention, Preparedness

U.S. Agriculture Secretary Mike Johanns has commended President Bush for signing and Congress for approving \$91.4 million in funding to enhance USDA's efforts to prevent and prepare for avian influenza (AI), a virus that commonly affects birds and has been transmitted to humans in Asia.

The funding is part of a larger request submitted by President Bush to implement the National Strategy to Safeguard Against the Danger of Pandemic Influenza.

The funds include:

- \$18M to control AI in Asian countries where the virus is currently endemic and to provide

technical assistance in high-risk countries;

- \$10M to increase current animal vaccine stockpile by 40M doses;
- \$32M for surveillance and diagnostic measures;
- \$6M for biosecurity measures;
- \$9M for smuggling intervention;
- \$7M for research and development of improved tools like vaccines and genome sequencing; and
- \$9M for planning and preparedness training and the development of simulation models.

Additional information about USDA avian influenza efforts can be found at www.usda.gov/birdflu or on the U.S. Government's comprehensive website at www.pandemicflu.gov.

Global Health Officials Set Key Action Steps for A.I. Pandemic Threat

A gathering of public and animal health officials from over 100 countries in Geneva, Switzerland in November determined key components of a global action plan to control avian influenza in animals and simultaneously limit the threat of a human influenza pandemic.

The meeting, jointly sponsored by the World Health Organization (WHO), the World Organization for Animal Health (OIE) and the World Bank, was attended by more than 600 delegates who agreed that there is an urgent need for financial and other resources for countries which have already been affected by avian influenza, as well as for those which are most at risk.

"The world recognizes that this is a major public health challenge," said Dr. Lee Jong-wook, WHO director-general. "WHO is ready to focus its resources to reduce the risk of a human pandemic. We have plans on paper, but we must now test them. Once a pandemic virus appears, it will be too late," he warned.

Urgency was also called for to identify and respond to a human pandemic the moment it emerges. According to an analysis by the World Bank, the needs of affected countries will potentially reach \$1 billion (US) over the next three years. This does not include financing for human or animal vaccine development for antiviral medicines or for compensating farmers for loss of income due to animals that have been culled.

"Many countries where the disease is endemic have already taken action but they are overwhelmed by the situation and require urgent



assistance," said Dr. Louis Fresco, assistant director-general of the United Nation's Food and Agriculture

Organization (FAO). "Fighting the disease in animals is key to our success in limiting the threat of a human pandemic. We know that the virus is being spread by wild birds but we need more research to fully understand their role."

Attendees supported a resource request for \$35 million to fund high-priority actions by WHO, FAO and OIE over the next six months. Additionally, surveillance, control and preparedness work in countries requires timely funding.

"The priority now must be to address the urgent needs over the next six months," said Dr. Bernard Vallet, OIE director-general. "OIE and FAO have identified the key pri-

orities as evaluating and strengthening veterinary services, laboratory and surveillance capacity in affected countries and those most at risk.

Vallet went on to say, "We must also provide support to the avian influenza network for diagnostic expertise and exchange of isolates with the WHO. I urge you all to remember that we are talking about an international public good."

James Adams, vice president of operations at the World Bank and head of the Bank's Avian Flu Taskforce said the minute there are more regions or countries with animal outbreaks or human-to-human transmission, the funding needs will increase considerably. "Based on our work here in Geneva over the past three days, we now have a strong business plan to take to the donors financial conference in Beijing in mid-January." ●

Action Plan

Experts and officials set out key steps that must be taken in response to the threat of the H5N1 influenza virus, which is currently circulating in animals in Asia and has been identified in parts of Europe:

Control at Source in Birds

- Improving veterinary services, emergency preparedness plans and control campaigns including culling, vaccination and compensation.
- Assisting countries to control avian influenza in animal populations.

Surveillance

- Strengthening early detection and rapid response systems for animal and human influenza.
- Building and strengthening laboratory capacity.

Rapid Containment

- Support and training for the investigation of animal and human cases and clusters, and planning and testing rapid containment activities.

Pandemic Preparedness

- Building and testing national pandemic preparedness plans, conducting a global pandemic response exercise, strengthening the capacity of health systems, training clinicians and health managers.

Integrated Country Plans

- Developing integrated national plans across all sectors to provide the basis for coordinated technical and financial support.

Communications

- Factual and transparent communications, to support all of the above; in particular, risk communication is vital.

AI Established as Global Threat

Avian Influenza (AI), or commonly referred to as "bird flu" has commanded much attention from the international health community, both for poultry and humans. A number of countries are dealing with AI, at various levels. Trade restrictions continue to be the norm for countries impacted by the disease. (All statistics as of Dec. 20, 2005, from OIE.)

China

China first reported high pathogenicity avian influenza (HPAI) in July 2005. A total of 78 outbreaks have been reported, with the latest coming on Dec. 18.

Vietnam

Vietnam has the most reported cases of HPAI, with 2,141 different outbreaks of the disease. The first case of AI was confirmed in January 2004 to OIE.

Thailand

Thailand was among the first countries to report the H5N1 strain of HPAI, along with Vietnam. The first occurrence was confirmed in January 2004. Thus far, Thailand has reported 1,164 cases of HPAI. Cases are still being reported in that country.

Indonesia

HPAI has been prevalent in Indonesia, however not to the scale of Thailand or Vietnam. A total of 216 cases rank it third in the world. Indonesia reported its first case in August 2004. Reports of human cases have also been prevalent in Indonesia.

European Union

A British quarantine center has reported a parrot and 53 mesias (finch-like birds) have been diag-

nosed post-mortem with H5N1 in the EU, all of which were imported. Though it has not been reported in commercial poultry, the disease has been found in nearby countries such as Turkey, Romania, Ukraine and Russia have reported cases. Russia has reported a total of 51 cases since their first confirmation of the disease in July 2005.

Canada

The western hemisphere experienced a scare following the detection of a low pathogenicity form of avian influenza in commercial ducks in November. The ducks were located in British Columbia, where the movement of poultry and poultry products was halted until the disease could be controlled, and no new cases were identified for 90 days. Canada has not reported any cases of H5N1 HPAI.

United States

The United States has no cases of HPAI. Many of the country's poultry states have been proactive in taking necessary precautions in case of an AI outbreak. Agriculture Deputy Secretary Chuck Conner has outlined USDA efforts to protect the United States against highly transmissible forms of avian influenza. Some of the key components include AI surveillance, education and the continued research on improving the rapid diagnostic test for AI.

Global Human Cases

The World Health Organization has reported a total of 139 human cases around the world, accounting for 71 deaths from the disease. The number of human cases has nearly doubled from 2004 to 2005, from 46 to 90, respectively. ●

USDA Offers Biosecurity Calendar

The U.S. Department of Agriculture's Biosecurity for the Birds program has unveiled a new calendar for backyard bird owners. "2006 Backyard Biosecurity: Keeping Your Poultry Healthy" is an informative bilingual calendar to help bird owners protect their birds from diseases like Exotic Newcastle Disease (END) and Avian Influenza (AI). The calendar is available free of charge while supplies last.

To obtain a copy please e-mail your request (with name, address and zip code) to birdbiosecurity@aphis.usda.gov.



LOOK for signs



REPORT sick birds



PRACTICE backyard biosecurity

USAHA Urges Approval of NPIP for AI Control

The U.S. Animal Health Association's (USAHA) Transmissible Diseases of Poultry and Other Avian Species Committee is urging USDA to move ahead with necessary action to approve and implement the National Poultry Improvement Plan's control program for H5 and H7 strains of low-pathogenicity avian influenza. The resolution was offered during the association's annual meeting in November in Hershey, Pa.

The resolution's background cites the success of NPIP. In fact, during a special session in May 2002, the committee recommended that AI control be administered through that program.

A key point made as part of the



resolution says, "International events have focused attention on this disease, the devastation that it is capable of visiting on the poultry industry, and the potential threat it represents to public health. The time has come to act quickly and decisively to control this threat."

The resolution reads:

The USAHA urges the U.S. Department of Agriculture, Animal and Plant Inspection Service (APHIS), Veterinary Services (VS) and the Office of Management and Budget (OMB) to proceed with all due speed to approve and implement the proposed National Poultry Improvement Plan (NPIP) Control Program for Low Pathogenicity H5/H7 Avian

Influenza in Commercial Poultry.

The committee also passed two other resolutions:

- "Importation of Raw Game Bird Carcasses from Areas Known to be Infected with Newcastle Disease and Highly Pathogenic Avian Influenza," which recommends changes to 9 CFR Chapter I, Part 94, Section 94.6 to tighten restrictions on known areas infected with END or HPAI, and expand definitions to include any types of the disease.

- "Amendment of the National Organic Program Section 205.239, Requiring Access to the Outdoors, to Make Access Optional and to Provide for Confinement During Outbreaks of HPAI."

The complete resolutions can be found at www.usaha.org. ●

Consumers Learn About AI as a Health Issue

Question: Can you get any type of avian influenza by eating chicken, turkey or other poultry products?

Answer: There is no danger of acquiring avian influenza from normally and properly cooked food. Avian influenza is caused by a virus. Like all types of viruses, avian influenza is destroyed by the heat of normal cooking.

That's according to a fact sheet recently issued by the National Chicken Council.

Many fears are associated with the threat of avian influenza in the U.S., though evidence shows that "bird flu" is not contracted through the consumption of meat from infected animals.

The NCC fact sheet also highlights the importance for consumers to understand that handling meat from an infected chicken or turkey does not pose a risk for AI. NCC adds that birds suspected or infect-

ed with AI will not enter the food chain as raw meat.

Companies such as Tyson, Perdue and KFC are said to be preparing campaigns that help consumers understand that bird flu is not a food safety issue, according to a report from Ad Age.

Perdue Farms offers a hotline for consumers to call with questions on avian influenza.

"The facts are that the strain of Asian bird flu in the news, highly pathogenic H5N1 avian influenza, has never been found in the U.S.," the company said on its web site. Perdue tells its consumers not to be concerned about eating poultry.

"This is a health issue, not a food safety issue," said Michael Rybolt, National Turkey Federation manager of scientific and regulatory affairs.

NCC has also released some key facts for everyone to understand

about AI.

- The type of avian influenza occurring in Asia is called H5N1 highly pathogenic avian influenza (H5N1 HPAI). We have never had H5N1 HPAI in the United States and do not have it now.

- The U.S. does not import any chicken, turkey, or poultry products from Asia. The fresh poultry products seen in the store are all produced in the United States except for a very small amount produced in Canada.

- Avian influenza is caused by a virus. Like all microorganisms, it is killed by the heat of normal cooking. Washing the hands after handling raw poultry is always a good precaution, but there is no danger of getting avian influenza from normally and properly cooked poultry. The normal precautions for handling and cooking poultry are printed on the package. ●

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Miles to Chair NIAA Poultry Health Committee

Dr. Andres Miles, a member of the American Association of Avian Pathologists (AAAP), has been appointed chairperson of the National Institute for Animal Agriculture's (NIAA) Poultry Health Committee.

Miles is a public health surveillance veterinarian with the Emergency Programs division of the North Carolina Department of Agriculture and Consumer Services (NCDA).

NIAA Chairman of the Board Dr. Rick Sibbel said Miles' appointment signals NIAA's intent to provide a solid framework to assist poultry industry stakeholders in addressing poultry health issues. "We are fortunate to have someone with Dr. Miles' experience and expertise to lead this committee."

Miles is a 1989 graduate of the Virginia-Maryland Regional College of Veterinary Medicine and is a Diplomat in the American College of Poultry Veterinarians. She received a Ph.D. in Animal Science from the Univ. of Delaware in 2000.

Prior to her current position at NCDA, Miles was the Eastern regional poultry epidemiologist for USDA, APHIS, Veterinary Services. Previously, she was an assistant professor in the Dept. of Population Health and Pathobiology at the North Carolina State University College of Veterinary Medicine. Miles also headed up veterinary research development at Embrex, Inc. at North Carolina's Research Triangle Park for several years in the early 1990's.



Dr. Andrea Miles

In addition to her involvement with AAAP and NIAA, Miles is a member of the American Veterinary Medical Association, the World Veterinary Poultry Association and the U.S. Animal Health Association, where she serves on the Transmissible Diseases of Poultry Committee.

Int'l Poultry Expo Nears

The 58th International Poultry Expo is scheduled for Jan. 25-27, 2006, at the Georgia World Congress Center in Atlanta, Ga. It is the world's largest expo targeted to the poultry and egg industry. Last year, there were more than 830 exhibitors and 18,763 visitors from 96 countries.

The educational program will be held Thursday, Jan. 26, in Room C204 of the GWCC. It will begin at 9:30 a.m. and adjourn at 4:30 p.m. There will be a number of speakers presenting on various topics. Some of the topics include: Animal Welfare in the Poultry Industry; The Salmonella Challenge in Poultry Processing; The Future of Worker Availability; Antibiotic Use in Poultry; Air Consent Agreement: What's Next?; Crisis Management; and Regulatory Issues in the Egg Industry.

For more information, visit the IPE web site at www.ipe06.org, or call the U.S. Poultry & Egg Association at (770) 493-9401.

Cambridge to Host Int'l A.I. Symposium

The sixth International Symposium on Avian Influenza will be held April 3-6 at St. John's College in Cambridge, England.

The symposium, which is held every four years, brings together

scientists, biologists, veterinarians and government regulators from all over the world to exchange and discuss current scientific information on avian influenza.

The program will consist of nine sessions covering a range of topics of particular relevance to veterinary health and including aspects for human health. Sessions will include global updates with special emphasis on H5N1 in Asia, epidemiology and ecology, options for control including vaccination, diagnostic developments, virus properties and pathogenesis.

More information is available on the Internet at www.defra.gov.uk/corporate/vla/aboutus/aboutus-ai-contact.htm.



USDA Releases NAHMS Poultry '04 Report

USDA's National Animal Health Monitoring System (NAHMS) has released the Poultry'04 Part IV: Reference of Health and Management of Backyard/Small Production Flocks and Gamefowl Breeder Flocks in the United States report.

The Poultry '04 study addressed issues important to the U.S. poultry industry, including information on bird health, bird movement, and biosecurity practices of nontraditional poultry industries, such as backyard flocks, gamefowl and live-bird markets. Highlights from this report include:

- Gamefowl breeder flocks were larger than backyard flocks. More than half of gamefowl breeder flocks had 100 or more birds,

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while more than half of backyard flocks had fewer than 20 birds.

- Introductions of new birds into the flock occurred more frequently in gamefowl breeder flocks than in backyard flocks.
- Owners of backyard flocks report very few health problems. The most common health problems reported by owners of gamefowl breeder flocks were external parasites and respiratory problems.
- Owners of both backyard flocks and gamefowl breeder flocks ranked fun/hobby highest as the reason for having birds.

The report is on the Internet at www.aphis.usda.gov/vs/ceah/ncahs/nahms/poultry/index.htm.

Egg Certified Seal Receives Approval

The egg industry's new seal, which assures consumers that the eggs they are purchasing came from hens that were properly cared for under scientifically-based animal husbandry guidelines, has won approval from federal regulators, according to the United Egg Producers (UEP).

The Federal Trade Commission and the U.S. Department of Agriculture have approved the new seal, which is slightly revised from the one introduced in 2002 when the program began. The seal is the same size and shape as the original one, but the words have been changed from Animal Care Certified to United Egg Producers Certified.

"We are pleased that our program has received the support it has, and we believe that this will help remove any lingering doubts or concerns," said Gene Gregory, Senior Vice President of UEP.

"This is one of the most proactive and progressive animal welfare



programs in the food industry, and federal approval of the identifying seal is critical to its success," said Dr. Jeff Armstrong, chair of the UEP Scientific Advisory Committee and Dean of the College of Agriculture and Natural Resources at Michigan State University.

The program itself will continue to operate as it has in the past, requiring participating egg producers to provide adequate space, food, water, ventilation and other components to ensure the welfare of the hens. Producers must file monthly compliance reports and are audited by independent authorities.

Propane Sanitizer an Option to Control AI

Attendees of the Sunbelt Ag Expo in October learned about a propane-powered sanitizer that can help stop the spread of avian flu in poultry houses.

For years, poultry growers have used and trusted propane as the main heat source in their buildings. Now propane can be used in a different facet of production – cleaning and sanitization.

New products have the capability of producing a flame that heats constantly at approximately 1400° F, which is hot enough to effectively eliminate a host of harmful pathogens, according to the Propane Council.

The practice is gaining industry

support, such as from the Texas Animal Health Commission.

"It is our recommended practice for growers to use flame sanitation to rid poultry houses of any pinfeathers, dust or other residue capable of carrying disease," stated Carla Everett, Director of Public Information for TAHC.

For more information log on to www.propanecouncil.org.

Johanns Recognizes Poultry Scientists

Agriculture Secretary Mike Johanns has recognized Agricultural Research Service (ARS) scientists Dr. Charles W. Beard and Dr. Nelson A. Cox for the ARS Science Hall of Fame for their work in the poultry industry.

Beard, now retired, joined ARS in 1965 at the Southeast Poultry Laboratory in Athens, Ga. During his 28-year career at ARS, Beard developed the test for the detection of avian influenza antibodies in serum and egg yolk. He has conducted experimental studies and published papers on a wide variety of poultry disease subjects including serology, vaccines, the origins of poultry diseases and disease containment.

Cox began his career with ARS in 1971 and still works for the agency. In the 1970s, Cox and his colleagues conclusively demonstrated that fecally contaminated, condemned poultry carcasses were microbiologically indistinguishable from inspection-passed carcasses after reprocessing. Results from this pivotal study convinced Congress of the merits of reprocessing. Cox and his coworkers also identified hatcheries as significant reservoirs for *Salmonella* and conducted extensive research on intervention strategies. ●

Natural Substance Reduces *Campylobacter* in Chickens

Proteins called bacteriocins, produced by bacteria, can reduce *Campylobacter* pathogens to very low levels in chicken intestines and could help reduce human exposure to food-borne pathogens, Agricultural Research Service (ARS) scientists report.

The research was coordinated by scientists at the ARS Richard B. Russell Research Center in Athens, Ga. They collaborated with scientists from the former Soviet Union on this and other food safety research.

In a chicken's gut, the bacteriocins can crowd out pathogenic bacteria, making it less likely that pathogens could infect poultry or humans.

Bruce Seal, research leader for the Poultry Microbiological Safety



Dr. Greg Siragusa, ARS, examines a bacterial culture

Research Unit in Athens, is directing the work on reducing food-borne bacterial pathogens like *Campylobacter*. The research was begun by ARS microbiologist Norman Stern in Athens. Stern was

awarded a patent on uses for bacteriocins. He and colleagues Greg Siragusa and Eric Line have applied for several other patents as well.

The work was completed in collaboration with Edward Svetoch, a Russian Federation scientist at the State Research Center for Applied Microbiology in Obolensk. Svetoch and Stern evaluated tens of thousands of bacterial isolates from poultry production environments.

Stern and his colleagues have found promise in numerous organisms for anti-*Campylobacter* activity, namely *Bacillus circulans* and *Paenibacillus polymyxa*.

In addition, Stern and his colleagues successfully enhanced the production of bacteriocins, making it much more attractive for industrial testing. According to Stern, there has been substantial industry interest in licensing the technology. Bacteriocins could become an alternative to antibiotics for protecting poultry.

The current research is funded and coordinated by the U.S. Department of State, the International Science and Technology Center, and the ARS Office of International Research Programs. ●

Better, Faster Vaccinations for Poultry

Egg producers now have access to a new tool developed by the Agricultural Research Service (ARS) that helps protect laying flocks from serious diseases like infectious bronchitis, mycoplasmosis and exotic Newcastle disease. Each year, mycoplasmosis alone costs U.S. producers more than \$140 million, partly due to uneven vaccine delivery.

Vaccines are currently dispensed to egg-laying leghorn chickens as an inhalable mist sprayed inside poultry houses. The applicator consists of a hose attached to a machine inside a backpack that resembles a modified leaf blower. The machine makes an ear-piercing noise that disturbs the birds, while the vaccine spray reaches its intended targets only about half the time.

Now, a more effective vaccinator has been developed by ARS researchers in the Poultry Research Unit at Mississippi State University,

under the leadership of supervisory veterinary medical officer Scott Branton. Named for its developers, Martin Carden, John Prisock and Jason Johnson, the CPJ Vaccinator is a battery-powered, 6-foot-tall by 5-foot-long device with nozzles on both sides that quietly spread the vaccine to three tiers of birds at once without disturbing them. The vaccine is dispensed so uniformly that it reaches more than 90 percent of the birds to be treated. Branton modified the device to meet industry standards.

Field trials at the Cal-Maine Foods, Inc., egg-production facility in Edwards, Miss., showed the CPJ Vaccinator to be efficient, effective and easy to use. With it, one person was able to vaccinate roughly 75,000 chickens in about seven minutes, compared to five people taking 45 minutes to get the job done conventionally. ●

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