



A quarterly newsletter detailing poultry related work, research, and events in California

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### Questions or Comments?

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## Keeping track of Highly Pathogenic Avian Influenza

**Mr. Brock Riggs**, Lab Manager, UC Davis School of Veterinary Medicine Cooperative Extension Poultry Lab

Highly Pathogenic Avian Influenza (HPAI) has yet again become an epidemic in the United States. The geographic area of impact, when compared to the most recent 2014-2015 outbreak is astounding. Since HPAI was first observed in a wild bird in South Carolina this past January, the disease has spread like a wildfire. In 2014-15, 113 counties in various states had a detection of HPAI, compared to the current 705 counties in 2022. Over 46 million commercial and backyard birds have been reported as infected to the United States Department of Agriculture (USDA APHIS), with thousands of wild bird detections (and countless numbers of wild birds going undetected). In California alone, there have been detections in 18 counties, as HPAI has crept into resident waterfowl populations. It has spread to several backyard flocks and commercial facilities within the state since the beginning of August, causing the euthanization of over half a million turkeys and chickens.

As bird migrations heighten with the coming fall and winter, the risk of exposure to poultry flocks grow. Not only has the virus been carried by waterfowl as it has in years past, but also by raptors, scavengers, and songbirds this year.



### Poultry? We have an app for that!

Backyard Poultry Central is your hub for the latest information on husbandry practices for new and experienced backyard owners. Get notified of outbreaks as soon as they happen, and receive critical information at your fingertips.

Download the "Backyard Poultry Central" app on the Google Play Store



Scan Me!



# Keeping Track of HPAI continued

As birds move south for the winter, they will travel near and often through properties where poultry are housed, carrying the virus with them and depositing it as they go along. The best way to avoid an outbreak in a facility is heightened biosecurity, and keeping your birds indoors. Wearing a dedicated set of clothes and shoes, along with disposable coveralls and plastic covers is the best way to keep HPAI away from poultry. This most recent epidemic has been much worse than in years past, and will likely continue into the winter. By enforcing the best biosecurity you can, your birds can stay healthy as the virus runs its course.

## Community Corner

An interview with Mr. Franklin Cartagena, an undergraduate intern from the CE Poultry lab through the Summer Work Experience Program

### How did you hear about the Pitesky/Cooperative Extension Poultry Lab?

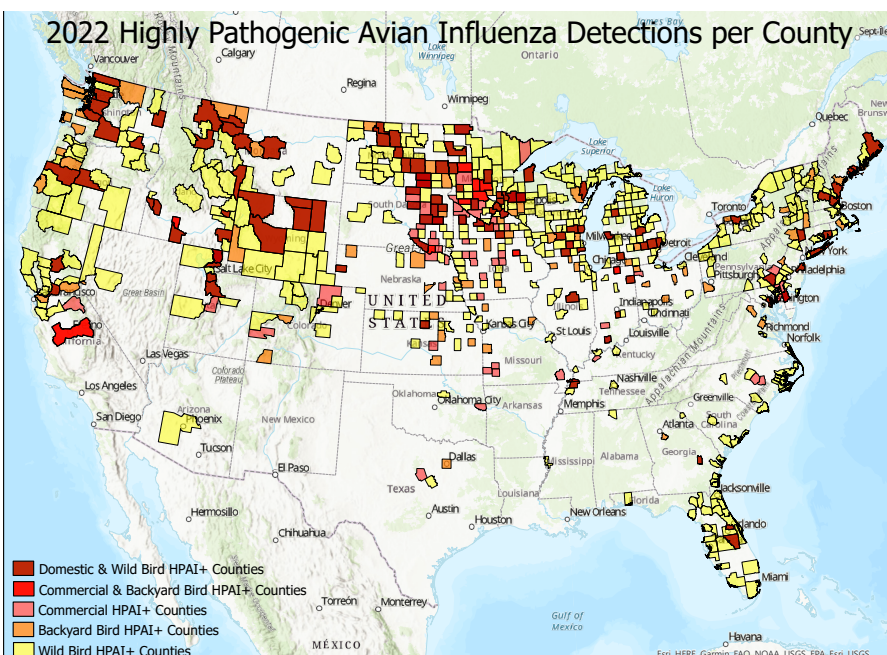
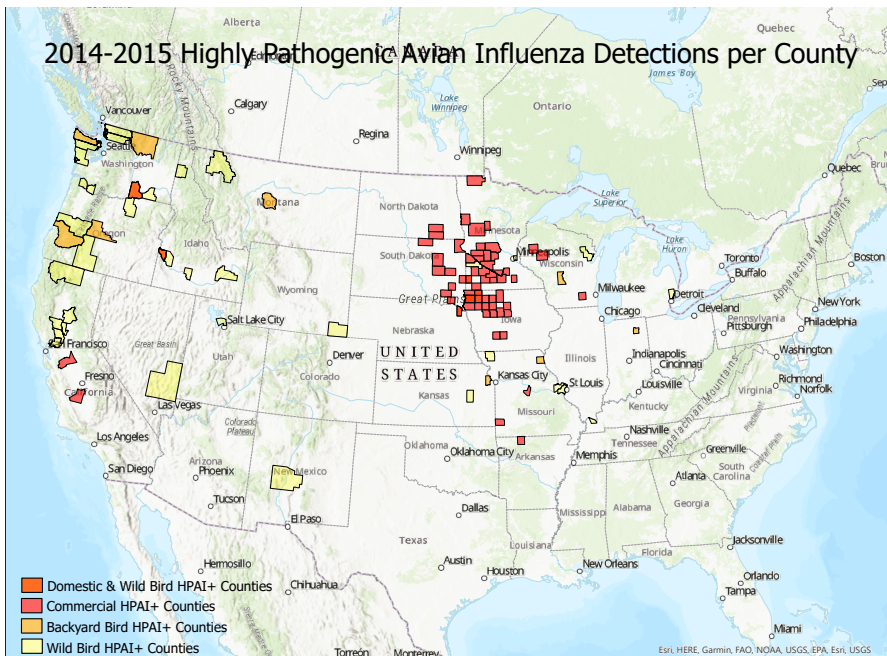
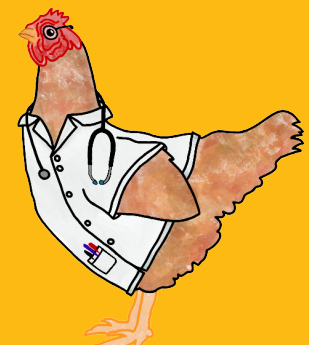
An agriculture-based freshman seminar class mentioned the cooperative extension poultry lab and I took an interest. Hearing Dr. Pitesky talk honestly about how he enjoyed his work inspired me to apply for an internship.

### What projects do you help with in the lab?

I help out on the computer analyzing data. I really enjoyed learning about how people use chicken manure instead of cow manure and other ways to integrate chickens into vegetable crop rotations. I've taken a lot of notes in hopes to share what I learn with family back home.

### What is something new that you learned during the internship?

I learned that there are alternative methods to get nutrients to plants other than artificial fertilizers. It was also eye-opening to discover that crop rotation could be another solution to improving animal welfare in agriculture. We can actually provide animals shelter and treat them with respect before they are processed.



# Lights, Camera, Action!

## vND Documentary In Production

**Mr. Jose Nabor Contreras**, Assistant Film Director at UC Davis School of Veterinary Medicine, Cooperative Extension Poultry Lab

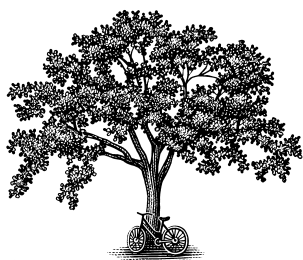
As a part of the UC Davis School of Vet Medicine Cooperative Extension Poultry Lab's recent USDA grant addressing virulent Newcastle Disease, the lab has been working on a documentary capturing the big picture story of the last outbreaks in Southern California. One of the newest members of the lab, Mr. Contreras, recently traveled to the city of Norco, CA to begin filming. Here he recounts his experience while interacting with the poultry community that he was able to meet during their city fair in September.

“On Saturday morning I attended the Poultry Show in which owners proudly displayed their chickens which included Silkies, Bantam, and many other breeds. Many of the owners of the displayed chickens were young children part of the 4H Organization. Even at a young age, I was surprised by their knowledge about biosecurity and their affection for their birds.

I was able to chat with the judges from the Poultry Show, and they made me aware of how important it is for our new generations to be aware of the benefits that exist when you produce your own food (eggs), and how tight biosecurity is linked to a successful flock of chickens.

Norco, CA has a community whose roots continue to be strong and its population wants it to stay this way regardless of being in the middle of a suburban area. Many of the residents grew up raising chickens and they continue that tradition with their kids and family.

This filming session was the beginning of our documentary that plans to educate the audience about the three different vND Outbreaks that have happened in this area. Stay tuned for more updates as we continue to film our story.”



Above: Serama Bantam on display at the Norco Fair Poultry Show with camera setup.

**As a 1st generation student, how has your University experience been?**

School itself has been great. Any challenges are mostly due to finances. I don't have family members close by that can help out in hard times. I see other students who are able to reach out for financial support from their families while I need to work to pay living expenses. It is also hard to get grants, scholarships and general aid. I suspect this is due to a language barrier, though I am getting better. I aim to become someone and absolutely want to continue learning. My family mostly believes that I should only be working right now, but I value my dream of higher education more than the responsibility I feel to take care of family immediately. I have enjoyed getting to know peers and professors and that helps keep me going, but it just gets hard to watch others enjoy much more leisure time and spare funds while in school.

**Do you have any advice for first year 1st generation students?**

Dream, have faith and some discipline. If you have a question or need help, there is probably a well-intentioned professor somewhere that can help you out. That's how I got my internship! The worse thing that can happen is not asking the question in the first place. Something that helps me when the stress gets to be too much is gardening and keeping a private plot over at the community gardens, as well as working out at the ARC. You are leaving a comfort zone when you come to university, but as long as you are open to change, it can become another home.

continued

## Crops taking turns: Organic Agriculture Research and Extension

**Ms Faye Duan**, Graduate Student at UC Davis School of Veterinary Medicine, Cooperative Extension Poultry Lab

This September, the OREI 1- acre experimental trial on integrated cropping and poultry production produced an abundant crop of organic butternut squash. Researchers and farmworkers harvested the squash by hand, then graded the fruits from each of our experimental plots individually before weighing them. Marketable fruits were separated into Grades 1 & 2 while unmarketable grades were further divided into groups of immature fruits, cracks or deformities, animal damage, insect damage, and rot. In all 12 of our plots, Grade 1 fruits far outnumbered the other categories—indicating the excellent quality of the crop.

Final numbers have yet to be compiled, but we know that each of our 30x40 ft plots were able to produce at least a few hundred pounds of fruit. Although researchers were glad to see a successful yield from the trial, hand harvesting so many hefty butternut squashes was a very laborious task! We gained a first hand appreciation for the hard work and difficult labor endured by farm workers, without whom vegetable production in California and the United States would not be able to succeed.

Following the completion of harvest, we will collect soil samples for analysis, prior to moving to the next stage of our rotational cropping system. While normally, this would entail grazing another flock of broiler chickens on the crop residue, we were unable to execute this step of our rotation due to the cases of highly pathogenic avian influenza. The current outbreak has already resulted in the loss of 40 million heads of commercial poultry in the United States this year, and an estimated 480 thousand commercial and backyard poultry lost in California alone. Therefore, although it was not the original design of our experiment, we will skip to planting our winter cover crop, with the hope to integrate chickens again in the spring of 2023.



Above: Butternut squash harvest  
Left: Ms. Duan harvesting butternut squash at Russell Sustainable Agriculture Research Ranch at UC Davis, CA.

Franklin Cartagena is working towards a Bachelor of Science degree in Clinical Nutrition from the College of Agricultural and Environmental Sciences. He is from El Salvador and also supports his sister's high school studies. He aims to pursue higher education to do more research and possibly become a registered dietician.

## Where Chickens and Computers Meet



This July, data analyst Mr. Joseph Gendreau from the UCD Cooperative Extension Poultry Lab attended the International Conference on Computational Social Science (IC2S2) in Chicago, Illinois. This conference is organized as an opportunity for diverse international researchers to share their multidisciplinary and often intersectional work. For example, Mr. Gendreau shared his research on how online bird sales can inform disease models for a more secure food supply.

# INFLUENZA VACCINATION FOR POULTRY WORKERS



TOMÁS J. ARAGÓN, M.D., Dr.P.H.  
Director and State Public Health Officer

State of California—Health and Human Services Agency  
California Department of Public Health



GAVIN NEWSOM  
Governor

August 30, 2022

Dear Poultry Operation Owner/Manager:

Influenza vaccination can protect your workers from missing work and from inadvertently spreading influenza viruses. **Please consider offering on-site flu vaccine clinics for all of your employees and contractors, especially those who handle poultry.**

Seasonal influenza vaccination benefits your workers: Each year, on average, 5 to 20 percent of the U.S. population gets the flu, resulting in tens of thousands of hospitalizations, thousands of deaths, annual medical costs of \$10.4 billion, and additional annual lost earnings and costs of \$16.3 billion.<sup>1</sup> Vaccination can result in 18%–45% fewer lost workdays and 18%–28% fewer days working with reduced effectiveness.<sup>2</sup> **By preventing flu, employers can help protect employees' health and reduce losses in productivity and revenue.**

Reduce the risk of dual infection with seasonal influenza and avian influenza: In 2022, avian influenza (HPAI) H5N1 has been found in wild birds and backyard and commercial flocks across the United States, including in California. Two human cases of this strain of avian influenza A (H5N1) have been identified. Consistent with longstanding best practices, poultry workers are highly encouraged to receive the seasonal influenza vaccine each fall to reduce the possibility of dual infection with seasonal influenza and avian influenza at the same time<sup>3,4</sup>. Dual infection could result in the formation and spread of hazardous new influenza viruses. Seasonal influenza vaccine does not directly protect against infection with avian influenza viruses but can prevent dual infection.

Consider offering worksite influenza clinics: [Hosting a flu shot clinic](#) can help your company to:

- Reduce employee absenteeism
- Reduce time away from the job to go to another location for the shot
- Enhance your relationship with your employees

CDPH Occupational Health Branch • 850 Marina Bay Pkwy, Bldg. P, 3<sup>rd</sup> Fl. • Richmond, CA 94804  
Phone: (510) 620-5757 • Fax: (510) 620-5743  
Internet Address: [www.cdph.ca.gov/OHB](http://www.cdph.ca.gov/OHB)



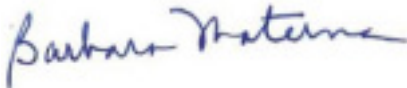
# INFLUENZA VACCINATION FOR POULTRY WORKERS

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Other options to prevent influenza include:

- Partnering with your health department, provider, or pharmacy to host community flu clinics
- Providing vouchers for staff to get vaccinated at a retail pharmacy or local clinic for free
- Supporting paid time off work for employees to receive flu vaccine
- Reminding workers of everyday preventive actions to stop the spread of germs:
  - Wash hands often with soap and water
  - Avoid contact with sick people
  - Stay home and away from others when they're sick

For more information about worksite influenza clinics or how to prevent influenza, please contact your [local health department](#). Thank you for protecting your business and staff from influenza this season.



Barbara Materna, Ph.D., CIH,  
Chief Occupational Health  
Branch California Department  
of Public Health

## ADDITIONAL RESOURCES

**Resources for planning a worksite flu clinic:**

- [CDC “Make it your business to fight the flu” Toolkit](#)
- [CDC Promoting Vaccination in the Workplace](#)

# INFLUENZA VACCINATION FOR POULTRY WORKERS

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## Information on protecting poultry workers during an outbreak of avian influenza:

- [CDC, National Institute for Occupational Safety and Health \(NIOSH\), Alert: Protecting Poultry Workers from Avian Influenza \(Bird Flu\), May 2008](#)
- [Cal/OSHA Regulation, "Aerosol Transmissible Diseases – Zoonotic" 8CCR §5199.1](#)
- [CDC, Recommendations for Worker Protection and Use of Personal Protective Equipment \(PPE\) to Reduce Exposure to Novel Influenza A Viruses Associated with Severe Disease in Humans](#)
- [Centers for Disease Control and Prevention \(CDC\), Prevention and Antiviral Treatment of Bird Flu Viruses in People](#)
- [United States Food and Drug Administration \(USDA\), Avian Influenza](#)

## References:

1. National Business Group on Health. Hospitals should require flu vaccination for all personnel to protect patients' health and their own health. National Business Group on Health's Position Statement on Influenza Vaccination of Hospital Personnel. October 18, 2011. [Position Statement on Influenza Vaccination \(kff.org\)](#)
2. Molinari NA, Ortega-Sanchez IR, Messonnier ML, Thompson WW, Wortley PM, Weintraub E, Bridges CB. The annual impact of seasonal influenza in the US: measuring disease burden and costs. *Vaccine* 2007; 25(27):5086–5096. [www.ncbi.nlm.nih.gov/pubmed/17544181](#)
3. Centers for Disease Control and Prevention (CDC), Bird Flu Virus Infections in Humans: <http://www.cdc.gov/flu/avianflu/avian-in-humans.htm>
4. Centers for Disease Control and Prevention (CDC), Transmission of Avian Influenza A Viruses Between Animals and People: <http://www.cdc.gov/flu/avianflu/virus-transmission.htm>

# A Puzzling Situation

Can you find the value of each symbol?

$$\text{🔥} + \text{🔥} + \text{🔥} = 36$$

$$\text{🔥} + \text{🐔} + \text{🐔} = 28$$

$$\text{🐔} - \text{🇺🇸} = 3$$

$$\text{🔥} = ? \quad \text{🐔} = ? \quad \text{🇺🇸} = ?$$

## Have you seen our new series, 'The Sitch'?

Sit down with Dr. Maurice Pitesky as he answers the most common questions for new and experienced backyard poultry owners alike. Get insightful and accurate information on the best practices for raising your own birds.

Visit our channel at:  
<https://www.youtube.com/c/UCDavisVetMedPoultryUniversity>

