Vet Med Cooperative Extension

Winter 2024

Connection

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For questions or comments, please contact Maurice Pitesky
at 530-752-3215 or mepitesky@ucdavis.edu

Top Toxicology Talent

New Cooperative Extension Professor

Mrs. Theresa Gendreau, Creative Director, UC Davis, Cooperative Extension Poultry Lab

Please join the department in welcoming new Assistant Professor of Cooperative Extension in Agricultural Toxicology Dr. Olukayode Jegede!

Dr. Jegede's research and outreach is focused on toxicology within the agriculture industry. This includes assessing and protecting human, animal, and environmental health. As an example, this kind of work includes examining contaminants involving agriculture like pesticides, microplastics, metals, and PFAS as well as monitoring environmental health through soil and plant health.

He joins UC Davis after spending time as a postdorctoral research associate at the University of Saskatchewan, Canada and as a research scientist at Wageningen University in the Netherlands with a focus on terrestrial ecotoxicology. With a childhood interest in the zoological and agricultural sciences, he found a multidisciplinary connection within Ecotoxicology. He wanted to know how to "protect organisms that were important for agriculture" after growing up watching his mother work with the International Institute of Tropical Agriculture in Nigeria. One of the ways he hopes to accomplish this in California is to bring more awareness to the importance of soil health and to overall limit exposure to contaminants that we can't always see.

Above: Photo of Dr. Olukayode Jegede courtesy of UCCE

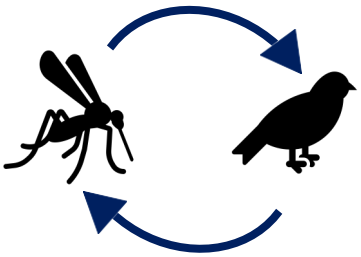
Got Chickens?

Volunteer your flock!

Join our community effort to combat West Nile virus! We are conducting a field trial this summer to evaluate how well a new mosquito control method reduces the spread of West Nile virus, and we need chickens to help measure our impact.

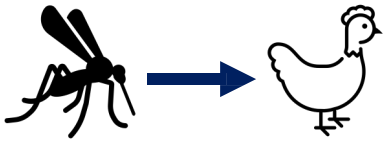
Understanding West Nile virus:

West Nile virus is spread through mosquito bites. It is maintained in the environment by a transmission cycle between mosquitoes and many species of common birds, including house sparrows and house finches.



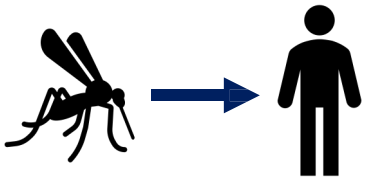
Role of chickens:

Chickens can become infected with West Nile virus but do not get sick or pass on the virus to more mosquitoes. Chickens do develop a measurable immune response after West Nile virus infection, which makes them valuable sentinels for virus activity.



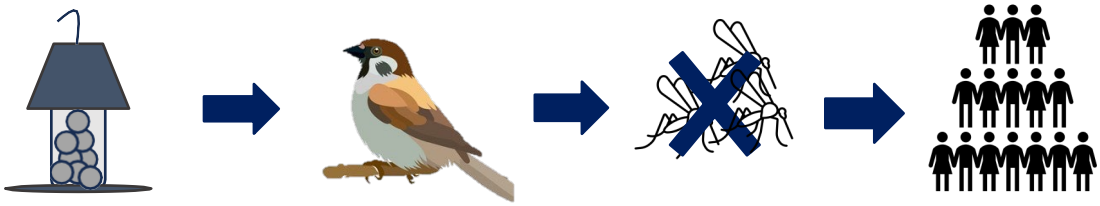
Human impact:

People are infected if bitten by a mosquito carrying the virus. In people, West Nile virus can cause flu-like symptoms and in rare cases may result in serious neurological disease. Chickens do not infect people with West Nile virus.



What is our study?

We are evaluating whether ivermectin can reduce West Nile virus transmission. Here's how it works:



Ivermectin is mixed with bird feed and placed in a backyard feeder.

House finches and house sparrows consume a dose of ivermectin.

A mosquito that bites a medicated bird dies and can no longer transmit the virus, protecting us from infection.

Got Chickens?

continued...

What is Ivermectin?

Ivermectin is a safe and widely-used medication in both veterinary and human medicine. It is better known for its effectiveness against parasites, but is also capable of killing adult biting mosquitoes, the carriers of West Nile virus.

How you can help

Volunteer your yard:

To make this trial a success, we need places to put our feeders! The feeders are temporary and will be removed at the end of the study. Each feeder will be randomly assigned to contain either medicated or non-medicated bird feed. To protect the integrity of the trial, you will not be informed which feed you received until the study concludes.

Volunteer your flock:

Chickens are excellent sentinels for West Nile virus because they do not get sick, do not pass on the virus, and are easily tested. By measuring their rate of infection, we can monitor local West Nile virus activity and estimate the risk of infection in humans.

How will chickens be tested for West Nile virus?

Testing will involve a maximum of 3 blood samples taken over the course of the study. Blood will be tested for the presence of antibodies to West Nile virus. Once positive for antibodies to West Nile virus, no further blood draws will be necessary. All blood draws will be performed by trained personnel.

Contact Us!

Ready to be a part of this study or have further questions? Please reach out to taswong@ucdavis.edu

Word Wrangle!

P S E D R C L P X X C R A Z C
N E T W O R K J U Q O H V W Y
J T T S M J D G X M N O E O F
K O X J R W B B R F T D O R Z
V X A L L I Y J U K A C Q G S
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Y F Y S P E S T I C I D E Z R

contaminant
outreach
organism
toxicology
mosquito
network

pesticide
citizen
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flock
virus
soil

UC Davis School of Veterinary Medicine
UC Agriculture & Natural Resources

www.vetmed.ucdavis.edu/vetext/

School of Veterinary Medicine
University of California
One Shields Avenue
Davis CA 95616

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Maurice Pitesky, editor in chief

For questions or comments, please contact Maurice Pitesky at 530-752-3215 or mepitesky@ucdavis.edu