

The Sentinels of SoWal

Did you know South Walton Co. is one of nineteen Florida counties that employ chickens to help guard against mosquito-borne diseases? Sentinel chickens perform a very important job for the public because they are our first line of defense for monitoring arboviruses in the area. Samples are taken weekly from the chickens (except in winter) and sent to a testing facility to be analyzed for West Nile Virus, Eastern Equine Encephalitis, and St. Louis Encephalitis. There are numerous benefits to this early-alert system for both our district and the public. By utilizing chickens as “mosquito monitors”, the district can make a better-informed decision on control efforts based on the virus present and the mosquito species that are known to vector the virus. This also narrows down our control response to specific geographical regions, decreasing our response time and increasing the chances of control before an outbreak can occur. Furthermore, the resulting data provides historical heat maps/hot spots of arboviruses in SoWal, allowing us to map out zones of higher arboviral concern that may require further surveillance and/or control efforts. SWCMCD employs 16 coop sites across the county and 94 total chickens in the field, the most of any Florida county.

The biggest advantage to using chickens for testing is their asymptomatic nature, meaning they do not get sick from the viruses or exhibit symptoms. This is because chickens are not an effective amplifying host for the viruses. In other words, the virus will never replicate to a high enough level within its chicken host to be transmitted back to any biting mosquito. Consequently, this also means the viruses cannot be transferred from chickens to humans through mosquito bites, providing a safe and effective way to monitor for arboviruses within the county.