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In the News

Marek's, vaccination, and "more dangerous" virus

Eric Gingerich, D.V.M.
Technical Poultry Specialist
Diamond V

A recent science article in the popular media reports that Marek's vaccines are not "perfect." Rather, they allow the infection to occur but prevent the virus from forming tumors.

The *PBS NewsHour* story – "This chicken vaccine makes its virus more dangerous" – summarizes a peer-review study by bio-medical researchers in the USA and UK. This research supports the hypothesis that by reducing natural selection against virulent strains, "imperfect vaccination" by "leaky vaccines" enables the spread of viral strains that would otherwise be too lethal to persist.

The reporting may be accurate so far as Marek's vaccination goes, but poultry producers need to pay attention to an equally important practice that prevents Marek's disease – cleaning and disinfection of facilities.

Timing is everything.

Marek's vaccinated flocks will shed virulent virus after 6 weeks of age. Using this known fact, poultry producers reduce the chance of more pathogenic viruses from infecting the next flock by using house cleaning and disinfection steps in long-lived egg layers to kill the virus left over from the previous flock.

In addition, the amount of time between flocks – normally 14 days or more – is important to allow die-off of virus. Broiler flocks are marketed before the virus shed stage, so cleaning and disinfection is not as critical.
Also, the use of all-in all-out, single-aged growing farms cuts the risk by not having flocks older than 6 weeks of age, which are virus shedders, on the same farm as day-old flocks. Biosecurity steps such as decontaminating any equipment or visitors from off the farm before entry are also quite protective.

If you're growing pullets, continue to use high quality cleaning and disinfection procedures to eliminate as much Marek's virus as possible from the previous flock. In addition, give your flocks at least 14 days down time between flocks.

The *PBS NewsHour* reporter interviewed lead researcher Dr. Andrew Read, who is the Evan Pugh Professor of Biology and Entomology in the Center for Infectious Disease Dynamics at Pennsylvania State University. He is known for his work on the evolution of virulence and drug resistance in malaria and the hypothesis that some vaccines can prompt evolution of more virulent pathogen strains.

"Even if this evolution happens (with Marek's)," Dr. Read told *PBS NewsHour*, "you don't want to be an unvaccinated chicken. Food chain security and everything rests on vaccines. They are the most successful and cheapest public health interventions that we've ever had. We just need to consider the evolutionary consequences of these ones with leaky transmission."

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