

University of Minnesota Study Shows UV + Ozone Shoe Sanitizing Station Has Potential to Reduce the Risk of Transmission of Avian Influenza Virus

St Petersburg, FL 01-08-2024 - Footwear is often a vector for Avian Influenza Virus (AIV) transmission, as workers may inadvertently carry the virus into poultry housing facilities. Mitigating transmission, particularly through footwear, remains a challenge.

The University of Minnesota recently conducted a comprehensive study to investigate the combined efficacy of ultraviolet light (UV) and ozone as utilized by the PathO₃Gen Solutions UVZone Shoe Sanitizing Station. The study evaluated the Station's inactivation efficacy against 3 strains of AIV (H9N9, H4N8, and H4N6) on various surfaces (fomites), including rubber boots and polypropylene.

The Station was effective in inactivating all four subtypes of AIV. On rubber boots, reductions were between 93.2% and 99%; and on polypropylene, the reductions were between 98.9% and 99.9%, indicating high efficacy.

These findings highlight the potential of the UVZone Shoe Sanitizing Station to serve as an additional protective layer against AIV. While the efficacy of chemical mats, foams, and quat powders requires maintenance throughout the day to ensure consistent disinfection, the Station requires no added labor or consumables to maintain its efficacy throughout the workday.

An emphasis on innovative viral protection strategies is crucial to protect flocks and production. In 2023, the poultry industry continues to grapple with the devastating effects of AIV. While efforts have been made to control the spread of this highly contagious virus, the toll on poultry farms remains significant.

Egg Farms Bear the Brunt: One striking feature of the AIV outbreak is its disproportionate impact on egg farms. These facilities, often housing millions of birds, have been particularly vulnerable to the virus. Iowa, the nation's largest egg-producing state, has been hit hard with nearly 17.3 million birds killed in 2023. Ohio, another prominent egg-producing state, has seen 5.1 million birds lost due to the virus.

Sizeable bird flu cases have also been confirmed across states including California, Georgia, Maryland, Minnesota, South Dakota, and Wisconsin; with one Maryland farm having to cull 198,200 birds in late November.

Poultry farms are no strangers to biosecurity measures. Farmers work tirelessly to safeguard their flocks, yet fomites including boots and shoes remain a particularly challenging vector for AIV transmission, especially for farms along migratory routes. Introducing a chemical-free UV-C + ozone tool is a novel approach. The UVZone Shoe Sanitizing Station's ability to reduce AIV on rubber and polypropylene boots highlights its value as a seamless enhancement to biosecurity in the poultry industry.

About the UVZone® Shoe Sanitizing Station

The UVZone Shoe Sanitizing Station is an innovative multi-patented disinfection technology delivering the combined power of UV-C light and ozone utilizing Corning® HPFS® Fused Silica glass windows. It has been proven to eliminate up to 99.999% of the most harmful pathogenic microorganisms including spore-forming and non-spore-forming bacteria, encapsulated and non-encapsulated viruses from shoe soles in ≤ 8 seconds. The UVZone Shoe Sanitizing Station is NSF International tested, TÜV SÜD Certified, EPA Registered, and manufactured in an ISO 9001-2015 facility in the USA.

About PathO₃Gen Solutions

PathO₃Gen Solutions (www.patho3gen.com) is a privately held Florida-based company holding multiple patents on its technology and equipment. Its sole mission is to create cleaner, safer environments.

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