



Tropentag, September 14-16, 2022, hybrid conference

“Can agroecological farming feed the world?
Farmers’ and academia’s views”

Prevalence and risk factors promoting the onset of Newcastle disease in local poultry farming in north of Togo

KOFFI FRANCOIS-XAVIER DZOGBEMA¹, ESSODINA TALAKI², ABDUL-WAADJIDOU TCHABOZIRE³

¹*University of Lomé (Togo), World Bank Regional Centre of Excellence in Poultry Science (CERSA), Togo*

²*University of Lomé (Togo), College of Agronomy ,*

³*University of Lomé (Togo), World Bank Regional Centre of Excellence in Poultry Science (CERSA),*

Abstract

Newcastle disease is a highly contagious viral disease of poultry with significant economic consequences especially in developing countries. This study was conducted to determine the prevalence and identify factors promoting the occurrence and persistence of Newcastle disease in the Kara and Savannah regions of Togo. To achieve this goal, a survey was conducted from February to March 2020 in 378 households and 1552 blood samples were taken from non-vaccinated traditional chickens. The hemagglutination inhibition test was performed on the serological samples to determine seroprevalence. In general, the prevalence of Newcastle disease in the Kara region ($37.96 \pm 3.45\%$) is significantly higher than the prevalence in the Savannah region ($29.50 \pm 3.25\%$). In the Kara region, the prefectures of Binah ($56.48 \pm 9.35\%$), Bassar ($54.63 \pm 9.38\%$), Kéran ($41.67 \pm 9.29\%$), and Kozah ($47.22 \pm 9.41\%$) have the highest prevalences ; and the values obtained in the prefectures of Binah, Bassar, and Kozah are approximately statistically equal. The prefectures of Oti ($48.15 \pm 9.42\%$) and Tandjoaré ($41.67 \pm 9.29\%$) are the prefectures with the highest prevalence in the Savannah region. Also the occurrence of the disease is higher in the dry season than in the rainy season. The proximity of local chickens to reservoirs of the virus, especially wild birds, the structure of henhouses, the bad management of morbid and dead animals, the movement of animals and people involved in the marketing of local chickens, breeding practices, the insufficient measure of sanitary prophylaxis and the low rate of immunisation coverage are the main factors favouring the emergence, dissemination, persistence of the disease in the traditional breeding systems in northern Togo and negatively impacts the income of rural farmers.

Keywords: Local poultry farming, Newcastle disease, prevalence, risks factors