

On the spreading of communicable diseases in farming environments

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University of Málaga, Spain, July 8th, 2019

Abstract

Epidemiological models for disease propagation, developed in strict collaboration with veterinarians, are important for providing farmers with guidelines on how to fight diseases that spread by contact among animals.

Directing our attention on hog-raising farms at first, we consider some control issues for containing the Aujeszky disease propagation. This is of high interest in a specific Piedmontese area, where in the farms occupying an area of 30 square kilometers, about 90,000 hogs are concentrated.

A particularly strong and counterintuitive result for disease eradication is obtained in the second case of interest, concentrating on CAEV (Caprine Arthritis Encephalitis Virus), a goats-affecting disease.