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Role of Animal Identification and Registration in Anthrax Surveillance

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Introduction

Anthrax is a globally distributed zoonotic disease caused by *Bacillus anthracis*, a soil-borne, Gram-positive, spore forming bacteria. *Bacillus anthracis* can infect people who slaughter or eat animals that are infected. Recent reports indicate the incidence of human anthrax has increased steadily over the last several years in Georgia (2007-2012). The Georgian National Animal Health Program has implemented an anthrax control program. The Ministry of Agriculture, the National Food Agency (NFA), and the Laboratory of the Ministry of Agriculture (LMA) are engaged in diagnosis and control of anthrax in animals. Epidemiological investigation and surveillance are used to determine the origin of anthrax affected animals and their route of migration, however, for successful implementation, proper animal traceability is required. Identification of cattle is one of the components of epidemiological investigation and has been ongoing in Georgia since 2012.

Methods

During 2012-2014, 1,292,754 cattle were identified with ear tags. In 2014, four fatal cases in cattle (with ear tags) were investigated to determine the origin of the animals.

Results

The cattle were found in seasonal pastures or on animal migration routes. All animals were from different regions relative to the seasonal pastures they were moved to and died.

Conclusions

Implementation of this new approach to livestock monitoring within the anthrax control program is considered to be one of the main factors to improve epidemiological investigation and surveillance. In 2014, as a result of this program, Georgian legislation was updated to require the tagging and identification of cattle, enabling traceability of individual animals. The resulting traceability due to tagging of cattle is known to have reduced illegal movement. As a result, control of the cattle vaccination program was improved. This minimized the migration of unvaccinated animals in seasonal pastures, which is a major risk factor for the spread of the disease.

Keywords

Bacillus anthracis; anthrax; cattle; tagging

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