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"BIOSECURITY" - JOINT ACTION IN EMERGENCY SITUATIONS IN CASE OF THE IDENTIFICATION OF DANGEROUS AND WIDESPREAD INFECTIONS IN CARPATHIAN REGION"

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STUDY SUMMARY "Research on the Prevention of the Spread of ASF and Avian Influenza"

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Summary

In the past five years, several infectious diseases, posing threats to both wild animals and domesticated livestock, have attacked the game management of the Central European region. These diseases, not confined by borders, consistently endanger the economies of the region, since their presence significantly restricts both livestock farming and game management. In the case of livestock, live and slaughter animal trade faces constraints, while hunting restrictions in game management chiefly affect hunting tourism. Yet, these also influence both open-air and enclosed game farming. The appearance of African swine fever (ASF) had the most significant impact on Hungarian game management, with the wild boar population affected by the disease exceeding an estimated 105,000 specimens by 2018.

Given that the highest risk of disease introduction was from Ukraine and Romania, national veterinary authorities in these regions implemented a series of preventive measures. A crucial component of this was informing game managers and pig farmers through professional events. As it transpired, these professional continuations played a pivotal role, ensuring that the public, animal breeders, and those entitled to hunt received accurate information about the course of the disease, the scale of infection and mortality, and the overall severity of the problem. With the survival of domestic pig farming and ensuring the sector's operation at stake, the lectures and information sessions emphatically drew every stakeholder's attention to the gravity of the problem and its anticipated consequences.

The Hungarian assessment of avian influenza from the game management sector was different. The main reason for this was that the disease affected small game farming, specifically enclosed pheasant and wild duck breeding, which posed operational problems for a significantly smaller group of game managers. Game managers mainly learned about the effects of avian influenza on the sector from the closure of certain wild duck or pheasant breeding stocks. These stocks were eradicated, leading to a shortage in day-old pheasants and pre-reared ducks. Lowland hunting associations that have been engaged in pheasant and wild duck breeding for several decades most keenly felt this. In addition to this, international, mainly European, avian influenza outbreaks also affected domestic indoor pheasant breeding. Since the virus's appearance near







Gyöngyös in Heves County on April 21, 2018, up until December 31, 2022, positive samples were detected in 8,724 wild boars. To date, the virus affects the administrative areas of eight counties.

Like in most European states, the virus entered our country primarily through migratory bird species traversing the country. These birds primarily transmit the disease to one another through their faeces, negating the need for direct contact – it is sufficient if the faeces of an infected bird, mixed with straw or feed, enters the barns housing domestic animals. Apart from faeces, the virus can also be found in the feathers and trachea of the infectious bird. Short-distance spread is mostly facilitated by the wind, while human movement, vehicles, and equipment play a major role in its longer-distance spread. In many instances, the virus can be introduced into barns through contaminated straw, feed, or even by the soles of our shoes. Dust, feather particles, and frequent interaction with other animals assist in the spread among domesticated animals. While wild birds often remain asymptomatic, domesticated birds display various symptoms, depending on factors such as the virulence of the strain, the species and age of the bird, existing health conditions, and housing conditions.

Regarding African swine fever (ASF), it is recommended to categorize the country into three risk areas: high, medium, and low risk area. It is advisable to set up an ASF Risk Analysis Action Group to ensure effective implementation. In Hungary, to create these risk categories this action group has set up a database based on data of the National Wildlife Database, its region-specific wild boar population estimates and data on domestic swine holdings from the Breeding Information System (BIS). It is imperative to consider also the number of ASF outbreaks reported in neighbouring countries (Ukraine, Slovakia, and Romania) and their proximity. After analysing the data, the emphasis was placed on the risk of ASF introduction, with a particular focus on the role of the wild boar population. Given that the virus has been confirmed in wild boars in Zakarpattia, and data from the European Food Safety Authority (EFSA) suggests the infection is spreading slowly (about 1-2 km per month) but steadily in the wild boar population without human intervention. After the first ASF detection, hunting of wild boars, both group and individual, must be prohibited in strictly restricted areas (SRA). Additionally, all forms of hunting, both group and individual, for other game species should be suspended. Those with hunting rights are obligated to report any dead wild boars they come across to the local epidemiological centre. This report







should be made as soon as possible after the carcass is found, detailing its geographical coordinates or a comprehensive description of the location.

When the investigation confirms that the flock is infected with avian influenza, all poultry and other captive birds at the affected farm must be culled promptly under official supervision. Dead animals and eggs must also be disposed of under the oversight of the authorities. All equipment, materials, areas, and buildings that could be contaminated by the virus must undergo strict disinfection and decontamination. Since the disease can remain dormant in animals for 1-2 weeks without visible symptoms and there is a high risk that other animals would eventually succumb to the disease, all birds must be culled without any delay. The authorities designate a 3 km radius around the infected location as a protection zone and a minimum 10 km radius as a surveillance zone. Within these zones, transportation of birds and eggs, both incoming and outgoing, is prohibited. The movement restrictions on poultry and their products within the 3 km protection zone are stricter than in the surveillance zone. Farms and poultry holdings within the protection zone are subject to clinical inspections, and samples are taken based on suspicion. Additionally, holding bird fairs, competitions, or similar events is forbidden within the protection zone. The restrictions apply to all domestic and captive birds, including closed pheasant, partridge, and wild quail farms.

The ongoing African swine fever epidemic has affected the quantity and selling prices of processed wild boar meat. There has been a significant market reduction, with approximately a 30-40% decrease in hunted wild boar meat. This type of game meat, particularly popular among consumers in our country because of its easy cooking, has reduced in commerce. This is primarily because of the total hunting prohibition on wild boars and only culling for diagnostic purposes is permitted in ASF-affected areas.

The African swine fever epidemic affected the entire north-eastern region of Hungary but impacted farmers differently at various times. In selecting the three case studies, we took into consideration the date of outbreak, ensuring inclusion of a state company, a hunting association, and a renowned (world-famous) game farm.





