Artykuł przeglądowy *Review*

National and international trade in poultry and poultry products in light of the valid legal regulations

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Summary

Freedom of international flow of goods, services, people and animals, including poultry and poultry products, poses a threat of spreading infectious diseases to people and animals. This requires public administration bodies to take certain measures to minimise the spread of animal infectious diseases, including zoonotic diseases, which pose a threat to public health. The World Trade Organization (WTO) regulates global trade in poultry and poultry products, working in cooperation with the World Organization for Animal Health (WOAH). In order to ensure the safety of food of animal origin, WOAH works together with the Codex Alimentarius Commission (CAC). Animal health and international trade in poultry and poultry products in the European Union countries have been regulated since 21 May 2021 by the Regulation of the European Parliament and of the Council (EU) 2016/429 of 9 March 2016, the so-called "Animal Health Law" (AHL), and the delegated and implementing acts that accompany it. The provisions of the regulation are applied directly in all the EU member states, which arises from Article 288 of the Treaty on the Functioning of the European Union (TFEU). According to the Commission Implementing Regulation (EU) 2020/2002, there is the Animal Disease Information System (ADIS) in the EU, which imposes an obligation to inform the European Commission and other EU Member States within 24 hours of confirming the existence of the primary outbreak of a category A disease (controlled *ex officio*). With respect to poultry diseases, following the Commission Implementing Regulation (EU) 2018/1882 of 3 December 2018, AHL regulations apply to the following: Newcastle Disease (ND) and Highly Pathogenic Avian Influenza (HPAI) as well as mycoplasmosis in chickens and turkeys, caused by *Mycoplasma* (*M.*) *gallisepticum*, and in turkeys, caused by *M. meleagridis*, infections in chickens, turkeys, guinea fowls, quails, pheasants, partridges and ducks, caused by *Salmonella* (*S.*) Pullorum and *S.* Gallinarum and in turkeys, caused by *S.* Arizonae, as well as bird viral infections of low pathogenic avian influenza (LPAI), avian chlamydiosis in parrots, and West Nile Fever. The AHL did not repeal the Regulation of the European Parliament and of the Council 2160/2003 of 17 November 2023, which obligates the EU Member States to implement programmes of *Salmonella* control as part of the national programmes. Moreover, the European Food Safety Authority (EFSA) was appointed, and the Rapid Alert System of Food and Feed (RASF) was established to inform about the threats found in food, feed and materials intended for contact with food. Observing these regulations on the national, community and international levels is of key importance in controlling each infectious animal disease and preventing threats to public health.

Keywords: acts of law, infectious diseases, national and international trade, poultry, public health

The poultry industry has a global reach as poultry and poultry products are the object of international trade on a continuous basis. This poses a huge risk of animal infectious disease spread, including zoonoses, which are a threat to public health, regardless of administrative and state borders. The World Trade Organization (WTO) regulates global trade in poultry and poultry products in cooperation with the World Organization for Animal Health (WOAH). In order to improve the safety of food of animal origin, WOAH works together with the Codex Alimentarius Commission (CAC). Poultry is produced in EU countries under conditions regulated by law to make poultry and poultry products production and trade meet the specific criteria of quality and health biosafety. Animal health and international trade in poultry and poultry products in the European Union countries have been regulated since 21 May 2021 by the Regulation of the European Parliament and of the Council (EU) 2016/429, the so-called "Animal Health Law" (AHL) (13) and the delegated and implementing acts to it. Based on the adopted criteria, the diseases were given various categories (A, B, C, D, E)

together with a list of species assigned to specific categories of risk of their occurrence. Depending on the disease categorisation, member states are obliged to take actions specified in delegated and implementing acts for AHL. The provisions of AHL, like those of every EU regulation, are applied directly in all the EU member states, which arises from Article 288 of the Treaty on the Functioning of the European Union (TFEU) (21). Regulation 2016/429 (13) establishes the general rules and the implemented measures when a category A disease is suspected and officially confirmed. The list of category A diseases, of which an obligation to control and prevent the occurrence and spread on the EU territory is imposed by Regulation 2018/1882 (16), includes Newcastle disease (ND) and highly pathogenic avian influenza (HPAI). The definitions of these diseases can be found in Appendix I to Regulation 2020/689 (7), and the measures to be taken when the disease is suspected and when it occurs are laid down in Regulation 2020/687 (5). Pursuant to the Commission Implementing Regulation (UE) 2020/2002 (17), the Animal Disease Information System (ADIS) is in place at the EU level. This system imposes an obligation to inform the European Commission and other EU Member States within 24 hours of confirming the existence of each primary outbreak of such diseases on their territory (13).

Specific regulations concerning the procedures to be followed in order to control category A diseases, including the collecting of samples and laboratory analyses, cleaning, disinfection and, when necessary, insect and rodent control, are laid down in the European Commission Delegated Regulation 2020/687 (15). If an outbreak of a disease controlled *ex officio* (ND, HPAI) occurs, a competent body (a country veterinary surgeon, voivodeship governor or the minister of agriculture and rural development) immediately sets up areas covered by restrictions, including a protection area and a surveillance area, and specifies administrative measures in the form of bans and orders aimed at preventing further disease spread in these areas and beyond them. The existing national regulations state that if the protection area and the surveillance area are situated within one county, it is defined by regulation (a by-law act) by the county veterinary surgeon, and if they reach beyond the borders of a county – by the voivodeship governor, and if the areas lie in more than one voivodeship – by the minister of agriculture and rural development. According to Article 64 of AHL (13), when determining restricted areas, their geographic location, ecological and hydrological factors, weather conditions, the occurrence, distribution and types of vectors, the results of epidemiological investigations, laboratory analyses, disease control measures, and other epidemiological factors are taken into consideration.

When Newcastle disease is diagnosed, administrative disease control measures must be implemented without delay under Article 61 on animal health protection and animal infectious disease control of 11 March 2004 (22). Newcastle disease control is based on three main rules: preventing contact between poultry and the AAvV-1 virus (biosecurity), taking action to prevent infection transmission between birds, and performing preventive vaccination. This strategy involves eradicating disease in the shortest time possible by: 1) quickly killing off the whole flock of poultry within the disease outbreak area, destroying it together with eggs and other products and materials potentially contaminated with the virus, 2) cleaning and disinfecting effectively in order to eliminate the virus, 3) strict quarantine and controlling the poultry movements in order to prevent the virus spread, 4) performing epizootic investigations and reviews in order to locate the infection source and to determine its range, 5) establishing protective zones (protection area with at least 3 km radius and surveillance area with at least 10 km radius with a protection area) in order to separate infected areas from disease-free ones, and 6) performing preventive vaccinations. The measures taken to protect an area are enforced for a minimum of 21 days. According to Article 39 (3) of Regulation 2020/687 (5), the extra supervision time can be extended by nine days. Additionally, the protection measures must be enforced for at least 30 days after the official completion of cleaning and disinfection in the disease outbreak area. The disease outbreak is regarded as having died out if at least 30 days have passed since the death of all birds, and their carcasses and eggs have been removed from the disease outbreak area in a manner that prevents infection from spreading, and cleaning and disinfection were performed. New poultry can be added to the farm 21 days after the disease outbreak if it is regarded as having died out. Vaccination can be performed for intervention purposes in Poland as an important supplement to the methods restricting the disease spread and preventive measures. Vaccinations are performed with live vaccines based on lentogenic and asymptomatic strains with the intracerebral pathogenicity index (ICPI) for one-day specific pathogen-free (SPF) chicks of 0.4 at most and inactivated. It should be stressed that introducing common prophylactic vaccinations in the 1960s and implementing effective immunoprophylactic programmes in the dynamically growing industry of gallinaceous poultry production resulted in Newcastle disease not having been noted for nearly 50 years (20). Cases of this dangerous avian disease were detected in Poland in July 2023, whereby Poland lost its status as an ND virus-free country (1, 18).

Regarding HPAI, according to the Council Directive 2005/94/EC (3) and the legal regulations valid in Poland (12, 13, 22) and other EU countries (13), an

obligation to report and control applies to poultry infections with highly pathogenic avian influenza virus that meet the criteria contained in the valid definition, and all the viral infections of subtypes H5 and H7 regardless of their pathogenicity, including those causing low pathogenic avian influenza (LPAI) (7, 13). The avian influenza control strategy is based on the plan for readiness to control the disease, which provides resources, equipment and personnel, as well as other necessary materials for its effective eradication (11). Detailed obligations for poultry producers in this regard are laid down in the Regulation of the Minister of Agriculture and Rural Development in connection with the occurrence of cases of highly pathogenic avian influenza (12). After highly pathogenic avian influenza is diagnosed on a farm, the county veterinary surgeon must declare it to be a disease outbreak area and order that the whole poultry flock on the farm be killed and that the dead and killed birds be destroyed, together with all eggs, by-products of animal origin, feed, bedding, droppings and other items which may have been contaminated and conducts an epizootic investigation in order to establish the source of infection and the manner of its spread. Protective zones are established around the HPAI outbreak area, as in the case of Newcastle disease control (5). Regarding LPAI, the county veterinary surgeon sets up an enclosed area with at least a one-kilometre radius around the disease outbreak site. Vaccinations against avian influenza are forbidden in Poland and in other EU countries, except for intervention vaccination, which can be applied upon the consent from the European Commission as a supplement to the sanitary disease control methods (killing off infected birds, quarantine, biosecurity), and they have to be consistent with the DIVA strategy, which enables differentiating infected birds from vaccinated ones, e.g. with special serological tests (20). The possibility of vaccinating in the EU has been very restricted until now, and 31 animal infectious diseases, including avian influenza, for which vaccinations are banned, were listed in Appendix 4 to the Act of 11 March 2004 (22). However, given recurring epidemics of highly pathogenic avian influenza (24) and the experience of this disease control in Poland and in other EU countries in the 2021/2022 season, the application of intervention vaccinations in poultry as an additional element of HPAI control in specified and supervised areas seems to be worth considering (19).

According to Regulation 2018/1882 (16), the "Animal Health Law" applies to category D poultry diseases: 1) mycoplasmosis of poultry caused by chicken and turkey infection with *M. gallisepticum* and turkey infections with *M. meleagridis*, 2) infections caused by *Salmonella* Pullorum and *S*. Gallinarum of chickens, turkeys, pheasants, guinea fowls, partridges, quails and ducks, as well as *S*. Arizonae of turkeys, 3) infections of birds with low pathogenic avian influenza virus, and 4) avian chlamydiosis in parrots. This means that if any of these diseases occur, measures are needed to contain them, and veterinary supervision must be conducted. For mycoplasmosis of poultry and infections caused by *S*. Pullorum, *S*. Gallinarum and *S*. Arizonae, it is obligatory to implement microbiological control programmes in hatcheries and supervision programmes in poultry farms and in hatcheries because this is one of the requirements in poultry trade. However, for chlamydiosis of birds, the requirements concerning the movement of birds kept in captivity are laid down in Article 59 of Regulation 2020/688 (6), including the requirements concerning supervision in cases of this disease. Category E diseases include bird infections with West Nile fever virus, which means that this disease has to be supervised in EU countries.

For zoonoses, including pathogens transmitted with food, the existing EU regulations remain valid. For poultry diseases, there is a valid Directive of the European Parliament and of the Council 2003/99/WE (2) concerning the monitoring of zoonoses and animal pathogens, and the Regulation of the European Parliament and of the Council (EC) No 2160/2003 of 17 November 2003 on the control of salmonella and other specified food-borne zoonotic agents (4). This regulation was implemented in the EU countries by Commission Regulation No 1177/2006 of 1 August 2006 (9). The main aim of these laws is to protect people against infection with *Salmonella* bacilli at every stage of the food chain and to implement national programmes of infection control. With respect to the community goal of limiting the incidence of certain *Salmonella* serotypes in breeding flocks of *Gallus gallus domesticus*, Regulation No 1168/2006 of 31 July 2006 was issued (8), which was the basis for implementation on 1 January 2007 of the national programme for control of infections with *Salmonella* bacilli in breeding flocks of chickens, which includes the following serovars: *S*. Enteritidis, *S*. Typhimurium, *S*. Hadar, *S*. Virchow and *S*. Infantis. This regulation imposes a limit on the incidence of these serovars of *Salmonella* in flocks of adult chickens to 1% or less.

The programme for controlling infections with *S*. Enteritidis and *S*. Typhimurium in flocks of laying hens (*Gallus gallus domesticus*) was implemented in Poland on 1 February 2008 and on 7 June 2009 in broiler chicken flocks. The programme for controlling infections with these *Salmonella* serovars in flocks of breeding turkeys and those kept for meat has been in place since April 2010. These programmes are being executed continuously, and according to EU guidelines, they involve analysis of samples provided by flock owners in accredited microbiological laboratories. The results of such analyses can be verified by analyses of official samples. A diagnosis of infections caused by these *Salmonella* serovars requires bacteriological and biochemical tests and serotyping in accordance

with the EU directive guidelines (8). Specific rules of bird monitoring in every production line (breeding and commercial flocks, broiler chickens, turkeys in breeding flocks and those kept for meat) and the procedures followed if *Salmonella* bacilli are isolated are laid down in the national programme for controlling infections with these bacteria in poultry.

Official inspections referred to in Regulation 2017/625 (14) are carried out to ensure that the regulations related to food and feed, including the rules pertaining to animal health and welfare, particularly with regard to *Salmonella*, are being followed and to this end tissues from deceased animals are collected. Swabs from the walls, bedding and floor in the henhouse, drinking bowls, handling equipment, means of transport, eggshells, egg contents, dead embryos, the hatchery, feed and water samples are collected to detect symptom-free infections (being a carrier of *Salmonella*).

The production and trade in poultry products are subject to Regulation (EC) No 853/2004 of the European Parliament and of the Council of 29 April 2004 (15). This regulation lays down detailed rules concerning the hygiene of food of animal origin. Moreover, Regulation (EC) No 178/2002 of 28 January 2002 (10) sets out general rules and requirements of the food law and establishes the European Food Safety Authority (EFSA). These laws set out the requirement for implementing a fast procedure of identification and preventing the introduction of products contaminated with *Salmonella* to the EU market. To this end, the Rapid Alert System of Food and Feed (RASFF) was established, which is used for quick exchange of information on threats detected in food, feed and materials intended for contact with food. National trade is supervised by the State Veterinary Inspection, and it must be consistent with veterinary requirements for products of animal origin (23), as well as with the Act on animal protection and on controlling infectious diseases in animals of 11 March 2004 (22).

An official health certificate, valid for five days from being issued by a veterinary surgeon, is required when hatching eggs, one-day chicks, and breeding and commercial poultry are imported to Poland. The basic information contained in the certificate includes the name of the exporting country and of the country of destination (with the exact site specified each time) and animal identification data (bird number and species, purpose of breeding). The means of transport must meet the conditions and requirements laid down for the exporting country and the country of destination. The official health certificate is a guarantee that the imported poultry comes from a plant with a licence and a number given by the competent authorities, it cannot be an object of any health restrictions, and it must come from a country (area) with no restrictions with respect to animal health. Moreover, imported birds must come from a country in which influenza and Newcastle disease are controlled *ex officio* and vaccinations against avian influenza are prohibited. It is also important that birds remain in the territory of the exporting country for at least the three previous months or since hatching when they are not yet three months old. An official health certificate guarantees that poultry and poultry products come from flocks free of diseases controlled *ex officio* (ND and HPAI) and from flocks supervised and monitored by veterinary services, based on which they are claimed to be non-infected with *Salmonella* (*S*. Pullorum and *S*. Gallinarum) and *Mycoplasma gallisepticum* (chickens) and *S*. Arizonae, *S*. Pullorum and *S*. Gallinarum, *M. gallisepticum* and *M. meleagridis* (turkeys), as well as *S*. Pullorum and *S*. Gallinarum for guinea fowls, quails, pheasants and partridges, and that the birds were quarantined immediately before being imported (2 weeks) in full isolation, under official veterinary supervision, and they were examined on the day of dispatch and no clinical symptoms were found in them. The valid documents must be consistent with the relevant templates.

Considering biosafety, poultry and hatching eggs imported from outside the EU should come from countries mentioned in the list prepared by the Commission and meet the conditions set out in Regulation 2018/1882 (16).

Trade in poultry and poultry products, both national and between EU member states, and especially with countries from outside the EU, requires great responsibility on the part of the Veterinary Inspection to observe the valid regulations. Proper performance of tasks concerning supervision and certification of animals and products of animal origin intended for trade will affect the reliability of the responsible bodies, containment of infectious diseases spread and consumer safety.

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