**Analysis of costs caused by an avian influenza outbreak in Denmark**

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Avian influenza virus will continue to threaten poultry production everywhere because of the global spread of the virus in wild birds. Due to the zoonotic potential of some strains, avian influenza is not tolerated in the food production chain and therefore outbreaks affect market access. Outbreaks of the HPAI H5N8 strain in poultry, captive birds and wild birds all over Europe from December 2016 to January 2018 provided an opportunity to evaluate the direct and indirect cost to the food production value chain in Denmark.

In peacetime, i.e. a time where no outbreaks are detected, the costs of avian influenza are related to the biosecurity standards in the poultry sector, the surveillance system and the traceability system for birds and bird products. It also includes the cost of preparing for the next outbreak and the contingency plan. These costs of the preventive activities burden the poultry and the public budgets recurrently.

If an outbreak takes place, there are direct control costs and indirect costs. The direct costs are related to the culling of the animals, cleaning and disinfection, compensation for the value of the animals killed and the cost related to control activities such as compulsory housing of outdoor poultry.

The indirect costs relate to downgrading of products from free-ranging farms and the decrease in the value of products due to export losses. The indirect costs often outweigh the direct costs of outbreaks.