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033 – Avian influenza - I

Introduction

Influenza used to be defined as an acute disease caused by an orthomyxovirus. Nowadays orthomyxoviruses are the cause of a number of diseases which are usually centred on the upper respiratory tract and which range in severity. Many animal species can be infected by orthomyxoviruses.

In 2003 a particularly virulent form of avian influenza, known as H5N1, infected birds in south-east Asia and then spread around the world. Prior to this, acute outbreaks of avian influenza tended to be localised. The advent of H5N1 revolutionised our thinking on avian influenza because of its severity, its ease of spread, its zoonotic implications and the impact it had on the global trade in live poultry and poultry products.

Nowadays a variety of strains of influenza can infect poultry and their impact ranges from virtually inapparent disease to almost 100% mortality.

Historically, avian influenza was known by a number of names, including fowl plague, but in 1981 the name 'highly pathogenic avian influenza' was adopted as the official international name for the highly virulent or pathogenic form of avian influenza. This is often shortened to HPAI and contrasts to milder forms of the disease which are now often referred to as LPAI. LPAI can be defined as any avian influenza which can not be classified as HPAI.

Most outbreaks of HPAI or LPAI are epidemics, although in recent years certain strains, such as LPAI H9N2, have become epidemic in some countries. Since 2003 H5N1 HPAI has also become endemic in backyard poultry, especially in domestic ducks in some countries.

Examples of some recent outbreaks of HPAI are summarised below.

Year	Country	AI strain	Birds lost/culled	Cost ($US)
1983-4	USA	H5N2	17 million	>850
1985	Australia	H7N7	240,000	3
1997	Hong Kong	H5N1	1.5 million	20
1999-2000	Italy	H7N1	13 million	>750
2003-2005	Asia	H5N1	220 million	>20 billion
2005-	Asia, Africa, Europe	H5N1	???	???

(Abridged from 12th Edition of Diseases of Poultry)