International
Poultry Production's
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114 – Pox I

Introduction

Pox is found quite frequently in commercial poultry and other birds. Pox can depress egg production as well as depress growth and kill birds and is therefore commercially significant. Pox is slow spreading and often found in association with other diseases.

Avian pox is also known as contagious epithelioma, avian diphtheria, variole aviare or variola gallinarum.

The cause

Pox is caused by the avian pox virus and there are strains of the virus that can be distinguished from each other.

Epidemiology

To date, fowl pox has been reported in over 200 avian species and occurs globally in chickens. In high density poultry areas, and especially with table egg layers, the disease often persists for a long time even in the face of vaccination programmes. Sometimes fowl pox viruses from vaccinated flocks with high mortality show in the diphtheritic or skin form of the disease. Often the pox viruses causing these outbreaks are not closely related to the vaccine strain used on the farm.

This infection is transmitted mechanically and infects the recipient bird through damaged skin. Infection via the eye is possible, sometimes via insects. In breeding turkeys the virus has been spread by AI. Bird to bird spread can be via dust aerosols in a contaminated house.

Clinical signs

The incubation period is 4-10 days and this disease occurs in one of two forms – cutaneous or diphtheritic. Birds afflicted by the former have a better chance of recovery.

The cutaneous form is characterised by lesions on the comb, wattles, eyelids and other unfeathered parts of the body that are of a nodular nature. Lesions on the eyelid can interfere when a bird is seeking food and water.

The diphtheritic or wet form of pox is characterised by yellowish lesions on the oral, oesophageal and tracheal mucous membranes – which sometimes interfere with eating and/or breathing. In pullets this disease can be associated with depressed production.

Morbidity ranges from a few birds to the whole flock. Duration of the disease is 2-4 weeks, although severe outbreaks can last up to eight weeks. Flock mortality is usually low but can be high in severe outbreaks.