International
Poultry Production's
Poultryhealth
BYTES
YOUR OWN REFERENCE SOURCE ON POULTRY HEALTH

103 – Intestinal spirochaetosis I

Introduction

Avian intestinal spirochaetosis involves colonisation of the caecum/rectum with the spirochaete Brachyspira and is seen in table egg layers, broiler breeders, turkeys and game birds, especially when they are in free range flocks. It has also been seen in some wild bird species. Subclinical colonisation with apathogenic or pathogenic species of Brachyspira is common in wild waterfowl.

The clinical picture encountered depends on the species of bird involved, the pathogenicity of the Brachyspira, the extent of colonisation and a variety of predisposing factors. In table egg layers delays or reductions in egg production are seen, as well as diarrhoea/scour.

The clinical signs of avian intestinal spirochaetosis are not specific and accurate diagnosis depends on the identification of Brachyspira Spp. in the caecum/rectum.

History

Spirochaetes were described in grouse in 1910 and in clinically normal and sick chickens in the USA in 1930. In the mid-1950s large caseous nodules were seen in the caecal walls of turkeys, chickens and pheasants in the USA. Interest was renewed in the 1970s when it was found that a specific spirochaete (Treponema hyodysenteriae) caused swine dysentery. By the mid-1980s intestinal spirochaetal infections were found quite regularly in flocks of laying hens.

The disease

Avian intestinal spirochaetosis is a general term relating to colonisation of the caeca and/or rectum with Brachyspira Spp. (B. intermedia, B. pilosicoli and/or B. alvinipulli) in birds that have experienced diarrhoea and/or egg production problems.

Aetiology

Brachyspira are Gram negative, helically shaped bacteria. These organisms are anaerobic and can be isolated on selective media.

B. pilosicoli and B. intermedia are often short lived in chicken faeces and do not appear to persist in the chicken house environment. Thus, cleaning, disinfection and resting poultry houses can break the cycle of infection.