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SALMONELLA AND E. COLI CONTROL

Thomas E. Lucas, D.V.M.¹

Salmonella and E. coli infections in chickens and turkeys are matters of increasing concern to the poultry industry.

E. coli are a large group of enteric bacteria which are part of the normal flora of all species of animals, man and their environment. A few of these organisms can be primary pathogens in poultry but usually are considered to be opportunists and cause infection when stresses of many types cause a lower resistance in the birds.

E. coli has been implicated as either the primary or secondary cause of the following diseases of poultry:

1. Colisepticemia (generalized infection of chickens and turkeys)
2. Omphalitis (naval infections)
3. Arthritis and synovitis (joint infections)
4. Panophthalmitis (eye infections)
5. Peritonitis (infections in the body cavity)
6. Salpingitis (infection of the oviduct)
7. Coligranuloma (tumor-like infections)
8. Airsacculitis (infection of the air sacs)

Salmonella are also enteric organisms but not part of the normal flora. The organisms do not always cause clinical disease when present especially in adult birds, but are potentially dangerous to young birds through infected eggs and contamination of the environment. Salmonella causes an enteritis and a fatal septicemia in young chickens, poults, and goslings. These organisms also cause infection in man. Poultry is the largest single reservoir of Salmonella infections in humans.

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TRANSMISSION AND CONTROL

Control measures for both Salmonella and E. coli are similar because the transmission of the agent is similar.

Some common means of transmission are:

1. Egg transmission.
2. Ingestion of contaminated feed, water, litter, etc.
3. Inhalation of dust particles contaminated with these agents.

Control is arrived at by breaking these transmission cycles.