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Poultry Production's
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YOUR OWN REFERENCE SOURCE ON POULTRY HEALTH

165 – Parasites

Introduction

A parasite is an organism that lives off or in another organism, obtaining nourishment and protection, while offering any benefit(s) in return. It is obviously in the parasite's best interest to noy be too demanding on the animal it is infesting (the host) otherwise it loses its home and food source or, as the lifecycle of the parasite is usually much shorter than that of the host, it sacrifices itself for the benefits that previous generations of the parasite received.

Some parasites are truly external, such as ticks, lice and mites; others are truly internal such as liver flukes and kidney worms; whereas others are apparently internal but are external to the host's body, such as worms and tapeworms that live in the lumen of the gut of the host.

Parasite lifecycles

Lifecycles can be relatively simple, such as that of some worms in which the adult lays eggs which are shed in the faeces on to the ground where another animal then picks the egg up. The egg matures and a larva hatches and then matures into an adult worm. Then the cycle repeats itself. Alternatively, the parasite's life cycle is more complicated involving one or more intermediate hosts. For example, species of human tapeworm have pigs or cattle as intermediate hosts, the liver fluke has a pasture snail as an intermediate host. Other intermediate hosts include earthworms, insects and fishes.

Obviously a very effective way of removing the parasite is to remove its intermediate host. This has occurred to varying degrees with the intensive housing of pigs and poultry and even more so with cages in which the chicken is immediately separated from its faeces and, even if all the faeces do not fall on to the belt, only a handful of birds have access to them out of the 50,000 or more birds in the house.

Parasite types

Parasites range from single celled ones such as coccidia and hexamita through to complex animals such as worms or lice.

Control by chemical means

Various drugs are available for parasites and by their very nature these are poisons. They are what we call selective poisons in that the dosage that kills the parasite is not high enough to kill the host animal. Obviously if this difference is small there are dangers associated with possible overdosing, so when developing a parasiticide one wants to maximise this difference. An example in which this is not the case is that of the monovalent ionophores such as salinomycin, narasin and monensin.