Breeding ducks — the importance of good health

The cornerstone to modern duck production is to maximise the number of fit, viable ducklings produced per breeder female duck housed at point of lay that are able to go through to processing. That is, the breeder female's contribution to an integrated duck operation will ultimately be defined in terms of kilograms of duck meat produced per breeder female housed at point of lay.

If we consider this, the success in achieving this target will be dependent on several things.

These include keeping the breeder ducks alive through lay, maximising their egg production, maximising the hatchability of the eggs produced and producing strong, viable, healthy ducklings.

Importance of health

One of the key factors that will influence our ability to achieve this will be the health status of the breeder flock and this article will focus on the health management of breeder ducks.

If we are to be successful, we must start off with healthy day old breeder ducklings.

In defining healthy day olds we need to define diseases that are absent in the flock of origin and also infections that the day old could have contracted in the egg or the hatchery environment such as yolk sac infection, salmonellosis and aspergillosis. If we have healthy day olds a first week mortality of less than 0.5% should be achievable.

Our next goal is to get our flock to point of lay and this involves keeping our ducks healthy.

If we are to achieve this we must keep diseases out of the breeder farm and this necessitates good biosecurity. We must also protect our ducks by vaccination for those diseases which we know to be present in our area and for which vaccines are available.

Such diseases will include pasteurellosis, Riemerella anatipestifer infection and duck virus hepatitis. In addition, vaccination against Salmonella enteritidis and S. typhimurium infections may be undertaken as part of a salmonella control strategy, although S. typhimurium is also a duck pathogen in its own right.

The quality of the immunity produced will be dependent on the type, timing and dose of vaccines used. The best person to advise on this is the flock's poultry veterinarian.

The quality of the immunity produced will also be influenced by the administration of the vaccines and, as most of the vaccines used in ducks are given by injection, this means the accuracy of the injections.

It is important that the vaccination team appreciates that they will be judged not on the number of birds they can handle per hour but on the accuracy of their injecting!

The needle that goes through the skin twice and shoots a dose of vaccine into the litter is leaving us with an unprotected duck!

Problems in rear

Diseases can occur in the rearing period and it is important that these are promptly spotted and accurately diagnosed and, when needed, that treatment is immediately and correctly administered. By correctly administered we

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mean that the correct dosage is administered for the correct period of time to all the ducks in the group. Thus, water medication is to be preferred because it can be initiated more quickly and sick ducks are more likely to drink than eat.

Having addressed the issues involved in general terms let us now consider some of the specific diseases individually.

Aspergillosis

Aspergillosis is often seen in young ducklings as well as adult stock. Aspergillosis is caused by the fungus aspergillus and the commonest isolate is Aspergillus fumigatus.

Infection is by the inhalation of fungal spores and these commonly come from the bedding material.

Mortality occurs from the acute form of the disease, which accounts for most of the mortality, but deaths can occur for weeks after this from the chronic form.

Infected young ducklings typically show gasping and those that survive the acute stage of the infection show lethargy and stunting.

In addition, they may develop swollen eyelids, blindness and twisted necks. Others may develop a progressive respiratory embarrassment as increasing body weight places extra demands on their reduced lung/respiratory capacity.

There is no effective treatment for aspergillosis and control of this important disease of ducks centres on reducing exposure to the fungal spores and associated risk factors.

Duck viral enteritis

Duck viral enteritis is a viral disease of ducks that can have a mortality of 90% in adult birds. The condition is characterised by a serious drop in egg production and ataxia in which ducks use their wings to help them walk or swim is often seen. Other signs include photophobia, pasted eyelids, thirst, soiled vents and a watery diarrhoea. In young ducklings blood stained vents may be seen.

Control relies on good biosecurity and vaccines are available.

Duck viral hepatitis

Duck viral hepatitis is an acute, highly infectious disease of two to three week old ducklings. Adult ducks are resistant to this disease. Death usually occurs within a couple of hours of the onset of clinical signs.

These include falling on to the side, paddling, opisthotonus or stretching back of the head.

Post mortem findings tend to centre on the liver which will be enlarged and contain numerous haemorrhages. Fatty kidneys may also be seen. Vaccines are available.

Riemerella anatipestifer infection

This is an important respiratory disease of ducks that is typically seen between two weeks and two months of age and mortality can range from 1 to 75%.

Typically lesions in the acute form of this disease are lung congestion and enlarged livers and spleens. The vent is often stained green and the beak may be congested and birds are typically in good bodily condition.

In the less acute form of the disease pericarditis and perihepatitis occur and there can be caseous deposits in the posterior aspects of the abdominal air sacs.

Effective treatment of breeder ducks can be achieved with an injection of streptomycin and dihydrostreptomycin or amoxycillin.

Water medication with potentiated sulphonamides can be successful if it is started early enough.

Autogenous vaccines have been used with success in some parts of the world.

Pasteurella multocida infection

Breeding ducks are very susceptible to Pasteurella multocida infection (fowl cholera).

This disease comes from previously infected birds, but rats are also a reservoir of the causative organism. The disease can spread from pen to pen and for ducks water troughs are a common means by which this disease, and others, is easily spread.

Again, acute and chronic forms of this disease occur and the clinical signs and treatment are somewhat similar to those previously described for R. anatipestifer infection. Breeder ducks can be protected against this disease by the use of commercially available vaccines.

Colisepticaemia

As in other avian species colisepticaemia, which is caused by E. coli, is an important disease. In many ways colisepticaemia resembles R. anatipestifer septicaemia.

Treatment is by medication using an antibiotic for which the E. coli isolated from the outbreak is sensitive.

Salmonellosis

In countries where Salmonella pullorum or S. gallinarum are widespread the possibility of infection with these serotypes should always be considered as a possibility. In ducks the commonest salmonella serotype of concern is S. typhimurium. In ducklings typical signs include dejection, drooping wings, conjunctivitis and pasted vents.

Worms

In modern duck breeding, in which the ducks are housed, worms are not a major problem.

However, if breeding ducks are housed outside with access to swimming water then there is a whole host of round and tape worms that have an aquatic intermediate host. Access to swimming water also provides the likelihood of the ducks coming into contact with flukes and leeches.

Other conditions

Breeding ducks are sometimes afflicted by salpingitis, which is an infection of the oviduct. This tends to occur at the onset of lay and often has peritonitis and death as a sequel.

In sexually mature drakes prolapse of the phallus may be encountered. In this condition the drake is unable to retract his phallus into the cloaca.

This is often as a result of infection in the erectile tissue at the base of the phallus. Treatment is rarely successful.

Cloacitis or vent gleet occurs in breeding ducks and is usually associated with dirty conditions in the house.

The health of your breeding ducks centres around providing them with a clean, stress free environment, maintaining good biosecurity and vaccinating them against those diseases for which vaccines are available.

Finally, it is imperative to spot diseases early and get a competent diagnosis before promptly initiating any treatment that is required. ■