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...
mean that the correct dosage is adminis-
tered for the correct period of time to all
the ducks in the group. Thus, water med-
ication 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 individu-
ally.

- **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 respi-
atory 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 impor-
tant disease of ducks centres on reducing
exposure to the fungal spores and associ-
ated 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 charac-
terised by a serious drop in egg produc-
tion 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 pos-
terior aspects of the abdominal air sacs.
  Effective treatment of breeder ducks
can be achieved with an injection of
streptomycin and dihydrostreptomycin
or amoxycillin.

---

Continued from page 19
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.