

# What, the duck?

**Dr Mark Elliott BVSc VetMfHom MRCVS MLIHM PCH DSH RSHom**, says that the diseases threatening released mallard are little talked about, but deserve consideration.

Mallards reared for shooting are a rarely discussed topic – perhaps because there are not so many of them released in the UK as there are pheasants and partridges, but probably also because they rarely suffer from health problems. However, when they do, they can do disease pretty well, so it is important for those rearing them and the gamekeepers releasing them to know what to look out for.

Water issues feature in many of the problems that arise. Good clean water – and plenty of it – is needed at all life stages; simple to remember, but in practice often forgotten.

When ducklings arrive, fresh clean water should never be more than a short waddle away. Drinker design should be such that the water remains clean, or is replaced

frequently, and it helps to have trays of running water that can be paddled in from the start. A common mistake is to use the sprung bell drinkers commonly used for pheasants – ducklings will get into the drinkers and their combined weight will cut off the water supply quickly. Turf them out to refill and they just do it again. Once ducklings have been deprived of water they rarely recover and consequent mortalities can be high – water-deprived ducklings are easily identified because they run around making a lot of noise and don't settle, then refuse to eat or drink. After a certain point they seem never to be able to learn how to drink.

Aside from the usual starve-outs seen in all bird species, losses other than through water deprivation in the first week or so are

usually management or environment related, or less commonly yolk sac and other bacterial infections which can arise from problems with laying flock and hatchery management.

I have spent many hours with clients reviewing management at all these stages. When looking into hatchery management, I recall being told no-one gets better than a 65% hatch from mallard eggs set. That is not true! 80% is achievable and we do it (or very nearly) regularly. It comes down to attention to detail and hygiene. Ducks are messy, and floor-laid eggs can quickly become contaminated, bringing down the rest of the settings. More nest boxes, regular collection, different approaches to cleaning floor- and nest-laid eggs, even separate incubators and →

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Liver lesions are easily spotted, have a number of causes and – if seen – are a guide that things are serious and must be investigated/acted on quickly.

hatchers, and care and cleaning in storage all have their effect. The health of the laying flock is important too, so regular monitoring pays dividends. Good hatches rarely get sick later down the line.

Laying birds can suffer a number of conditions. *Mycoplasma* is reported occasionally and it is a different strain to those affecting pheasants and partridges – fortunately I have never seen it in any of my clients' birds.

Aspergillosis in adults is not an uncommon finding if the bedding has got old and contaminated, but the birds seem pretty resistant to it and I have never regarded it as more than an indication to freshen up the environment. If it spreads into floor-laid eggs from mouldy bedding then ducklings can become infected in the hatchers and that can be a problem. Young ducklings can be quite badly infected if exposed to mouldy food or poor bedding materials and if overcrowded in early life, and especially so if their immune system is impaired from other disease, when quite high mortalities can be seen. Again, it comes down to hygiene and attention to detail.

*Trichomonas* organisms are often found in the caeca of ducks on post mortem, but are of questionable significance. The only time I found it to be an issue was when the water supply was heavily contaminated, and fresh water resolved the issue without the need for antibiotics.

*Alcaligenes faecalis* is a bacterial problem that can be one of the infections behind “wet eyes” in mallard (and especially muscovys – don't keep these or any other ornamental duck on the same site). Treatable with antibiotics, it usually highlights an environmental problem that needs to be addressed otherwise recurrence is common.

Worms are an issue, especially gapeworms. In commercial laying flocks worming before onset of lay is routine with Flubendazole, which seems to solve most problems. Generally I would avoid worming in lay due to the temporary

suppression of egg production and possibly immunity as well.

Tapeworms are not treated by the common wormers used, but are rare and only occasionally considered an issue in released birds on open ponds, and then the birds are generally sick due to other reasons otherwise they would have thrown off the problem.

These are just a few examples of problems – there are plenty of other SRPs (strange, rare and peculiar) to test the Veterinary Surgeon as well.

Back to rearing – at weeks two to four of age (and occasionally either side) there are a number of common problems that arise. Typically these relate to overcrowding which leads to ducklings scrambling onto each other, and they have sharp claws on their toes that cause scratches which can introduce bacterial infections such as *Reimerella anatipestifer* and various *Streptococci*, especially *Strep bovis*. These will rapidly cause mortalities and antibiotics will be needed quickly. Farms tend to develop their own patterns of bacteria and it is important to establish which

antibiotics work quickly if subsequent batches are to be treated successfully. If there is no overcrowding yet there are recurring problems red mites may be a vector, carrying infections from batch to batch. These are reasonably easy to control with timed treatments.

Viral infections do occur in rearing as well. If the parent flock has not been vaccinated then Duck Viral Enteritis can occur with sudden high losses, often presenting with a classic fluorescent green and/or bloody diarrhoea. In younger ducks (2-7 weeks of age) the bloody diarrhoea is more commonly seen, as well as wet, runny, sore eyes, even bleeding in the nares and mouth preceding death. Despite vaccination and the strong maternal immunity passed on as a result, mild symptoms occur sometimes. It is spread mainly to farms from wild ducks. So it is important to prevent contact between wild ducks and your poults.

Occasionally Duck Viral Hepatitis is reported which goes through a similar cycle of rapid mortality fading out over five or so days, with 15-20% losses common (there are reports of some infections causing 80%+ mortality). Age of onset of symptoms is important in predicting mortality, and by five to six weeks of age this will be near zero. There is no vaccine for this virus and it is probably brought in by wild ducks visiting, so again these should be precluded from contact until your ducks are ready to release. It is rare, but in the last couple of seasons I have heard of mortality in ducks (not diagnosed) that sound very much like this – I would be interested to know if anyone has seen any cases in the last couple of years (a picture of the classic liver appearance is shown), especially as hot off the press is a case that has been confirmed in the UK in Government disease surveillance reports.

With all the above in younger ducks there seems to be a neurological component to symptoms so the usual first report to the vet is often ducklings having fits or spasms and dying in front of the stockman. This usually requires post-mortem examination to establish the cause, and swabs for cultures need to be obtained to avoid spread into subsequent batches on a farm.

Fortunately for the shoots, most of these diseases occur well before poults are delivered and keepers are surprised if their ducks become ill.

However, the recent hot summers have seen a significant rise in calls to flocks sick after release. The commonest problem

has been Botulism, which is a Clostridial disease. The causative bacteria *C.botulinum* is widespread in soil, and under certain conditions produces a lethal toxin. Warm temperatures (25-42°C), an absence of oxygen and a protein source are required. Shallow warm ponds devoid of oxygen with rotting vegetation (so don't cut this back just before the ducks arrive) or deceased fish, ducks, etc, and high insect levels in the water all lead to a build up, and the toxin then accumulates in the insect tissue. Last season we had a particular problem with a group of shallow stagnant ponds with large numbers of hoverfly larvae (known as "shitapillers" after causing mass hysteria in the ladies loos at Glastonbury – so I am told – as they grow well there!), which the ducks hoovered up before dying. It is worth noting that insects in particular act as efficient bio-accumulators of the toxin, so any dead ducks must be picked up immediately as maggots feeding on carcasses will prove lethal to other ducks. It is claimed just two infected maggots will kill an adult duck and from what I have observed that is probably so. Signs appear within hours of consumption, and often ducks will die on the water with floppy necks and co-ordination problems. The message here is to clean out and prepare your ponds in February/March rather than do it in the face of an outbreak, which disturbs sediment and makes things worse. A happy pond is a healthy pond.

The warm weather has also led to algal blooms on static ponds with little fresh water coming in. As springs dried up, this happened in some ponds not usually prone to such problems. Algal blooms do not seem to cause huge mortalities, but the ducks that survive can fail to thrive and quite a few will waste away as their organs fail. Affected birds never seem to fly well so the season can become a disappointment.

One solution when faced with stagnant ponds or ponds where the springs have dried up is to adapt some cut down IBCs with ball cocks (as pictured) so the ducks can clean up, drink and paddle in fresh water until their ponds are restored by rain and the weather cools.

Leeches have also been a problem in the recent warm summers, with some ponds becoming unusable for release as a result. There isn't an easy solution as such sites

**A cut down IBC with a ball cock can make a good temporary pond until the natural ones are restored by rain or cooler weather.**

have lots of fish and other life we don't want to destroy – any ideas gratefully received.

And of course ducks will eat almost anything that looks like food. On one occasion, there was a .410 charity clayshoot before the poult arrived whereupon they promptly ate all the wads and blocked their intestines. On another occasion, roofing nails got into gizzards from the spilt bucket not cleaned up from roofing the fishing lodge close by. All in a days work for a vet!

The message for duck release is that healthy ponds with freshwater and ideally flowing water – living ponds rather than muddy puddles – win every time and overstocking is to be avoided so that ponds do not silt up over time, and become shallow and warm. And as our climate warms it is increasingly important to pay attention to your release environment early in the calendar year. Ducks are not always as easy as they appear. ●



Mark Elliott is a specialist gamebird vet within the South Downs Veterinary Consultancy. In his spare time he runs a busy small animal practice treating a high proportion of working dogs. He is also secretary to the NGO Deer Branch committee.

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