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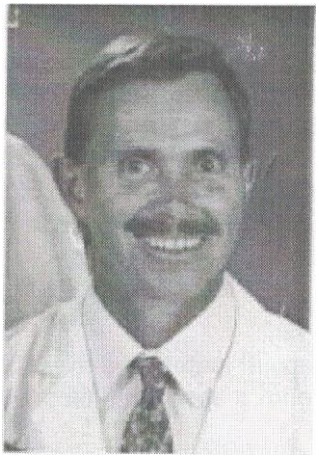

By Dr. David Marx, DVM

Winter Time

After seeing the sun for the first time in what has seemed like weeks of cold rainy weather, I finally got the motivation to vaccinate my birds. While catching them and performing this task, I thought of several things that we may all need to be reminded of.

The reason we vaccinate before pairing is so that the breeders will have the highest level of antibodies during their reproduction. This is important in producing quality offspring as these squabs receive some of their parents immune globulins via the egg yolk and crop milk. This passive (temporary) immunity helps keep the youngsters healthy until their immune systems can mature.

The birds, during the idle season, tend to become very fat. Until one catches a few one doesn't realize how fat these birds have gotten. Regular exercise during the off season is helpful in keeping the birds trim, but in areas where this is impractical or if loft setup doesn't allow it, we have to intervene with less feed to prevent the obesity from becoming a problem. Birds, during cold weather, tend to overeat as a survival instinct. They act starving to death sometimes just because their bodies are telling them to stock up for hard and/or lean times. Monitor the condition of the birds and feed less as indicated. Barley is advantageous here, after the moult, as it is less appetizing to the birds and is also less calorie-dense than some other grains. Why keep them from becoming too fat? When they are obese they have less desire to fly, have more difficulty flying, have more difficulty performing a good mating act (resulting in infertile eggs), and often an obese hen has trouble ovulating or laying.

It is easy to get complacent during the winter when it comes to giving the birds a bath. I was reminded of this when I saw how dirty the bands had become. lt is harder during cold weather go do this and we have less ambition to do things like this during the short days of winter. The birds

really love the bath, winter or summer, and while it is not a critical health matter is is an important hygiene measure and the birds surely do appreciate it.

It is a good idea, before mating, to treat the birds for the routine things such as trichomonas, coccidia and worms. Using broad spectrum antibiotics to clean out the birds is a counterproductive measure. The antibiotics have no preventive effect, only a therapeutic effect. They may also eliminate the friendly bacteria which have a blocking effect against the bad bacteria; therefore the birds may actually be more susceptible after antibiotic usage than before.

When vaccinating (I vaccinate for PMV and Paratyphoid) remember to increase safety, keep the vaccine just under the skin...don't go too deep into muscle or other vital structures, or too shallow and inject into the skin. If we go too deep we can cause serious muscle damage or worse, hit a vein. If the vaccine is injected into a vein, the bird will usually die within seconds to minutes. Feel the needle go through the skin and then go no deeper. Keep the bevel of the needle up to facilitate correct placement of the vaccine. Vaccinate, midline, on the back, near where the neck hits the back, or in the groin. The groin site is safer but more trouble. Further up the neck increases the risk of hitting a blood vessel.

Getting Ready to Pair Up

In preparation of the breeding season there are several things we should consider every year. The birds should be good and rested and should have gone through a good moult.

A few weeks before pairing, I suggest vaccinating for PMV and paratyphoid. Also treat for worms, coccidia, and trichomonas. Preventive antibiotics is counterproductive and not recommended. Antibiotics have no preventive properties, only therapeutic, so if theres nothing to treat, dont treat it. Indiscriminate use of antibiotics encourages resistant strains and may, indeed, make the birds more susceptible to infection by disturbing the normal flora of the gut.

Give the birds time to recover from the treatments and vaccinations we put them through, and you will notice a rebound effect, where they ascend to a higher level of health than before the intervention. The vaccinations peak their immunity; and these higher levels of immune globulins are then passed to the offspring via the yolk and crop milk, resulting in more vigorous offspring.

The treatments we give for trichomonas, cocci, and worms may not all be necessary. Usually the trichomonas treatment is needed, but if a fecal examination shows no worms or just a low lever of coccidia, then these treatments can be omitted. If no fecal examination is done, then treat to be safe.

Difficulties with Eggs and Babies

This time of the year when many of us are expecting our first round of youngsters to hatch, we are disappointed with some aspect of our breeding success. The most common problems being clear eggs; eggs which die before hatching; and babies which perish in the first few days of life.

Clear eggs tend to be the most prevalent in the first round or two. These are the eggs which never begin development because of being infertile. The testicle in the cocks get quiescent during the shorter daylight periods. Breeding activity reawakens them and they begin producing sperm and testosterone at a higher level. While this process is under way, there is often a low sperm count and a lower sex drive in cocks. Frequently the breeding vigor and frequency is decreased as well a there being diminished sperm in the ejaculate. All these can produce infertile eggs. One or both eggs being infertile in the first round is a frequent finding sometimes running as high as 50% or more of the eggs. The weather plays some role in this. Colder, darker periods accentuate the problem.

Eggs which begin developing but fail to fully develop and die in the shell can be the result of several things. Poor incubation can cause embryo death. Here the parent(s) may fail to keep the eggs warm for even a short period during very' cold weather. Eggs getting jarred excessively at critical points of development may also perish. Infection in the egg is probably the most common cause. The infection may be incorporated in the egg by hens having an oviduct infection. Infection more frequently occurs through the shell. This can happen during laying as they often become contaminated with feces during this process. It can also happen by fecal contamination after laying, frequently from parents defecating in the nest or tracking feces in the nest on their feet. During damp periods, nesting material often gets high numbers of bacteria in it from parents tracking feces and the dampness and warmth of the sitting parents encourage bacterial growth. The higher the numbers of bacteria around the eggs the easier it is to have penetration of the shell and subsequent infection of the embryo.

Babies dying in the first few days of life occurs when they are infected either in the egg, resulting in weak hatchlings, or they become infected after hatching. After hatching they can become infected from the crop milk from either parent or from the nesting material. During damp periods it is often helpful to change the nesting material just prior to the eggs hatching as infection enters the squabs easiest just after hatching through the umbilical area which is yet unsealed.

When certain parents experience repeated deaths in newly hatched babies, they should be separated and treated with a broad-spectrum antibiotic for about 10 days, and for trichomonas, then remated. Pay attention to the condition of the nesting material during the times mentioned above and provide clean dry nesting material as indicated.

There are other factors which may cause the problems discussed here. Only the most frequent caused were discussed here.

Babies which die in the egg (as long as the shell remains intact) and babies which die soon after hatching are often valuable specimens for culture. A culture can be very revealing as to cause of death and possible course of action to prevent future deaths.

Holding And Switching Eggs

There are often times, at least for some breeders to switch eggs under foster parents for one reason or another. This is easily done, but the timing of incubation with both pairs needs to be similar. Usually, if the sets of eggs are laid within 3 days of each other, the switch goes uneventfully. If the babies hatch too early, the foster parents will not have sufficient crop milk, and the babies will perish or develop poorly. If they hatch too late, the foster parents may desert the eggs or already be on the downside of crop milk production.

To achieve the proper timing, eggs frequently need to be "held" before the foster parents have eggs of their own. I have heard many ways of successfully doing this, but what I am going to relate here is what I have experienced personally. A few years ago I did a lot of egg switching as I rotated hens on the breeding cocks. A cadre of "pumpers" was kept. I always attempted to get the eggs to time out correctly, but often they did not. This results, usually, in holding eggs until a pumper pair lays.

Eggs can be easily held for 3 to 5 days at room temperature, before incubation has started, and placed under foster parents when the timing is right. When held, the eggs should be turned at least twice daily. Success can be achieved holding up to 10 days but success rate diminishes after 3 to 5 days of holding. Eggs held in the hydrator drawer of a refrigerator can be held somewhat longer.

Some people claim higher success holding the eggs after incubation has proceeded for several days. I have had poorer success doing this. The developing embryo is very fragile at this time and just a little shaking can cause it's death. Also it is more sensitive to chill, in my experience. Eggs that have never been incubated usually give the best results when held.

The thing to remember is to stay as close to nature as possible. The natural "window" can be stretched to fit into our manipulation of things. Remember that the longer we stretch it, or the more we manipulate, the less we can expect to succeed.

Spraddle-Legged Squabs

I am sure we have all experienced spraddle-legged youngsters in the nest. Here one or both legs splays outward producing a deformity in the leg or legs. The deformity is mainly in the ability to position the limb in a proper posture; but can also result in true deformed bones or joints of the involved leg(s).

The condition results from insufficient traction in the nest bowl. It happens most commonly when there is a single nestling. The second nestling usually provides something to push against for the other nestling, and the side of the nest bowl provides the same thing for the opposite leg. The nesting material is the other factor in providing adequate traction to the growing squabs. The parents usually cover the squabs providing extra weight for them to bear, and if adequate traction is not present, the leg or legs tend to push away from the body producing this condition. The involved leg can end up pointing 90 degrees or more away from what would be normal. I have even seen them where the rotation was so severe that they appeared to be pointing backwards. Of course the longer before they are noticed, and the worse the deviation, the harder it can be to correct the problem.

This can usually be corrected by the fancier. First, adequate nesting material to provide decent traction needs to be supplied. The legs then need to be "hobbled", or bound together to approximate a near normal or slightly overcorrected posture. One must be careful not to attach the binding material too tightly around the legs so as not to disturb circulation. A relatively soft material is better, so as not to cut into the leg tissue since there may be quite a bit of tension on the legs/material. I have used soft twine or tape to do this job, often using the band as a starting point, attaching to the band rather than the leg to distribute the pressure more evenly. Next bind the other leg to pull them together without constricting the leg. It usually only takes several days to a week or so to accomplish the correction since the squabs are growing so fast at this time. Remove the binding when it seems to be time and see how the squabs leg posture appears. One can always reapply it if it is not corrected adequately. Some may not be completely correctable depending on severity and timing on the corrective process. The success rate is high and certainly deserves trying.