

How to

Make marginal gains in rearing an

By doing a little at every opportunity we can drastically reduce our reliance on antibiotics. Mark Elliott BVSc VetMFGH MRCVS of South Downs Veterinary Consultancy provides thoughts on how we might achieve this.

SOME PROBLEMS ARE UNPREDICTABLE, possibly insurmountable and potentially devastating. One example of this is bird flu, a problem that may well get worse throughout Europe, and is already out of control in the Far East.

The 2016/17 outbreak, and restrictions put in place to control it have led many game rearing businesses to re-evaluate their supplies, consider ways they can reduce risk and how they can protect themselves from economic disasters.

At the same time, no matter which animal-related industry we are in, we must all look at ways in which we can reduce the use of antimicrobial drugs. If we do not take steps voluntarily, then we can expect restrictions to be imposed through legislation.

The main areas we can look at relate to management and animal husbandry. These are key issues that we should all be scrutinising as there is a direct correlation here with animal welfare.

When looking for ways to improve rearing, many different systems work well, otherwise they could not have survived as viable businesses. So I like to think in terms of 'marginal gains' rather than seeking to re-invent the wheel.

The concept of marginal gains has become popular after the success of the British Cycling Team at the last few Olympics. A look at the models adopted there can be useful in creating a blueprint for game rearing in the UK.

British Cycling's argument is that by seeking a 1% margin for improvement in everything you do, when amalgamated together those small gains add up to remarkable improvement.

Simple ideas such as washing hands and wearing gloves to prevent infection helped prevent athletes from getting sick before competitions and to train in a planned way effectively.

On the rearing field, the equivalent of hand-washing might be to restrict access

for visitors; or control where delivery lorries come in having been to other farms; boot dips with effective disinfectants; proper cleaning and disinfection between years and batches; fogging to keep the

Look at everything and anything to improve how you rear.

buildings clean; water sanitisation, etc. We all know this as 'Biosecurity'.

Almost every habit you have – good or bad – is the result of many small decisions over time. All too often, we convince ourselves that change is only meaningful if there is some large visible outcome associated with it.

The marginal gains theory works the same in reverse. If you find yourself stuck with bad habits and poor results, it is not usually because something happened overnight. It's the sum of the many small poor choices made, the 1% declines, that lead to the problems.

The wide gap between people and businesses and their success or failure can be simply explained by those who make slightly better decisions on a daily basis than those who don't.

Flock health planning with your vet might seem a waste of time as you can never predict disease entirely; it may not even happen. But if you prepare for the worst, and can act quickly, effectively and decisively, you reduce the risk of disease becoming a disaster.

I wrote a piece entitled *Water the forgotten nutrient* (KtB Summer 2016), and spoke on this at keepers' meetings. After that, many people made minor changes that proved significant, reporting less disease, better birds and lower vet bills.

The point was simply that continuous, adequate, clean and palatable water at each stage in the rearing cycle, allowed

for bird growth and competition. It's not rocket science!

Food intake drives water intake, and vice versa, so it is actually important to get both aspects of nutrition right. Good quality, easily digested, consistent diets are arguably more important than worries over protein levels and what an additive might or might not achieve.

Producers rely on the feed companies to get their formulations right, but consumers always want the best product for the cheapest price. So, manufacturers have to work within price

Wheat should always be of high quality and should be correctly stored before feeding. (Inset) this shows mouldy feed, which is of poor nutritional value.



MAIN PICTURE: PAUL QUAGLIANA; INSET: MARK ELLIOTT



and release

constraints to produce the best they can from the raw ingredients (eg. wheat, oats, soya, etc) which may vary in price and content month to month and year to year.

Having done their best (you hope) they deliver the product fresh and packaged for feeding to your birds. You order in bulk to get a better price, store the food for feeding later, and expect perfection out of the bag every time.

It doesn't take much to realise that there are many points at which this system can go wrong. The results of failures can be significant, for examples:

CASE 1: PARTRIDGES WITH COCCIDIOSIS?

Partridges failing to respond to treatment, and continuing to show symptoms of Coccidiosis and high mortality. A simple trial of different food on a number of the rearing sheds resolved symptoms and



mortality issues within 24 hours. It is always worth considering food when a problem is not resolving, and a comparative trial is quick and easy to do, whereas detailed food investigations are slow and expensive.

CASE 2: HIGH CHICK MORTALITY

With mortality at 14% in the first week, and with investigations making no sense. Chicks were found to be eating the bedding not the food. A quick food trial with a different crumb from a different mill on half the next batch showed 14% losses on the original food, and 6% on the new crumb, with the latter being eaten rather than scattered on the floor. The cause? Not defined, but could only be the food.

THE MANUFACTURER'S FAULT?

Most manufacturers fulfil their task well, which is to supply the product fit for purpose at the point of delivery. After that, it is up to the rearer to look after the food supplied.

Food left in bright sunlight can go rancid; food left to be rained on can go mouldy; food ordered in too large a quantity, or not properly stock controlled/rotated with the next delivery can deteriorate over time, hence expiry dates are noted clearly on the bags. Food delivered loose into barns can be contaminated by rodents and wild birds having access; barn floors are often damp, and deliveries on top of previous ones lead to product decay. All these factors can render food inedible or unpalatable, while moulds (despite pheasants being more resistant than some other species) can depress the immune system leading to other diseases occurring.

AND WHAT OF WHEAT?

Wheat is a variable commodity year to year. When poults succumb to disease at the changeover from pellet to wheat, it is always worth questioning both the wheat and the changeover.

Wheat from last year can be mouldy, and its nutritional status can be poor. We saw some thin poults suffering Aspergillosis a few times last season due



NOTE IT!

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to this issue. Wheat stored damp, which has got heated is particularly bad for the birds; I've seen wheat so bad even ducks (who normally eat anything) won't touch it – and yet it looked fine having been put back through the dryer!

Changeover is a key issue. It takes around two weeks for a bird's gut to adapt fully to a change in diet, so the transition should be made over that time. If the transition is sudden, without due planning, the bird doesn't have time to adapt, and the stress on the gut can lead to diseases such as Hexamita in late birds, which is harder and more expensive to treat at that stage. This is a bigger issue in some years than others, perhaps and probably due to the protein/carbohydrate balance in that year's wheat.

Perhaps professional keepers shouldn't get this wrong, but they are under pressure to keep costs down; and it's hard to resist that trailer of cheap wheat, or the extra cheap but short-dated food to make up a load which then sits outside in the rain and sun.

Coming back to marginal gains, if we are to reduce our antibiotic use considerably – as we must – we need to look at anything and everything that could improve how we rear. After all, a healthy bird over the guns has value, but a dead poult has only cost you money.