



# St David's Poultry Team Newsletter

June 2009

## Wet litter

Wet litter is currently a hot topic in the UK and Irish broiler industry. 2008 has seen a higher than normal incidence.



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So, what makes litter wet? The simple answer is an excess of water going into the litter which is not being removed. This can range from: too little litter being placed at the start of the crop (something I witness on a regular basis); poor

ventilation practices; poor insulation resulting in excessive condensation, poor enteric health in the birds and nutritional challenges (such as sorghum in the feed).

### Water production

It is useful to think what is happening in the shed during the lifetime of the flock. 10,000 birds will consume 15-20 tonnes of feed and drink 30-40,000 litres of water and excrete 20-30,000 litres of water. Another way of looking at this is that by 25 days the broiler will be excreting a total of about 6 litres of water in every square meter of the shed. This compares with 15 years ago when the figure was about 20-30% less.

### Litter

The type of litter being used and its moisture content at placement are very



important factors. All litters are not equal! White shavings absorb better than red; chopped straw better than un-chopped straw; and rye straw better than barley straw. Obviously, regional availability and cost has to come into the equation when a litter is used. However, if the performance of the available type of litter is understood, then the appropriate steps can be made to compensate for its weaknesses.

Firstly, irrespective of litter type, is ensuring that adequate litter is laid down at the start of the crop. If this is skimmed upon, then re-littering will be required throughout the crop with the impact on labour and moral that it brings. Simply by ensuring that enough litter is placed at the start, the chances of having to re-litter will be dramatically reduced!

The Ross manual states that the litter should be evenly spread to a depth of 3-10cm. My personal preference is to target a uniform depth of at least 5cm (2" for the old ones!) throughout the house. Why would I recommend as much as that? Litter acts as a water binding buffer

between water input and water loss from the house and it is all in a delicate balance, driven by ventilation.

I believe this is the single most important function of ventilation – focus on the water balance and the rest all falls into place. As everyone is well aware with the recent cold spells, water loss in the winter is difficult as cold air holds very little water and the temptation is to minimise ventilation rates to conserve heat as gas is expensive.

With the approaching summer, you would expect things to improve as you don't need to heat the house the same! Well, water loss in summer is also difficult due to air having a high humidity in this country – when it is already saturated it cannot take in anymore water! So, getting your ventilation right for the housing you have is critical in managing your litter.

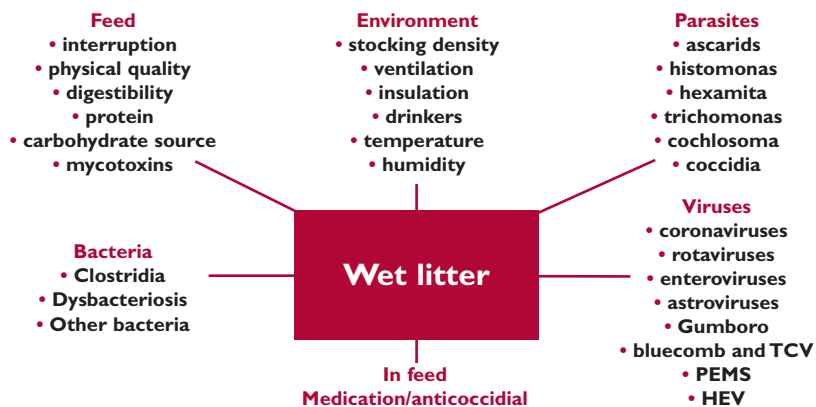
### Wet litter syndrome

So, apart from ventilation, what other factors should we consider? The following diagram tries to capture some of the influencing factors:

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The syndrome is often multi-factorial. It is usually a combination of many of the items working together with the end result being wet litter. The feed is formulated by your nutritionist for optimum digestibility and performance. The environment is managed by you according to your house set-up to provide the ideal conditions for the broilers. Parasites and viruses are managed by the appropriate medication strategies and vaccination programs as advised by your vet based upon local challenges and knowledge. By focusing on each of these individual 'bricks' a wall is built up to protect the integrity of the gut. If a few items are overlooked, the wall will not be as high and thus, a lower challenge can then cause a problem. Equally, the amount of challenge can increase from crop to crop which can overcome this wall if the appropriate steps are not taken to reduce this challenge.

I have put the in-feed medication / anticoccidial program as a separate entity. As this can generally be overlooked for the benefits that it may bring. In broiler production, coccidiosis can be largely controlled in one of two main ways: vaccination and in-feed anticoccidial. Both options control the disease very well and a whole article can be written on that alone. The most popular and commonly used method to control coccidiosis in broiler production is an in-feed additive. This is usually an ionophore compound. The benefit of the ionophores they can help maintain a healthy gut, so the choice of an ionophore as a method of coccidiosis control is generally a beneficial one. Recent information suggests that starting chicks on a feed containing an ionophore can be of immense benefit in the development of the broilers gut in the first week of life. By incorporating an ionophore through this period, the intestinal bacterial microflora is more likely to exclude any undesirable bacteria. As a result, the gut can then develop to the

level dictated by the genetics of the bird. The birds can then perform much closer to their genetic potential. It has also been suggested that the birds will then be more robust in the mid and later grow-out.

In some disease situations, an in-feed antibiotic may be prescribed by your vet. This will be to sort out a specific problem and the choice of antibiotic may benefit the gut bacterial microflora, however on occasion, may upset the delicate balance. Obviously the choice of antibiotic is driven by the primary disease being treated but your vet will also consider any consequences on gut health before prescribing.

### Identification of failing gut health

There are many ways that a challenge or upset to the gut microflora can be recognised. Feed intake tends to drop off rather quickly and is a sensitive method of identification where it can be measured. Fluctuations in water intake, up or down, can be an early warning – especially if over a few days by +/- 10%. Observation of the birds' behaviour: looking for selective feeding and stripy vents can be early symptoms of an upset gut. Post mortem can yield a variety of findings within the gut to trained personnel and can help confirm any suspicions. Using litter as the indicator, whilst demonstrating there is a problem, is too late for an early intervention. A great indication of gut health can be established by examining fresh droppings. The consistency and wetness are good indicators of how efficient digestion is within the birds. Identifying 'Weetabix'-like droppings or changes from the norm can help identify challenges in the very early stages. However, droppings alone cannot easily differentiate between feed issues and disease challenges. It is therefore of critical importance to look at the big picture and history of the flock before deciding on an intervention.

### Interventions

So, what do we do once we know there is a problem with the flock? If it is a true upset to the bacteria within the birds' guts, then an antibiotic may be required to help put them back on track and re-establish a good bacterial microflora. With early identification, I have found using an antibiotic such as tylosin very beneficial in putting things right. However, if the changes have gone unnoticed and the symptoms are severe then a wider spectrum antibiotic, amoxicillin, will need to be used. A veterinary visit will help determine the correct antibiotic to be used if that is what is required. It is also critical to resolve any environmental changes with the litter etc. Without improving the environment, the broilers would then just become 're-infected' due to bacterial contamination within the environment. Improvement of the environment can be made by increasing ventilation, re-littering, correcting any leaks from drinkers and improving insulation (particularly in the cold weather).

### Off to a good start

Avoidance of the situation is better than trying to resolve it! Get the chicks off to as best a start you can. Use crop fill to assess eating and drinking in the first few days.

Clean out between crops should be thorough, focusing on the reduction of bacterial challenge for the newly placed chicks and also on reducing the crop to crop carryover of infective coccidial oocysts. This can be very effectively achieved by using formalin and ammonia compounds, old fashioned but extremely effective! Ensuring a period of dryness between the detergent wash and the disinfection is also very simple but very effective. Very few bugs can survive a good period of drying out. Ensure a deep layer of absorbent litter is placed for the chicks and that the house is adequately heated prior to delivery. Litter is much more than bedding and insulation – it is a barrier protecting the chicks from what is on the floor. Heating of the shed must be for at least 48 hours prior to delivery to ensure the floor is adequately warmed, longer being required if the house has been empty for a while without heat or in colder weather.

This is an extremely complex syndrome, as I am sure you know! If you wish to discuss any aspect of it further or have a desire to know more about any of the areas covered (or not covered), please do not hesitate to contact the practice.

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## ByeMite



**Richard Turner**  
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### **A licensed zero egg withdrawal chemical to control red mite.**

ByeMite has been licensed in other EU countries as a long acting OP type chemical to control Red Mite in poultry Houses.

Organophosphorus type chemicals have had considerable investigation and there are many issues with their use. For this reason there has been no zero egg withdrawal OP type product available in the UK for some time. The health of the staff using the product is very important and it has been difficult to gain a license in the UK for this reason.

We have gained an import license for ByeMite use where there is a clear welfare need due to high red mite levels resistant to other products.

The Veterinary Medicines Directorate have placed a range of requirements which have to be met prior to the use of this product, these include the need to have staff correctly trained in the administration of pesticides. To use this product the operative needs to have the following certification:

An NPTC certificate of Competence in the safe use of pesticide (PA9 or PA6). Also guidelines must be followed for the correct use and wearing of protective clothing. All this information is sent out to the farmer prior to the product being authorised for issue.



Once the correct criteria have been met we then need to apply to the VMD for a licence to use the product on each individual farm.

We believe ByeMite gives the poultry Industry a legal chemical option where other UK licensed products are ineffective. If you have a red mite problem which

is not under control then this might be an option for you if the license requirements can be met.

For more information please contact any member of the Poultry Team Ltd.



**Sarah Hodge**  
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### **Salmonella sampling - the 72 hour rule**

Please be aware that we have learnt that DEFRA intend to impose a time limit of 72 hours between samples being taken by the

client and tested by the laboratory. We are sure that the BEIC Lion Code may

also require producers to follow this rule in the near future.

Because of this intention, samples that fall outside this time frame will not be able to have the laboratories UKAS accreditation mark on the result form. This is because the sample is outside the requirement for good practice and the result of the examination may not accurately reflect the condition of the sample (and the salmonella status) when it was taken.

In the future it may well be that samples outside this time frame will not count as

a valid sample, and whilst the sample could still be set it up at the laboratory the sample would fail a farm audit. Whilst re-sampling may be an option for birds during lay, please be aware that it may not be possible for pre-stocking swabs and the other time critical samples such as Liners or DOA's.

To avoid this we would strongly recommend not to take or post samples on a Friday or Saturday, and to ensure they are sent by First Class Delivery.



**Alison Colville-Hyde**  
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### **New Field Services Manager**

We are pleased to welcome Alison Colville-Hyde to the Poultry Team, Alison has recently joined us as Field Services Manager; this is a new role created to primarily support our broiler farmers. It is our

intention to offer our clients a wider and more comprehensive range of services, these would include for example gathering flock information on behalf of the vets, fact finding, blood sampling, taking water samples and follow up swabs and general advice or queries that may arise throughout the production process.

These areas do not always need a vet to carry out thus making good economic and management sense and complimenting our existing veterinary service. Alison visiting your farm will be

charged at a field service rate, more information on the service and charges can be obtained from contacting the Poultry Office.

Alison is a qualified Veterinary Nurse and worked in large animal practice until moving into Animal Health, where she obtained much experience with notifiable disease control and biosecurity. In 2006 she joined Lloyd Maunder Ltd as a Field Manager. Alison will work alongside Chris Grubb, our Product Support Manager on products sales and advice.

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Kayleigh Walters

## Staff changes

We are sad to announce that Kayleigh is leaving St David's Poultry Team to take a year out working and travelling around Australia. She has been an extremely valuable member of staff often working

under pressure to get the vets in the right place at the right time – no mean feat! Kayleigh has been at St David's for three years and will be missed by all who work with her and we all wish her the very best in her new venture.

Her departure means we have had a reshuffle, Sarah from the dispensary is moving to Kayleigh's position and we have employed a new member of staff Gemma to work in the dispensary alongside



Gemma Thackway

Sophie and Kimberley.

We would also like to welcome Fiona back to the practice, she has been away on maternity leave and has now returned to the office on a part time basis.

**SALMONELLA.ORG.UK**

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**Broilers - Salmonella Testing under the National Control Programme**

The National Control Programme was implemented throughout the UK in January 2009, which has resulted in all flocks of chickens reared for meat being required to test for salmonella. Flocks produced for private consumption, or where there is direct supply of small quantities of products to the final consumer may find themselves exempt from these requirements.

**The requirements**

You are required to take 2 pairs of boot swabs per flock within the period of three weeks before the birds are due for slaughter. Both pairs of boot swabs must be pooled together into one sample bag for testing as one sample. In flocks with less than 100 chickens, where it is not possible to use boot swabs as access to the houses is not possible, they may be replaced by hand drag swabs, where the boot swabs are worn over gloved hands and rubbed over surfaced contaminated with fresh faeces.

**PLEASE NOTE:**

A flock means all poultry of the same health status kept on the same premises or in the same enclosure and constituting a single epidemiological unit; in the case of housed poultry; this includes all birds sharing the same airspace.

**Links**

[Defra - National Control Programmes for the reduction of Salmonella \(External link\)](#)

## salmonella.org.uk

We have recently revamped and updated the salmonella.org.uk website. Please take a moment to browse the site, it offers all the latest information you require to comply with current salmonella regulations. Do not hesitate to contact Sarah in the poultry office if you require any further help or advice.

## Contact us

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