

FARM NEWSLETTER

December 2023



A word from our Directors - Rob Powell

December has arrived with some heavy frosts, and it very much feels like winter is here. I hope people are not having too many problems with frozen water tanks and milking parlours.

I recently attended a meeting on sustainability in dairy, beef, and lamb production. It was interesting to see some of the numbers behind the CO2 arguments in the news. A flight to Cape town emits the same amount of carbon as eating 90kg of beef which would take the average person 5 years to eat. I would personally like to see some more documentaries on flying and transport than the beef industry.

The same numbers also look quite different depending how you compare them; the carbon footprint of milk is higher when compared to soya/oat drinks per 100ml but is lower than soya/oat drinks when compared to nutrient density.

There are several things that can be done on most farms to improve carbon footprint.

Animal health parameters included;

- Reducing losses, with a 2008 research study showing that only 81% of dairy heifers born calve into the dairy herd. Reducing losses will also apply to beef suckler calves and lambs.
- Reducing age at first calving (currently 26 months for dairy herds in the UK)
- Reducing disease- there was a 5-10% difference in greenhouse gas emissions between the bottom 10% and average performing farm for BVD, mastitis and infertility.



November 2023

Well done to Chris Dunn, our Shepton Top10 Champion for genetics. Both his milking herd and youngstock are in the top 5% for £PLI when benchmarked against the UK Holstein herd.



Coming up in January 2024

In January we are having another Pilton meeting where Paddy and I will be discussing fertility in the dairy herd. We have split the meeting into fertility for all year round (AYR) and block calving herds. AYR discussion will include automated heat detection, timed A.I protocols, transition health and infectious disease. Block calving discussion will include heifer management, commonly used targets, managing calving pattern and bull management. We will look forward to seeing you there.

- Rob Powell



COME AND JOIN US



Christmas Social



Location: Thatched Cottage, Shepton Mallet, BA4 5QF
Date: Wednesday 13th December 2023 Time: 7:30pm

Come and join us for some festive nibbles, drinks, and Christmas cheer!
Christmas jumpers are encouraged (there will be a prize for the best).
Please let the farm office know if you are planning to come.
We look forward to seeing you there..



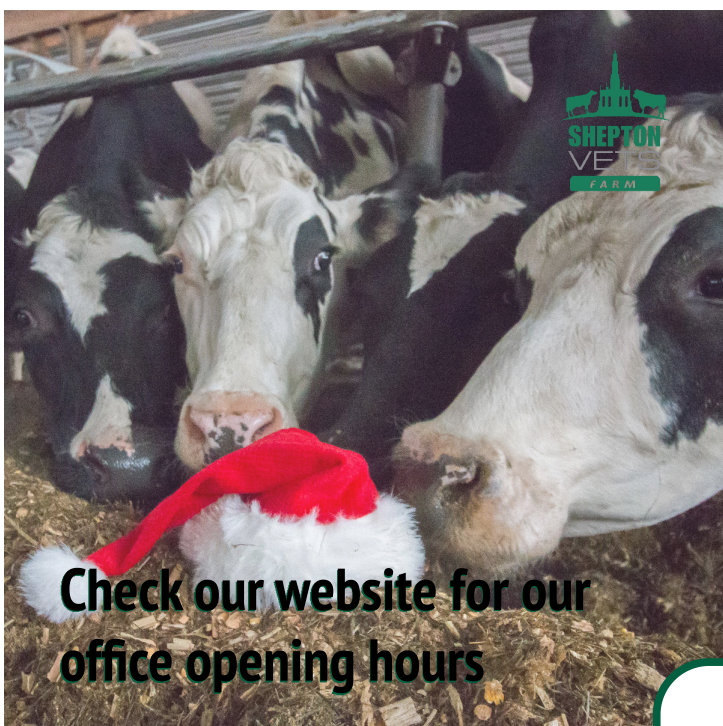
From 13th December all producers selling livestock at market will require a veterinary attestation document to allow exports to the EU. This may also apply to animals taken to the abattoir. You may not be planning on exporting but often parts of the carcass may be exported, and markets are asking for this information on their entry forms.

A vet attestation is an annual farm visit to verify the absence of notifiable disease and to provide advice on biosecurity. We will provide a signed declaration form for each holding number and all the required details.

This needs to be carried out every 12 months and can be included with other work. If you are part of a Red Tractor assurance scheme you are covered and do not need a vet attestation. If you apply for an Animal Health and Welfare Pathway visit, we can complete the attestation at the time at no cost to you. Otherwise, the cost for this work is £95+VAT.

Please ring the practice to book in your vet attestation or for more information.

- Paddy Gordon



In November some of the veterinary team, as well as a group of farmers attended The XL Vets Transition Cow Road Show. Stephen LeBlanc from Guelph University in Canada was keynote speaker.

We all know how important it is to ensure a successful transition period for our dairy cows' health and performance. Did you know that over 40% of cows will have at least one health event in the first 60 days postpartum? Conditions range from calving problems, metritis, endometritis, mastitis, and ketosis to name but a few. We know that the higher the incidence of these conditions occurring on your farm, the more significant an effect it will have on reproduction.

Stephen discussed in more detail the effects on subsequent fertility associated with Purulent Vaginal Discharge (PVD) & Endometritis, each affects 15-20% of cows, as well as ketosis. Did you know that a cow with subclinical ketosis in early lactation is associated with a 4-8 x increased risk of LDA. She is also at 1.8 times increased odds of culling < 60 DIM. Cows that have raised ketones in week 1 or 2 after calving have decreased pregnancy rates. Stephen discussed a study measuring ketones which showed cows with no ketosis have a conception rate at 1st AI of 42%, cows with ketosis in 1 week a CR of 36%, this went down to 28% for cows with ketosis for 2 weeks.

Our transition cows are certainly faced with significant challenges around calving. What can we do to ensure the most successful transition? We want to optimize metabolic health and increase immune function. This means we need to manage cows to maintain feed intake. Do you know exactly what your Transition cows DMI is....? Have you done everything you can to maximize this?

Transition cow checklist:

- Make sure your cows have good access to feed, dry cows need 90cm/cow. Transition cows should be fed at least daily, do you know how much extra DMI you could achieve if you fed your transition cows twice a day.
- Ensuring good access to water is also vital, you should have at least 10cm per cow. Having 2 water troughs reduces competition in the transition cow environment.
- Making sure cows have a clean, comfortable lying space.
- Aim for cows to be in BCS 3.0-3.25 at calving.
- Feed a specific transition cow ration that contains sufficient energy, Vit E and is formulated to reduce the risk of milk fever around calving.

After calving monitoring cows for ketosis, PVD and Endometritis will help to ensure prompt treatment to help minimize the negative effects on fertility. The Transition Cow Road Show opened my eyes to the metabolic pressure our dairy cows are under, Stephen was informative and very inspiring, I am certainly interested in discussing with you all the details of your own transition cow management protocols. Remember to let me know your exact DMI for your transition cows next time you see me!

- Bibby Thomas

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Office Opening Hours Monday-Friday: 8am - 5:30pm Saturday : 8:30am - 12:30pm



October AI course review – Rosie Lyle

In October, we hosted another successful AI course. We had four delegates learning about AI for the first time and one delegate attending for an AI refresher. All trainees had slightly varied reasons for attending the course, some to be able to support the team of AI-trained staff already on their farm and others to enable their farm to be less reliant on AI technicians.

Day one was hosted by Vet Charlie; this day is classroom-based with lectures and practicals on semen handling and AI on abattoir specimens and our Shepton training cow. It is vitally important that all the fundamentals are understood, including the legislation surrounding who can perform AI on cows before we start to put the knowledge and skills learnt into practice on live cows. Attendees learn about key reproductive anatomy using both the abattoir reproductive tracts and our training cow and as well as understanding the oestrus cycle and heat detection. They also learn the fundamentals of flask and straw storage and management, as well as correct thawing and semen handling.

Day two and three were hosted by vet Rosie and Alan from AB Cow Support. These two days are on the farm, and this is where trainees get the opportunity to practice and consolidate the skills and knowledge, they learnt on day one. Often, day two is challenging initially for delegates, but with time people start to grasp the new skill. During these sessions, all aspects of AI are practiced, and we have active discussions about fertility management using real-life data focusing on recording and monitoring AI outcomes. Host farms also give us an insight into how this is implemented on a day-to-day basis. Our AI refresher joined us for the day which allowed us to review their knowledge and techniques and give the most up to date advice on these.

The final day ends with a practical test where delegates demonstrated the skills, they have learnt from identifying and safely retraining the animals, semen selection, thawing and handling, and AI. They used a special straw which allows us to ultrasound scan the cow to see if the “semen” is deposited in the correct place. At the end of the course, trainees were able to safely perform AI on live cows, and now all they needed to do is go away and build their experience. The AI course includes a follow-up session with individuals 6–8 weeks after their course to support their progression.

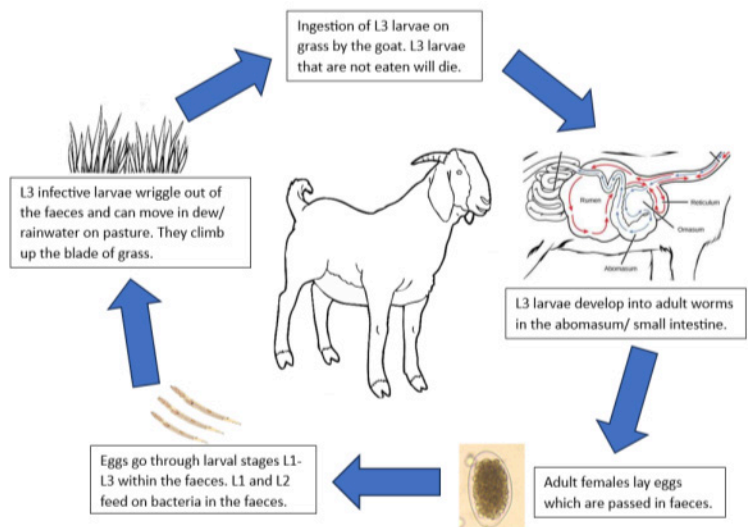


Gastrointestinal Roundworms – Anna Hewson

Which worms affect goats and sheep?

- *Trichostrongylus axei*
 - These worms are small and hair-like, tapered at one end. Males are 4–6mm long and the females are 5–7mm long.
 - Live in the abomasum.
- Other *Trichostrongylus* species (*T. colubriformis*, *T. vitrinus*)
 - Live in the small intestine.
- *Teladorsagia circumcincta*
 - Adult males are 7–8mm long and adult females are 10–12mm long.
 - Live in the abomasum.
- *Haemonchus contortus*
 - Adult female worms are quite long (20 to 30mm) and look like a ‘barber’s pole’ due to the pink, blood-filled, intestinal tract of the worm twisted around the paler reproductive tract. They are prolific egg layers, laying up to 10,000 eggs per day.
 - Adult males are smaller (around 15mm) and pale pink.
- *Nematodirus battus*
 - Very seasonal – eggs hatch between April and June when environmental temperature is consistently above 10°C. A cold winter primes the eggs.
 - Transmitted from previous years lambs/ kids to this year’s lambs/ kids when the same pasture is grazed.

How are animals infected with worms?



- Development from an egg to L3 within faeces takes between 4 and 10 days depending on temperature – slower in colder temperatures and faster in warmer weather.
- Below 10 degrees Celsius and above 35 degrees Celsius larval development is markedly reduced. Excessively dry conditions also reduce development
- L3 larvae cannot feed on bacteria and will die when their energy reserves are used up. This occurs faster at higher temperature and humidity
- Adult worms can survive and reproduce for several months within the abomasum/ small intestine.

What environmental conditions will affect worm survival?

- *Haemonchus contortus* eggs can survive very hot and dry conditions e.g. summer 2022, however most *Trichostrongyle* eggs will not survive for long in this environment.
- Below 10 degrees Celsius the hatching of worm eggs and development into L3 larvae is slowed down.

What affect do worms have on goats and sheep?

- Trichostrongylus damages the abomasum leading to malabsorption of essential nutrients and protein loss. This causes scour, inappetence, weight loss and poor growth rates.
- Haemonchus contortus lives in the abomasum (4th stomach) where it sucks blood causing anaemia. This causes weakness, bottle jaw (swelling under the jaw) and weight loss.
- Nematodirus larvae attack the gut wall and cause dehydration and rapid death.
 - This is a pre-patent disease which means that disease occurs before the worms produce eggs (therefore cannot be diagnosed with a WEC).

Do sheep and goats get immunity to worms?

- Unlike adult sheep, goats do not develop immunity to roundworms, which means that they are susceptible to infection throughout their life.
- No animals develop immunity to Haemonchus, including adult sheep, therefore we must remember this during late summer when Haemonchus worm burdens can increase.

Resistance

- A 2016 study of sheep farms in the Southwest of England found 100% resistance to Benzimidazole, 77% resistance to Levamisole and 100% resistance to Ivermectin [Bull and others (2022)]. This study was only conducted on a small number of farms however it is an important reminder that we need to be very aware of anthelmintic resistance.
- Monepantel (Zolvix) resistance was first detected in 2017 (Hamer and others 2018).
- We should be performing faecal egg count reduction tests to determine whether resistance is present on our farms. This is available through the animal health and welfare pathway for sheep farmers.

How can we control gastrointestinal roundworms in sheep and goats?

- Avoid underdosing:
 - Use well maintained dosing guns.
 - Use in-date and correctly stored wormer.
 - Use individual weights or weigh to the heaviest animal in the group.
 - Yard the sheep/ goats without feed for a period of time before giving a benzimidazole or macrocyclic lactone.
- Quarantine bought in animals:
 - Zolvix + yard for 48hrs
 - Turn out onto dirty pasture that has previously been grazed by the home flock/ herd.
- Targeted selective treatment:
 - If lambs/ kids are not growing at the expected growth rate despite adequate nutrition, then they might benefit from worming.
 - FAMACHA scoring for Haemonchus control.



Other methods of controlling roundworms

- Breeding RESISTANT sheep/ goats:
 - Resistant animals are those that mount a strong immune response to roundworms.
 - Worm egg counting ewe lambs at 21 weeks old is an accurate predictor of the total egg output of the ewes in their first lambing and lactation. This is useful for EBVs as it is heritable (applicable with goats too).
 - We can also measure antibodies to CarLA (carbohydrate laval antigen) by blood sampling or saliva testing. There is a strong correlation between a high level of antibodies and a low WEC.
- Breeding RESILIENT sheep/ goats:
 - Keeping lambs/ kids that have good growth rates and do not require worming as replacements.
- Trace elements:
 - Cobalt deficiency can predispose animals to worms.
 - A high worm burden increases the risk of cobalt deficiency.
- Bioactive forages e.g. chicory, sulla, sainfoin and birdsfoot trefoil:
 - Condensed tannins within these plants may either reduce egg hatching or act secondarily to improve immune response in the sheep/ goat.
 - The structure of these plants may also reduce migration of the larvae up the plant and consequently reduce ingestion of the larvae.
- Reducing pasture level contamination:
 - Taking a crop of hay or silage off the field.
 - Avoid overgrazing and overstocking.
 - Grazing pasture with cattle or horses will reduce contamination.
 - Rotational grazing i.e. moving paddock weekly.
- Copper oxide wire bolus:
 - Shown to be effective at reducing Haemonchus worm burdens in goats.
 - Have to be very careful with copper toxicity in sheep!
- Nematophagous fungi:
 - Duddingtonia flagrans has been found to be effective at reducing larvae numbers in ruminants and on pasture when fed as a daily supplement.
 - This fungus can survive in the ruminant GIT and germinate in faeces to trap the infective larval stage within faeces.
 - This is not currently available in the UK and more research needs to be done on farm to determine efficacy, however it is something promising for the future.
- Vaccines:
 - A new vaccine called Barbervax has been produced for Haemonchus control however it requires a booster every 6 weeks. This is not currently available in the UK but something promising for the future.
 - Research is ongoing into making a Teladorsagia circumcincta vaccine.

In conclusion, managing roundworms in sheep, and particularly goats, is tricky and multi-factorial. It is especially important to be aware of increasing anthelmintic resistance and we need to be able to control roundworms with management rather than relying on anthelmintic treatments.