



ARDENE HOUSE

VET PRACTICE LTD

Farm Newsletter
April 2020

Tel: 01224 740700



COVID-19 Services Update

In these unprecedented times, it is important we maintain our commitment to animal health and welfare while doing all we can to protect human health.

We are open as normal for all emergencies, as well as for services required for maintaining the food chain, including PDing, Scottish government mandated BVD testing, and TB testing. We are also currently accepting faecal samples for worm and liver fluke egg counts.

We are, as normal, always available over the phone for consultation.

Please note there are some restrictions for routine herd/flock sampling for PCHS and PSGHS, but this is for routine sampling only – all diagnostic sampling for ill animals is essential for animal health and welfare, and as such is continuing as normal.

As we all are aware, the situation is regularly changing, but our commitment to our clients and the animals under our care remains the same.

If you have any questions or would like to consult us about a visit, please contact us at 01224 740700 to discuss your individual cases and requirements.

As 2020 begins its transition from spring to summer, we hope all of our clients and patients remain safe and healthy!



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If you would like to receive our newsletters by email please send an email to

farmandequine@ardenehouse.co.uk

You can find previous newsletters on our website www.ardenehouse.co.uk

24 Hour
Emergency Service
01224 740700

Trace Minerals: What are they, and why test for them

When sampling for trace minerals, we are measuring the blood levels of Copper, GSH-Px (glutathione peroxidase), and Vitamin B12. Copper directly measures the copper levels in the blood at that time. GSH-Px is a way to measure selenium. Vitamin B12 is a way to measure cobalt levels. Inorganic iodine can also be measured if there is also a concern for iodine deficiency.

Copper plays an important role in the function of metalloenzymes. These enzymes are found in multiple key pathways in the body, and a disruption in their function can affect bones, muscles, blood, and hair/fleece quality in addition to causing poor growth and fertility. In sheep, a deficiency in copper is what causes the disease known as swayback. However, excessive supplementation can result in copper poisoning, causing weakness, anorexia, and in severe cases can cause destruction of red blood cells. Sheep are particularly sensitive to copper and are at a high risk of developing toxicity if overly supplemented. Therefore, checking the herd or flock for copper deficiency by means such as blood sampling is important before deciding to supplement copper. Some copper is also stored in liver, which can be sampled and measured to confirm copper deficiency.



Calf with poor coat quality



Lamb with swayback



Calf with white muscle disease

Selenium is converted into GSH-Px, which is an important antioxidant that functions to protect the cells from damage. Selenium is particularly important for proper function of skeletal, cardiac, and respiratory muscles. It is also required for conversion of thyroid hormones from the inactive to the active form. When there is a deficiency of selenium, these muscles are at risk of becoming damaged, which causes white muscle disease. If calves or lambs are born deficient, this results in either still birth or weak calves/lambs. If the calves and lambs become deficient as they grow, this may present as ill thrift and reduced growth rate or, if the deficiency is severe, it can result in sudden muscle weakness, respiratory distress, or sudden death due to cardiac failure depending on which muscle group is primarily affected.

Cobalt's key role is to be converted by rumen microbes into vitamin B12, which is then required for energy metabolism. Because this process requires rumen microbes, young calves and lambs cannot make their own vitamin B12 until they develop a functioning rumen. Before they can synthesize their own vitamin B12, they rely on vitamin B12 in the milk. Signs of insufficient vitamin B12 include poor growth/ill thrift as the animals are not able to efficiently utilize the energy from the feed. In severe cases in sheep, it may cause ovine white liver disease.



Ill thrifty lamb with severe cobalt deficiency

<https://www.nadis.org.uk/disease-a-z/cattle/trace-element-deficiency-in-cattle>

<https://www.nadis.org.uk/disease-a-z/sheep/trace-element-deficiencies-in-sheep>

Iodine is required for synthesis of thyroid hormones, which are an important regulator of an animal's metabolism and hormones. When a thyroid is underactive, such as due to a deficiency in iodine, it can result in a goitre (an enlarged thyroid), stillborn or weak calves and lambs, poor growth, and poor fertility. Primary deficiency is caused by low iodine content in the soil. Secondary deficiency is caused by ingestion of brassicas and/or legumes which contain goitrogens that interfere with the iodine uptake, or by low selenium disrupting thyroid hormone production.

By taking blood samples from each group in a herd or flock, we are able to determine if there is a deficiency in these minerals that may be resulting in disease, which may be clear such as white muscle disease, or may be more insidious such as reduced fertility and poor growth rates.

Flock Health Club 2020

Ardene House is proud to offer membership to our Flock Health Club to any and all clients with sheep, no matter if you have 1 sheep or 1000! By joining, you will get discounted benefits to maximize the health of your flock.

For a single annual fee , benefits included with 2020 membership are:

- Faecal worm egg counts + liver fluke faecal analysis
 - 2 pre-dosing and 2 post-dosing pooled samples, for a total of up to 4 tests
 - 10 faecal pots per test included
- Reduced visit fees for blood sampling for trace minerals (lab fee not included) and subsidized EAE/ toxoplasmosis monitoring
- Sheep CT scanning: scan 1, get 1 free



If you are interested in joining this year or have any queries, please phone 01224 740700 and ask to speak with Rebecca or Marta.

Flock Health Club Calendar			
	Worms and fluke faecal testing	Trace mineral blood sampling	EAE and toxoplasmosis blood sampling
January			
February			✓ 1-3 months post-lambing
March			
April	✓	✓	
May		Ewes	
June			
July			
August	✓	✓	
September		Lambs	
October			
November			
December			



Subsidized blood testing for EAE and Toxoplasmosis



Enzootic Abortion of Ewes (EAE), caused by the bacterium *Chlamydia abortus*, and Toxoplasmosis, caused by the parasite *Toxoplasma gondii*, are two important causes of abortions in sheep. Both of these are also zoonotic, meaning the disease can be spread to humans and cause illness and abortion in humans as well. Thankfully for both of these diseases, a vaccine is available.

If you are not already vaccinating for EAE and/or Toxoplasmosis, Ardene House is working with MSD and CEVA for subsidized blood testing programmes to check if the ewes have been exposed to these diseases. These test results can then help guide your vaccination programme to reduce the risk of future abortions.

MSD's FlockCheck programme subsidizes blood testing for antibodies to *Toxoplasma gondii*, and Ceva's Assure Ewe for *Chlamydia abortus*. Both will test up to 7 samples from barren or aborted ewes.

This blood test can show if the ewes have been exposed to these diseases, and thus if EAE or Toxoplasmosis may have been a cause for the abortions. If positive, vaccination is an important protective measure to prevent the diseases from re-emerging and causing more abortions in future seasons.

These tests check for the presence of antibodies, which rise significantly within the first month of exposure to the disease. However, the antibody levels then decrease over time after the ewe has recovered; If the sample is tested after the antibody levels have decreased below detectable levels, there is a risk of the ewe falsely testing negative. For this reason, sampling is recommended in the period of 1 to 3 months after lambing.

We can combine the visit for these samples with the other benefits of the flock health club, namely blood sampling for trace minerals, as well as taking faecal samples for faecal worm egg counts to ensure the most effective worming regime is implemented.