Forage analysis has been crucial to understanding how trace element and mineral issues have been affecting Edward Albutt's flock.

## How to remedy mineral deficiencies

Mineral and trace element deficiencies can play havoc with lamb growth and finishing. They can also impact on overall flock fertility.

Knowing what issues are affecting your flock before any mineral supplementation is essential to ensure money and time are not wasted treating animals that either do not require it, or require alternative treatment.

Winchcombe, Gloucestershire-based Edward Albutt had, for many years, believed his sheep were doing as well as they could be.

"We'd never really seen any issues relating to mineral and trace element deficiencies. We weren't seeing any swayback as a result of copper deficiency and lambs seemed to grow well and thrive.

"The flock was scanning at about 185-190% and we were happy with how things were going. However, gradually, as local dairy farms sold up we lost some of our better seasonal grazing land and have since been grazing more environmental stewardship ground. While these blocks grow plenty of grass, it isn't of as good quality as we were previously grazing."

"I was in market one day and our lambs were penned next to those of a friend and I happened to comment that my lambs lacked the colour his had. He suggested we should look at our mineral and trace element status."

Mr Albutt says that at about the same time he had a batch of lambs which were scouring and not thriving despite being on better ground.

"It just didn't make sense. We carried out faecal egg counts and there were no worm issues.

"We'd just started using cobalt, selenium and copper boluses on Suffolk x Mule ewe lambs we were retaining for sale as shearlings. But felt we needed to act on all the lambs and while the boluses seemed a good idea, I didn't much fancy giving them to 2000 lambs every year.

"It was a bit of a fiddly job and they weren't the easiest thing to administer. We looked at other options, including mineral blocks and free access minerals, but were told that these couldn't contain copper due to the chance of them being accessed by non-target animals.

"As a result we went for a mineral and trace element drench which included copper. It meant we knew every animal would get the dose they needed in an easy to use format," he explains.

Forage analysis has been crucial to understanding how trace element and mineral issues have been affecting stock in the farm's 1500 Mule flock.

"It was important for me to fully understand exactly what the problems were in order to best remedy them," adds Mr Albutt.

"We worked with Jonathan Guy of JG Animal Health and during 2014 and 2015 conducted forage analysis of both grass silage and fresh grass to fully understand exactly what issues we were facing."

As expected, copper, selenium and

cobalt were all found to be at lower than ideal levels in the forage analysis, says Mr Guy.

"Importantly though, all samples had molybdenum at high levels and also iron at levels which could be problematic too.

"Both molybdenum and iron are copper antagonists and can result in these elements being locked up and unavailable to the animals. It is important to understand the relationship between trace elements and antagonists to fully understand which supplements are needed.

"In Mr Albutt's case the copper levels in his forage analysis, while lower than ideal, weren't the only problem. High levels of molybdenum

and iron were stopping animals from being able to use what copper was available.

"In all the samples we tested, cobalt and selenium were also at lower than ideal levels, giving a clear indication that all three of these elements required supplementation."

Mr Guy adds that while in some situations blouses are an option, in many cases a drench is the better option.

"This is particularly the case where trace element levels are known to be low in animals.

"A bolus doesn't have the ability to provide any immediate correction in the way a drench can. The bolus will only release small amounts of trace elements over time rather than a larger dose which may be required to correct existing deficiencies and rebalance levels in the animal."

In the first year of using the drench Mr Albutt split his lambs in to three groups based on size.

"I saw a noticeable improvement in the lambs within a couple of weeks, although the smaller lambs still didn't thrive as well as some of the larger types. As a result we dosed them a second time six weeks later and then they really started to move forward."

He now has an annual routine for supplementing ewes and lambs with trace elements to ensure they thrive.

"The poorest 20% of the ewes receive a mineral drench pretupping. That is basically any ewe below a condition score of three. We lamb in two groups, with the first batch lambing in mid-February and the second group starting in the third week of March.

"These lambing ewes are only fed from a fortnight before lambing, so they all have a mineral dose to ensure they are covered for everything and maximise lamb vigour," he explains.

"All lambs then receive a dose at 10-12 weeks old, about a fortnight to three weeks pre-weaning. Lambs are then monitored throughout the summer and autumn and drenched as required.

"Just recently we had a batch of lambs which were scouring and looked off colour. They'd had a worm drench ahead of being moved to some aftermath grazing, so we did a faecal egg count and that came back fine with no parasite problems.

"We gave them a mineral and trace element drench off the back of that and the scouring dried up and the lambs started to thrive again and filled out."

He says it is noticeable in Suffolk cross lambs when they're not thriving as their colour fades.



Correcting trace element issues has seen lambs thrive better and regain their colour, says Edward Albutt.

"When we have the minerals right they have a good black colour to them."

Across the flock correcting the trace element issues has been beneficial, he adds.

"We now scan at about 200% on a regular basis, with those poorer ewes having increased lamb numbers as a result," adds Mr Albutt.

Premier Sheep and Premier Cattle Drench Organically chelated trace element vitamin supplements Not all mineral drenches are the same



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