



Early Supplier Deadlines

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Introduction

Hooray! My youngest daughter Amy is getting married at the end of November.

That is one of life's great moments and so we are obviously going to celebrate the big day with the usual party etc etc.

This means that I have too much to do between now and then.

Please help by working out your order needs between now and the end of January. Okay, it doesn't all have to be delivered in one go but the 25th November deadline is key and I am going to need to get all of our orders in before then because of this wedding.

WE also have Agriscot the week before so I will have to be super organised if this is going to work and none of you run out of product over the festive season and beyond.

Challenging Order Deadlines

This is definitely not the year to hesitate with ordering for Christmas and the New Year. For some weeks now I have been receiving e mails from most of our suppliers letting me know about their end of year order deadlines.

This year if you want anything in a bag it would be wise to order it by November the 25th although it would probably be better to go a little earlier.

There are four reasons for this.

1. Many suppliers are having trouble with their own incoming raw materials being delayed.
2. They are also having their own labour problems citing illness and difficulty recruiting for anti-social shift hours.
3. Lack of manufacturing capacity. With the fire at the Rumenco factory in the spring (they are still working on the site) and the withdrawal of Devenish to name but two, the old saying of "trying to get a quart out of a pint pot" comes to mind.
4. Haulier unreliability. (I guess we all know how cavalier they can be about deadlines).

Milk Replacers.

We are seeing a big increase in demand for all of our calf milk replacers. Britannia sales are now way ahead of our forecasts, but it's not just Britannia, we are also seeing increased sales of all of the other brands in our range.

I think most farmers have realised that with milk prices where they are, it's probably best to sell as much as they can rather than feed it.

The best strategy would be to place a large enough order to keep you going well into January.

If you haven't tried Britannia yet why not have another look at it? There is lots of information on our extensive website lakescot.co.uk

Oregostim

Finally, I have been given permission to publish the research paper that completely justifies this product. (See below) The hesitation was that the paper had not been published in the science journals, but it is far too important to ignore.

AgriScot November 16th Ingliston Edinburgh near the Airport

This year we will be at our usual location in the Highland Hall stand 32.

Trevor Birchall and his staff will be on hand to support our joint product range presentation

We are featuring Britannia Calf Milk Replacers and are supported by the TBA team.

We will also feature our new yeast supplements **F 1 Prosecure 1 and 2** and I will also be happy to promote Oregostim as an extra dimension to our calf rearing protocol.

We have decided to limit our product range display so as not to detract from these key products but of course we can discuss any other items in our extensive range if you wish.

I also wanted to talk about the reason why the best calf/ heifer rearing protocol will pay dividends but it will be a lot easier to discuss this on farm calls and at AgriScot.

Rant of the month. (Perhaps, its just an age thing)!

There was also a moment of unbelievable ineptitude that I came across last week.

A farmer in Scotland started to tell me about some issues that had started to occur shortly after he had been advised to change his mineral supplement.

Given that the NRC revised Nutrient Requirements for Ruminants was published in December 2021, a representative and his technical support, from a compounder, had advised the use of a bespoke mineral supplement with No phosphorous, only 2% magnesium and less than half of the permitted and required iodine!

I am furious about this. What is the point of having a Feed Adviser Register if many of the members can't even leave their clients with the right advice. In this case I think they must have been trying to see if they could get in the record books for inducing the first cases of Hypomagnesaemia (Staggers) in housed dairy cows on a winter semi TMR! It's outrageous.

The X Files!

Back in the spring I asked if I could publish this data. The response was to delay publication due to the sensitive nature of the data. I have now been given permission to publish this trial data in this newsletter and at some point, on our website.

Frankly, I don't think that research can lay out a case much better than this.

Firstly, it is worth pointing out that the Oregano used is a 100% natural product.

Secondly, it is more than obvious that using Oregostim as an antibacterial application should help to reduce bacterial challenge to calves in their early life.

The extracted oil from the Oregano variety used is indeed very potent, and the Oregostim liquid product is obviously a dilution of this oil. We do this because it would be just about impossible to get the dosage right in our calves with the neat product but the antimicrobial effect is similar, just spread over a more practical volume. The best news is that this is not an expensive product to use.

BACKGROUND

- ✓ The antibacterial effect of a product can be easily compared using a zone of inhibition test. This highlights the sensitivity of a known bacteria to multiple products.
- ✓ The larger the zone of inhibition, the more effective the product is against the chosen bacteria.
- ✓ Orego-Stim Powder is a high quality eubiotic containing 100% natural oregano essential oil.
- ✓ This work is part of Anpario's 4R's approach (Review, Reduce and Replace antimicrobials Responsibly) which helps to maintain gut health and support healthier livestock through the use of natural products.

TRIAL DESIGN

The trial was undertaken by an independent microbiology laboratory in the UK in 2020. A variety of antibiotics and bacterial challenges were selected to account for the most common challenges and associated therapeutic treatment globally. Bacteria were suspended in 20ml of diluent, shaken and the concentration adjusted to contain between 1.5×10^8 - 5.0×10^8 cfu/ml. Plates were prepared in triplicate and incubated at $36^\circ\text{C} \pm 1$ hour for 24 hours. The zone of inhibition was measured using calipers.

Bacteria selected for use in the trial included:

- ✓ *Salmonella typhimurium*
- ✓ *Staphylococcus uberis*
- ✓ *Escherichia coli* (O157)
- ✓ *Staphylococcus aureus*

Antibacterial efficacy of the following treatments against each bacteria were assessed:

- ✓ Lincomycin
- ✓ Chloramphenicol
- ✓ Amoxicillin
- ✓ Tetracycline
- ✓ Trimethoprim
- ✓ Orego-Stim Powder (OSP)
- ✓ Bacitracin

RESULTS

- ✓ The antimicrobial activity of Orego-Stim Powder against *Salmonella typhimurium* was comparable to 3 of the 6 antibiotics and was significantly more effective than the other antibiotics tested (Figure 1).
- ✓ When testing efficacy of treatments against *E. coli*, the antimicrobial activity of Orego-Stim Powder was comparable to 2 of the 6 antibiotics and was significantly better than the other antibiotics tested (Figure 2).
- ✓ Orego-Stim Powder resulted in a zone of inhibition which was statistically better than, or comparable with, 5 of the 6 antibiotics tested for antimicrobial efficacy against *Staphylococcus aureus*, with only Amoxicillin producing a significantly larger zone of inhibition (Figure 3).
- ✓ The zones of inhibition produced by Chloramphenicol and Tetracycline when tested against *Staphylococcus uberis* were statistically comparable to that of Orego-Stim Powder. Orego-Stim Powder outperformed Bacitracin and Trimethoprim (Figure 4).
- ✓ The results demonstrate that Orego-Stim Powder provided antimicrobial action which was statistically comparable or better than several commonly used antibiotics in all 4 of the bacteria trials.

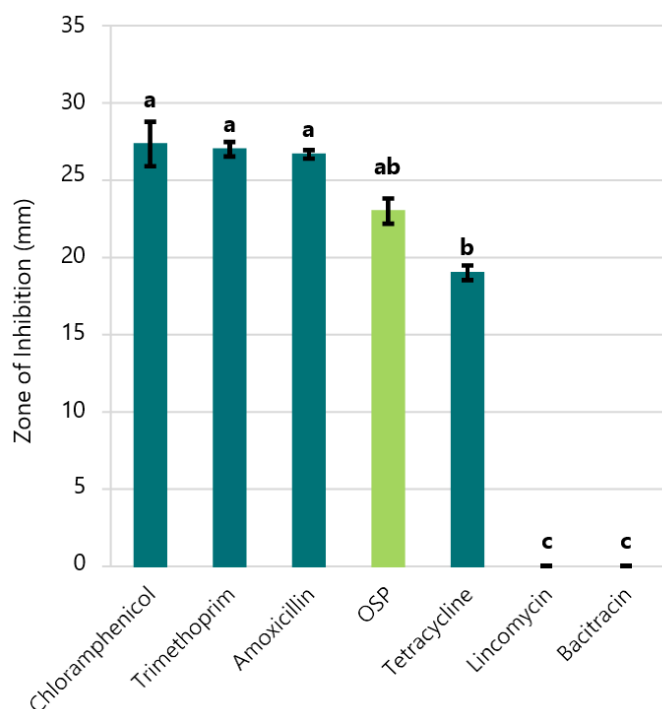


Figure 1. Antibacterial efficacy of treatments against *S. typhimurium*, measured by zone of inhibition (mm).

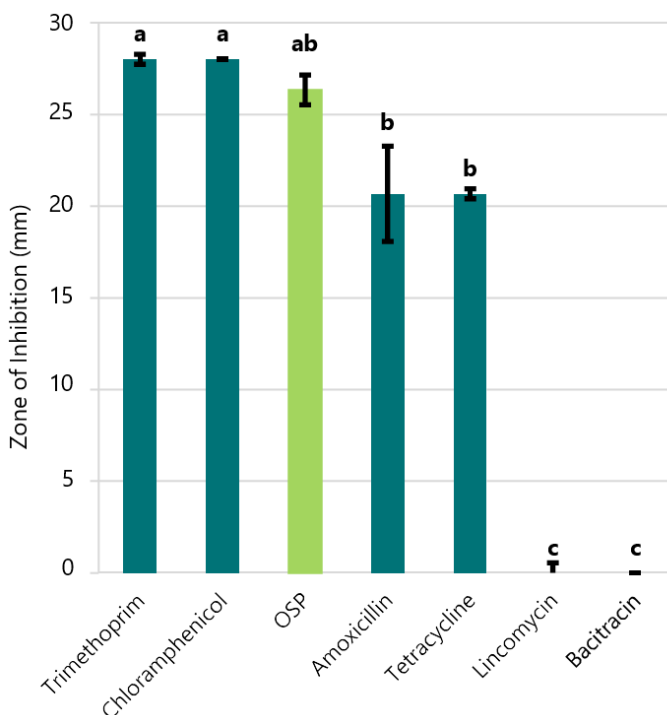


Figure 2. Antibacterial efficacy of treatments against *E. coli*, measured by zone of inhibition (mm).

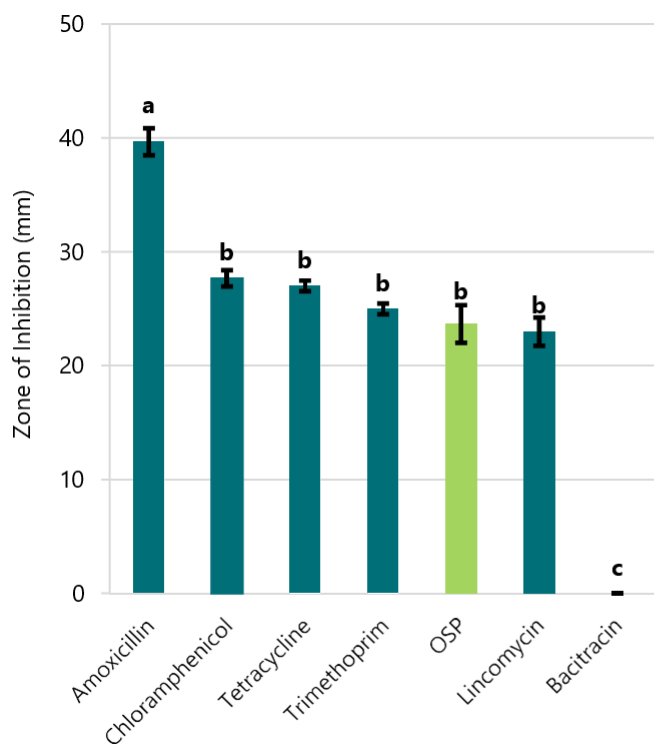


Figure 3. Antibacterial efficacy of treatments against *S. aureus*, measured by zone of inhibition (mm).

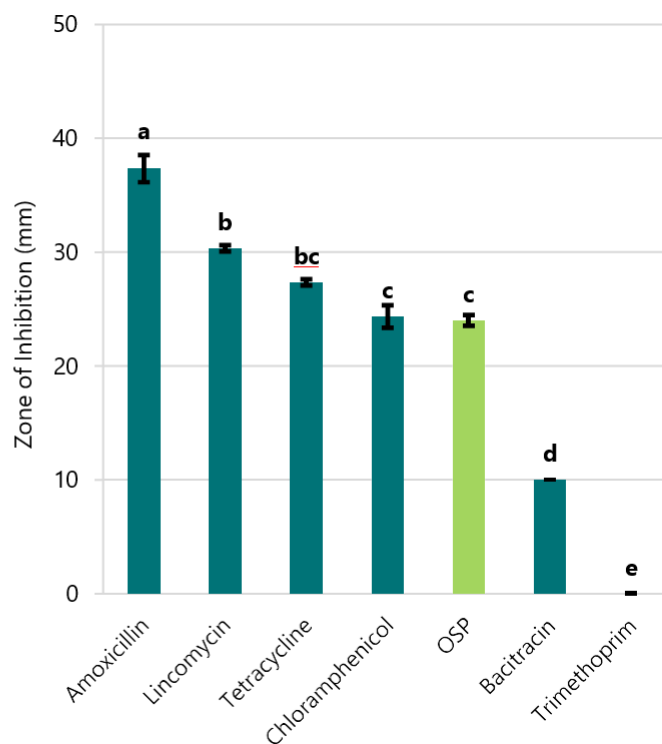


Figure 4. Antibacterial efficacy of treatments against *S. uberis* measured by zone of inhibition (mm).

✓ Differing letters denote significant differences between treatments ($p < 0.0001$).

We also know from trials at Reading University that it will reduce viable spore shedding of Cryptosporidia, and continued use along with a good cleansing program between batches of calves: does much to help to dramatically reduce the incidence of infection from this parasite.

We are also seeing early signs that it is quite an effective coccidiostat. At this stage we only have one trial for this in sheep. That should not put anyone off because (off the record) we are more than confident that it will be a very effective and natural way of controlling this problem.

So far, the case for using this product is really compulsive but I have attached another trial below showing that Oregostim can also significantly reduce methane emissions when added to the diets of dairy cows!

I guess whilst this may well be an attractive feature of the product, there has to be a payback on the investment. This is not obvious, but improved resistance to environmental bacterial challenges may well generate a milk response because there is always an energy cost to maintaining the immune system.

For more information on any of the items mentioned in this newsletter please get in touch with Jerry. Our phone numbers are always available during normal working hours. You can also email Jerry or visit the Lakeland-Scottish website.

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THE EFFECT OF OPTOMEGA PLUS ON METHANE OUTPUT IN DAIRY COWS

SUMMARY

- ✓ Methane is a strong greenhouse gas, which can be emitted from livestock and other agricultural practises.
- ✓ Optomega Plus may help to reduce methane emissions by up to 10% in dairy cows.

BACKGROUND

- ✓ Methane production from ruminants contributes significantly to greenhouse gases (GHG) in the atmosphere, although it is a natural phenomenon.
- ✓ There is global pressure on the ruminant sector to reduce methane output, especially from dairy cows.
- ✓ The addition of oils and omega-3 fatty acids have been shown to help reduce methane production.
- ✓ Optomega Plus is a blend of sustainably sourced fish oils on a mineral carrier, rich in omega-3 fatty acids.

TRIAL DESIGN

An *in vitro* study was carried out by the University of Reading to assess the effect of Optomega Plus on gas and methane production when supplemented in the ration. A standard procedure similar to Sinclair *et al.*, (2005) was used in a 24-hour batch culture model, in triplicate. The basal total mixed ration (TMR) was a typical UK grass and maize silage-based diet plus concentrates. Optomega Plus was included to provide the equivalent of 160g per cow per day and gas pressure readings were taken at 0, 2, 4, 6, 8, 10, 12 & 24 hours. Methane analysis was carried out using gas chromatography.

RESULTS

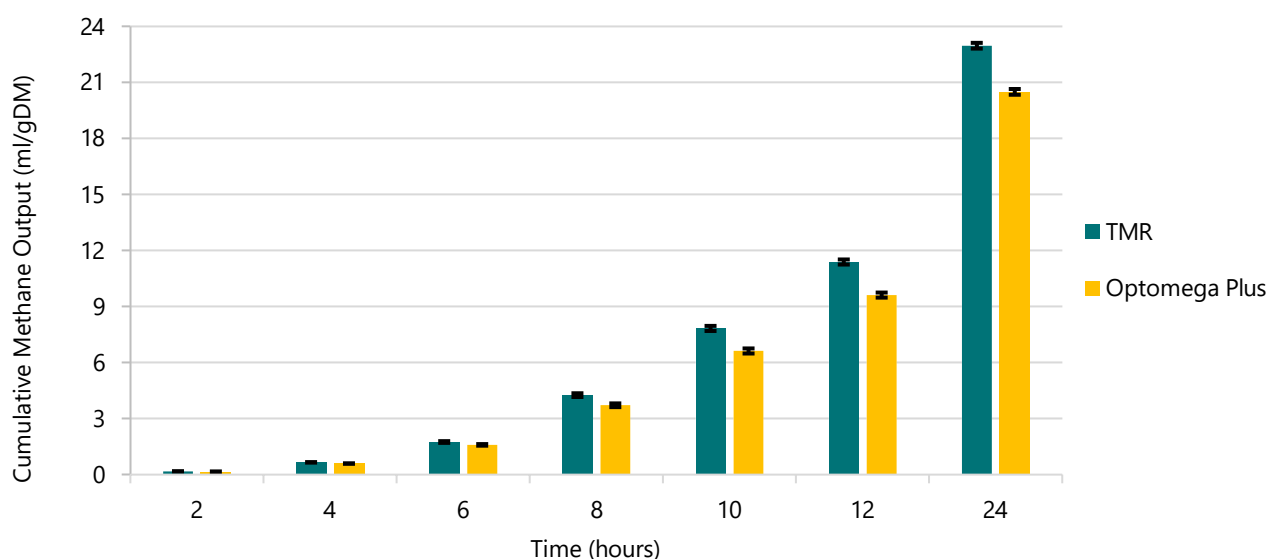


Figure 1. Cumulative methane output (ml/gDM) from dairy cows fed a control TMR or a ration supplemented with Optomega Plus.

- ✓ Cumulative gas production was reduced with Optomega Plus over the 24-hour period.
- ✓ Cumulative methane output was 10.8% lower over 24 hours in cows fed diets supplemented with Optomega Plus compared to those fed the control TMR (Figure 1).
- ✓ In context, for a 200 cow dairy herd, this could support a reduction in carbon footprint of up to 80 tonnes per year of CO₂-equivalents.
- ✓ Optomega Plus is effective in supporting the establishment and maintenance of pregnancy and may also help to reduce GHG emissions from dairy cows.

Government requirements for product claims vary, therefore statements may not apply in all geographical regions. All economic benefits claimed in this document were correct at the time of publication.