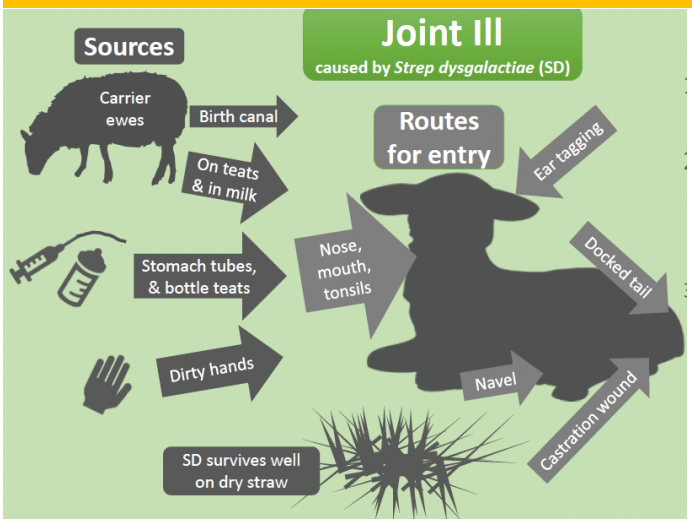
FARM ANIMAL NEWSLETTER MARCH 2019

JOINT ILL



A recent study about Joint ill showed why it is so challenging to treat and prevent. The study found 90% of the cases were caused by the bacteria *Strep dysgalactiae*. This bacteria showed a lot of resistance to antibiotics:

- 88% were resistant to oxytetracycline (Terramycin, Alamycin)
- 69% were resistant to neomycin
- 15% were resistant to tylosin (Tylan)
- All were sensitive to ampicillin, amoxicillin and penicillin (Penstrep, Betamox, Synulox).

This means the drug of choice for treatment and prevention of Joint ill is a penicillin based one. It is important that we don't start using penicillin antibiotics as a prevention in every lamb however, as it will not take many years of doing this before penicillin resistance is developed, making treatment very difficult.

TREATMENT OF LAMBS WITH JOINT ILL : 7 DAYS OF PENICILLIN + ANTI-INFLAMMATORY

Not completing a full course and only giving a couple of injections (until you can't catch the lamb!) results in an incomplete cure and the disease flaring up again.

Recent research has shown that the bacteria can be found at harmful levels in a lamb's environment - in the ewes birth canal, in dry straw, on teats, bottles, tubes etc. It will thrive in a damp, warm environment and gain entry through the mouth, navel or a wound. If the lamb's immunity is not 100% the bacteria takes advantage, multiplies and causes damage. Ideal conditions for the bacteria are not always achieved so we sometimes see different levels of infection from one year to the next. It is useful to pinpoint where the infections have routed from and then target them.

PREVENTION HAS TO BE BASED AROUND SEVERAL FACTORS

- Ensuring good colostrum intake to maximise lamb immunity (50ml/kg of ewe colostrum in the first few hours of life—the most effective prevention by a long way)
- Preventing the bacteria crossing the navel (dipping 10 % iodine twice in the first few hours is best practice)
- Good hygiene at every stage of management. Considerations include:
    - Clean dry pens; lime and antibacterial powders are useful when completely cleaning out pens and allowing them to dry is not practical
    - Clean hands and gloves
    - Disinfecting lamb tubes, teats and bottles between lambs
    - Dipping tags, taggers and castrators in surgical spirit between lambs
    - Avoiding tagging or injecting if the weather is wet and there is a high risk of contamination
    - Use of antibiotics when there is a high risk. *A long acting injection of penicillin to prevent Joint ill is invaluable but targeting this injection to the right lambs at the correct time is important.*

Using an injection on every lamb will cause a very quick development of resistance and is not recommended. A long acting injection will only give 2 days cover, target when risk is high. If your lambs are getting infected at tagging or turnout then injecting as a newborn is pointless.

#COLOSTRUM IS GOLD - HOW TO USE ANTIBIOTICS IN NEWBORN LAMBS

Ok I can see some of you rolling your eyes at this - "Here we go they are about to rattle on about antibiotics again." However, please read on as we really do need to address this or we are going to have antibiotics with little or no efficacy!

In an ideal world our lambing sheds would be clean and dry, every lamb would get plenty of good quality colostrum and no lambs would become diseased. In reality there is always a build up of infection during lambing time and vulnerable lambs, twins and triplets often don't receive adequate colostrum.

To control diseases such as watery mouth and Joint ill, antibiotics are essential in the modern lambing shed. Unfortunately we are seeing a lot of resistance of disease causing bacteria to antibiotics. The results of a recent study into how effective certain antibiotics were to E. Coli, the bacteria that causes watery mouth, are shown below.

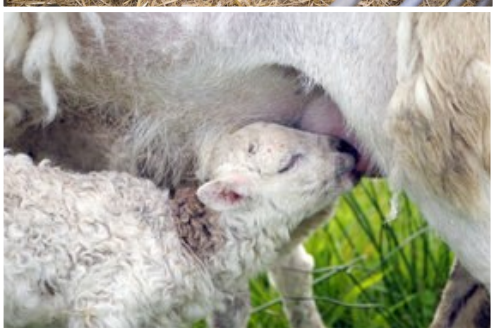
Resistance to Watery Mouth—E.coli		
PRODUCT	**ANTIBIOTICS**	**RESISTANCE**
Terramycin	Tetracyclines	52.5%
Spectam	Spectinomycin	29.8%
Synulox	Amoxycillin clavulanate	23.7%
Norodine	Trimethoprim sulphonamide	13.9%
Oroject	Neomycin	11.2%

This means up to half of the commonly used antibiotics are not working for watery mouth on our sheep farms!

This is a scary fact! We need to slow down the development of resistance and protect the drugs that are still working on our individual units. Consideration of some of the following points will achieve this:

- **PREVENT PATHOGENS INFECTING THE LAMBS:** Dip navels twice in strong iodine, disinfect feeding tubes, teats and bottles in between lambs. Keep pens as clean and dry as possible, use lime or antibacterial powders when the pens can't be completely cleaned out and dried.
- **USE DRUGS THAT ARE EFFECTIVE FOR THE DISEASE:** This is achieved by sampling the first case of watery mouth or Joint ill in the season to get an accurate diagnosis identify the pathogen and demonstrate which drugs are effective. It is best to sample a lamb before treatment to get accurate results.
- **FOLLOW THE MANUFACTURER INSTRUCTIONS:** Administer medications as instructed by the manufacturer ensuring the correct dose is given and the medicine is stored correctly. Using low doses or partially effective antibiotics speeds up resistance.
- **USE TARGETED PREVENTATIVE ANTIBIOTICS** (such as Spectam, Orojet, Terramycin etc.) only on the vulnerable lambs not likely to have had enough colostrum such as triplets and hard lambings. Blanket treating every lamb speeds up resistance hugely. Consider waiting until later on in lambing time when there is a build up of pathogens before you start using preventative antibiotics at all.
- **TARGET SPECIFIC DISEASES** such as Joint ill by knowing your farm trigger factors and using antibiotics at the correct time. On many farms the Joint ill bug isn't infective in the first few days, your antibiotic given to a newborn is days too early.

This year the majority of our ewes are in good BCS coming into lambing so the colostrum quality should be at its highest. This is the year to start your targeted use of antibiotics!



THE FACTS ABOUT COLOSTRUM SUBSTITUTES

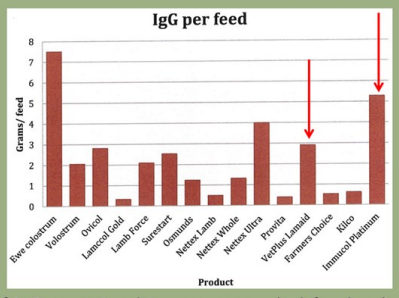
Lots of colostrum facts in last months newsletter which you can find on our website if you haven't filed your copy carefully!

COLOSTRUM

	Ig G level
Lamb Requires	20g
Good Ewe Colostrum	50g/l
Ewe Colostrum 6 hrs Lambed	30 g/l
Good Holstein Colostrum	35g/l
Good Quality Artificial Colostrum	20g/l

This months topic is what is the best colostrum to use? The answer is undoubtedly ewe colostrum! To compare substitutes we have to think about Ig G levels which is the protein that passes on immunity and fat levels which tells us how much energy is available. Ewe colostrum has 50g IgG and 15% fat. Goat colostrum is higher in fat and close to ewe colostrum in constituents so is a great alternative if you can source it. Cow colostrum has a lower energy density which means a lamb needs 30% more for energy levels. A factor to remember is that lambs can be allergic to some cow colostrum (it causes anaemia and death). The cow's colostrum can be tested for antibodies involved in this allergic reaction.

COLOSTRUM



Mass of IgG contained in recommended feed volumes of colostrum supplements.

Freezing goat or cow colostrum is a great way to have reserves in place. A top tip is to freeze it in a freezer bag laid flat, it will thaw faster than if frozen in a tub. Remember that boiling colostrum or thawing it in the microwave will damage the proteins and the antibodies in the colostrum won't be effective.

The quality of powdered colostrum varies hugely. The best have only half as many antibodies as ewe colostrum! This means they are better than nothing but not ideal as a replacement for ewe colostrum. Topping up well fed lambs with powdered colostrum probably isn't **best practice as you are really just diluting the good stuff.**

COLOSTRUM SUMMARY

Lambs require 50ml/kg in first 6 hours birth of good quality ewe colostrum

200ml/kg in first 24 hours

Lambs need 20g IgG for a good immunity

ABORTION CONTROL IN SHEEP

Any farm experiencing over 2% of ewes either aborting or lambing prematurely is likely to have an infectious cause of abortion present in the flock. It should always be assumed that every ewe that aborts is potentially contagious to other sheep and to isolate her from other ewes and to remove any aborted lambs and afterbirths as soon as possible. Even if the flock is fully vaccinated for Enzootic abortion there are other infections such as Campylobacter and Salmonella which make isolation essential to prevent spread from ewe to ewe. Be aware that many of the causes of abortion in sheep can potentially infect humans as well and that strict hygiene measures such as wearing gloves should be observed when handling abortion material. Anyone who is pregnant should stay well away from sheep at lambing time.

It is important to have samples from aborted lambs and afterbirths tested to determine the cause of the problem as control measures will vary depending on which infection is present. If enzootic abortion is found, antibiotic treatment of the group may be justified to reduce the number of further abortions this year until a vaccination programme can be implemented next year.

If you wish to have abortion samples investigated please phone the surgery first to discuss which samples will be most appropriate for testing. Samples must be packaged in leak proof containers and labelled with your surname and the farm name. They **MUST** be left **OUTSIDE** in the yellow salt bin by the Portakabin and a member of reception informed.

LEPTOSPIROSIS AND BVD VACCINATIONS FOR CATTLE PRIOR TO TURNOUT

In the spring, prior to turnout, is when the majority of breeding cattle are vaccinated to give protection against BVD and Leptospirosis. This year the unusual spring like weather in February combined with diminishing silage stores could mean that turnout is earlier than usual. In addition to single annual boosters for animals already in a vaccination system, previously unvaccinated animals may require a course of 2 injections approximately 4 weeks apart to become fully protected (Bovela BVD vaccine just requires a single injection followed by annual boosters) for both BVD and Leptospirosis.

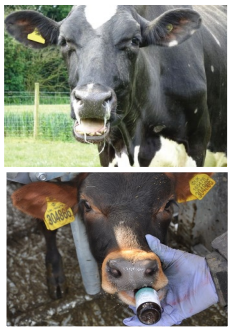
It is recommended to complete the initial vaccination course prior to service so consideration needs to be given to which animals are going to be served through the summer. It is particularly important that BVD vaccinations of replacement stock are completed prior to service to avoid infection of susceptible animals during the first 3 months of pregnancy leading to the production of PI (persistently infected) calves.

There are likely to be supply problems with Leptavoid H leptospirosis vaccine this spring (we also have some supplies of an alternative vaccine Spirovac) so it is recommended to order your vaccine early as when existing Leptavoid/Spirovac stocks are used we are not expecting any more until May.

For further information on appropriate vaccination protocols for your cattle this spring please speak to one of the farm vets.

HUSKVAC

Husk is caused by the parasite *dictyocaulus viviparus* as grazing cattle eat larvae on the pasture and these migrate to the lungs through the diaphragm, where they block airways and cause damage. The larvae mature to adults whilst in the lungs and lay eggs which hatch out to form new larvae. The new larvae are coughed up and swallowed back into the rumen – these are then shed in the faeces completing the infection cycle. Once a farm has lungworm, cases will recur due to larvae over wintering on pastures and cows carrying larvae through the housing window.



Clinical signs of husk include:

- Coughing
- Increased breathing rate
- Difficulty breathing
- Loss of body condition
- Milk drop
- In severe cases, rapid death

Youngstock in their first grazing season and adult cattle that have not been recently exposed are at high risk of developing severe clinical signs when they come across lungworm as they have no protective immunity to the parasite. A natural immunity develops once animals have been exposed to low numbers of larvae. If adults are grazed each year then their immunity is boosted annually.

Huskvac is a vaccine made of live but irradiated 3rd stage larvae. These stimulate antibody production against the parasite without causing clinical signs. The only method of protecting animals against lungworm is to vaccinate cattle due to be grazed for the first time before turnout

All cattle should be vaccinated before their first grazing season from 8 weeks old with a course of 2 doses, 4 weeks apart and the 2nd dose 2 weeks prior to turnout. This means that the course should be started a minimum of 6 weeks prior to turnout. If cattle have been previously vaccinated but not exposed to the parasite through grazing, then they can be boostered with a single dose 2 weeks before turnout.

DO NOT USE ANY WORMER IN VACCINATED CATTLE FOR 2 WEEKS AFTER VACCINATION AS THE WORMER WILL KILL THE IRRADIATED LARVAE.

ORDER YOUR HUSKVAC FROM US NOW, TO PROTECT YOUR CATTLE FOR THIS COMING GRAZING SEASON.