Kite update
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New born calves and the importance of colostrum

By Geraint Jones
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The calving yard is a source of pathogens that can cause calf diseases so regular cleaning out, disinfection and bedding are vital. Immediately after birth calf navels should be dipped with iodine to prevent bugs entering the blood stream before colostrum has had a chance to take effect.

At birth calves are unprotected against infection which is why colostrum is so important. Ensure that calves receive at least 3 litres in the first 6 hours of life and, where possible, within the first hour after birth. For maximum protection feed 3 litres in 2 hours, with another 2-3 litres by 8 hours old.

Even when calves seem to be suckling well feed an additional 3 litres within 6 hours of birth as they need to suckle for at least 20 minutes to ensure adequate intakes. Calves that are slow or weak to suckle should be stomach

tubed to ensure they receive a sufficient amount.

The calf should then be removed from its dam as soon as possible after birth and once colostrum has been fed. Research at the University of Minnesota showed that calves removed from their dams less than six hours after birth had half the mortality rates of those exposed to adult manure for twelve hours.

Evaluating Colostrum

Ideally colostrum should come from the calf's own dam, but individual cows have varying levels of immunoglobulin in their colostrum, some at levels that are too low to provide adequate protection. A hydrometer aids the evaluation of colostrum by measuring its specific gravity. Good material should have a specific gravity of 50g/ litre or above. Having a frozen reserve of good quality colostrum is essential. It should be thawed in warm water at a temperature below 50°C. Colostrum quality is reduced with short dry periods, milk fever, pre milking before calving and induction of parturition.

Immunisation of pregnant cows and heifers will boost antibody levels against E. coli, rotavirus and corona virus.

TB, Johnes and IBR are all diseases that can be passed to the new born calves via the colostrum and this needs to be taken in to account when making health plans. For some, installing a pasteuriser might be a viable option to reduce the risk of disease transfer.

Monitoring the efficiency of Colostrum administration

Ensure that the colostrum administration protocol is clear to all staff. It is good practice to record feeding volumes and timing.

A valuable tool in assessing colostrum management is routine measurement of calf immunoglobulin levels from a random number of calves less than 7 days old. One such test is the Zinc Sulphate Turbidity test, once levels fall below 20 ZST units, failure of passive transfer has occurred and the calf will be more susceptible to disease-causing bacteria, leading to scour and pneumonia. The table below gives the range of ZST units and the associated levels of protection that can be expected.

Zinc Sulphate Turbidity Units	Amount of Absorption	Calf Protection
0-5	minimal	none
6-14	inadequate	minimal
15-20	moderate	moderate
>20	adequate	good

Good colostrum management is the key to a good start in life and the first step towards raising healthy heifers.

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Outlook for the red meat sector

By Ewan McCombe
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With the outlook for dairying looking better for 2010, we take a look at how other livestock enterprises are likely to fare over the next twelve to eighteen months.

Beef

The outlook for beef producers is good in the medium term due to a decrease in supply and a beneficial exchange rate.

UK beef production self-sufficiency has fallen from 109% to 80% over the last 15 years and this is predicted to continue with the UK beef herd decreasing by 3% annually. Historically the majority of beef was sourced from the dairy sector, however, this is now at an all time low of 50% as dairy cow numbers contract, with the remainder being sourced from suckler beef.

At present, exchange rates are working in favour of the UK, making imports expensive and exports cheaper. In addition, the current embargo on Brazilian beef, due to traceability issues, has increased demand for domestic supply.

Going forward, the decline in production is likely to continue. The nature of the production cycle suggests that any upturn in supply will not occur until at least 2011, whilst consumption is predicted to remain robust. This, coupled with no reversal in exchange rates forecast in the medium term, suggests continued buoyancy in beef prices over the next 12 months. However, prices will remain volatile given the dependence on exchange rates. It is also worth noting that even though prices are higher than in 1990, producers are receiving less in real terms now due to inflation.

Sheep

The UK breeding flock is falling by 5% per year, mirroring trends in Europe and New Zealand. The fall in the UK is primarily driven by a reduction in the hill flock, which has its own implications for our stratified sheep production system. A shift away from hill ewes has driven up rearing rates (due to higher lowland rearing percentages) but these are insufficient to halt a decline in the lamb crop, dropping by 4% in 2009.

Again, because of exchange rates and a fall in supply, UK prices have risen above those seen in recent times, with highs in 2009 of 430p/kg/dw. Demand for lamb has also held up, although there has been some slowing during the economic crisis. As long as exchange rates remain favourable, prices are forecast to hold their current position.

Pigs

After many lean years, there is currently a renewed vigour in the pig sector as a result of better prices, lower costs of production (particularly feed) and significant improvements in efficiency. In 2008 this resulted in the first increase in the size of the breeding herd since 1997.

Without the buffer of a single farm payment, pig producers have long been at the mercy of the open market and as a result are now very efficient. The scale of technical improvement is notable: since 2003, an increase of 30% in pigs per sow per year has contributed to a 33% increase in pigmeat per sow per year.

Deadweight prices peaked in August 2009 at 155p/kg – a 15 year high, benefitting producers who, in the same time period, have seen a 7kg increase in carcase weight and also increased slaughterings as a result of the PCV2 vaccine. Decreasing production costs in 2009 brought UK pig farmers closer to those of their European competitors and combined with a favourable exchange rate has resulted in a welcome return to profitability for many producers which is forecast to continue into 2010.

Summary

- Since decoupling, profitability is closely linked to market forces with the primary driver being the exchange rate
- We have “exported” our beef, sheep and pig industries to satisfy the demand for cheap food
- Exchange rates favouring exports at present therefore demand for UK meat and consequently prices have risen
- The dominant effect of the exchange rate is likely to cause volatile “boom and bust” cycles for these sectors
- Falling producer numbers leave tremendous scope for improved technical and business performance, as seen by the pig sector, to enable survival during hard times and profitability in boom times

NVZ update

By Paul Macer
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Appeals

These have had quite wide coverage in the press of late and many appeals against inclusion in the NVZ have been upheld. Although the closing date for appeals was last January they are only being heard and announcing the results now. Although it is too late to make a new claim for incorrect inclusion, any farmer in a river catchment area making a successful appeal might mean that other local farmers could also be exempt. Keep up to date with what is happening on a local level in case it affects you.

Purple Patches

These are areas that were designated as NVZs in 2002 but did not trigger the criteria at the last review as Nitrate levels in the water had reduced. Most of the areas have been maintained as NVZs on a precautionary basis. These areas have been given an extension until 1 January 2013 to comply with the storage regulations, but still have to comply with all the other aspects of the legislation. If they are de-designated at the next review then they will no longer be in an NVZ and will not have to comply with the regulations. If, however, the areas are not de-designated then sufficient storage for the closed period will have to be in place by 1 January 2013 and all other areas complied with in the meantime.

Derogation

A successful appeal for a derogation will allow farmers to increase the total farm loading up to 250kg organic N/ha as opposed to the 170 kg permitted as the base level. In order to qualify for the derogation the farm must have a minimum of 80% of the land down to grass. This can include grassland that has less than 50% clover inclusion and more importantly will cover other crops that are undersown with grass. Current advice received at the NVZ meetings at the end of last year suggests that as well as cereals this could also include maize undersown with grass.

There are a number of extra requirements that have to be met in order to apply for the derogation including :

- Nutrient management plans for N and P
- Need to sample phosphate levels every 4 years
- Records of organic manure applications (where, when and how much) have to be submitted to the Environment Agency by 30 April of the following year
- Rules on ploughing out grassland

Full details can be found on the defra website.

For many farms in areas of high livestock density this does provide the possibility of increasing the N loading significantly and will be worth investigating further. Applications will have to be made annually to the Environment Agency and need to be lodged by 31 March 2010. The authorities have made it clear that not every application will be successful.

Fertiliser Planning

Although most farmers are aware of the majority of the requirements for the NVZ regulations, one area that is not always fully understood is the Planning of Nitrogen. The full details can be found in Leaflet 6 of the Guidance for Farmers in Nitrate Vulnerable Zones, but essentially every field should undergo an individual four step planning process and then a record of the actual applications must also be kept.

The four stages required are:

1. Calculate the amount of N in the soil that will be available to the crop during the growing season - the Soil Nitrogen Supply (SNS)
2. Calculate the optimum amount of N that should be applied to the crop taking into account the SNS
3. Calculate the amount of N from any planned applications of organic manure that is likely to be available for crop uptake during the season that it is spread
4. Calculate the amount of manufactured N that is required to make up the balance

Cross Compliance Reminder

Make sure that your Soil Protection Review for 2009 has been completed. This is one of the most common reasons for failure of a cross compliance check and with the RPA now imposing harsher penalties will probably lead to a 3% reduction in your Single Farm Payment if not filled in.

Fat dry cows and associated health problems

By Tim Davies
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Management of the dry cow period is critical to achieving high milk yields, good fertility and conception rates. A lot of health and fertility problems in early lactation are caused by cows becoming too fat prior to calving.

Holstein cows are not very good at dealing with excess fat and it can be hard to see as it is largely stored around their internal organs. However, if a Holstein cow is carrying more than condition score 3.5 in the last 4 weeks of pregnancy, the fat moves to the liver in the run up to calving, causing fatty liver and a build up of toxic ketone bodies including non esterified fatty acids (NEFAs). Ultimately this can cause ketosis or acetonaemia, but at the sub clinical level, fat mobilisation and raised NEFAs in the run up to calving causes profound immune system suppression.

A cow with a suppressed immune system is vulnerable to retained placentas, metritis, mastitis and displaced abomasums. Immune suppression is increased as the cow becomes fatter (even at slightly over CS 3.5), the feeding or facilities become poorer and fat mobilisation becomes greater. It is not unusual to see cows calving at condition score 3.5 or greater, and then falling to condition score 2 or less within two months. If a cow loses more than one condition score after calving, her chances of getting back in calf fall to less than 17%. Also displacements, retained placentas, metritis and mastitis all add 30-40 days to the time it takes to get the cow back in calf. Research shows Holstein cows are healthiest and most productive when calved down with a condition score of 2.5 to 3.

What can you do to stop cows getting too fat?

The best advice is to prevent cows gaining fat during late lactation. To achieve this, avoid over feeding in late lactation, and dry any fat cows off early at 12-14 weeks pre-calving. Give them a diet of ad lib straw with 50g dry cow mineral and either 0.5kg of a high protein feed or a maximum of 10kg grass silage.

You should not try slimming cows down in the last 8 weeks of pregnancy as weight loss at this stage will trigger a whole host of problems. If you have fat cows in late pregnancy, then feed them to maintain condition and prevent weight loss.

Cows dried off at condition score 3 should not be fed ad lib silage as this can easily lead to weight gains of 1 kg/head/day. Instead provide them with good facilities, plenty of straw yard space (minimum of 80 square foot/cow) or plenty of spare cubicle space, and 28-30 inches of trough space on a low energy, high fibre diet.

Managing the dry period carefully in order to calve down healthy cows leads to less disease and fertility issues in early lactation, ultimately resulting in healthier and more productive animals.

Most transition problems are associated with excessive negative nutrient (energy) balance

New recruits...

Kite continues to grow and and we would like to welcome three new recruits to the team. Paul will be working on special projects, initially focusing on wind turbines. Cath is joining our consultancy team in the North West and Wales and Geraint will be working in a similar role in South and Mid Wales.

Paul Fox

Cath Woods

Geraint Jones

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