Management Notes

cafre
College of Agriculture, Food & Rural Enterprise

Dairying

Christopher Breen

Calf housing and management

Good calf and housing management is essential to achieve performance targets. The main areas to address are:

- **Hygiene -** thoroughly clean the shed and disinfect with a broad spectrum disinfectant before calves are born. While in use, pens should be frequently disinfected to prevent the buildup of disease organisms. The flooring/bedding also needs to be able to facilitate easy cleaning and removal of waste. Ideally bed calves every day and clean out pens weekly.
- **Drainage -** waste should not drain from one pen through another as this can spread disease. Improve drainage on concrete floors by having at least a 1:60 slope towards a channel.
- **Ventilation -** fresh air delivery should come from natural ventilation with additional fan ventilation provided if necessary. If natural ventilation is not sufficient to provide adequate air movement during the critical periods of damp calm weather, a fan and duct system should be fitted. Only use an extractor fan system in buildings with a low volume and a small number of inlets in the walls. Fan and duct ventilation systems are inexpensive to buy and run and can provide fresh air to all corners of a building. A calf house should have at least six air changes per hour. Micro-organisms die off more quickly when relative humidity is below 80%. However, relative humidity levels above 85% could occur during damp, dark days. Air space is also critical in calf housing. A minimum of six cubic metres total air capacity should be provided per calf at birth, increasing to ten cubic metres by twelve weeks of age. The greater the number of calves in a single air space, the greater the risk to health.
- **Moisture level -** this can be controlled through the use of sloped floors that ensure good drainage, fixing any leaks and good ventilation. Providing calves with a dry lying area by using a deep bed of straw will also help. Straw is superior to other bedding material in terms of insulation value. It has a high 'nesting score' which provides a preventative effect against calf respiratory disease in naturally ventilated sheds. Straw bedding should be at least 15cm deep and should be kept dry at all times. To reduce the amount of heat lost from calves their legs should not be visible when lying in the straw, especially during cold weather.
- **Air speed -** fresh air is an essential requirement for good health but draughts must be avoided at calf level. Fresh air delivery not only picks up aerial contaminants such as dust, fungal spores, gases and airborne pathogens, it is also an excellent biocide. Fresh air kills airborne bacteria and viruses ten to 20 times quicker than stale air.

Good calf housing and management is key to ensuring performance targets are achieved

November jobs checklist

- Identify cows to dry off in the next two months and assess body condition. Feed cows with a body condition score less than three additional concentrates to improve condition.
- Assess body condition of young stock, especially maiden heifers. Will they be in the right condition for service? Do you need to increase the feed rate?
- Carry out any vaccinations due, for example BVD, well in advance of the breeding season.
- Select suitable bulls to achieve long term breeding goals.
- Calibrate parlour and out of parlour feeders to ensure accurate feeding.

CAFRE Calf 2020 Sustainable calf rearing webinars

CAFRE are planning to host a series of three Calf 2020 online webinars. These will be held on consecutive Thursday evenings starting at 8.00pm on 19th November. The webinars will cover various aspects of the design and management of the new CAFRE Calf Unit. For more information, please see the news and events section on the CAFRE website: www.cafre.ac.uk.

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https://www.daera-ni.gov.uk/landing-pages/daera-and-covid-19

Beef and Sheep

Nigel Gould

SUCKLER COWS

Assessing body condition

Body condition is scored on a scale of 1.0 to 5.0, with 1.0 being emaciated and 5.0 obese. One body condition score (BCS) in a suckler cow equates to 70-90 kg of live weight. The target BCS for spring calving suckler cows is 3.0 at weaning (mid-pregnancy), 2.5 at calving and at least 2.0 at mating. Body condition scores of 3.0-3.5 may be more common this year at housing where cows had access to good supplies of quality grass during the grazing season.

Pen suckler cows according to BCS and feed accordingly. Silage analysis is useful for determining the quality of different silages on the farm. This allows quality silage to be fed to priority stock such as thin cows. Allow excessively thin cows unrestricted access to moderate to good quality silage. Cows in good body condition can be offered a restricted allocation of silage to either reduce or maintain body condition. Unless silage is of poor quality, allowing unrestricted access will result in cows putting on more condition. This may increase the incidence of calving difficulty, which in turn may negatively affect subsequent fertility and calving interval. Restricted and supplementary feeding need to be carried out in good time to ensure all cows are at their target BCS six to eight weeks before calving. Underfeeding in the last six to eight weeks of pregnancy will lead to increased incidences of weak calves at birth and cows with poor colostrum quality and quantity. Overfeeding in this same period increases the risk of heavier calf birth weight and a higher level of calving difficulty.

SHEEP

Parasite control in sheep

Mature ewes should have a good resistance to stomach worms. Some farmers dose ewes for these worms just once a year, with some only dosing young ewes or those in poorer body condition. Strategically avoiding the treatment of sheep which don't require it reduces the threat of a population of worms developing which are resistant to a particular type of wormer. As ewes do not develop resistance to liver fluke, dosing for fluke using a suitable product needs to be considered. Multiplication of the intermediate host, the mud snail is helped by wet weather. There are two forms of liver fluke; acute and chronic. Acute fluke affects sheep, mainly in autumn, while chronic fluke affects both sheep and cattle. Acute liver fluke disease is caused by the migration of a large number of immature flukes through the liver. This can be severe on the animal and cause death. The chronic form can persist through the year but mainly occurs in winter and spring. It results in reduced thrive and in some cases animals can show swelling under the jaw. Talk to your vet about an appropriate fluke drenching programme. Ideally this should include the analysis of faecal samples initially to identify if treatment is required. Sustainable Control of Parasites in Sheep (SCOPS) is an industry led initiative which promotes best practice in the control of parasites. It provides regular forecasts for the likelihood of infection during the year. For more information, please visit: www.scops.org.uk

Flock breeding season coming to an end

The tupping season will soon be coming to an end in most mid-season lambing flocks. Continue to monitor ewes closely for evidence of a high repeat rate as it will soon be too late to take any action. The use of a raddle on rams is the most effective way of identifying repeats. Keep a close eye on anything which can affect the rams tupping ability. Lameness is reported as being more of an issue in some flocks this year which could pose a threat. Where a ram lamb is being used, pay particular attention. Ideally, ram lambs will have been used on mature ewes and a mature ram mated to ewe lambs. When rams are finally taken out ram lambs and thin rams in particular may need some preferential treatment.

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Finance

Martin Reel

Are you thinking about tax?

As we are now in late 2020 it's a good time to think about how the farm business is going to look at end of the 2020/21 tax year. There is still plenty of time to plan how to manage your tax liabilities for the current year and plan for the year ahead. If you haven't already done so, I would recommend you make an appointment with your accountant or tax adviser.

It is important to consider options for reducing your tax liabilities and using any money available wisely to benefit your business. If you are reading this thinking you will be faced with a significant tax bill this year, it is a good sign; tax means you have made a profit.

Paying off debt

Over the last few years, many farm businesses had to extend overdrafts and merchant credit in order to manage cashflow. Paying off debt when you can is important. We don't know what the markets or weather will throw at us in the years ahead so it is better to repay debt in the better times to reduce the financial burden in the hard times. Speak to your bank manager and work out a plan to pay off your debt when you can.

Capital investment

The Annual Investment Allowance was increased from £200,000 on 1st January 2019 to £1 million until 31st December 2020. This makes investing in plant or machinery an attractive option for reducing your tax liability. It is good practice to have a machinery replacement policy for your business to allow you to plan ahead and structure your capital spending. Any proposed purchases require careful consideration; is it needed and is it part of a plan? It does not make financial sense to buy equipment for the sole purpose of reducing your tax bill! In most cases, repayments will be spread over several years and cashflow must be available to cover those costs going forward.

Pensions

The Government encourages us to save for our retirement by providing tax relief on pension contributions. For personal pensions you pay income tax on your earnings before you make a contribution to the pension. However, your pension provider will claim back, at the basic tax rate of 20%, your contributions from the Government, adding it to your pension. If you are paying a higher rate of tax, you can claim the tax back either through your tax return or by contacting HMRC. Your accountant or financial adviser can also advise you on options for setting up trusts for your children or grandchildren.

Charitable giving

Making a donation to a registered charity is perhaps something you already do. If you are a sole trader or a partnership you can take advantage of the tax reliefs on gifts of money to charities and can claim them on your Self Assessment tax return.

Paying tax

Remember you pay only a proportion of your profit in tax and the rest can be saved or invested for when you really need it. The deadline for paying tax is 31st January for tax on profits made in the previous tax year. For example tax due on 31st January 2020 is tax owed on profits made during the 2018/19 tax year. Your tax demand may also include a 'payment on account' which is the first of two estimated part payments for the current tax year's liability. The second 'payment on account' is due on 31st July each year. It is important to remember that tax owed on a year when profits are good is often due during a year when profits are lower. It is therefore important to budget for your tax payments.

If your business is unincorporated you have the option to average profits for tax purposes over any two or five consecutive years with the averaged figure being used to work out income tax liability. As farming incomes can be significantly volatile between one year and the next averaging works to iron out these peaks and troughs. Averaging profits over the relevant number of years and treating the average profit as the taxable profit means you can offset good profits in one year against smaller profits or losses in another. This reduces the risk of a business being hit by a high tax bill in a bad year, when cashflow might be tight and in some cases they can even generate tax refunds.

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Horticulture

Kieran Lavelle

Growing media alternatives

A growing media is a substrate which provides a structure for plant growth and establishment. At present peat is the most commonly used substrate in the horticulture industry. It is a suitable growing media as it is consistent in it properties. The use of alternative substrates will need to be considered more readily as the drive towards sustainability and environmental awareness heightens. With peat harvesting becoming more limited and concerns of environmental impact, a scarcity can be predicted.

The most common peat alternative substrates are:

- **Wood fibre -** a processed by-product of the timber industry with a wool like material in texture. This works best up to 30% of the mix and can improve air filled porosity of the media.
- **Coir -** a by-product of the coconut industry. The most commonly used peat alternative currently available and can be used up to 100% in substrates. It is used frequently as a complete substrate or as a majority percentage of a substrate. It has poor nutrient holding abilities but has excellent water holding capabilities.
- **Composted bark -** a process of biodegrading another by-product of the timber industry resulting in a compost material which works up to 30% of a substrate. It can be a dense and bulky material so a smaller percentage is added to most substrate mixes. There is an issue ensuring that all properties of the substrate remain consistent.

When moving from a peat based growing system to a peat reduced or peat free system it is important to carefully manage nutrients.

Fungal or bacterial spot

Leaf spots are caused by fungi and bacteria. These can seriously affect the quality of plants and are the most common problem encountered by ornamental growers. Fungal leaf spots are commonly caused by fungi that belong to the genera Alternaria, Cercospora and Colletotrichum, with bacterial leaf spots linked to the pathogens Pseudomonas syringae and Xanthomonas campestris.

Fungal leaf spot

Bacterial leaf spot

The range of organisms affecting the plant can be narrowed down as in many cases plants have 'signature' diseases, for example cyclamen are prone to Colletotrichum infections. The signs (physical evidence of the growth of the pathogens) and symptoms (impact of the disease on the plant's growth and development) can further narrow down the pathogen responsible. Signs of a fungal pathogen include the white hyphae and fruiting bodies (rust pustules) that can appear on the plants. Unfortunately, even though a fungal pathogen is suspected, no visible signs are detected as the pathogen has not developed sufficiently. One option to enhance the chances of seeing signs of fungi is to use a moisture chamber. This can be a simple box with a layer of moist paper in the bottom. If a piece of infected plant tissue is placed in the box and the box sealed and kept in a warm place, mycelia growth or fruiting bodies can appear within two days. This approach works best with spots or blights in the early stages of disease development.

The shape, appearance and smell of leaf spots can also be used to help differentiate between fungal and bacterial pathogens. Fungal leaf spots tend to be circular, with a target like appearance and many having a yellow halo around the circumference. Fungal leaf spots also tend to create dry, papery dead tissue and do not have any smell. In contrast, bacterial leaf spots tend to be angular, with the limit of their growth dictated by the leaf veins and the spots tend to be water soaked, have a slimy texture and often produce a fishy or sour smell.

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