

Management Notes



Christopher Breen

Dairying

Cows at grass

Last month I encouraged you to get your cows out. Poor ground conditions in many areas may have limited access to grazing. However, now that the time has changed and ground conditions are more suitable, your cows should be going to grass straight after morning milking and grazing for half a day. A 'crash' in milk yield is a concern when turning cows out to grass. So how can you maximise daily yield and remain feed efficient on your farm this spring, when the yield of individual cows can vary from 15 to 60 litres? In a herd where the calving pattern is spread out, batching your cows into yield groups will help. Use milk yields to sort cows into groups for:

| | |
|------------------------------------|--|
| Grazing full time | Lowest yielding/ late lactation cows |
| Grazing by day and housed at night | Mid lactation cows |
| Housed full time | Freshly calved/ highest yielding cows |

For the grazing group the ration M+ will depend on the grass supply and quality. For the partial grazing or full time housed groups formulate the ration M+ so that the lowest yielding cow in the group is not overfed. The M+ will change as cows are moved from housing, through partial grazing to full time grazing.

Aim to have your grazing rotation fully established by the third week in April. Full time grazing will then have the potential to provide the nutritional requirement for cows yielding up to 22-25 litres but this will depend on both weather and grazing conditions. The table in the next column shows a practical spring transition. This can be fine-tuned based on the daily milk sales and concentrate levels fed.

Drinking water

As a rule of thumb cows require five litres of water for every litre of milk produced. Around half of the herd's daily water

| | Ration | Parlour feeding above M+ (litres) |
|-------------|--|-----------------------------------|
| Early April | Few hours grazing after morning milking | M+ 10 |
| Mid April | Quality grass by day and silage by night | M+ 15 |
| Late April | Good supply of quality grass full time | M+ 20 |

requirement is consumed after each milking. It is therefore important to provide adequate trough capacity and water flow rates to meet demand. Any restriction in water supply will impact on milk yield. There should be enough



Provide adequate trough capacity and water flow rates to suit demand

trough space for 10% of the herd to drink at any one time and each drinking cow needs 700 mm of trough space. Position troughs within the grazing area if yield is not to be restricted. The lip of the trough should be 850 mm above ground level and the water level should be 50-100 mm below the lip.

Nitrogen for silage

A splash-plate application of 33 cubic metres per hectare (3,000 gallons per acre) of cow slurry, preferably applied by trailing show or hose, in March will have supplied enough phosphate and potash for first cut silage at typical silage field soil indices. It will also have provided some nitrogen (34 kg per hectare), for grass growth but there is still a requirement for nitrogen fertiliser. You should now apply up to 90 kg of nitrogen per hectare (70 units per acre) to fields for first cut silage.

April jobs checklist for spring calvers

- Prepare for the forthcoming breeding season. How good are your heat detection rates? Can these be improved? Have you selected suitable bulls to achieve your long term breeding goals?
- Assess condition of young stock, especially maiden heifers. Will they be in the right condition for service?
- If not already done, adjust time clocks now that the hour has changed.



Nigel Gould

Beef and Sheep

Turning out cattle

Turn out cattle to grass as soon as grass covers, ground and weather conditions allow. As ground conditions may still be poor due to the higher than average rainfall earlier this year target lighter, priority stock such as weanlings and light stores. Where cows and young calves in particular are being turned out, target the most sheltered areas of the farm where possible. Allow autumn born calves and those born at the start of the year to graze areas close to the sheds during the day. They can then return to their mothers at night. For autumn born calves this can facilitate a gradual weaning process, reducing

the cow calf bond. Turn cattle out first thing in the morning where possible. This allows them time to adjust body temperature to adapt to cooler night time temperatures.

Start the grazing season with lower stocking rates without allowing stock to roam over large areas. Try to graze down tight for the first grazing. If this isn't possible, tight grazing in the second rotation will be required to remove any dead material from the base of the sward. This is key to maximising grass quality in subsequent rotations.

Fertiliser and slurry applications

Poor ground and weather conditions delayed slurry and chemical fertiliser applications this year. If not already applied, spread fertiliser and slurry based on recent soil analysis. However, avoid spreading slurry on heavy covers. Use the CAFRE crop nutrient calculator to develop a fertiliser plan for each field on your farm. This can be accessed online via your government gateway account. Soil index, field size and proposed cropping

details, for example first cut silage can be entered, along with the estimated volume of slurry to be applied where applicable. The programme then provides you with recommended amounts of N, P and K to apply. An appropriate fertiliser product can then be matched with the requirement. The recommended values are maximum values. Lower figures may be appropriate depending on individual circumstances.



Freshly calved cow and calf at CAFRE, Greenmount Campus, Beef and Sheep Centre

Paddock grazing

Where paddocks are being set up, lay them out in a square shape as opposed to long and narrow. This will reduce poaching in wet weather as stock tend to stay close to the boundaries. In early spring, opening covers of 2000-3000 kg dry matter per hectare are

acceptable. Later in the season, when grass growth is at its peak, follow the rule of threes: graze at the three leaf stage, graze for three days and graze again in three weeks. This means seven paddocks will be required. When the grass plant is grazed, it typically grows a new leaf each week. This varies depending on growth conditions, taking longer in the shoulders of the season. After the third leaf grows, the first will die. For this reason, grazing at the right time means minimal dead material in the sward resulting in higher sward quality. It will also serve to increase total utilisable annual dry matter yield.

Closing silage ground

Where silage ground is being grazed, aim to close it by mid-April at the latest. Late closing pushes harvest date further into June, at a time when grass naturally goes to seed, rapidly decreasing D-value and overall quality.

Grass tetany

Be aware of grass tetany (Hypomagnesaemia), especially on highly productive perennial ryegrass swards. It is caused by a magnesium deficiency and is made worse by heavy applications of potassium fertiliser which can 'lock up' available magnesium. High producing animals, such as lactating cows and ewes are most at risk, with wet weather often increasing its occurrence. As magnesium cannot be stored in the animal, daily intakes are required. Magnesium lick buckets and boluses are the most popular methods of prevention.



Kieran Lavelle

Horticulture

Top fruit scab control

Persistent rainfall during spring has left many orchards slow to drain and wet underfoot. It may take another week or two before alleyways are dry enough and the ground sufficiently firm to support a tractor for orchard operations.

The stormy weather did provide one unusual benefit in more exposed orchard sites. Last autumn's fallen Bramley leaves were blown away from below the trees by the winds and are no longer a direct source of apple scab spores as temperatures rise and buds break this month. Overwintering spore bodies in leaf litter have always been a serious issue in local orchards. In fact, growers who have recently tried to remove or mulch fallen leaves (as much as is practical) seem to find less scab disease pressure at the start of the growing season. This can be a slow, laborious task but has the great advantage of reducing total fungicide usage.

In recent seasons, spring was marked by high pressure weather with exceptionally warm temperatures at some point during March and April. This resulted in exceptionally rapid blossom expansion and leaf emergence. If this happens this year, it is wise to schedule shorter intervals between scab spray applications to ensure good foliar coverage in case wet weather conditions return which are conducive for fruit and leaf scab development. Highly active systemic products or quality protectants are always worth including in your programme when scab threat is significant. Scab spray applications are best applied when the temperature is over 5°C.

Routine control of apple scab through fungicide application during spring and summer is essential for business success in commercial apple production. The optimum interval between fungicide application and

thus the total number of applications during the production cycle depends on prevailing weather conditions and the associated incidence of Apple Scab Infection Periods (ASIPs). If you do not receive text alerts when Apple Scab Infection Periods are detected at AFBI, Loughgall and would like to receive them, please contact Kieran Lavelle, CAFRE, Senior Horticulture Adviser on 07990 575893.

Integrated crop management

With changes in pesticide legislation there has been an increase in pesticide resistance due to the increased reliance on fewer active ingredients. Rothamsted Research Centre has been monitoring pesticide resistance. They have identified that the peach potato aphid, *Myzus persicae*, has developed resistance to a range of pesticides such as DDT, organochlorines (including DDT, which was banned in the UK in 1984), organophosphates, carbamates (for example Pirimicarb) and pyrethroids. In France the aphid has developed resistance to neonicotinoids but not in the UK. This is of some concern to ornamental and strawberry growers as the peach potato aphid can cause considerable losses, not only due to direct damage to the plant but also the range of plant viruses (over 100) it transmits. However, the good news is that aphids that gain pesticide resistance are more susceptible to parasitoid attacks, which underlines the importance of having a good biological control programme in place. Seek professional advice from your biological



control suppliers as some parasitoids and predators are more effective against *M. persicae* than others. Levels of parasitoids can be sustained in a greenhouse through effective use of banker plants, which have been found to provide 90% control of *M. persicae* in an ornamental nursery. Also be aware that pesticides can affect natural enemies like parasitoids as well as the targeted pest. Check compatibility charts from companies that supply an integrated system of specialist knowledge and natural, safe solutions that improve crop health, resilience and production. This will ensure the selection of active ingredients that have the least impact on biological control.



Leigh McClean

Crops

CEREAL MANAGEMENT

Winter cereals

Most winter cereals will be due their second split of nitrogen at early stem extension Growth Stage (GS) 30-32, barley reaching this stage before wheat. Inspect crops for recently emerged broad leaved weeds applying top-up herbicide as temperatures warm up. As with all pesticides follow product labels paying attention to latest application timings, sequences with other herbicides and approved tank mixes with other products.

Disease control

If mildew and rhynchosporium infection is severe in winter barley keep fungicide rates high, particularly if no T0 fungicide was applied or T1 has yet to go on. The T2 fungicide should be applied around GS 39 when flag leaf has fully emerged and first awns are appearing. This should be no later than four weeks after T1. At both timings best performance comes with Prothioconazole or an SDHI in the product mix.

Where ramularia is a known problem Chlorothalonil was considered the most effective fungicide and advice was to include it at T2. The final use date for all Chlorothalonil containing products is 20th May 2020. Whilst most winter barley T2s will be applied by then, you will have to consider alternative products for spring barley this year and all barley crops from next season onwards. Prothioconazole or new active ingredient mefenftrifluconazole (Revysol) have shown useful activity against ramularia in trials.

In winter wheat if T0 fungicide has not been applied the T1 is critical to control Septoria. Apply around GS 32 when leaf three is emerging.

AHDB fungicide trials have shown a long term gradual decline in SDHI/azole activity on septoria tritici over recent years. Newly released product Revystar, containing a new triazole (mefenftrifluconazole) and established SDHI (fluxapyroxad), performs well against septoria in trials. It gives a step up in performance compared with other azole/SDHI products on the market. As T2 timing gives the



best return on fungicide investment, Revystar if used once in the programme is best applied at T2. Where disease pressure is low or on varieties with good septoria resistance like Extase or Graham, existing SDHI/triazole mixes at strong rates offer cost effective protection. Where Chlorothalonil is no longer available Folpet is an alternative multisite which still gives financial return and slows the pace of disease resistance developing in wheat and barley.

Spring barley

As we move through April gradually increase seed rate up to 400 grains per square metre. Plan to treat weeds in sown crops as soon as possible. Pre-emergence herbicides can help manage resistant broad leaved weeds such as chickweed and also target problem annual meadow grass.

POTATOES

Sprouting and chitting

Pre-sprouting systems must ensure adequate temperature, ventilation and light to control sprout growth and protect against frost. As seed planted now is for the main crop ensure the pre-sprouting system encourages multiple sprouting to produce many tubers which can increase in size over a longer growing season than with early varieties.

Diquat withdrawal

Following the withdrawal of Diquat consider alternatives for weed control and desiccation this season. A range of pre-emergence products offer good weed control, though for best results apply these as soon as possible after planting. If the window for pre-emergence herbicides has passed, contact herbicides such as carfentrazone (Shark) are an option.

It seems premature thinking about desiccation before planting but decisions taken now affect the ability of desiccants, carfentrazone (Spotlight) or pyraflufen-ethyl (Gozaï) to perform well at burn-down. These products can be effective on crops that are starting to senesce, but typically take one to two weeks longer to give the same effect as Diquat. Factors such as earlier planting and careful nitrogen management help canopies start dying back earlier and improve the probability of a successful burn-down without Diquat. If planting is delayed reduce nitrogen rate by 1.0 kg per hectare per day after planned planting date. Avoid late nitrogen applications which keep the canopy greener for longer.

Greening and EFA requirements

Both crop diversification and Ecological Focus Area (EFA) requirements remain the same as previous years. Whilst completing your single application online you will be notified of your greening requirements as part of the process. Doing this early gives you time to make adjustments to crop areas or EFA if necessary to meet greening, which represents approximately 30% of your entitlement value.