

Feeding in summer drought conditions

Introduction:

Soil moisture and high daily temperatures have begun to strongly impact on daily grass growth nationally, with growth rates on many farms falling below 45kg DM per day (PastureBase June 2018). As a result, average farm covers are beginning to drop below the target 160-170kg DM per cow. Given the prospect of sustained dry weather, it is important that prompt actions are taken to manage the situation.

Grazing management decision rules

- The main priority now is to reduce daily grass demand to below daily growth rate. This will help to hold grass cover on the farm, protecting current growth and speeding up recovery when rain arrives.
- Rotation length must be maintained at 25-27 days approximately. Effectively this means grazing no more than 4% of the grazing platform daily. Assess the grass available on this area and supplement with forage/concentrate to balance herd demand
- For example, a 140 cow herd is grazing 45ha (3.1 stocking rate). Max daily area allowed should be 1.8ha (4% of 45). If there is 1100kg DM per ha available then the paddock has $1.8 \times 1100 = 1980$ kg available. Herd demand is 2520kg per day, therefore 540kg of total supplement is required per day.
- In this example, holding total grass allowance to 1980kg equates to 44kg daily demand per ha day ($1980/45$). This will hold grass cover per ha reasonably well if growth rates are within 5-7kg daily. Larger deficits will rapidly reduce average farm cover.
- If there is larger deficit between growth and demand it will be necessary to temporarily reduce demand further by reducing grazing stocking rate and feeding extra silage.
- Increasing rotation length beyond 30 days may lead to much reduced grass quality in current conditions.
- Post grazing residuals of 4 to 4.5cm must be maintained , otherwise feed is being wasted
- Maintain fertilizer N at 25kg per ha after grazing. Risk of losses are low with CAN products. however if drought conditions persist to >60mm soil moisture deficit it is advised delay N until rain is forecast

Hints and tips on feeding out forage supplements in dry weather

Dry field conditions should make the task of feeding out much easier compared to spring. Each farm will have its own preference (based on facilities/machinery/labour) but the main objective remains to reduce total daily grass intake to the level of daily growth or below. Feeding forage will be necessary for many farms. Once the available daily grass is known, some options for feeding are:

- Separate a proportion of the herd and place on 100% silage plus meal in a convenient paddock. This may be a paddock marked for reseeding later in the year. A small area of fresh grass can be allocated to this group daily. Some farms have used a double temporary wire feeding rail to good effect. This approach simplifies grazing management of the main group.
- Offer silage to all cows in the grazing paddock, placing silage along perimeter fencing. This works best where feed can be allocated with a diet feeder. Total silage allocation should be calculated to balance available grass on the paddock daily. Forage should be spread along a long linear distance (1m per cow) to reduce competition and bullying.
- Hold a proportion of the herd in the yard for silage feeding after milking. These can be turned out with the main group after 3-4 hours feeding. This simplifies feeding out silage but in dry conditions there is a risk of injury due to slippery concrete floors
- High fibre straights can be offered PKE/hulls/pulp at a rate of 3-4 kg per cow. Some farms choose to feed these in mobile feed troughs in the field. Note that citrus pulp does not work well in this situation due to its lower NDF fibre content. Ensure full access to clean water.
- Whichever actions is chosen, it is vital act now to ensure that grass supply is stretched out as early as possible. If covers are allowed to drop too quickly, it will result in the entire herd having to managed on silage for a period. Grass recovery will also be delayed.
- Plan supplement until 4-5 days after growth exceeds demand. Assess feed plans with this in mind

Concentrate feeding guidelines: Parlour-fed concentrate will form a major part of daily feed allowance in drought conditions. Some decision rules are:

- Feed up to 5-6kg of parlour concentrate per day as part of an overall feed plan. This is a relatively safe level provided adequate forage and water are provided. A further 2-3kg of high fibre straights can be fed out-of-parlour.
- Purchase concentrate based on UFL value, targeting a value of >0.94 UFL on a fresh weight basis
- Ration crude protein should be decided based on overall composition of the diet. In normal circumstances a 14% high energy ration would be adequate at grass. However, in the current situation it is likely that lower protein ingredients will form a significant part of the diet. Also, where grass is drought stressed and lacking N uptake, it is possible that sward protein content could be lower than normal.
- Therefore, it is recommended that a 16% ration be used if grass intake is around 7 to 10kg per day. If the herd is placed on silage full-time then a high energy ration of 18+% will be needed in the short term. These targets are for parlour rations fed at 4-6kg.
- Be careful not to overfeed magnesium. A rule of thumb is that cows will tolerate up to twice the recommended allowance over a short period (100-120g per day). Above this level there may be issues with scouring as Mg has a laxative effect. Therefore if concentrate is formulated for a 2kg feeding rate then max feeding rate should be limited to 4kg

Decision rules on grazing silage crops

- Areas closed for silage and accessible for grazing with <2200kg DM covers may be grazed as a 'standing supplement'. Pre-mowing does not confer any advantage in this situation.
- Recent work on zero grazing in NI showed a significant drop in milk yield where heavy swards (2500 kg DM) were cut and fed, relative to cutting or directly grazing lower mass swards (<1600kg DM). The decision to zero graze should be based on pre-grazing yield.
- Overall, if silage swards have surpassed ideal pre-grazing herbage masses and are nearing cutting stage then it is preferable to leave for silage cutting at this stage.

Options to reduce milking herd demand ?

- Autumn calving herds can dry off stale cows 2-3 weeks early and feed off the grazing block
- Consider offloading problem cows (e.g. high SCC) that are already in line for culling
- Once daily milking (OAD) is known to help cows retain body condition at a cost of reduced milk solids output (15-20%). However this assumes that cows' intake is maintained relative to 2x daily milking. Where OAD milking is imposed in tandem with reduced feed intake, milk output may be reduced by >30%. OAD is an option to manage cows in severe situations but at this point the preferred option would be to supplement the required feed instead.
- Do not neglect youngstock. Total dry matter intake requirements are small relative to the milking herd but nonetheless adequate feed dry matter (2.0 to 2.2% of liveweight) must be offered daily



Temporary double wire feed rail for silage feeding



Feeding straights in mobile troughs