

*Messages:*

- ▶ **Steps to overcome drought conditions.**
- ▶ **Nitrogen: apply the 2nd last application, but use it wisely!**
- ▶ **You must reach target grass covers in August.**
- ▶ **This year should be a big August reseeding year.**
- ▶ **No/Low antibiotic use; the next 5 months vital in dealing with Mastitis.**
- ▶ **How can I be good to myself? No one else can control!**
- ▶ **Achieving replacement heifer targets delivers profit. Weigh them!**

**Overcoming Drought**

- ▶ Some parts of the country are suffering near drought conditions after recent dry, extremely warm weather.
- ▶ How do you define drought?
- ▶ The Farmers Journal every week, give the “Soil Moisture Deficit” for all areas around the country.
- ▶ At levels between 50-75mm, grass growth is restricted, but new research shows that it sets in at lower levels on light soils. Above 75mm drought conditions exist where no growth takes place. The recent high temperatures will have pushed many farms towards drought conditions.
- ▶ This information should be used to size up the growth potential of your farm and the actions you need to take. PastureBase is proving very accurate in predicting the following week’s potential grass growth.
- ▶ What should you do to compensate for poor growth due to drought? Measure grass twice every week.
- ▶ What to do! Keep grazing out paddocks until all grass is nearly used up.
  - ▶ This overcomes the dilemma as to the length of the drought and the steps you need to take to overcome it.
  - ▶ It ensures that no grass is wasted by leaving too much grass post grazing or in dung-pads or by wilting/decaying away in dry weather. Also, if you have “saved” a bank of grass and the rain comes it “rots” fast so that you lose a lot of grass.
  - ▶ Also, because there is a void for grass when rain comes, you can then feed meal/silage as a supplement.
  - ▶ But how do you extend rotations when grass is getting scarce until the rain comes?
  - ▶ Feed more meals, the amount can be calculated based on the amount of grass you have but it could rise to 3-6 kgs, or even higher. Research at Moorepark last drought showed dairy ration and soya hulls to be best.
  - ▶ Where high meals are fed (4kgs), feed a 16% protein ration.
  - ▶ Feed maize (some farmers may have it) as it would be ideal with grass.
- ▶ Graze silage ground. Think of zero grazing silage ground from an outside farm (cheap).
- ▶ If grazing silage ground (heavy covers) pre-cut it. Only cut one day’s feed at a time, being very careful to estimate the quantity made available to herd for the day. Remember a cow will eat 18 KgsDM per day and from this you calculate the herd demand.
- ▶ Feed baled silage where silage is plentiful. If it is very good, milk yield and protein will decrease very little (Moorepark).
- ▶ Reduce stocking rate now, if you have too many cattle sell them now, as it will reduce the demand for grazed grass now and winter feed later on. Cows not in calf fall into to this category also.
- ▶ What might seem a rather radical suggestion would be to go on once per day milking (OAD), as it reduces the demand for grass/feed, cow body condition will improve, milk yield will decrease 26% (MS/cow decrease by 20%), and work load will be reduced.
- ▶ Should you apply Nitrogen?
  - ▶ Yes, if some grass growth has taken place since last nitrogen was spread (20-35 units of CAN would be advised).
  - ▶ No, if little or no growth occurred since last spreading - soil moisture deficit of over 60mm.
- ▶ When the drought is coming to an end with the arrival of rain, and this is very important advice, it is then you need to be very pro-active:
  - ▶ Apply N immediately, remembering that it will take 3 weeks to have adequate pre-grazing covers.
  - ▶ So, you must continue feeding meal/silage so that the rotation is 30 - 35 days.
  - ▶ If you don’t do this you will have to house stock in Sep/Oct, which could put pressure on winterfeed stocks.
- ▶ Some of the suggestions made in this section will be appropriate for anyone who is “tight” in grass. Refrain from topping, as grass shortage means paddocks will be well grazed out. A few seed heads may look bad but in an overall context they have no adverse effect.
- ▶ **Water availability** is essential for animal welfare and performance:
  - ▶ Water is the animals’ most important nutrient,
  - ▶ When temperatures increase from 18 to 30 degrees celsius, water consumption increases by 29%,
  - ▶ Cows provided with shade during summer consume 18% less water per day,
  - ▶ Cows will drink at least 5-6 times their milk yield per day, more if eating meal or very dry roughage,
  - ▶ Limiting water availability severely and rapidly depresses performance,
  - ▶ Drinking rates vary from 1 to 3.5 gallons/minute,
  - ▶ As cows consume water up to 14 times per day it is important to have water available within 300 meters and it should be available at or near milking parlour.

**Use Nitrogen Wisely**

- ▶ Now is the time to take stock of how much Nitrogen you have used so far this year relative to what you are allowed to use. Overuse will result in penalties.

| Stocking Rate/Year |             | August      | September   | Total for Year |           |
|--------------------|-------------|-------------|-------------|----------------|-----------|
| Kg/ha Organic N    | Cows/ha     | (units/Acr) | (Units/Acr) | Kg/ha          | Units/Acr |
| 155 - 170          | 1.82 - 2.0  |             | 14          | 164            | 133       |
| 170 - 180          | 2.00 - 2.12 |             | 20          | 192            | 155       |
| 180 - 190          | 2.12 - 2.24 |             | 28          | 216            | 175       |
| 190 - 200          | 2.24 - 2.35 | 26          | 20          | 250            | 202       |
| 200 - 210          | 2.35 - 2.47 | 28          | 28          | 275            | 223       |
| 211 - 250          | 2.47 - 2.94 | 25          | 18          | 242            | 196       |

Table 1: Recommended Rates of N for Different Stocking Rates

- ▶ Study Table 1 and decide what level of Nitrogen you can use for your own farm.
- ▶ Farmers stocked at less than 2.24 cows/ha should only put on Nitrogen once, late August, over the next two months. All other farmers should apply 28 units/acre in August (protected Urea). Response is much better in August.
- ▶ This Nitrogen should all be blanket spread as there is no reduction in grass yield for August – September blanket spread applications.
- ▶ The August Nitrogen should be applied early in the month as you will grow 10-15% more grass because growth rates are higher early in the month than late August. If you have some clover in the sward and you want to encourage its contribution to grass growth, reduce the nitrogen rate to half in those fields. If you have a lot of clover in the sward do not apply any N until mid-September (30 units/acre)

| Period            | Grass Grown (kgs) | No.Grazing's | N/ha (kgs) | Meal (kgs) | MS/cow sold |
|-------------------|-------------------|--------------|------------|------------|-------------|
| 1 Jan -10 April   | 1450              | 1            | 85         | 210        | 105         |
| 11 April - 1 June | + 3800            | +3           | +75        | +70        | +110        |
| 2 June - 5 Aug    | + 4500            | + 3          | + 40       | + 70       | + 110       |
| 6 Aug - 1 Dec     | + 5350            | + 3          | +50        | + 150      | + 150       |
| Totals            | 16,000            | 10           | 250        | 500        | 480         |

Table 2: Moorepark Roadmap to Increase Grass Utilisation: Self-sufficient farm stocked at 2.8 cows/ha, Utilising 13tDM/ha.

- ▶ It is time now to review how your grassland management KPI's compare with Moorepark targets to the 5th August (Table 2) so as to grow 16tons DM/ha, spreading 250kgs N and feeding 500 kgs meal to produce 480 kgs MS/cow.
  - ▶ To achieve this standard, you must have the following by the 5 August:
    - ▶ 10,650kg DM grown = 67% of annual amount.
    - ▶ 7 Grazing's complete = 70% of annual amount,
    - ▶ 200kgs N used = 80% of annual amount.
    - ▶ 350 kgs meal fed = 70% of your annual amount.
    - ▶ 330 kgs MS/cow sold = 69% of your annual amount.
- ▶ Use the percentages to extrapolate your yearly achievement from your present figures.

## Reach Target covers by building grass in August

- ▶ To make “real money” you must rely solely on grass to feed

cows, which is a big challenge in autumn as grass growth decreases relative to demand.

- ▶ The following target covers (kgs DM) per cow must be achieved:
  - ▶ 1st August 200
    - ▶ 15th August 300
    - ▶ 1st September 400
    - ▶ 15th September 450
    - ▶ 1th October 400
- ▶ Grass build-up starts in August:
  - ▶ In the South on 10th August
  - ▶ In the North on 15th August.
- ▶ Rotation length must be 24-26 days in August.
- ▶ Build up farm cover by increasing grazing rotation to 30-35 days from mid September on.
- ▶ The following possible ways to build up grass should be applied:
  - ▶ **Reduce stocking rates** by taking away calves or cattle, selling cull cows, drying off very poor yielders. Stock cows at 2.9 cows/ha for grazing.
  - ▶ **Reduce 2nd cut silage** (particularly if you have enough pit silage)
  - ▶ **Introduce meals** (expensive option), but will be necessary at high stocking rates. A grass budget will tell you when to start but early rather than too late. An alternative to meal is to feed good quality round bales and this is the preferred option for high stocked farms.
  - ▶ **Apply more nitrogen** (stay within your limits) in August as you get a better response than in September.
  - ▶ **Graze out** pastures well (3.5-4.0 cms) as there is a temptation to leave too much after each grazing in August.
  - ▶ Set up a ‘**3rd cut-graze**’ bank of grass.
  - ▶ Protect **regrowths** by not having cattle or cull cows grazing after cows or spending more than 24 hours in each paddock.
- ▶ It's a very good idea to set up this; ‘3rd-cut-graze’ because:
  - ▶ It brings in a bank of high-quality grass for grazing in September.
  - ▶ Allows you use 2-3000 gallons (16-24 units N) of slurry per acre on it at closing, saving bag N.
  - ▶ Allows you put on 55-65 units of Nitrogen (discount the slurry N) to cover the 6-week closed-up period and the extra Nitrogen will grow extra grass which will feed 10-12 cows for one extra day for every acre closed up.
  - ▶ The way you do it is set aside 10-15% of the farm for this purpose by stocking the cows at 2.9 – 3.0 cows/ha for grazing.
  - ▶ These fields should be topped or very well grazed out (skinned) leaving no butt, apply the slurry plus 25-35 units of N per acre and leave for 6 weeks and it should result in 7-10 days grazing in late September.
  - ▶ An interval of 3-5 days should be allowed between spreading slurry and applying nitrogen, so as to avoid losses of N by denitrification.
  - ▶ If grazing grass is tight during this period, some of this area can be grazed.

- ▶ However, at low stocking rates (2.2 cows/ha or less) because the demand will be low, 40-45 kg DM/day, it will not be necessary to do any of the above to build up grass. It will happen naturally.

### Reseed - early August

- ▶ With plenty of winter feed made this year, and Nitrogen restrictions coming, it is an opportune time to reseed underperforming fields.
- ▶ Reseeding with perennial ryegrass, even though costing €250-300 per acre, will pay for itself in 2 years by growing much more quality grass.
  - ▶ You will have more spring and autumn (500-800 kg DM/ha).
  - ▶ You will grow 3ton/ha more grass compared with old grasses, worth €500 per year more profit per hectare.
  - ▶ Silage quality will be 5-8DMD units better,
  - ▶ Less stem/seed-heads and topping during summer.
  - ▶ New grasses respond 25% better to fertiliser than old grasses.
  - ▶ At high stocking rates, trials have shown an increase of 7.7% in milk production with perennial swards over old permanent swards.
    - ▶ The return on money invested in reseed is 96%.
- ▶ Every day extra you keep grass in the cow's diet is worth €2.80/day in profit.
  - ▶ Perennial ryegrass is the best way to grow more grass in the shoulders of the year.
- ▶ Reseeding must be done in August:
  - ▶ September is too late as it results in weed grasses dominating with poor perennial establishment (50-80% of the sown grasses)
  - ▶ Clover will only prosper if sown in August.
  - ▶ Anecdotal evidence of Sept/Oct reseeds doing well is false because even weed grasses look green.
- ▶ It is important to do the job correctly and the following must be adhered to:
  - ▶ Kill off old grasses and weeds with Round-up/Gallup,
  - ▶ Leave for 6-7 days before eating off or baling and then ploughing or tilling with one or two pass system, leaving a fine, firm seed bed by rolling prior to sowing (neglected in most situations)
  - ▶ Apply lime, up to 3 tons/acre, (required Ph is 6.3-6.7) if necessary and 3 - 4 bags 10:10:20 (more if Index 1) plus 1 bag CAN before sowing.
  - ▶ Sown the seed, only 1cm deep if clover included, lightly chain harrow in or use a ring roller, but it must be rolled after sowing.
  - ▶ Watch out for pest attacks in autumn sown crops, particularly, slugs, leatherjackets, frit fly, and rabbits.
  - ▶ Spray for weeds, particularly docks with clover-safe spray 4-5 weeks after sowing when the docks are the size of a 20cent piece.
  - ▶ Graze early, at 600-700kg DM/ha, and often to promote tillering. It would be a good idea to roll again before this grazing to prevent pulling by stock.
- ▶ Being a bit old fashioned, but from experience, and where there are no stones, I favour shallow ploughing (less than 15cms).
- ▶ The next big decision is which varieties of grass to sow,
  - ▶ It is best to take independent, professional advice on this as it is an investment that will influence your profit for the next 10-20 years.
  - ▶ In principle, put in 3 varieties and clover for grazing mixes, and even in silage ground being cut twice.
    - ▶ Sow 14-15 kgs/acre to ensure thick establishment,
- ▶ James Humphreys, Moorepark/Solohead suggests the following:
  - ▶ Grazing:
    - ▶ 5 Kgs Aberchoice
    - ▶ 5 Kgs Abergain
    - ▶ 2 Kgs Abercianti Red Clover
    - ▶ 1.5 Kgs Buddy White Clover,
    - ▶ 1.0 Kgs Aberlasting White Clover
  - ▶ Silage:
    - ▶ 5 Kgs Astonenergy
    - ▶ 5 Kgs Astonconqueror
    - ▶ 3 Kgs Milvus Red Clover
    - ▶ 1.0 Kgs Crusader White Clover,
    - ▶ 1.0 Kgs Chieftain White Clover
  - ▶ Silage (3 - 4+ Cut on outside blocks) Mix:
    - ▶ 9.0 Kgs Astoncrusader
    - ▶ 4.0 Kgs Milvus Red Clover
    - ▶ 1.0 Kgs Barblanca
  - ▶ Why red clover?
    - ▶ Very high production for the 3 to 6 years, delivering an annual production of 13 -16 tons DM/ha
    - ▶ It fixes more than 300kd N/ha (240 units/acre)
    - ▶ But it has a high requirement for P & K
    - ▶ Very suitable for a 4-cut silage system with zero grazing in the autumn.



**ICMSA**

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IRISH CREAMER MILK SUPPLIERS ASSOCIATION

- ▶ White clovers are more persistent in sward, with a recommendation to oversow every 5-6 years and reseed every 10+ years.
- ▶ Mixes species: I work on the principle of relying on research and 'proven by good farmers' before I recommend a new practice. Therefore, that's my position on 'mixed species'.

## Mastitis/SCCs - a serious matter

- ▶ Because we are heading into a no/low antibiotic era for mastitis control now is the time to sort out your SCC issues.
- ▶ Some farmers think this day will never come. Well it is here!
- ▶ Any farmer, and there are huge numbers out there, with herd SCC's over 150,000 is heading for serious control issues.
- ▶ High herd SCC suggests:
  - ▶ Old herd of cows with many problem cows,
  - ▶ Poor milking routine and milking machine working poorly,
  - ▶ No, or inadequate teat dip being used,
  - ▶ Stray electricity (have this checked out)
  - ▶ Good earthing of electric fences.
- ▶ A lot of clinical cases suggests:
  - ▶ Chronic cows (cannot be cured)
  - ▶ Milking machine problems (pulsation, poor reserve, bad liners, etc)
  - ▶ Poor milking routine (too rough with cows when taking off clusters)
  - ▶ Stress (examine all aspects).
- ▶ Sorting out the problem involves:
  - ▶ Identifying problem cows,
  - ▶ Identifying the cause of the problem.
  - ▶ Very, very few farmers, who have a problem, keeps records of mastitis.
  - ▶ ICBF have a wonderful data base to help you
  - ▶ Record mastitis cases through the ICBF Annual Events
- ▶ You must fill the clinical mastitis record card
  - ▶ This records the date a cow gets mastitis, the quarter and the type (all vital information),
  - ▶ This is vital if you have employed staff or if you use a relief milker
- ▶ You must get, at least 3 somatic tests done for each cow in the herd every year.
  - ▶ Even now get 2-3 milk recordings done between now and year end.
  - ▶ High SCC cows can be managed differently (a separate mob is very advantageous to reduce the spread) or culled if justified.
- ▶ A sensitivity test may have merit in identifying the type of bug causing the problem.
  - ▶ But sampling must be done very hygienically
  - ▶ Cows must not have been treated with antibiotic (only fresh cases)
  - ▶ Some would argue that this is a wasted exercise because 70-80% of the bugs causing problems during lactation are staph. Aureus and they are hard to kill.
- ▶ Get the milking machine tested again, now.
  - ▶ Little things do make huge changes
  - ▶ Change the liners now at 2,000 milkings.
  - ▶ Worn rubberwear must be replaced

## How can I be good to myself?

- ▶ Avoid "work stress" by:
  - ▶ Working a reasonable day length,
  - ▶ Getting involved in community activities,
  - ▶ Meeting and talking to 'positive' people often,
  - ▶ Taking a holiday.
- ▶ A reasonable work day is within all farmers reach:
  - ▶ Milk cows at 8am and again at 4pm, because research says there is no loss of milk if cows are milked at 16 to 8 hour milking intervals.
  - ▶ 13 times per week milking does not reduce milk yield, therefore, don't milk the cows on Sunday evenings.
  - ▶ Get the Farm Relief Service to milk them one other evening per week.
  - ▶ Get contractors/farm relief service to do some general work if you are overworked
  - ▶ You should not be working more than 10 hours per day and if so ask yourself how you can organise yourself.
  - ▶ Insist on a family holiday. On holidays leave the mobile on the 'off' button so that you remove yourself from farm life to a relaxed frame of mind.

## Replacement must meet weight target

- ▶ Why?
  - ▶ They will reach optimum service weights,
  - ▶ They will have earlier onset of puberty,
  - ▶ Greater milk production in first lactation,
  - ▶ Every 50 kgs extra first calving liveweight resulted in 300 kgs extra milk in the first lactation.
- ▶ Table 3 lists out the weights of heifers and weight gains

| Mature cow Weight                    | 450  | 500  | 550  | 600  | 650  |
|--------------------------------------|------|------|------|------|------|
| R1 (6months) Wt.                     | 135  | 150  | 165  | 180  | 195  |
| R1's ADG** (Kgs/day)                 | 0.57 | 0.63 | 0.68 | 0.73 | 0.78 |
| R2 Target Weight (Kgs) 18 months old | 315  | 350  | 385  | 420  | 455  |

Table 3: Liveweight targets (\*) for Replacements relative to Mature Cow Weight so as to achieve optimum first-calving weight. (Source:NZ)

- \* Because most R2's are calving down at 1 year and 11 months, these targets must be 5% better.
- \*\* Average Weight gain from weaning to 6 months.
- ▶ Two messages arise:
  - ▶ Light animals must be managed to achieve targets on 1st November,
  - ▶ Heavy, 20+kgs over target must be managed so that so that they do not get too fat/heavy because they will struggle to go in calf and will milk less over their lifetime.
- ▶ The appropriate actions are obvious. Act now.
- ▶ Not only is this message, weight and act, essential for farmers who rear their own but contract rearers must also be checked for this information.

**"It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is most adaptable to change". (Charles Darwin)**