

# DietCheck News

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*Following a difficult winter with poor weather, below average forage quality, and now falling milk prices it is even more important than ever to maximise output and profits over the grazing season. We believe that DietCheck is uniquely placed to allow users to take informed decisions about when supplementary feed is needed and, just as importantly, when extra feed is not needed.*

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## **DietCheck Worldwide**

We are very proud of the fact that DietCheck is increasingly being used throughout the world – in many countries throughout Europe, New Zealand, Australia, South Africa, and even China.

This not only shows the confidence that is being shown in the program but sets the DietCheck team new challenges to cope with new feeds and different feeding systems. We are able to learn from all of these opportunities and these ideas are fed back into our development plans.

## **An Opportunity with DietCheck**

The continued expansion and development of the DietCheck program has created an opening for someone to join our dedicated team. In time this will offer the opportunity of becoming a shareholder in a business that continues to grow and already has exciting development plans for the future.

The right person will have an in-depth understanding of practical ruminant nutrition and be comfortable working with computers. All our people are able to offer strictly independent nutritional advice and the successful applicant is likely to want to continue (or to develop) their own farm consultancy clients. It is our regular involvement with “real” farms, dealing with “real” problems, and creating “real” nutritional answers that is a key factor in our understanding of the needs of all our DietCheck users. We see the expansion of the advice and support offered throughout the world under the DietCheck brand as an important part of our future.

If you would like to discuss this opportunity further please contact us in the strictest of confidence.

## **DietCheck when should you increase feed?**

According to DairyCo milk supply in the UK over the 07 – 08 period was the lowest for 30 years and is expected to fall even lower, to around 13 billion litres, for the year ending March 2009. The average calving interval is now estimated to be 419 days and this is predicted to increase to 429 days by 2010.

The reasons for these changes are clearly complex and will include factors such as falling cow numbers, poor seasonal weather resulting in poor forage quality, etc. However, diet formulation must be at the hub of all systems – balanced nutrition will allow the animal to express her genetic potential whilst the farmer needs to know that it will be economically viable to provide any extra feed. If more nutrients are required to balance forage then the farmer needs to know this *before and during* the feeding period and not *afterwards* based on poor performance.

This is especially important during the grazing period when grass inputs are difficult to assess and management attention is often directed towards other tasks such as silage making, harvest, etc. All too often cows not only lose potential production during the grazing season but then enter the winter needing to recover from underfeeding during late summer/early autumn. A typical picture is that by Christmas both yield and fertility are disappointing but by then it is too late to improve cow performance economically.

Of course all of this – both when grazing and with conserved forage – *must* start from the premise that *maximum output must be obtained from farm forage at all times*. As a farmer it is often easier to add an extra feed to the diet and see if there is a yield response than it is to reduce supplementary feed and risk a fall in production.

***This is where DietCheck can be such a help – it allows the user to predict where extra feed is required and just as importantly when extra feed is not needed or will not give an economic response.***

## **DietCheck & Grazing Diets**

When looking at grazing diets be prepared to use DietCheck's ability to do a "what if?" You never know exactly how much grass will be eaten each day, or the real nutritional value of the sward being offered, but you can look at a series of "what ifs" based on your knowledge of the farm and the season. The trick is to do three things:-

1. Spend some time deciding of the correct target animal you are trying to feed. If the herd is autumn calving then look at a lower mid/late lactation target but if there are still animals calving consider the needs of earlier lactation and especially fertility.
2. Take some trouble to estimate the value of the sward – be realistic about the DM as it is often lower than you expect. Remember that during wet periods grass DM will fall as low as 15% so check that the expected grass intake is realistic during these periods.
3. Start your diet by entering an estimated intake of grazed grass in *Dry Matter* for your target cow. Then switch to *Fresh* and prepare to be amazed at how much the animal will have to eat! For example 18 kg of DM when the grass is 15% DM needs an intake of 120 kg of fresh grass. At this stage you may need to reduce the estimated intake to a more realistic value.

If you are a member of M&S you have the added advantage of being able to take account of the extra energy needed for the animal to travel to the paddock and to graze. This is particularly important in places such as New Zealand where herds travel big distances but it can also be significant in UK herds. If the extra energy for grazing is not accounted for the cow will still do the walking and adjust milk output, or perhaps reduce fertility, to balance her nutritional account.

Once the ration is balanced to meet the energy requirement, protein balance must be assessed. This can be difficult when dealing with high protein spring grass, so we need to interpret the DietCheck predictions and decide what adjustments should be made to improve the balance. Many users find grazing diets difficult because they see a very large excess of ERDP and are, rightly concerned that this may cause problems. There are two factors here that are often misunderstood:-

First of all remember that there is ***no requirement for ERDP!*** The value shown under the requirement column is the prediction of the amount of microbial protein that can be produced from the energy supplied to the rumen by the diet. So generally the amount of microbial protein yield is controlled, and thus limited, by the energy supplied to the rumen. To demonstrate this look at a ration with a big excess of ERDP and then just add more rumen available energy (try 2kg wheat) and you will see that the ERDP excess is immediately reduced. Once you are familiar with this area of energy/protein interaction it becomes easier to interpret and balance diets.

Secondly, accept that a grazing diet inevitably supplies high overall protein, and specifically a higher excess of ERDP, during the grazing season. It is not possible to feed 25 – 30% protein grass and still reduce the excess ERDP in line with winter diets. Fortunately (perhaps because grass intake is spread over a long grazing day and each mouthful contains plenty of energy as sugar) the cow is normally able to cope with this higher excess.

## NDF Degradability & Acidosis

We normally look at the amount of NDF in a diet to give a guide as to likely rumen function and suggest a target of 32 – 35% of the total DM in an early lactation ration with at least 20% of the NDF coming from forage. Although these guidelines can be helpful they can sometimes lead us astray because NDF sources can have very different degradabilities. The analysis of diets using forages like spring grass and early cut grass silage often shows ample NDF, indicating enough structural fibre to maintain optimum rumen function. However, in practice these rations may still lead to sub clinical acidosis.

The reason, of course, is that all NDF is not equal and, although the FiM RSV (rumen stability value) can give extra help, we really need to have a better description of the fibre. Within DietCheck we have been looking at this problem and considering possible solutions for some time in an attempt to give more accurate information when formulating rations for high performance cows.

We expect to have a system operating within DietCheck in time for the introduction of this year's first cut silages in the autumn/early winter.

## Extra Nutrients available to all

As discussed in the section above, it is helpful to know the amount of NDF from forage as well as the total NDF in a diet. This, along with a range of other nutrients, has historically only been available in some versions of the program or as an optional extra. As part of the next major update, due in the autumn, we will include these nutrients in all versions of DietCheck free of charge to members of the Maintenance & Support scheme.

These extra nutrients are:-

- **NDF (Neutral Detergent Fibre) from Forage** - Helps guide if there is enough functional fibre
- **DCAB (Dietary Cation Anion Balance)** - Used mostly in dry cow diets
- **Rumen Starch & Rumen Bypass Starch** - Calculated using the rate of starch degradation at the appropriate rumen outflow rate. Individual feed starch degradation rates are shown, and can be changed, in the feeds screen.
- **Starch plus Sugar** - A useful measure of quickly fermented rumen energy

All these values are shown in the formulation screen:-

NDF from Forage (g)	5088.9	
NDF from Forage %DM	22.0	
Rumen Starch (g)	2916.9	12.63
Undeg Starch (g)	534.0	2.31
Starch plus Sugar (g)	5106.1	22.11
DCAB (mEq/kgDM)	321.8	

## Version 3.3 No Longer Supported

Due to the many changes in computer operating systems and enhancements within DietCheck, any version prior to 4.0 will no longer be supported (i.e. version 3.33 and earlier). If for any reason you are still using an old version and would like to upgrade to the latest 5.1 version please contact us as soon as possible.

## Maintenance & Support

You will see from this Newsletter that DietCheck continues to improve and we will be working over the summer on several very exciting developments that we intend to introduce ready for the winter feeding period. If you are not already a member, then why not join the annual Maintenance & Support scheme to receive all updates and ensure your version is always supported.

## Change of contact address

You will note that there is a different postal address at the top of this Newsletter which should now be used for payments and all other surface mail.

*We hope you have found this edition of the Newsletter of interest – please keep visiting the DietCheck website for updates and technical information and, if you have any questions, do not hesitate to contact us.*