

Edited by  
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Dairy Knowledge Transfer

## A unit a day is OK!

In mid-season, the crude protein content of grass ranges from 17-22%. Basic chemistry tells us that the nitrogen (N) content of grass will average approximately 3.2% N during this time, as the protein content of grass (20%) divided by 6.25 gives the percentage N content of the grass. Using this figure we can calculate the amount of N that will be needed to grow a given amount of grass. In order to grow a cover of 1,400kg DM/ha (ideal pre-grazing cover), we can calculate the N requirement as follows:  
 $1,400\text{kg DM grass/ha} \times 3.2\% \text{ N} = 45\text{kg N/ha}$  or 34 units N/acre.

Fertile soils can supply approximately 10-15 units N/acre over a 21-day rotation in summer.

This N comes from the soil – some left from previous fertiliser/slurry applications and some left from dung and urine from previous grazings. The remaining 20-23 units N/acre is generally applied as N fertiliser. This ties in with the 'one unit of N/day' rule. Cutting back to a unit a day will have no impact on grass growth and will significantly reduce the amount of N spread over the course of the main grazing season.

"If you are cutting bales every round during the mid-season, you are using too much N," according to Deirdre Hennessy, Teagasc Moorepark, at the January 2021 Irish Grassland Association Conference.

**Save money and reduce nitrogen rates this summer by thinking a unit a day is ok!**

## White clover incorporation in pasture

The benefits of increasing the content of white clover in dairy pastures for animal and sward are well understood. The cow eats more and produces more while the sward can yield the same with less fertiliser N.

According to Michael Egan, Teagasc Moorepark, for clover to persist and contribute, it needs a soil pH of >6.3, the soil phosphorus and potassium indexes need to be at three or greater, and the sward needs to be grazed every 18-21 days in mid-summer to allow sunlight to penetrate to the sward base where the stolons of the clover plant are growing. White clover can replace up to 100kg N/ha per year.

According to Michael, early June is an ideal time to incorporate white clover into the sward. Full reseedling with 3-5kg per hectare of untreated seed is the most effective means of its incorporation. Over sowing can also be successful preferably after a cut of silage.



*With white clover in the sward, the cow eats more and produces more.*

- Drill or broadcast 4-6kg of white clover seed with two and a half bags of 0:7:30 or 0:10:20 per hectare.
- Reduce fertiliser N application to give the clover a chance of establishing itself.
- Roll the sward after sowing or apply 5,000 gallons per hectare of dirty water to improve soil to seed contact.

If the sward is old, has a high proportion of weeds or low perennial ryegrass content, a full reseed may be the better option.

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## A liner change is due shortly

Liners are the only piece of the milking machine that comes into direct contact with the cow. They are made from complex material and have a limited useful life. The majority of rubber liners are expected to last for 2,000 milkings or six months, whichever comes first. Milk liners lose elasticity over time for the following reasons:

- swelling due to fat absorption;
- stiffening due to milk stone accumulation; or,
- rubber denaturing due to the action of dairy detergents.

These changes to the liner make it less effective at fully milking out the cow. More residual milk is left behind, reducing milk yield and leaving the cow more vulnerable to infection. Take the example of a dairy farmer milking eight rows of cows: this equals 16 milkings per liner per day and the 2,000 milking limit will be reached after  $2,000/16 = 125$  days. Assuming that a new set of liners was put in at the start of calving and that mean calving date was February 20, the 125-day limit will be reached on June 24.

**MESSAGE:** Calculate the date on which you're going to reach the two-thousandth milking from your liners and change the liners that day.

## Moving to beef AI

Before any consideration is given to finishing artificial insemination (AI), consider how many empty cows you have left, and how many mature stock bulls you have. You need one mature bull for every 15-20 empty cows. Continue to use AI for 10-14 days after releasing the bull to allow the bull time to settle and also use AI on any day that two or more cows are on heat.

The advantages of using beef AI are the security of easy calving and choice – both of the shortest gestation length beef sires available and of the sires with the highest carcass weight and conformation.



*Use the DBI sub-indexes to select suitable beef AI sires for your herd.*

Decide first on the breed that you wish to use. Then select the appropriate sires based on direct calving difficulty for maiden heifers, second calvers and mature cows. Then select the highest beef value in the DBI within your calving range.

## HEALTH & SAFETY

### Keep yourself and children safe



Farm workplace deaths have reduced in the four months to April 2021, with two fatalities reported. It is likely that there are more persons available to assist with farm work due to the Covid-19 lockdown, which may have helped with the injury reduction. However, as the economy reopens and as farm risks rise during the busy summer months from June to August, extra safety vigilance is needed from now on.

Farmer vehicle knockdowns and falling from heights are

major causes of deaths during

these months. Last year saw an increase in childhood farm workplace fatalities, so extra vigilance is especially needed in this area. This month we include a children's safety newsletter. Please check in on the use of this newsletter by children and discuss farm safety positively with them. Children model their safety behaviour on adults, so a good example and leadership are vital to gain culture change with farm safety. Further information can be obtained on the Health and Safety Authority (HSA) and Teagasc websites.



*Childhood safety newsletter which highlights the need to provide a safe play area for children.*

## National Quality Milk Virtual Farm Walk

The National Quality Milk Virtual Farm Walk takes place on Tuesday, June 29, at 11.00am. It will be broadcast live from the farm of Richard and Wendy Starrett, Killendarragh, Lifford, Co. Donegal. The Starretts are the 2020 National Winners of the NDC and Kerrygold Quality Milk Awards. Facilitated by Jack

Kennedy, *Irish Farmers' Journal*, the programme includes interviews with Richard himself, his Teagasc adviser Tommy Doherty, and Aurivo Farm Profitability Specialist Majella McCafferty. Richard sold almost 600kg milk solids per cow



*Richard and Wendy Starrett, winners of the NDC and Kerrygold Milk Awards, with their children, Holly, John and David.*

from his 150-strong dairy herd in 2020. The event will be run by Teagasc, the National Dairy Council, Ornua and Aurivo.

The link on the Teagasc website to register for the event is [www.teagasc.ie/virtualmilkwalk](http://www.teagasc.ie/virtualmilkwalk).

## Managing replacement heifer weanlings

Replacement heifer calves should be weaned when they weigh approximately 18% of their mature body weight (BW), e.g., just over 100kg for a Holstein Friesian (HF) heifer calf with a maintenance sub-index of €10 (and a predicted mature liveweight of 590kg).

- If taking them off concentrate, they should be approx. 145kg (~25% mature BW for HF heifer) and then wean them gradually off meals onto an all-grass diet.

- It is a good idea to keep calves that are not thriving in a smaller group as there is less competition between animals in such groups and they can be preferentially fed meals and higher quality grass to improve growth rates.
- If the lighter calves catch up and grow to a similar size to those in the main grazing group (i.e., calves on target weight) they can be removed from the smaller group and returned to the main group; calves that are falling behind in this group can be moved to the smaller group.