

Securing your

Although winter feeding is a distant thought, some careful planning and preparation now will help prevent problems arising later

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There are a number of questions to ask yourself. Is there enough silage in storage? Is silage of adequate quality to meet the nutritional requirements of stock? Is there a contingency reserve in case there is a lack of grass next spring?

Silage requirements

Silage accounts for a significant proportion of a pasture-based dairy herd's annual feed budget. This ranges from approximately 20% for extended grazing systems to more than 30% for highly stocked grazing platforms and/or heavy soil farms. Following the expansion of many herds, silage supplies must be increased to meet the extra demand.

This increased silage requirement is often a hidden cost, particularly where grass utilisation per hectare has not increased. Incorporating silage-making decisions into the grazing management of the whole farm will help to meet this requirement.

On dairy farms, silage requirements can be separated into high-quality silage and standard quality silage. High-quality silage (74 DMD) should be targeted at lactating cows and weanling replacement heifers. Standard silage (68 DMD) should be fed to dry cows and stock bulls.

In spring-calving herds, a dairy cow will consume 1.5t DM of 68 DMD silage over a 140 day winter. An additional 400kg DM 74+ DMD silage should be available for feeding cows that are still milking. This is very important where stocking rates have increased and grass supplies are under greater pressure during periods



of poor growth.

Weanling replacement heifers should also have access to high quality silage. At least 850kg DM silage should be allowed for each replacement heifer for a 140-day winter. For example, a 100-cow herd with 25 replacement heifers has a requirement for 300 high-quality bales.

A spring-calving dairy cow that will be dry over the winter needs 7.5 bales or 1,500kg DM of silage for a 140-day winter. On heavily stocked farms or farms on heavy soils, an additional bale of high-quality silage may be required as silage makes up a greater proportion of the milking cow's diet.

On suckler farms, a similar approach can be followed, with autumn calvers, growing and finishing

stock, having access to 72+ DMD silage while dry cows can be offered restricted access to 68 DMD silage. Each finishing steer, for example, will require 1,000kg DM silage for a 120 day finishing period. Feed budgets should allow 1,100kg DM for each dry suckler cow on farm. A complete fodder budget can be completed using Table 2 and Table 3.

Silage quality

Analysis of silage quality reports from Teagasc clients in 2016 has highlighted differences between regions of the country (Table 1). The counties along the Atlantic coast, particularly in the northwest had, on average, lower DMD silage than farmers located inland and in the south east of the

silage supply



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Table 1: Mean grass silage quality parameters from Teagasc clients in 2016

	DMD	CP	PDI	UFL
West	66	11	63	0.74
Southwest	67	11	66	0.74
Southeast	70	13	74	0.79
Northeast	67	11	66	0.75
Midlands	68	12	69	0.76
Northwest	64	10	59	0.71

Table 2: Quantity of silage required on farm

Animal Type	No of stock to be kept over winter (A)	No of months (B)	Pit silage needed/ animal /month (C)	Total silage requirement
AxBxC				
Dairy cow			1.6	
Suckler cow			1.4	
0-1 year old			0.7	
1-2 year old			1.3	
2+ year old			1.3	
Ewes			0.15	
Total tonnes needed				X=

Table 3: Silage in stock/ to be harvested

Pit silage in yard ¹	A	
Pit silage to be harvested (area in acres x 7t/ac)	B	
Total pit (A+B)	C	
Bales	D	
Bales converted to tonnes (D x 0.9)	E	
Total silage tonnes (E+C)	F	
¹ Pit silage tonnes = (length x width x settled height) ÷ 1.35		

country. In addition, there was a large range in DMD across all regions with silage quality in a spectrum from 55 DMD up to 80 DMD.

The average quality of silage was 67 DMD. This silage has an energy value of 0.74 UFL which is lower than grazed grass (0.85-1.05 UFL kg DM). High quality silage can have a UFL value in excess of 0.80 UFL kg DM, which can help meet performance targets with minimal supplementary feeding.

A similar trend was also found for crude protein. Average silage crude protein concentration for 2016 was 11%. This would equate to a PDI (protein that is digestible in the small intestine) of 66g/kg DM. The PDI system accounts for the quantity of

protein that is available to the animal as not all of the protein in a feedstuff is utilisable by the animal.

Typically, young stock need 13% to 15% crude protein in the diet, lactating cows require 14% to 17% crude protein, depending on yield, and finishing cattle require 11% to 12% crude protein. Silage crude protein can be improved by ensuring that sufficient quantities of nitrogen fertiliser are applied and by harvesting leafier grass before stem and seed head develops with a shorter regrowth interval.

Silage analysis

Having your silage quality analysed is vital and early analysis can help guide decisions regarding the type

and specification of additional feed-stuffs to be purchased. The benefits of silage analysis are clear.

Feeding rates can be formulated to reach a target body weight and body condition score, which can result in cost saving through reduced feeding and/or improved performance of livestock. Once grass has been ensiled for six weeks silage analysis can be carried out. Early analysis of silage quality and stock checking, allows for alternative strategies to be put in place before the winter.

Further information on making high-quality silage can be found at <https://www.teagasc.ie/media/website/publications/2016/Teagasc-Quality-Grass-Silage-Guide.pdf>