Managing Out blocks to ensure high overall farm performance

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Summary

- Growing and utilising high quality home produced feed, rather than depending on purchased in concentrates or bought in feed remains the most cost effective option for dairy farms.
- The dry matter performance of out blocks will have to equal or surpass the performance of the grazing platform, otherwise further feed will require to be purchased
- Leasing costs are only the initial cost of leased out blocks, the full cost of a two cut silage system from a leased out block is approximately €1577/ha
- Measurement of grass DM production on dairy out blocks is recommended

Over the last number of years, feed costs have increased by approximately 30% on farms. Fertiliser, contractor, spray costs and land charges have all increased. Parallel to this the level of out blocks been utilised on dairy farms has increased. Across the country, leased land costs can vary, but in all cases, land is now more expensive to lease.

Feed cost analysis

The 'Grange Feed Cost Model' was used to determine the cost of commonly grown feeds in October 2023. Some of the assumptions made are listed in Table 1. Slurry was applied to all crops to reduce Nitrogen (N) input and lower N requirements. Land cost was assumed at €865/ha (€350/ac). Grazed grass is the cheapest feed resource, with white clover inclusion reducing costs further. Purchased concentrate such as rolled barley remains an expensive feed resource, compared to grass and other feeds. Within this analysis, grass clover is least expensive compared to grazed grass, zero grazed grass is the most expensive of the fresh grass option. First cut silage and red clover grass silage remain the most competitive of the conserved feeds, followed by baled silage and maize silage, the most expensive conserved feed.

The most important aspect of farm growth rate and stocking rate is that the farm needs to be stocked to the farm grass growth capacity, not its potential. Figure 1 shows the mean grass demand across the year on PastureBase Ireland farms, compared to the mean grass growth from 2021 to 2023. This figure shows that on average, on many weeks over the past three years (especially 2022) cows have had to be supplemented to satisfy their feed demand. Grazing platform DM production averaged 12.8t DM (estimated) in 2023, 12.7 (2022) and 12.2 (2021), 12.9 (2020). On many farms this level of DM performance, did not satisfy the feed demand of

the grazing platform and required very high preforming out blocks to complement the lower DM performance.

Table 1. Feed assumptions and estimated costs (€) to produced feed in October 2023

	Grazed Grass	Grass+White Clover	Zero grazed grass - All year	First +Second cut pit silage	First and Second cut baled silage	3-cut Red clover silage	Maize silage open	Purchased Rolled Barley @€330/t
DM Yield (t/ha)	13.0	13.0	13.0	6 +4	6 + 4	6+4+3	13	
DM %	17.4	17.4	17.4	21.7	32.4	30	30	
UFL/kg	1.03	1.02	1.03	0.82	0.82	0.82	0.8	
In organic Fertiliser N Kg/ha	225	100	225	87+69	87+69		112	
Total Fertiliser N kg/ha	250	125	250	115+82	115+82	0	145	
Total Cost/ha (in; land charge)€	1427	1283	2785	2161	2431	2823	3135	
Total costs/ha (ex; land charge)	563	418	1921	1577	1848	2071	2271	
Total cost t DM/ha grown (in; land charge)	110	99	214	216	243	215	245	
Total costs t DM/ha grown (ex; land charge)	43	32	148	158	185	158	177	

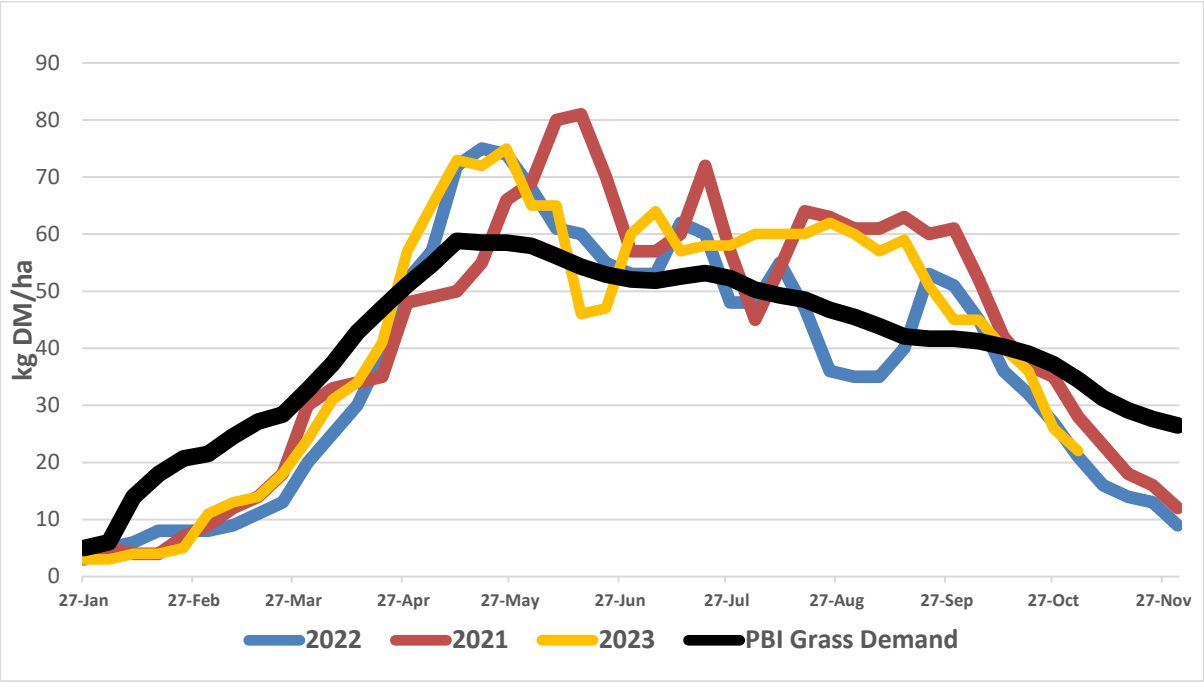
Zero-grazing does not include the cost of handling extra slurry vs. grazing. First- and second-cut silage were assumed to be cut on 29 May and 17 July, respectively. Slurry + the cost 0-7-30 for the remainder of K requirements, does not include grazings in the back end of the year. 6 year persistence for red clover. Land charge of (€865/ha) €350/acre. Protected urea = €550/t

Out block DM production performance needs to be at least at the same or higher level of DM production than the grazing platform, to ensure that the farm is able to be feed self-sufficient. On many farms, the total land base is underperforming and has to be complemented with additional silage and concentrate purchases. Table 2 shows the level of stocking rate and concentrate inclusion to ensure high grass utilisation. In recent years, many farms, both grazing platform and out blocks have under preformed, for example in Table 2, if the farm is not growing 14t DM/ha (which can sustain 2.5 cows/ha), then higher levels of concentrate will need to be supplemented or additional feed purchased.

Table 2: Stocking rate that optimises profit on farms growing different amounts of pasture and feeding different amounts of concentrate/cow

Concentrate, t DM/cow	Grass grown, t DM/ha			
	10	12	14	16
0.00	1.5	2.0	2.3	2.6
0.25	1.7	2.1	2.4	2.8
0.50	1.8	2.2	2.5	3.0
0.75	1.9	2.3	2.7	3.1
1.00	2.0	2.4	2.9	3.2
1.25	2.1	2.5	3.0	3.4
1.50	2.2	2.6	3.1	3.5

Figure 1. Grass growth compared to Grass Demand on PastureBase Ireland Farms (2021, 2022, 2023)



Conclusion

The performance of dairy out blocks does not attract the same emphasis as the grazing platform. Reduced DM production performance of the out blocks generally leads to additional feed purchases to sustain the farm system. Even though silage produced on out blocks is more expensive than grazed grass highly productive out blocks can still play a role in efficient grazing systems by providing sufficient high quality winter feed. Excessive levels of outside blocks in a farm system will lead to reduction in grazing season length and an increase in the overall production costs.