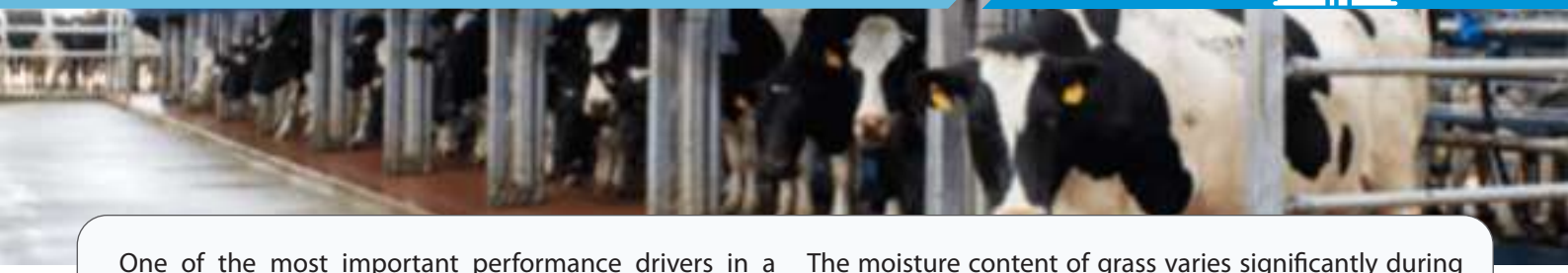
FEEDING THE MILKING COW



One of the most important performance drivers in a spring block calving herd is a cows feed intake. A cow will reach her highest daily milk output 6-8 weeks after calving but will only reach her highest intake of dry matter 10-12 weeks after calving. The cow will use energy from her fat reserves ('off her back') to make up the energy deficit for several weeks. However, if the cow loses too much body condition in early lactation, it can reduce her chances of getting back in calf again. Cows calving onto a grass-based diet will eat a total dry matter intake (DMI) of 8-10kg DM (grass + concentrates) in week one after calving. Intake will increase by 0.75-1.0kg DM every week until they reach peak intake at 16-18kg DM during week 10-12 of the lactation.

The moisture content of grass varies significantly during spring, this can have a major impact on dry matter intake. It is important not to overestimate the DMI a cow can get from pasture or else fertility and performance can be compromised. For example, a cow estimated to consume 12kg of at 15% DM will require an intake of 80kg of fresh grass, this is a large volume of grass for any cow to eat. Buffer feeding and or extra concentrate feeding should be considered especially during wet periods when required grass DMI cannot be maintained due to the low dry matter of the grass. In spring, the aim is that the cow should graze a high amount of quality grass with appropriate concentrate supplementation.

Grass DM intake kg/cow/day	20	22	24	26	28	30	32	34
8	7.4	8.4	9.4	10.4	11.4	12.4	13.4	14.4
9	6.3	7.3	8.3	9.3	10.3	11.3	12.3	13.3
10	5.2	6.2	7.2	8.2	9.2	10.2	11.2	12.2
11	4.1	5.1	6.1	7.1	8.1	9.1	10.1	11.1
12	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
13	1.9	2.9	3.9	4.9	5.9	6.9	7.9	8.9
14	0.8	1.8	2.8	3.8	4.8	5.8	6.8	7.8
15	0.0	0.7	1.7	2.7	3.7	4.7	5.7	6.7
16	0.0	0.0	0.6	1.6	2.6	3.6	4.6	5.6

Finbar Mulligan UCD

Concentrate supplementation required to meet energy demands of milking cow

During the breeding season, it is essential to ensure that the nutrient intake of the cow is adequate to meet the needs of the cow and doesn't fluctuate. Grazed grass will provide adequate protein for the breeding cow. Energy, not protein or minerals, is the most limiting nutrient in dairy production systems. If animals are not milking as well as expected, or milk protein is low or cows are losing excessive condition, energy is the first nutrient to check. Check the total dry matter intake of the animal as well as the quality (i.e. energy content) of the forages/feeds used.

Meeting a cow's energy needs at this time of the year will drive solids production as well as the success of your upcoming breeding season. Cows require a certain amount of metabolisable energy each day to support their basic body functions, this is before she has produced a litre of milk or maintained a pregnancy. Insufficient energy in the milking cow's diet can result in low milk protein, low milk yields, poor fertility, poor immunity – susceptibility to disease and metabolic disorders including ketosis etc. – as well as loss of body condition. The target should be to optimise milk solids production and keep body weight loss to less than 0.5 BCS between calving and breeding.

Important to monitor milk constituents to assess diet

High Fat % & Low Protein % = Ketosis = Lack of Energy

Low Fat % and Low Protein % = Lack of Energy

High Protein % and Low Fat % = Acidosis = Lack of Fibre

Key risk

If body condition loss in early lactation is 0.5 BCS or greater, cow fertility will suffer.