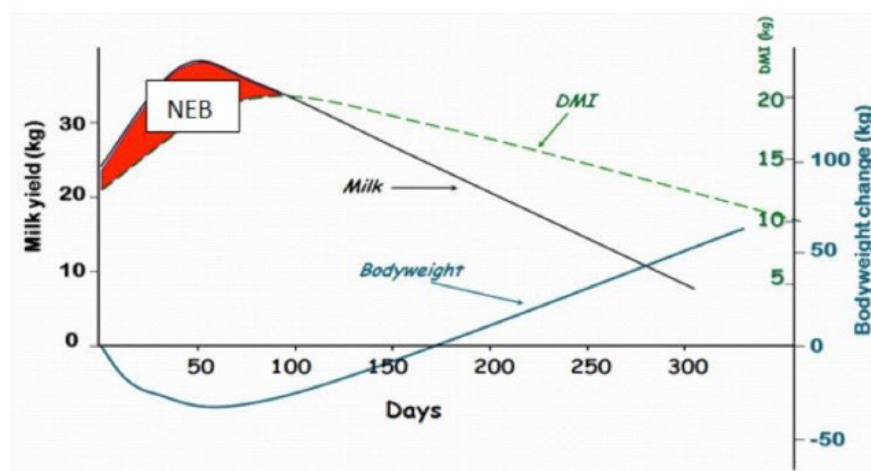




Early Lactation Nutrition

The transition period, which occurs from 3 weeks pre-calving to 3 weeks post calving, is the most difficult time of the lactation cycle. Up to 80% of issues around calving can be controlled or prevented. This critical period can determine the profit for the entire lactation. Even a "normal" transition constitutes a time of challenge for the dairy cow with hormonal changes, immune suppression, dietary changes and nutrient deficits amongst others. One of the major challenges of the transition cow is low calcium levels in the blood at calving causing a number of health disorders including Milk Fever, Retained Placentas, Uterine Infections, LDAs, Mastitis and Weak Immune Systems. These all have a negative impact on dry matter intakes, at a time when intakes are low already post calving.

In the weeks post-calving, cows will produce more milk than their feed intake can provide for, resulting in body condition loss due to negative energy balance (NEB). The main reason a cow is in a NEB is due to a reduced 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 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



Spring Nutrition Plan

1. Prevent BCS loss- Assumption made that we should supply 100% of UFL requirements
2. Maximise Dry Matter Intake by ensuring best forage goes to milking cows
3. Maximise energy density by feeding a high energy concentrate
4. Supply the cow with enough protein
5. Feed post calving to match forage & milk yields

Appropriate Concentrate allowance for cows in full time on 12kg of grass silage DM intake

Silage DM	Milk Yield KG							
	20	22	24	26	28	30	32	34
64	6.3	7.3	8.3	9.3	10.3	11.3	12.3	13.3
70	5.2	6.2	7.2	8.2	9.2	10.2	11.2	12.2
74	4.6	5.6	6.6	7.6	8.6	9.6	10.6	11.6
76	4.3	5.3	6.3	7.3	8.3	9.3	10.3	11.3
78	4	4.9	5.9	6.9	7.9	8.9	9.9	10.9

Appropriate Concentrate allowance for cows out by day and in by night

Milk Yield KG									
	18	20	22	24	26	28	30	32	34
6 kg Grass DM & 6 kg 64 DMD silage	4	5	6	7	8	9	10	11	12
6 kg Grass DM & 6 kg 70 DMD silage	3.5	4.5	5.5	6.5	7.5	8.5	9.5	10.5	11.5
6 kg Grass DM & 6 kg 74 DMD silage	3	4	5	6	7	8	9	10	11