

Section 6



Feeding the Suckler Cow

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Introduction

Suckler herds produce the majority of stock destined for beef production (though weaned animals are also sourced from dairy herds). About 80% of suckler cows calve in spring, 20% in autumn.

- ① Why does the cow's Body Condition Score matter?
- ② What are the feed requirements of the dry cow (in late pregnancy)?
- ③ What are the feed requirements of the lactating cow?
- ④ How do I manage the feed requirements of the autumn-calving suckler cow?

Feeding the Suckler Cow

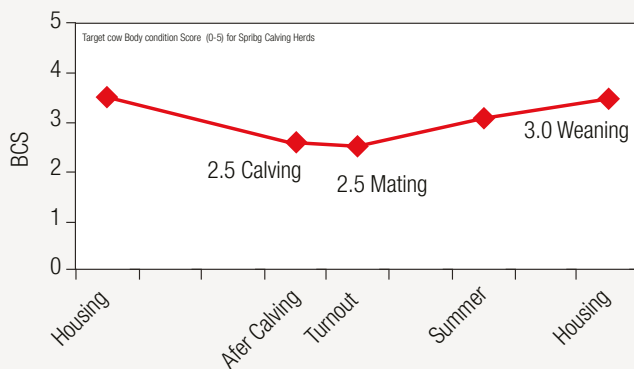
① Why does the cow's Body Condition Score matter?

Body Condition Score estimates the cover of flesh on the 'frame' of the animal. The range goes from 0 (emaciated) to 5 (grossly over-fat). Individual condition score units are usually divided into half and quarter scores. Body condition scoring provides an excellent guideline for feeding suckler cows at various stages of the production cycle (calving, weaning, housing, etc.).

Targets: Body Condition Scores

	Spring Calving	Autumn Calving
Housing	3.0-3.5	2.5-3.0
At Calving	2.5	3.0
At Turnout to pasture	2.0+	2.0
At Breeding	2.0 – 2.5	2.5

Target cow Body Condition Score (0-5) for spring calving herds



How to

Assess the Body Condition Score in suckler cows

- Handle cows for fat cover on edge of loin bones (transverse processes).
- Handle for fat cover on tail head and ribs.
- At condition score 3.0 and greater, loin bones cannot be felt so focus on the tail head and the fat cover over ribs.

Body Condition Scores on 5 point scale

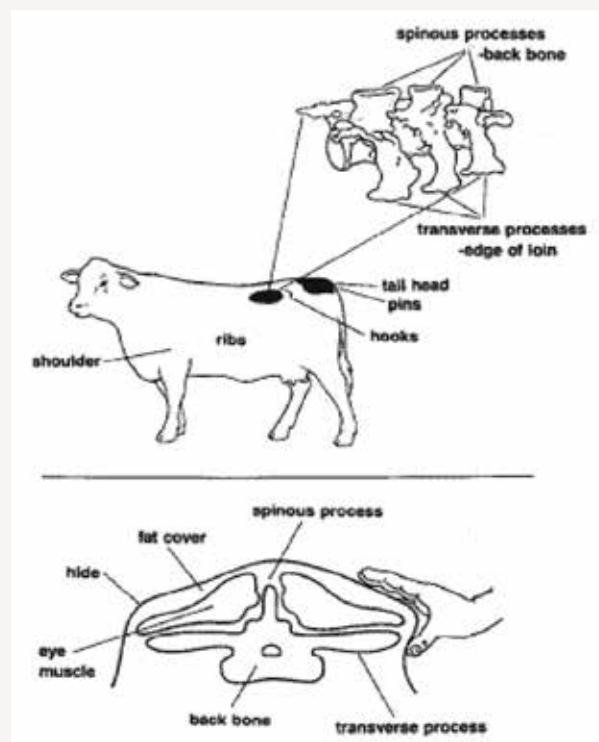
Score 1: Individual transverse processes fairly sharp to the touch & no fat around tail head. Hip bones, tail head & ribs visually prominent.

Score 2: Transverse processes identified individually when touched, but feel rounded rather than sharp. Some tissue cover around tail head & over hip bones. Individual ribs no longer obvious.

Score 3: Transverse processes can only be felt with firm pressure. Areas either side of tail head have fat cover that is felt easily.

Score 4: Fat cover around tail head evident as slight "rounds," soft to touch. Transverse processes cannot be felt even with firm pressure. Folds of fat developing over ribs.

Score 5: Bone structure no longer noticeable, & animal presents a "blocky" appearance. Tail head & hip bones almost completely buried in fat, & folds of fat are apparent over ribs. Transverse processes are completely covered by fat, & animal's mobility is impaired



Body Condition Scoring (BCS)



Pictures Defra

What If: Body Condition Score is not at target level?

Spring Calving	Target	Implications
At Calving	2.5	Lower, If BCS is less than 2.0 there will be a slower return to breeding, the cow will be weaker at calving and will produce poorer colostrum. Higher, If BCS is higher than 3.0 the cow will have greater difficulty calving and re-breeding could be delayed.
At Turnout	2.0+	Lower, If BCS is lower than 2.0 there will not be enough time to recover for breeding with spring-calving cows.
At Mating	2.0-2.5	Lower, A BCS below 2.0 will result in delayed breeding and possibly lower conception rate.
At Housing	3.0+	Lower, If BCS is lower than 3.0 winter feed costs will be higher Higher, A BCS of more than 3.0 is unnecessary, wasteful

Feeding the Suckler Cow

Spring Calving Sucklers

② What are the feed requirements of the dry cow (in late pregnancy)?

Cow feed requirements during late pregnancy are for maintenance of the cow, some growth of the cow particularly if she is young (especially applies to first-calvers) and for the growing foetus. The foetus gains between 75 and 80% of its total birth weight during the last 3 months of pregnancy. Where mature cows are in good BCS (~3.0) at the start of the winter their feed energy intake can be restricted such that some of the body reserves of fat are utilised to reduce winter feed requirements. This feed energy restriction can result in a feed saving equivalent to 1.0 to 1.5 tonnes fresh weight of grass silage.

The feed energy restriction can occur in various ways, such as offering moderate quality grass silage (65 DMD) to appetite, "diluting" the energy value of good quality silage with straw and offering that to appetite, or by restricting the amount of good-quality silage offered daily. Another option is feeding good-quality straw with supplementary concentrates.

- Where the amount of feed is restricted it is important that feeding space is adequate such that all cows can eat at the same time.
- If cows are below good BCS, they cannot be restricted and must be fed to requirements.
- Always offer an appropriate dry cow mineral/vitamin mix.

How to Feed cows pre-calving



- Group cows according to BCS.
- Assuming a BCS of 3.0-3.5 at housing:
- This body condition can be used to reduce winter feed costs.

- If moderate to good quality silage (65-70 DMD) is available, intake can be restricted to 30-35 kg fresh silage prior to calving.
- Assuming a BCS 2.5-3.0, cows should be fed such silage to appetite, if an adequate supply is available, while thinner cows will need 1-2 kg concentrate before calving.
- Good-quality straw plus 2-3 kg of concentrates (including minerals & vitamins) is suitable for dry cows in good body condition. The crude protein content of the concentrate should be at least 18% in order to meet the dietary protein requirement. Feeding straw is not suitable for cows in poor BCS or for cows after calving.

Body Condition Score, nutrition & calving difficulty

Many factors influence the incidence of calving difficulty but calf birth weight and internal pelvic area of the cow account for most of the variation in calving difficulty (dystocia). As cow BCS increases above a moderate level, calving difficulty can increase. Over-fat cows have increased calving difficulty because fat is deposited in the pelvic area, thereby reducing the size of the pelvic canal. Very thin cows also have increased calving problems (and increased calf mortality) due to insufficient strength to withstand the birth process and giving birth to weak, non-vigorous calves.

Low levels of feeding during the last one-third of pregnancy will not result in predictable effects on calf birth weight or calving difficulty.

Key Facts

Nutrition & calving difficulty



- Fat animals can have increased difficulty at calving (fat-filled birth canal etc.). Reduced feeding during the last one-third of pregnancy may not solve this (there can still be problems calving). The problem of excess condition must be addressed earlier.
- Thin cows may have insufficient strength to withstand the birth process and can deliver weak non-vigorous calves.

③ What are the feed requirements of the lactating cow?

Cow feed requirements during lactation are for maintenance of the cow, some growth (particularly young cows) and milk production. Replenishment of body reserves utilised during the indoor winter period is an additional requirement.

- Aim to turn out spring-calving cows to grass as they calve. Cows going to grass directly after calving don't need concentrates if there is a good supply of high-quality grass.
- If cows with calves at foot are indoors on a silage-based diet and in good condition, feed moderate to good quality silage, to appetite, for 4-6 weeks after calving, provided the diet is grass-based thereafter. If silage quality is poor, feed 1-2 kg meals.
- If cows with calves at foot are indoors on a silage based diet and in poor condition, feed moderate to good quality silage, to appetite, plus 2-3 kg meals.
- After calving, first-calvers require concentrate supplementation in all cases until turnout to pasture. Where silage quality is moderate to good, feed 1-2 kg meal and if silage quality is poor, feed 2-3 kg meal.
- Always offer an appropriate mineral/vitamin mix
- Pay extra attention to first-time calvers, shy feeders, old cows and thin and lame cows. Feed minerals – see below.
- Feed a high energy (UFL = 0.94+) ration with 16% protein.

Autumn Calving Sucklers

④ How do I manage the feed requirements of the autumn-calving suckler cow?

How to Feed autumn-calving sucklers pre-calving



Typically cows are grazing pasture. In situations where cow BCS is high and cows are likely to become over-fat, weaning may be delayed and herbage allowance or quality can be restricted. This may be achieved by increasing stocking rate or grazing the cows as followers in a leader-follower grazing system.

- Feed a good quality pre-calver mineral. In general, a mineral bucket is used autumn-calving suckler systems.

How to Feed autumn-calving sucklers post-calving



With 72 DMD silage if autumn-calving cows are in good condition, feed 1.8 kg of meal before and drop to 0.3 kg after breeding. If cows are in poor condition, 1.8 kg before and after breeding.

See Table below.

Feed requirements of autumn-calving cows.

Silage Quality (66 = moderate, 72 = good)	Time	Cow Condition Good ~ 3.0		Cow Condition Poor ~ 2.0	
		Meal Feeding kg / day	Time	Meal Feeding kg / day	
72 DMD	Before breeding	1.8 kg	Before breeding	1.8 kg	
	After breeding	0.3 kg	After breeding	1.8 kg	
66 DMD	Before breeding	2.5 kg	Before breeding	2.5 kg	
	After breeding	1.5 kg	After breeding	2.5 kg	

Mature 600 kg cow; Milking 8 kg / day; Change concentrate allowance by ~0.5 kg / kg change in estimated milk yield.

Feeding the Suckler Cow

Checklist



Minerals for the suckler cow – pre-calving

- Feed the right type and level of pre-calver mineral (see example below)
- Feed pre-calver minerals for 4-6 weeks pre-calving
- Pre-calver minerals can be fed by dusting on top of the silage, through water, trace elements can be supplied in boluses (but this will not cover for major elements), molassed mineral buckets and in a carrier ration.
- Don't feed last year's minerals.
- Ensure feeding rate is correct – weigh it out
- If top dressing on silage, do it at least twice a day
- Ensure adequate feeding space (1.5-2.0 ft, 0.5 - 0.66m / cow)

Major Elements	"What you see on the label"	Feeding Rate 120 grams / day What the animal gets / day
Calcium	0%	0 g / day
Phosphorous	4.0%	4.8 g / day
Sodium	13%	16 g / day
Magnesium	17%	20 g / day
Trace Elements		
	mg/kg	
Copper	3,500 mg /kg	420 mg / day
Selenium	50 mg /kg	6 mg / day
Iodine	500 mg /kg	60 mg / day
Cobalt	100 mg /kg	12 mg / day
Manganese	1,000 mg /kg	120 mg / day
Zinc	4,000 mg /kg	480 mg / day
Vitamins		
Vitamin A	400,000 iu / day	48,000 iu / day
Vitamin D3	100,000 iu / day	12,000 iu / day
Vitamin E	2,000 iu / day	240 iu / day

Checklist



Minerals for the suckler cow – after calving

The need for minerals in the suckler cow is significantly lower than that of the dairy cow and in general molassed mineral buckets are adequate to supply minerals. Major elements such as calcium, phosphorus and sodium will be adequately supplied in grazed grass and grass silage. Magnesium must be supplied during the tetany risk period. In the event of a deficiency, supplementation rates of trace elements are:

Trace Elements	What the animal needs to get per day
Copper	150-400 mg
Selenium	3-5 mg
Iodine	12-50 mg
Cobalt	5-10 mg
Manganese	335-415 mg
Zinc	335-750 mg

The lower end of the range is for routine use and the higher levels are advised for stock at risk of severe deficiency.

Key Risks



Magnesium deficiency

Suckler cows are at high risk of grass tetany (staggers) particularly on lush grass rich in potassium and nitrogen, in cold wet conditions. It can also occur on autumn grass. Cows need a supplement of 30 g of magnesium (or 60 g of calcined magnesite) during the high risk period.

Methods of magnesium supplementation include:

- Pasture dusting.
- Molassed mineral buckets/licks.
- Low feeding rate carrier concentrate feed.
- Water application.