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Keeping young stock growing well during the winter

Efficient beef production centres on good growth rates right through the animal's life. The younger an animal finishes the less energy it uses for basic body maintenance. We can split the animal's life into a growing period which takes it from birth up to 2/3rd of its finishing weight and then a finishing period covering the last 1/3rd of its weight gain. The growing period is the longest time period; that is what we will concentrate on here.

Growth rate: assess what growth rate is needed for your system by thinking about what weight you need animals at a certain stage. For example, if you want animals to start their finishing period in January, to be finished by May, then assess the daily weight required during the rest of the growing period to get to at least 2/3rds of finishing weight.

As a general rule plan for at least 0.7kg per day growth rate during the growing phase, this should suit heifers and steers even of the smaller breeds, steers with high potential carcass weights could be grown at up to 0.9kg per day without laying down fat.

Protein requirements change significantly during the growing period with very high muscle growth in the younger animals demanding more protein. The type of protein also changes with younger animals requiring more rumen bypass protein whereas cattle close to starting their finishing period can usually make all of the protein they need from growth or rumen bugs. This means protein sources such as soya bean meal, distillers grains, rapeseed meal, peas and beans are needed by young calves but when these animals go over about half of their finishing weight then proteins such as grass silage or clover silage protein and urea can be good enough.

For cattle to utilise urea effectively and safely they do need an active rumen. Some urea can be included in diets for bucket reared calves heavier than 150kg live weight, but slower rumen development in suckled calves would make it safer to avoid urea inclusion until suckled calves are over 200kg. Start off with just 20-30g of urea per day but this can increase to 150g per day by 500kg live weight, ensuring that the urea is thoroughly mixed throughout the ration.

To keep feeding simple, if using a mixer wagon often the same diet can be fed from 100kg to 400kg but to adjust for the higher protein required by the younger stock top up their diet with additional concentrates, typically an extra 1kg of concentrates at 18% protein.

Silage quality is clearly important but also consider the presentation of the silage. Feeding every other day or even Mon/Wed/Fri is perfectly acceptable during the cooler winter months provided it is kept pushed up so all the stock in the group can reach it – remember smaller cattle have short necks so they will get left behind if feed is not pushed up close. Larger cattle can pull silage out of bales easily but small cattle really struggle so consider shaking out bales with the loader before feeding any smaller cattle.

If feeding straw make sure it is easily accessible, weld mesh racks restrict feed intake too much, ring feeders will result in more waste but allow ad lib intake.

As a general rule – unless silage is over 11MJ ME/kg DM then supplement growing stock with at least 1kg of cereal based concentrates – it will ensure active rumen bugs, good forage digestion and healthy stock.

Calf rearing is an area that has received more attention in the last couple of years but young calves remain the most underfed class of stock on any livestock farm. Feed conversion efficiency is always best in young cattle so be prepared to feed them well. Milk powder for bucket reared calves should be mixed up to 15% strength – that's 150g of powder topped up to 1 litre, not added to 1 litre of water, there is a big difference. Historically, and still on some milk powder bags, the instructions are for 10% dilution and fed at 4-5 litres but this is only just enough to keep a healthy calf alive, any other health issue and it will soon go back and die. Target milk powder intake should be 600-750g per day, so 4-5 litres at 15% dilution achieves this. Start reducing milk at 7 weeks and wean at 8 weeks. Make a good quality concentrate available from a couple of weeks of age and feed it fresh daily. Feed as much as they will clear up each day until intake reaches 3kg per day and then restrict at that level. This is a sound investment because weight gains close to 1kg per day have been achieved and a strong healthy calf that will fight off disease challenges has been reared.

