

Silage Quality and Quantity

- Reduced silage quality, less than 75% digestibility leads to lower milk proteins.
- Reduced silage intake leads to lower dry matter intakes and lower milk proteins.
- Reduced total energy intake leads to lower milk protein and milk lactose levels.
- To optimise milk composition and milk solid production the cow's intake needs to be consistent.

Milk Composition

- Milk composition varies with breed, genetic potential within the breed and stage of lactation.
- Cow nutrition influences the ability of the cow to express her milk composition potential.
- The annual cycle of milk composition starts high, reduces in early lactation and increases thereafter.
- Both proteins and fats are high immediately after calving, but reduce quickly if herds are underfed.
- Both proteins and fats bottom out at around 2 to 3 months into lactation as milk yield peaks.
- Both proteins and fats start to rise again as milk yield decreases, as lactation progresses.
- If total energy intake is reduced at any stage milk protein and milk lactose suffer.
- To produce high levels of milk protein and lactose, herds need to be fed very well continually.
- Additional dietary protein intake has little effect on milk protein or milk lactose concentration.
- The diet needs to be very low in dietary protein quality and quantity to see a reduction in milk protein.
- Milk fat is influenced by the amount of long fibre in the diet.
- Acidic, wet and poorly preserved silage will reduce milk fat levels.
- Precision chop silage can reduce milk fat as the cow does not chew the cud and she gets acidic.
- Chewing the cud boosts saliva production which helps prevent acidosis.
- Providing long fibre in the form of hay or straw or baled silage will help milk fat concentration.

Fertility

- Low milk proteins also predict a pending poor fertility season.
- Thin cows with low milk proteins and low lactose will have reduced fertility.
- If the cows ribs are clearly visible, then it is already too late.
- Fertility is a cycle, the damage was done earlier when the restriction was there.
- Cows need to be on a rising plane of nutrition after calving.
- Not feeding enough will reduce fertility as the energy gap is not filled.