

Managing the summer

On-Farm
Research

Key Points

1. Achieving target growth rates is often difficult over summer because of poor summer feed quality. Calves reared on a high milk volume system fare worst because of insufficient rumen development.
2. Silage is just a substitute for pasture and is often of insufficient quality to maintain summer growth rates in young calves.
3. High energy supplements can be used but must be introduced slowly. Calves fed 1 kg of palm kernel and 1 kg of crushed grain grew at 0.9 kg/day compared to calves fed pasture alone which grew at 0.6 kg/day.
4. Calves on forage rape (Winfred) can grow at 1 kg/day provided they have 3 weeks to adapt to the crop and they are not forced to eat into the stems.



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Calf Rearing Fact Sheet 3.7

What is the problem?

- Milk feeding is only part of calf rearing. After weaning a young calf needs high quality feed well beyond weaning as the rumen is simply not big enough to cope with much roughage – and roughage is often what they have to contend with over their first summer. Feed which is drying off and going to seed is rapidly declining in energy. The end result is poorer energy intake and slower growth rates.
- Calves which have been reared on high milk volume systems with little meal often fare worse over their first summer (than those reared on low milk volume/high meal). This is because although milk is a great energy source it does not actually stimulate rumen development. On the other hand, the grain in meals encourages the growth of the papillae which line the rumen wall and absorb the products of rumen digestion. Calves with good rumen development may not be as heavy or look as round as calves which have been fed a lot of milk but they are better placed to handle poorer quality feed.
- The same issues apply to bull calves and many bull finishers hold off their calf purchases until the autumn – so they can buy calves that someone else has battled through the summer. With bull calves there is an obvious gap between when calf rearers need to sell their calves (late spring) and when finishers want to buy (early autumn) which creates ongoing problems in the bull beef supply chain.
- Calves can potentially grow at 1.3 kg/day over their first summer – to achieve this requires an impractical ration of *ad lib.* lucerne hay and pellets containing by-pass protein. But even on good quality summer pasture, calf growth rates are typically 0.55-0.65 kg/day.
- A Friesian dairy heifer weaned at 100 kg on the 30th November should be 185 kg on the 1st April. But if it only grows at 0.5 kg/day over the summer it will be 25 kg behind its target weight.
- Live weight penalties incurred over the first summer can be recovered before mating but only with very good management and supplementation.

Brassicas

- Feeding a brassica crop is one of the most cost effective way of ensuring good calf growth rates – particularly in a summer dry area.

Brassicas (continued)

- Forage rapes provide the best fit as they can be grazed early yet are capable of carrying a bulk of feed into the summer. There are cultivar differences in growth and animal performance but Winfred has consistently given good animal performance and can be grazed 85 days after sowing.
- On all brassica crops, calves need time to adapt to what is a complete change of diet (3 weeks seems sufficient). This means that growth rates will be slow initially after calves are introduced to a crop. In two different experiments, calves on Winfred grew at 0.6 and 1.0 kg/day over the first 3 weeks and 1.1 and 1.2 kg/day over the second 3 weeks. To achieve this level of performance, calves need to be rotationally grazed and moved once they have eaten the leaf off the crop. If they are pushed to graze into the stem they won't grow as fast and brassica re-growth will be compromised.



Feeding supplements at pasture

- Calves can be fed silage but this is just a pasture substitute. Higher growth rates often require higher energy supplements. The advantage of supplements is that they can be used on an as-required basis whereas brassica crops require planning and having land that can be taken out of grass.
- In a series of experiments feeding supplements to pasture fed calves, growth rates were typically increased from 0.6 kg/day on summer pasture to 0.75 kg/day with 1 kg of supplement (25% of total ration) and to 0.9 kg/day with 2 kg of supplements (50% of total ration). Supplements used were typically a mix of 50% crushed maize and 50% palm kernel. While palm kernel has palatability issues for very young calves, this does not appear to be an issue once calves are older than 3 months.
- Calves need to be adjusted to supplements gradually to avoid dietary upsets and potential acidosis. However this is not an issue if the summer feeding supplementation is simply a continuation of the rearing and meal feeding programme.

