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DoloZest® News

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Maximising summer performance

Summer is well underway and for most the recent rain has provided relief from what was looking like the beginning of an uncomfortably long hot couple of months.

The absence of rain soon after an exceptionally wet winter and spring, challenged pasture management systems more quickly than expected.

Those that were able to get supplement off early and achieve a genuine 30-day grazing interval fared best. The question is now whether a change of plan is warranted.

Every farm situation is different and what we suggest is based on close to forty years of our own experience, along with what we've learned from clients, field work, and research over that period.

A 30-day grazing interval, where possible, seems to provide best performance. A longer interval may have merit depending on the class of stock being farmed.

Young, rapidly growing, and lactating animals require a large proportion of their diet in highly digestible feed rich in protein. Longer stalky feed provides the necessary energy and fibre for optimum rumen performance.

The challenge posed by the rapid change from wet to dry was that clover plants didn't have sufficient time to fully establish providing a base of highly digestible nutritious feed before the soil moisture content became the limiting factor.

Many thanks for the photos of pastures rich in both red and white clover received recently. There's been a noticeable increase in contact from potential new clients with increased awareness that reducing nitrogen dependency and sequestering carbon are the future of genuinely sustainable pastoral farming.

Grass seed head appeared on cue early in November and, regardless of management, will continue to do so while soil temperatures remain high. Seed provides oil, mineral, and energy, however, for best effect it is only part of the diet of a grazing ruminant.

Fresh clean drinking water is a necessity and those that clear troughs of gunge often report increased water intake and a corresponding lift in performance.

Shade is also welcome during long hot periods; however, that's not always feasible. Calcium is regarded by some animal nutritionists as the temperature regulator in animals and making lime flour available over summer will soon establish whether extra is being sought and therefore beneficial.

Salt is recommended during summer as both clover and most of the summer growing grasses, (paspalum, lucerne, maize, kikuyu) are classed as natrophobes; i.e. plants that naturally contain little sodium.

Our experience is that well-fed animals do not eat more than they require and the likelihood of animals over eating minerals when they are available separately, as opposed to in mixes, is remote. Mixing molasses and minerals to entice them to eat more is **not** recommended.

Having salt, lime flour, and dolomite available in bins, ensures animals that require extra sodium, calcium, and magnesium, are able to adequately supplement their diet, eating only what is required.

Nitrogen for summer growth
It's not unusual for new-to-the system clients to wonder how summer pasture will fare without regular inputs of nitrogen, particularly when clover performance is a little ordinary.

Soils under grazed pasture naturally contain between 5,000–15,000kg of N in the top 15cm (6 inches), so there is no shortage of short term nitrogen. Under a DoloZest/CalciZest programme the stimulation of soil biology and resultant improvement in physical soil structures ensures sufficient nitrogen for optimum pasture performance.

Clover fixes nitrogen in response to declining plant available N which means that, as with all other nutrients, the plant available portion being somewhere between 1–5% of total, is constantly changing. The ability of natural systems to continuously provide what is required depends on biological activity.

In recent times some pastures have appeared lighter green than expected. However, when pasture growth rates have been calculated or measured they have been excellent for the time of year, challenging the view that darker is necessarily better.

Animal performance is the ultimate measure and darker green pastures are those high in nitrate, not necessarily what animals require for best performance, and plants high in nitrate are also more susceptible to damage by heat. Spending time watching what stock eat first when entering a fresh break or paddock is a recommended practice.

Old habits die hard
Probably better stated as 'old truths' these can be difficult to replace. The first farm we purchased, a stepping-stone dairy farm south of Tokoroa had a ragwort problem. Wanting to minimise boom spraying we accepted that there would be years of persistent spot spraying in order to eradicate the weed, based on the knowledge that one year's seeding required seven years weeding.

After applying bulk lime to one area of the property it was apparent that ragwort plants in that area were noticeably less, although at that time we didn't associate it with lime. We were of the belief that killing things was the way to get rid of them, and creating the conditions that favoured the plants we wanted to thrive was a concept that hadn't entered the psyche at that time.

There's always a time to deal to persistent well-established 'weeds" provided the conditions that favour the replacement species are then created.

Conditions that favour clover
Clover contains calcium at 3–4 times that of grasses, hence it makes sense to provide extra calcium. Our experience is that providing a calcium rich total nutrient programme steadily increases the vigour of clover, and where clover flourishes, higher fertility grasses appear of their own accord.

Recommended calcium inputs, based on a range of soil test measures including Base Saturation, results in a pH of 6.3. Soil test pH can vary a little and readings from 6.1–6.4 are common. In these conditions clovers toward the end of their rapid growth phase, the ideal time to graze, have long strong and solid stems, and as a result bloat is less likely to occur. However it's not the only factor.

Clover contains little sodium and it's well accepted that high potassium and low sodium will create the situation under which bloat may rear its ugly head. Applying potassium may well encourage more clover, but the plants tend to be hollow-stemmed and close to the ground, as it takes a plentiful supply of calcium to grow a solid long strong stem.

Potassium fed clover will also encourage attack by pest and disease resulting in poorer overall pasture persistence.

A dry patch in summer, with a 30-day grazing interval, provides the perfect conditions for the setting of seed, both clover and grasses and this plays an important re-seeding role, reducing the requirement for expensive pasture renewal.

Strongest plant response typically comes from autumn applied nutrient. Regular soil testing throughout the growing season shows a steady decline in plant available nutrient. Replacing removed nutrient speeds autumn growth and increases the length of the autumn growing window.

All the best for your 2018 Functional Farming enterprise, Peter & Coralie