Managing the changing climate

THE FARM

Jacqui and Stuart Tracy

Waratah Bay, South Gippland Victoria

Stuart and Jacqui Tracy are dairy farmers at Waratah Bay in South Gippsland, Victoria. They milk 470 cows on their property, a stone's throw from the ocean.

"We are observing the climate changing," said Stuart. "We have not had a wet winter since 1996," added Jacqui. Some of the observations that Stuart and Jacqui have made are later autumn 'breaks' – often a winter 'break', milder winters resulting in more grass growth and the growing season finishing earlier, often resulting in an early silage season. "We now make silage in September, so there is no getting away in those school holidays," Jacqui said.

Jacqui and Stuart Tracy are adapting their farming practices to the changing climate.

BUSINESS SNAPSHOT

- Number of cows: 470
- Autumn calving
- Rotary shed built in 2006
- Energy savings in the cow shed
- Feedpad allows feeding of bread, almond hulls, home-grown hay and silage
- Predominant pasture species: rye though looking for dryer climate alternatives

LESSONS LEARNED

- There are challenges to autumn calving.
- Water supply is a continuing challenge.
- The drier years have forced smarter water management practices.

The Tracys have observed changes in climate at their Waratah Bay beach front property.

Changes in farming

With changes in the climate have come changes to the farming system. The extended dry season over the summer months and less runoff throughout the winter means water supply is tighter and needs to be managed carefully.

Effluent captured from the cow shed and feed pad is irrigated over half the milking area.

Not only is water reused, but nutrients are recycled too. Annual soil testing allows Stuart and Jacqui to monitor nutrient levels on these areas. The reuse of nutrients has resulted in a reduced application of phosphorous and potassium fertilisers and in turn equates to financial savings.

A new cow shed completed in 2006 services the farm well. The Tracys are seeking energy savings in the shed and run their automatic wash system at temperatures around 50°C. Quantum (heat pump) hot water services were installed this year. Stuart and Jacqui are keeping an eye on new technologies to reduce energy and water use even further. "We want to save energy, dollars and not have such a big impact on the environment," Jacqui said.

New calving pattern

In 2002, the Tracys decided to change their calving pattern. Tired of calving cows in muddy, cold conditions during winter and seeing significant pasture damage, calving was moved to March. "Calving is much easier now with calves born onto dry paddocks" said Stuart. "Our milk production is more even. We used to have large peaks and troughs, which would cost us money," he added. Milk incentives are gained with this calving pattern and lactating cows can make the most of grass growth through the winter months.

There are some challenges.

Hot days in March can cause heat stress to the young calves in the shed. This is managed with shading of the calf rearing area. With later autumn 'breaks', freshly lactating cows are not always able to move onto green pastures. A feed pad built in 2004 allows brought-in feed – oaten hay, bread, almond hulls – and home-grown silage to be fed.

Another challenge has been mastitis. Due to the often dusty conditions in March and the increased number of flies with drier summers, mastitis has caused more problems than expected.

Pasture alternatives

Traditionally rye grass has been the predominant pasture species, but the Longer, drier summers have brought concern about survivability and Stuart has found that annual over-sowing of pastures is becoming expensive.

He is looking to alternative deep-rooted species, more suited to the sandy loam soils and drier summers. Stuart has begun trialling cocksfoot, fescues and prairie grasses and is working through palatability, grazing and management issues with these species.

The future

Managing a farming system is complex at the best of times. With the added challenge of changing seasonal conditions, every decision requires careful research and knowledge. The Tracys have obtained information from other farmers and advisers. They are managing their farm using the best management practices available and adapting to the changing climate that they are observing every day.

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