

Tropical pasture evaluation plots being developed at Gatton Research Dairy

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Tropical pastures are widely used in dairy production systems in tropical and subtropical regions in Queensland and northern New South Wales. Commonly used species within pasture based and partial mixed ration systems include kikuyu, setaria and rhodes grasses. These pasture based systems offer low cost, long term forage options for milking stock, dry stock and followers. They also allow potential fodder conservation options through hay and silage when conditions are suitable.

As part of the C4Milk project, six tropical grass species will be established this summer at the Gatton Research Dairy and evaluated over the next three to five years for yield, quality and persistency under a range of management strategies. These strategies may include optimal versus sub optimal water application, grazing management to increase leaf yield, quality and intake, and oversowing with temperate forages and or legumes to improve yield and quality. Two commonly used species in the dairy industry will be grown alongside four newer species to evaluate their relative potential in pasture and PMR based dairy production systems.

The species selected for evaluation include:

- 1. Floren Blue Grass** – a tussock-type grass that has a high tolerance to waterlogging, with good persistence on heavy soils, a high leaf to stem ratio and good forage quality.
- 2. Brachiaria Mulato II** – a newly released variety that is high yielding, quick to establish and has high forage quality when managed optimally.
- 3. Reclaimer Rhodes Grass** – a quick establishing stoloniferous variety selected from Katambora Rhodes grass, that is later flowering compared to other Rhodes grass varieties.
- 4. Gatton Panic** – potentially offers high yields and forage quality when managed intensively.
- 5. Splenda Setaria** – a high leaf to stem ratio grass that grows well in high rainfall or irrigated systems.
- 6. Whittet Kikuyu** – a commonly used kikuyu variety that is high yielding with good forage quality when managed intensively under irrigated systems.

The species will be sown in October 2019 with four plots of each species approximately 0.1 ha per plot in area, which will provide enough area to graze each plot if required. The pasture plots will be sown into a fully prepared seed bed at recommended rates, irrigated and managed to allow each species to demonstrate it's full potential during establishment. A range of attributes will be assessed including:

1. Ease and rate of establishment
2. Persistence and regeneration
3. Dry matter yields over growing season
4. Suitability and performance under grazing
5. Cut and carry yield and performance
6. Pasture quality vs dry matter production
7. Response to varying agronomic practices

The plots will be managed over multiple growing seasons to assess their suitability for dairy production systems under a range of management strategies, and therefore allowing for their evaluation of production and persistence over a time. ■■



Gatton Panic oversown with ryegrass, Clews farm, Rossmoya, Central Queensland.



Brachiaria Mulato II in a trial plot at Kingaroy (photo courtesy of Ben Vercoe, Heritage Seeds)