

# Update on C4 Milk Winter Forage Demonstrations

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## Far North Queensland

The Department of Agriculture and Fisheries (DAF) has established a winter demonstration plot at East Barron in Far North Queensland (FNQ), in collaboration with Frank and Dawn Cuda. A 10-hectare irrigated site previously planted to summer corn was planted to four forage crops on 10th July, 2021. Table 1 provides some details of the crops planted.

Forage	Area planted (ha)	Seeding rate (kg/ha)
Barley var. Shepherd	4	100
Wheat var. Buchanan	2	100
Wheat var. Bennett	2	100
Canola var. Hyola	1.5	5

**Table 1** Crops and varieties grown

All four crops are showing promise. The images below show stage and appearance 68 days post planting for barley, wheat and canola.

At planting, the seed was broadcast with 125 kg/ha Entec urea and watered in. From planting to mid-September, the crop received 75 mm rainfall and four irrigations of about 25 mm each. A second fertiliser application of 100 kg/ha of granular urea was applied on 26 August, 46 days after planting. An out of



**Image 1** Symptoms of spot blotch on Shepherd barley

season storm, which delivered about 50 mm of rain, accelerated the development of spot blotch disease caused by the fungal pathogen *Bipolaris sorokiniana* (*Cochliobolus sativus*) in the Shepherd barley. The crop was sprayed promptly with Amistar Xtra and has since recovered. Image 1 above depicts the extent of the disease on Shepherd barley.

All four crops will be evaluated for yield, nutritional profile, suitability for ensiling, economics of production and incidence of pests and diseases. If you would like to know more about the FNQ winter forages demonstration, please contact Jo Srhoj on 0458 065 695.



**Image 2** Barley var. Shepherd



**Image 3** Wheat var. Buchanan





## Gatton Research Dairy

The C4Milk team has planted another small scale on-farm demonstration in conjunction with University of Queensland Dairy Research Unit as part of the 2021 Gatton Research Dairy (GRD) winter cropping program.

Three varieties of wheat; Bennett, Naparoo and Severn, and a combination of Naparoo wheat and Hyola canola were planted in two-hectare blocks on 20 June, 2021. Planting was later than ideal due to prevailing wet weather. The wheats were planted at 50 kg/ha and the wheat and canola combination at 50 and 5 kg/ha, respectively. The paddock was previously under lucerne. The balance of the paddock was sown to Naparoo wheat. Another smaller area was sown to faba beans at two planting rates; 100 and 200 kg/ha. The crops are fully irrigated. The wheat varieties and the canola are to be taken as a multi-harvest option, with the first harvest taking place on the 1st September, 72 days after planting. The crops were mown and wilted for 24 hours for the wheat and 48 hours for the canola before being picked up with a silage harvester. The faba beans will be harvested at full pod stage as a single-harvest option and round bale silage wrapped.

Yield and quality parameters from the first cut from the demonstration trial are shown in Table 2.

The first cut harvest results for the 2021 crops align with results from previous winter demonstrations. Protein was high in the crops containing wheat, with Bennett showing the highest content although it exhibited the lowest yield. At present both Bennett and Naparoo are showing signs of rust incursion. Severn had significantly higher yields than Naparoo and Bennett; 16% and 24% respectively, and also currently less rust issues. Image 6 shows Dave Barber in Severn wheat before its second



cut. Note the yellowing in the Bennett wheat behind Dave's left shoulder. The combination of Naparoo and Hyola canola had slightly lower feed values than straight wheat varieties, however, recorded a yield 25% and 32% higher than Naparoo and Bennett, respectively.

The final results from this demonstration trial will be reported in a later edition of Northern Horizons. ■ ■

Crop/variety	Yield (kg DM <sup>a</sup> /ha)	Crude Protein (DM%)	Metabolisable energy (MJ <sup>b</sup> /kg DM)	NDF <sup>c</sup> (%DM)
Bennett wheat	2407	34.8	11.7	34.9
Naparoo wheat	2662	33.2	11.5	35.6
Severn wheat	3179	32.1	11.4	37.6
Naparoo wheat/Hyola canola	3551	29.2	10.4	27.3
Hyola canola	5562	19.6	10.0	30.0

<sup>a</sup>Dry matter <sup>b</sup>Megajoules <sup>c</sup>Neutral detergent fibre

**Table 2** First cut yields and quality parameters from the 2021 Winter Forage demonstration at Gatton Research Dairy.

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