

# MLA PDS – Alternate Forage Legumes

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**Host – Tim Metcalfe**

**Location – Porongurup**

**Soil type – Gravely loam**

**Control – Ryegrass / clover pasture, 25.5ha, 35 yearling steers, ~1.4 yearling cattle/ha**

**Treatment – Winter wheat (DS Bennett), 85ha, 210 yearling heifers, ~2.5 yearling cattle/ha**

## KEY POINTS

- Winter wheat produced more than double the biomass at 3.88t/ha across 85ha compared to the clover rye pasture that averaged 1.86t/ha across 25.5ha.
- Total livestock weight gain over the 40 grazing days was 17.2 kg/ha higher on the DS Bennett compared to the rye clover pasture.
- DS Bennett (winter wheat) benefits extend beyond grazing. In this project, 65ha was taken through to harvest yielding 3.6t/ha and 17ha was cut for silage with a yield of 12t/ha.

## BACKGROUND

In 2020, Stirlings to Coast Farmers (SCF) began a project with Meat & Livestock Australia (MLA) looking at alternative forage crop options for southern WA. The alternate forage crops were compared to traditional feed sources at the time of grazing for both nutritional value and live weight gain (LWG) on either lambs or weaner cattle. The project has run for three years with final year results currently being collected. This article discusses final year host, Tim Metcalfe's site, comparing yearling cattle that grazed winter wheat to those grazing a ryegrass clover pasture over 40 days from July to August 2022.

## METCALFE'S PRODUCER DEMONSTRATION SITE (PDS)

As the alternate forage, Tim decided on DS Bennett, a winter wheat. Winter wheat varieties are suited to the high rainfall zone and are a great alternate feed source. Advantages of DS Bennett include higher biomass production which in turn supports higher stocking rates compared to traditional annual pastures. Sowing winter wheat early for early grazing opportunities can allow farmers to defer grazing. This deferment can allow these pastures to establish and increases subsequent pasture availability. After grazing, winter wheat gives a diverse range of options to growers depending on seasonal conditions. For this demonstration, Tim had a herd of 210 yearling heifers rotationally grazing 85ha of winter wheat and a herd of 35 yearling steers grazing a 25.5ha clover rye pasture. Ideally, the cattle grazing the two treatments should have been of the same class, and initially, Tim thought these animals would have been okay to compare against each other in this trial. It highlights the difference that sex and genetic variation can play in an animal's growth and this difference should be kept in mind when comparing the results. The steers were yearlings with a good frame and were brought in with the purpose of filling out to sell. The heifers, which were the Metcalfe's third draft, had remained on-farm to fatten.



Figure 1. Top: 35 yearling steers grazing 25.5ha of clover ryegrass. Bottom: 210 yearling heifers grazing 85ha of winter wheat.



Figure 2. Biomass cuts of DS Bennett wheat (left) and clover rye pasture (right).

Table 1. Key nutritional value analysis of forages (full analysis published in previous article SCF Spring Focus)

NV Analysis	Mixed Pasture	DS Bennett Wheat
Dry Matter (DM)	18.5 %	14.9 %
Moisture	81.5 %	85.1 %
Crude Protein	20.0 % of DM	21.7 % of DM
Digestibility (DMD)	71.1 % of DM	84.3 % of DM
Est. Metabolisable	10.6 MJ/kg DM	12.9 MJ/kg DM

Table 2. The Average weaner weights recorded on the 1st July and the 10th August, and their average weight gain across the 40 days.

	Weigh In (Avg kg)	Weigh Out(Avg kg)	Weight gain (Avg Kg)	Avg weight gain kg/hd/day	Weight gain kg/ha/day	Weight Gain Total / ha (40 days)
Mixed Pasture (Steers)	389	463	74	1.85	2.53	101.2/ha
Bennett Wheat (Heifers)	385	433	48	1.20	2.96	118.4/ha

## RESULTS AND DISCUSSION

Biomass cuts of the clover rye pasture equated to 1.86t/ha across the 25.5ha and the DS Bennett wheat averaged just over double at 3.88t/h across 85ha. Nutritive value samples showed both feed sources were relatively comparable with the DS Bennett being of slightly higher quality (Table 1). This extra biomass and quality allowed the DS Bennett to support a higher stocking rate of 2.5 heifers/ha, compared to the 1.4 steers/ha on the clover rye mix. Over the 40 days grazing, the heifers on the DS Bennett produced an extra 17.2kg/ha (Table 2).

One of Tim's favourite aspects of DS Bennett wheat was the versatility and range of options it gave him. In 2022, Tim took full advantage of this diversity and cut 17 ha for silage which yielded 290 rolls at approximately 700kg each (12t/ha). The remaining 68 ha were taken through to harvest, with an average yield of 3.6t/ha.

### SCF are currently collecting final surveys.

If you are a livestock producer and have not done so yet, could you please take a few minutes to complete the following survey.

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