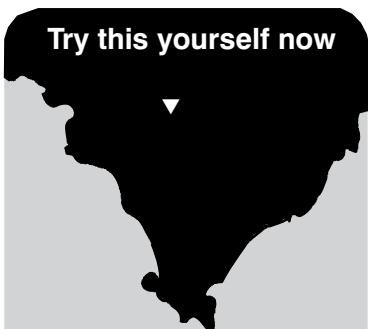


# Responsive Farming Using VRT: Strip Grazing Barley at MAC 2009

Roy Latta and Mark Klante  
SARDI, Minnipa Agricultural Centre

DEMO

## Try this yourself now



**Location:** Minnipa Ag Centre

### Rainfall

Av Annual: 325 mm

Av GSR: 242 mm

2009 Total: 421 mm

2009 GSR: 333 mm

Paddock History

2008: Wheat

### Soil Type

Red sandy loam

### Plot size

Broadacre demonstration

### Yield Limiting Factors

Nil

### Livestock

Enterprise type: Self replacing merino

Stocking rate: 41 – 57 DSE/ha

### Environmental Impacts

#### Soil Health

Soil structure: More even grazing

Compaction risk: Low

#### Social/Practice

Time (hrs): Set up fence

Clash with other farming

operations: Standard management

Labour requirements: Labour to shift sheep

#### Economic

Infrastructure/operating inputs:

Electric fence, portable trough

Cost of adoption risk: Low

## Key messages

- In 2009 47 ha of barley sown for feed at the break of the season sustained 300 ewes and lambs for 3 months during the period of late autumn-winter, a traditional period of pasture deficit.
- Hay freezing the forage crop ensures grass weeds are controlled.
- Use of strip grazing better utilises feed on hand and helps control erosion (especially around watering points).

## Why do the demonstration?

The aim of this demonstration was to provide early feed for stock in autumn, a time of year when pastures haven't established properly, and get ewes and lambs out of the confinement feedlot and onto good quality feed as soon as possible. The sheep had been agisted after the poor 2008 season as there was no paddock feed.

The paddock was sown to Maritime barley that was to be hay frozen in late winter, providing a grass freeing opportunity and a break in the rotation. There was no intent to harvest the crop. The demonstration measured the response in early feed production and utilisation to increased seeding rates and applied nitrogen.

The demonstration built on previous Eyre Peninsula Grain & Graze research and extension, highlighting the use of sown cereals for early feed, strip grazing and the importance of feed testing (EPFS Summary 2007, pg 75 and pg 84).

## How was it done?

Paddock North 2 (area 55 ha) on Minnipa Agricultural Centre was the

site. Barley was sown on 24 April at the commencement of 20 mm of rain over the period 23-28 April. Two treatments were applied to previous 2008 treatments in 9 m seeder strips across the whole paddock; 2008 high input – 2009 Maritime barley sown @ 90 kg/ha with DAP @ 30 kg/ha and 2008 standard and low input – 2009 Maritime barley @ 60 kg/ha with no fertiliser. Barley was direct drilled on 30 cm spacings with 12 inch sweeps and press wheels.

The paddock was split into three approximately equal sections using three wires of electric fencing to best utilise forage. Pasture cuts were taken prior to sheep being rotated into new sections from both the pre and post grazed sections to measure pasture growth rates and utilisation.

Three hundred lactating merino ewes with similar lamb numbers (approximately 3 DSE) were rotated between the 3 sections from 13 May until 9 August 2009. The paddocks were then sprayed to freeze grass seed set.

## What happened?

Sheep were moved to another section once they had evenly grazed the section they were in. The sections were not completely grazed out, but had enough left to allow rapid plant recovery.

There were 140 barley plants/m<sup>2</sup> established in the high input treatment, 100 plants/m<sup>2</sup> in the low input. Total biomass produced until hay freezing (early August) was 6 t/ha in the high input strips and 4 t/ha in low input strips, an average growth rate of approximately 75 and 50 kg DM/ha/day respectively. The amount the animals utilised up to that point is presented in Table 1.

**Table 1 Barley utilisation by 300 ewes and lambs in paddock N2 from 13 May until 19 August 2009**

		2 June	29 June	18 July	9 August	Total
High input	Utilisation (t/ha)	0.6	1.2	1.7	1.7	5.2
Low input		0.3	0.7	1.4	1.3	3.7

**Table 2 Gross margin summary of paddock N2 Minnipa Agriculture Centre, 2009**

Section	High input	Low input
Area (ha)	13	27
Cost of pasture/ha (\$/ha)*	50	30
DM utilised/ha	5.2	3.7
Grazing value (DSE/ha)	57	41
Gross Margin (\$/ha)**	306	226

\*Pasture costs included sowing inputs, herbicides and machinery expenses. Barley was valued at \$200/t.

\*\*Grazing value was calculated by multiplying the DSE (based on 1kg DM/DSE/day) by \$25 (estimated annual value/DSE) and dividing by 4 to adjust to proportion of year (3 months).

The positive gross margins in response to the high stocking rate show the opportunity to sustain a sheep flock over the winter feed gap.

### What does this mean?

Sowing a paddock early to a cereal feed crop provided a valuable feed supply and gave the other pastures their best opportunity to establish themselves and have grass management before being utilised for grazing. Hay freezing the forage crop still ensured grass

weed seed set was controlled.

The seasonal conditions provided the catalyst for the high production levels in 2009 but the general relationship remains between inputs and outcomes irrespective of the season.

Electric fencing was an effective means of dividing the paddock up for strip/controlled grazing. The stocking pressure was dramatically increased and, with close management, strip grazing was a more effective grazing

strategy as selective grazing was reduced, feed was more evenly grazed and hence feed utilisation improved.

### References

Grain & Graze, Free Food for Thought, Grazing Winter Crops Roadshow Workshop Notes Eyre Peninsula Farming Systems Summary, 2007

### Acknowledgements

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