

OPTIMISING LAMB GROWTH ON WINTER WHEAT

Reg and Rebecca Woodiwiss - Sunnyside, North West Tasmania

INTRODUCTION

Based in Sunnyside in Tasmania's north west, Reg and Rebecca Woodiwiss farm 'Royston' comprises of 93 hectares with an average annual rainfall of 1082mm.

The property currently runs a stud herd of shorthorn and saler cattle, supplied into local markets. Previously, poppies and sucker lambs were also produced, but with the decrease in poppy areas within the state, and challenging dry seasons, it was time to find another enterprise.

Reg Woodiwiss explained:

"Traditionally we do a paddock of dryland poppies, but that has changed the last couple of years as you had to have the irrigation to do it. We'd traditionally run cows with calves but then have surplus feed so we thought we'd grow fat lambs"

"We've had breeding ewes previously but got out of them 17 months ago. The problem with the ewes at the time was they were eating all year round, but with store lambs we could bring them in when we had the feed and 3 months and they are gone"

CROP AND LAMB PERFORMANCE

A total of 148 first cross lambs were purchased in from local saleyards at an average of \$73 per head. The heavier 97 of the lambs were inducted onto manning wheat and a small run-off paddock of pasture, weighing an average of 38.7kg. The remaining 51 lighter lambs, weighing an average of 33kg, were turned onto pasture when they reached 38kg. All animals received a drench of virbamectin and selenium on induction.

Sown on the 15th of March following poppies, the 4.45ha dryland paddock of manning wheat was sown to provide high quality and quantity for finishing. The wheat was sown at a rate of 120kg/ha with 120kgs/ha of DAP, following an application of glyphosate at 2.3l/ha. The crop's first grazing commenced 38 days after sowing, with 799kgs DM/ha on offer. This early grazing is characteristic of cereal crops, with grazing advised when the crop passes the 'twist and pull' test, the point at which the crop cannot be pulled from the soil.



Image 1: Manning wheat at first grazing on the 22nd of April with 799kgs DM/ha of feed on offer.

Lambs were weighed regularly, with animal's meeting market specifications identified for consignment. The market for the lambs was domestic supermarket, with specifications of 18-22kg carcass weight (cwt) and fat score 2 to 3. The first consignment of 20 head filled a local butcher order, with lambs achieving an average carcass weight of 20.7kg. Subsequent consignments in June, July and August were to a major retailer via JBS' Devonport plant, meeting market specifications at an average of 22kg cwt and a fat score of 3, as shown in table 1 below.

Table 1: Consignment details for first cross lambs grazed on the wheat forage.

KILL DATE	HEAD	CARCASE WEIGHT (AVG)	FAT (AVG)
8 May	20	20.7	3
16 June	53	22.7	3
21 July	29	21.5	3
10 August	18	21.8	3
22 September	24	20.9	3

Lambs gained an average of 188 grams over the 122 day grazing period. This figure represents the average of the flock consigned, per the initial weigh. Undoubtedly there was likely several high performing animals in the flock, although unidentifiable in this case. Given the industry benchmarks of 160 to 200 grams per day for first cross lambs on green fodder crops (Department of Agriculture and Food Western Australia, 2016), and the variability of the flocks the animal performed well, producing a total of 666kg cwt.



Image 2: Lambs grazing wheat in June 2016

The crop was monitored for quality and quantity over the grazing period, with both feed on offer (kilograms of dry matter per hectare) and feed analysis (feed test) taken on three occasions. The crop was first grazed with 799kgs DM/ha on offer and feed values of 13 MJ ME kg/DM and 32% crude protein, as shown in Figure 1 and 2. As expected, the crop could be grazed initially with low feed on offer, which as mentioned earlier is common for cereal forages. The crop continued to

provide sufficient dry matter for the lambs through to August, although growth slowed in winter with wet, cold conditions. This decrease was also experienced across other cereal crops in TasForage case studies during the season. At this stage, feed quality was also declined, a result of the high stalk to leaf ratio, with energy levels below requirements of 10.8MJ ME kg/DM (Productive Nutrition, 2015) at 8.7 MJ ME kg/DM. Feed on offer increased in late September after lambs were removed from the crop, before silage was baled. Overall, the crop provided 122 days of high quantity and quality of feed, receiving 922mm over the growing season (April to August), supporting lambs at 31 DSE/ha.

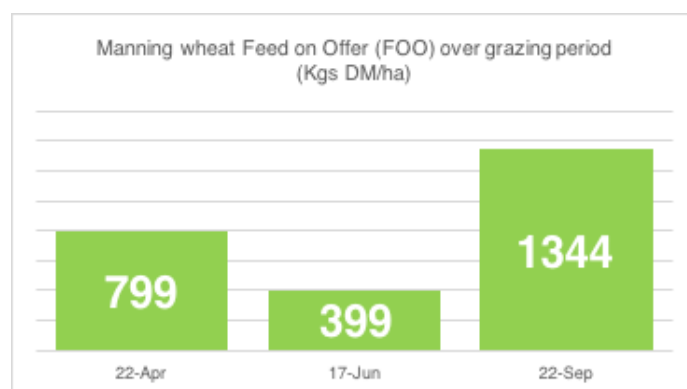


Figure 1: Feed on Offer (FOO kgs DM/ha) across the three sampling dates during the grazing period.

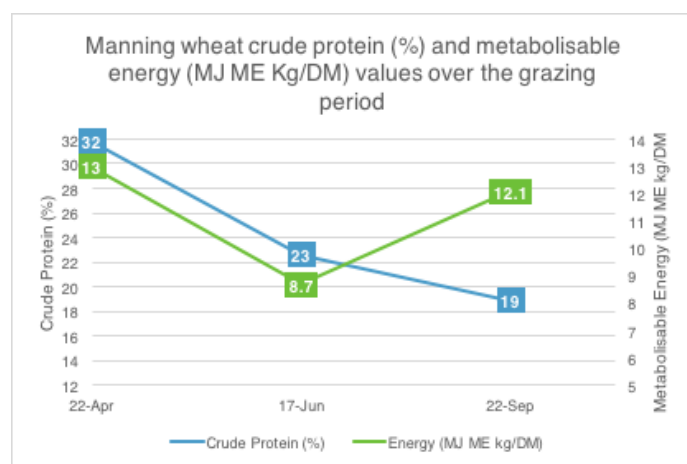


Figure 2: Feed values of the wheat forage over three dates during the grazing period.

Following lock up on 22 August, and an application 160kg/ha of Muriate of Potash (Potassium chloride) the crop provided additional income in September with 71 bales of silage cut, to an estimated total of 17.04 tonnes of dry matter.



Image 3: Lambs grazing the crop on 17 June with 399kgs/DM on offer.



Image 4: Manning wheat 19 September prior to potash application and silage with 1344kgs DM/ha on offer.

GROSS MARGIN

A gross margin was produced for the crop to analyse the enterprise. Factoring in labour and silage conservation expenses, the crop yielded a gross margin of \$1,823, a reasonable figure given the small area.

INCOME	
Lambs (sales less purchases, skins inc)	\$8,692.80
Silage (71 bales at \$80ea)	\$5,680.00
TOTAL Income	\$14,372.80
EXPENSES	
Seed (120kg/ha)	\$619.44
Fertiliser	\$1,029.24
Chemicals	\$152.03
Labour	\$1,104.37
Animal health	\$407.00
Freight and levies	\$814.00
Silage conservation costs	\$2,130.00
TOTAL Expenses	\$6,256.09
GROSS MARGIN (GM)	\$8,116.71
GM per hectare	\$1,823.98
GM per DSE	\$58.94
GM per kg cwt	\$12.19

ACKNOWLEDGEMENTS

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KEY MESSAGES

- Crop provided **122 days** of high quantity and quality of feed for finishing.
- Stock were grazed consistently over the period at **31DSE/ha**.
- Quick time from sowing to grazing, maximizing grazing duration.
- The gross margin of **\$1,824/ha** provided excellent returns, especially given the small crop area
- First cross lambs gained an average of **188 grams per day**, a productive figure for the mixed mob.
- Additional income from silage, with a total of **71 round bales** (17 tonnes) produced.

REFERENCES

Growing Weaner Sheep, Department of Agriculture and Food Western Australia, 2016. <https://www.agric.wa.gov.au/management-reproduction/growing-weaner-sheep>

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