

Mixed Species Annual Forage Crops Budget Series

Winter 2025

SOUTHERN NSW, CATTLE, MIX - GRAZE & GRAIN

Wheat, radish, turnip, and vetch

1. GROSS MARGIN BUDGET:

INCOME \$/ha:

Steers/ha

3.8

Sale price

\$1,503 per head

* includes 1% mortality.

381 kg per head,

(after 85 days @ wt. gain 1.3 kg/hd/day)

Income \$/ha	Your Budget
\$5,655	

Grain t/ha

\$/tonne

0.80 ASW wheat

\$300.00

TOTAL INCOME \$/ha:

\$240	
\$5,895	

VARIABLE COSTS:

See page 3 for detail

Sowing.....

\$143.40

Fertiliser.....

\$126.95

Herbicide.....

\$65.61

Harvesting.....

\$105.48

Grain levies.....

\$2.45

Livestock variable costs

4,574

TOTAL VARIABLE COSTS \$/ha:

\$5,018

GROSS MARGIN \$/ha:

\$877

2. Effect of stocking rate and livestock selling price of gross margin per hectare

Stocking rate Steers/ha	Selling price \$/hd				
	\$1,493	\$1,498	\$1,503	\$1,508	\$1,513
3.0	-\$281	-\$266	-\$251	-\$236	-\$221
3.3	\$92	\$109	\$125	\$141	\$158
3.5	\$466	\$483	\$501	\$518	\$536
3.8	\$839	\$858	\$877	\$895	\$914
4.0	\$1,212	\$1,232	\$1,252	\$1,273	\$1,293
4.3	\$1,586	\$1,607	\$1,628	\$1,650	\$1,671
4.5	\$1,959	\$1,981	\$2,004	\$2,027	\$2,049

SOUTHERN NSW, CATTLE, MIX - GRAZE & GRAIN

Wheat, radish, turnip, and vetch

3. Effect of livestock prices on gross margin per hectare

Purchase price \$/hd	Selling price \$/hd				
	\$1,303	\$1,403	\$1,503	\$1,603	\$1,703
868	\$914	\$1,276	\$1,637	\$1,998	\$2,359
968	\$534	\$896	\$1,257	\$1,618	\$1,979
1,068	\$154	\$516	\$877	\$1,238	\$1,599
1,168	-\$226	\$136	\$497	\$858	\$1,219
1,268	-\$606	-\$244	\$117	\$478	\$839

4. Effect of grazing days and weight gain per hd per day on gross margin per hectare

Grazing days ↓	Weight gain kg ght gain kg/hd/day				
	1.00	1.15	1.30	1.45	1.60
55	-\$16	\$133	\$281	\$281	\$430
70	\$281	\$430	\$579	\$728	\$877
85	\$430	\$579	\$877	\$1,025	\$1,174
90	\$579	\$728	\$877	\$1,174	\$1,323
120	\$1,025	\$1,174	\$1,472	\$1,770	\$2,067

5. Effect of weight gains and stocking rate on gross margin per hectare

Stocking rate steers/ha ↓	Weight gain/hd/day and Selling price \$/hd				
	1.00	1.15	1.30	1.45	1.60
	\$1,384	\$1,424	\$1,503	\$1,543	\$1,582
3.0	\$235	\$353	\$591	\$709	\$828
3.3	\$314	\$442	\$700	\$828	\$956
3.5	\$393	\$531	\$808	\$947	\$1,085
3.8	\$432	\$580	\$877	\$1,025	\$1,173
4.0	\$551	\$709	\$1,026	\$1,184	\$1,342
4.3	\$631	\$798	\$1,135	\$1,303	\$1,471
4.5	\$710	\$887	\$1,244	\$1,421	\$1,599

6. Effect of grain yield and sale price on gross margin per hectare

\$/tonne ↓	Wheat yield t/ha				
	0.20	0.50	0.80	1.10	1.40
\$250	\$717	\$777	\$837	\$897	\$957
\$275	\$722	\$789	\$857	\$924	\$992
\$300	\$727	\$802	\$877	\$952	\$1,027
\$325	\$732	\$814	\$897	\$979	\$1,062
\$350	\$737	\$827	\$917	\$1,007	\$1,097

SOUTHERN NSW, CATTLE, MIX - GRAZE & GRAIN

Wheat, radish, turnip, and vetch

CALENDAR OF OPERATIONS:		Machinery		Inputs			Total Cost \$/ha
Operation	Timing	Total \$/ha		Rate/ha	Cost \$	Total \$/ha	
Pre-sowing operations							
Glyphosate 570 g/L				1.60 L	8.41/L	13.46	13.46
Paraquat 360 g/L - with above	Jan	4.50		1.00 L	4.95/L	4.95	9.45
Wetter 1000 - with above				0.10 L	10.10/L	1.01	1.01
Sowing and fertiliser							
MAP at sowing	Mar	20.00		50 kg	1.08/kg	53.95	73.95
Wheat (Illabo) - with above				40 kg	1.20/kg	48.00	48.00
Turnip (Purple top) - with above				0.3 kg	4.00/kg	1.20	1.20
Radish (Tillage) - with above				2 kg	10.10/kg	20.20	20.20
Vetch (common) - with above				40 kg	1.85/kg	74.00	74.00
Broadleaf herbicide (iso-octyl-ester: 250 g/L diflufenican: 25 g/L)	July	4.50		1.00 L	9.91/kg	9.91	14.41
Urea - top dressing	Aug	4.00		70 kg	0.70/kg	49.00	53.00
Contract harvesting	Nov/Dec	105.48					105.48
End of season knockdown							
Glyphosate 570 g/L	Dec	4.50		2.00 L	8.41/L	16.82	21.32
Paraquat 360 g/L - with above				1.00 L	4.95/L	4.95	4.95
Wetter 1000 - with above				0.10 L	10.10/L	1.01	1.01
Crop levies							2.45
A. TOTAL FORAGE VARIABLE COSTS \$/ha:							443.88

Input prices were correct at the time of writing (March 2025). Use your own prices to estimate your gross margin.

LIVESTOCK COSTS	Number		\$		\$/ha
Replacements (i.e. value in)	3.8	steers @	\$1,068	per head	4,058.55
This assumes all steers are 270 kg/hd, purchased at 395.6 c/kg lwt.					
Husbandry					
Vaccination	3.8		\$1.25	per head	4.75
Drenching	3.8		\$0.75	per head	2.85
Livestock selling costs	3.8		\$1.50	per head	5.70
Forage and supplementary feeds					
Supplements - dry lick	0.11 kg/hd/day	85 days @	\$0.81	per kg	29.30
Commission on livestock sales			4.0%		226.20
Other costs e.g. yard dues \$10.00/hd; MLA levy \$5/hd; average freight cost to saleyards \$25/hd					247.00
B. TOTAL LIVESTOCK VARIABLE COSTS \$/ha:					4,574.35
C. TOTAL VARIABLE COSTS \$/ha:					5,018.23

NOTES:

A consistent set of assumptions were used to prepare the budgets in this series, covering agronomy, livestock and economic values. Sensitivity tables have been used to test the impact of key variables. Graze & grain budgets assume forages are managed for both early grazing and subsequent grain harvest. Graze only budgets assume forages are managed to maximise grazing utilisation without the need to protect grain yield.

Key economic assumptions include:

- All calculations are ex-GST.
- Livestock price information is sourced from the MLA Market Database in March or April 2025.
- A purchase price or initial value (where they have been bred on-farm) is applied to all livestock to allow the value of grazing the crops to be evaluated.
- Labour is not included. This is usually accounted for at either an enterprise or a whole farm budget level. Labour requirements differ substantially between enterprises, particularly where rotational grazing management or specialist machinery is required.
- Additional benefits, such as spring grazing of breeding stock, or hay production, are not included but may be relevant to some operations.

Key agronomy and management assumptions include:

- Weed control is conducted prior to sowing to minimise early competition and ensure successful crop establishment. A pre-sowing herbicide mix is included in the budget as an example; however, the specific products used will depend on paddock history, expected weed spectrum, and the pasture/cropping rotation.
- Sowing in March is into sufficient moisture and a suitable seed bed allowing for good establishment prior to grazing.
- Seed is of good quality and pre-treated to prevent disease.
- Optimal grazing management for the purpose of the enterprise, e.g. rotational or strip grazing to reduce spoilage, maximise regrowth, and extend the productive life of the forage crop. Overgrazing is avoided to preserve grain recovery (where appropriate) and soil structure.
- Stocking rates matched to expected growth potential of the forage crop, preventing over- or underutilisation.

Further information: Mixed Annual Forage Crops NSW DPIRD 2025, www.dpi.nsw.gov.au/mixes or contact Matthew Pierce matt.pierce@dpi.nsw.gov.au