



## Sheep CRC Practical Wisdom Notes

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## THE COWRA BALE FEEDER FOR HAY AND ROUGHAGE FEEDING

### Key points

- Feeding hay and roughage to lambs on the ground can be extremely wasteful.
- The Cowra Bale Feeder (for intact bales) and Chop Feeder (for pit or chopped silage, intact square bales or biscuits) reduce losses from trampling and soiling.
- In Sheep CRC trials, instead of losing as much as 45% of the bale, the Cowra Bale Feeder lost only 7% and the Chop Feeder 3%. The lambs also grew faster on the cleaner feed.

### Introduction

Feeding hay and silage on the ground can be extremely wasteful with reduced lamb growth rates. The Sheep CRC has funded the development of the Cowra Bale Feeder and Chop Feeder. These reduce waste and improve growth rates. The feeders can be purchased commercially or can be home-built using the detailed plans and photographs that are available at the Sheep CRC website: <http://www.sheepcrc.org.au/management/nutrition-and-feeding/feeding-equipment.php>

### What is the Cowra Bale Feeder?

Feeding whole bales of hay to lambs can result in wastage as high as 45%. Wastage is mainly due to spoilage by urine, faeces and trampling, with rain an added complication. The Cowra Bale Feeder developed by a team from NSW DPI led by Peter Holst, Principal Research Scientist, handles square and round bales of hay or silage. It has one swinging side, is covered and comes in two sizes.

The smaller feeder holds one round bale of hay or silage (up to 1.5 metres long). Producers who feed mainly large square bales of hay (2.4 metres long) can use the larger feeder. Alternatively the larger version will take two round bales. Wastage is negligible leading to high feed efficiency.



Figure 1 (right): Dave Stanley, NSW DPI and the Cowra Bale Feeder

David Stanley, Technical Officer with NSW DPI at Cowra worked with Lachlan Steel Industries, a local metal fabricator, to design the feeder. With critical input from farmers in the district, the team has produced a versatile and efficient feeder. If only square bales are being fed then the flexible pivot arm in the plans can be fixed. However this does reduce the versatility of the feeder.

### How well did the Cowra Bale Feeder perform?

Four hundred and fifty store lambs were used to compare the Cowra Bale Feeder, the Chop Feeder and the common method of placing an intact bale on the ground and allowing the lambs free access.

The roughage was round bale lucerne silage with 6.4 per cent sterile barley grass seedheads and leaf contamination (BG lucerne). In previous experiments, foraging lambs avoided barley grass seedheads and this behaviour may have contributed to the high level of wastage seen, therefore another trial using weed-free lucerne (WF lucerne) was also undertaken.

The lambs received a grain mixture of oats/wheat/lupins at the rate of 800g per head per day, fed every second day in a Cowra Lick Feeder. The silage in the Cowra Bale Feeder was replaced every fourth day, whereas the chopped material was replaced every second day.



Figure 2 (right). Sheep eating hay from the Cowra Bale Feeder.

Table 1. Comparison of the Cowra Bale Feeder and Chop Feeder with intact bales on the ground

	Wastage BG lucerne (%)	Lamb Growth Rate (grams/day)	Wastage WF lucerne (%)
Cowra Bale Feeder	7	204	0
Chop Feeder	3	173	0
Intact Bale on Ground	45	161	19.4

Table 1 indicates the significant reduction in wastage when hay or silage is fed in the feeders.

With the weed-free (WF) lucerne, wastage levels were reduced to nil for the Cowra Bale Feeder and Chop Feeder compared to 19.4% for the intact bale on the ground. This suggests that the presence of barley seedheads in the BG lucerne resulted in higher wastage levels.

The trials showed:

- No undue competition between lambs.
- A capacity of greater than 80 lambs for both feeders.
- Minimal wastage and good feed efficiency when supplemented with grain.
- The feeders worked well with the Cowra Lick Feeder as a system.
- The feeders accommodate round or square bales of silage or hay.

Feeding intact bales of hay or silage on the ground is wasteful. The new feeders are an attractive alternative and offer considerable savings and efficiencies.

### What is the availability of the Cowra Bale Feeder?

The Cowra Bale Feeder can be purchased from Lachlan Steel and Industrial Supplies, 1-9 Young Road, Cowra NSW 2794. Lachlan Steel can be contacted on 02 6342 4188 or visit the website: [www.lachlansteel.com.au](http://www.lachlansteel.com.au)

### What are the take home messages?

- Feeding hay or silage to lambs on the ground can be extremely wasteful and inefficient.
- The Cowra Bale Feeder will reduce the wastage and improve lamb growth rates.
- The feeder can be purchased commercially or home-built.
- Detailed plans and photographs are available.

At the time of publication the Chop Feeder is still undergoing trials and plans are not yet available.

### Further information

The Sheep CRC website has comprehensive plans and photographs of the Cowra Bale Feeder, visit:

<http://www.sheepcrc.org.au/management/nutrition-and-feeding/feeding-equipment.php>

The Cowra Bale Feeder is available commercially from Lachlan Steel and Industrial Supplies in Cowra (see contact details below).

### Commercial availability

The Cowra Bale Feeder can be purchased from:

Lachlan Steel and Industrial Supplies

1-9 Young Rd

COWRA NSW 2794

Tel: 02 6342 4188 Fax: 02 6342 3199

Internet: [www.lachlansteel.com.au](http://www.lachlansteel.com.au)

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