

SHEEP CRC Article: BALE FEEDER FOR SHEEP



Feeding whole bales of hay to sheep can result in wastage as high as 45 per cent. Wastage is mainly due to spoilage by urine and faeces, with rain an added complication.

Staff from NSW Department of Primary Industries at Cowra, working on a Sheep CRC project, have developed the Cowra Bale Feeder to increase feeding efficiency.

The project led by Peter Holst, Principal Research Scientist with NSW DPI, has designed a feeder that handles square and round bales of hay or silage up to 1.4 m long.

The Cowra Bale Feeder comes in two sizes and has one swinging side and is covered. The smaller feeder holds one round bale of silage or hay or square bales of silage (up to 1.5 metres long). Producers who feed mainly large square bales of hay (2.4 metres long) can use the larger version. It takes 2 round bales. Wastage is negligible leading to high feed efficiency.

David Stanley, Technical Officer with NSW DPI at Cowra, worked with a local metal fabricator (Lachlan Steel Industries) to design the feeder. With critical input from farmers in the district, the team has produced a versatile feeder that satisfies a real need.

How well did the feeder perform?

Four hundred and fifty store lambs (43kg) were used to compare the bale feeder, the chop feeder and the traditional/common method of placing an intact bale on the ground.

The silage was round bale lucerne with 6.4 per cent sterile barley grass seed heads and leaf contamination (BG lucerne). In previous silage experiments, foraging lambs avoided barley grass seedheads and this behaviour may have contributed to the wastage in this experiment. Therefore we also followed it with another trial using weed-free lucerne.

The lambs also 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 bale feeder was replaced every fourth day, whereas the chopped material was replaced every second day.

Comparison of the Bale Feeder with bales on the ground and the Chop Feeder

	Wastage in BG lucerne %	Lamb growth rate grams/day	Efficiency gain/total intake	Wastage on weed free lucerne %
Bale feeder	7	204	146	0
Chop feeder	3	173	120	0
Intact bale on ground	45	161	131	19.4

The table indicates the significant reduction in wastage when silage is fed in a feeder. It also suggests that the presence of barley grass seedheads brings about higher wastage levels.

The field trials showed:

- No agonistic interaction between lambs
- A capacity of >80 lambs for both feeders
- Minimal wastage, good feed efficiency when supplemented with grain
- The feeders worked well with Lick Feeders as a system
- Accommodates round or square bales of silage or hay

The project has demonstrated that feeding intact bales of silage on the ground is a wasteful exercise. The new feeders appear to be an attractive alternative and offer considerable savings.