Feeders and feeding systems for optimal sheep health and performance

Peter Boyd

Boyd Metal Works

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Welcome to ‘Canimbla’

- Purchased in 1999
- Owned and operated by the Boyd family
- Totalling 607 ha:
  - Lucerne (180,000 small and 3000 large bales)
  - Cropping (wheat, barley, oats, ryegrass and canola)
  - 500 first-cross ewes
  - 8000 store lambs

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- Established in 2006
- Fully-equipped workshop
- A variety of grain, lick and hay feeders for sheep, cattle, horses, pigs and chooks
- Employ 35 local staff
- 100% Australian steel

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What makes Boyd feeders different?

- Designed by farmers for farmers:
  - Large capacity
  - Easy to adjust
  - Minimal wastage
  - Heavy duty
- Ongoing improvement

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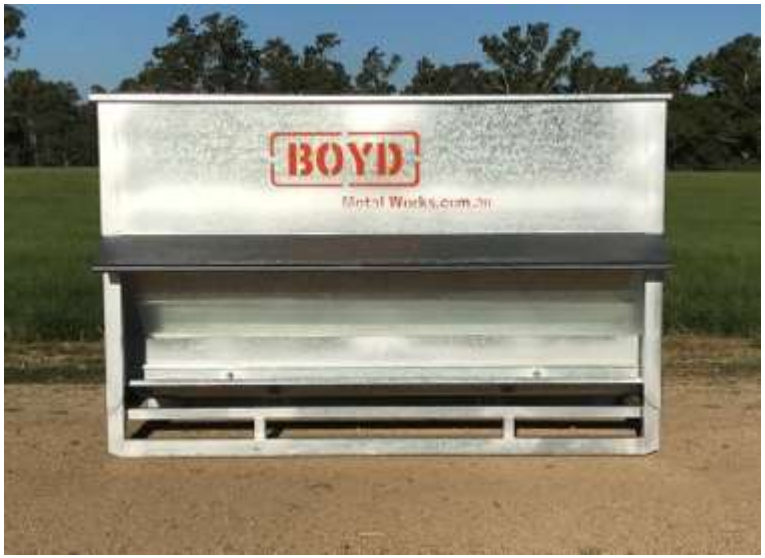
Grain feeders

- 3 m^2 capacity (approx. 2 t)
- Sliding lid for easy filling
- Easy wingnut adjustment
  - Single slide (300 g/day)
  - Double slide (150 g/day)
- Stationary & towable models
- Tray design minimises waste
- Heavy duty construction



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Hay feeders

- Raised floor
- Fixed roof
- Vertical gates
- Load from either side
- Heavy duty construction
- Three different sizes

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Newest Feedlot & Technology

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Automated feeding system

- Grain storage
  - 75 t grain silo
  - 25 t lupin silo
  - 8 t pellet silo
- Mixing bin fed by three variable-drive augers (no milling)
- Touchscreen control panel
- Delivered via PVC channel with non-return spring
- One tonne per hour

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Feeding program

Induction: Vaccinate with Vitamin AD&E, B12, 5 in 1, MH vaccine and broad spectrum drench.

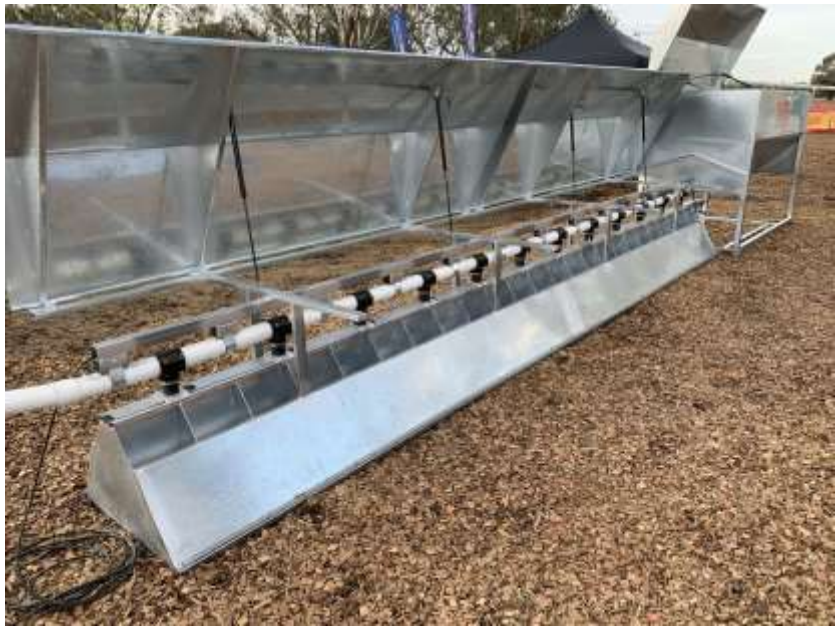
Shear if more than 20 mm wool.

Day 1: Optimum is to start @ 300g/head/day then increase by 50g/day until you reach 700g/head/day. This will take up to 9-10 days. This builds up the immune system for the sheep enabling a transition from grass to grain.

Day 10: Introduce to finisher ration via self-feeders in feedlot.

80% cereal, 15% lupins + 5% pellets.

Ad-lib access to straw.



Management

- Electronic ID, weighing and drafting systems essential
- Maintain good hygiene (clean water troughs and feeders)
- Weigh sheep weekly and re-draft into pens based on 5 kg weight ranges
- Remove any lambs that are losing weight
- Sell lambs once they reach target weight

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Calculating feed costs

High protein ration (e.g. growing)

	LOW			MEDIUM			HIGH		
Grain	$ 320	70%	**$224**	$ 350	70%	**$245**	$ 380	70%	**$266**
Legume	$ 620	25%	**$155**	$ 650	25%	**$162.5**	$ 720	25%	**$180**
Pellet	$1250	5%	**$63**	$1250	5%	**$ 63**	$1250	5%	**$ 63**
Cost	**$442/t**			**$470.5/t**			**$509/t**		

High energy ration (e.g. finishing)

	LOW			MEDIUM			HIGH		
Grain	$ 320	80%	**$256**	$ 350	80%	**$280**	$ 380	80%	**$304**
Legume	$ 620	15%	**$ 93**	$ 650	15%	**$ 97.5**	$ 720	15%	**$ 108**
Pellet	$1250	5%	**$ 63**	$1250	5%	**$ 63**	$1250	5%	**$ 63**
Cost	**$412/t**			**$440.5/t**			**$475/t**		

My current feed costs

Grain	$350/t	80%	$280.00
Legume	$700/t	15%	$ 105.00
Concentrate	$1250/t	5%	$ 62.50
Total feed cost			**$447.50**

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Feed efficiency is profitability

Feed conversion efficiency	4:1	6:1	8:1
$430 / tonne	$69.50	$48	$26.50
$455 / tonne	$67	$44.25	$21.30
$490 / tonne	$62.50	$37.50	$12.50

Assumptions: 25 kg liveweight gain. ADI: 1.6 kg/head/day. $9/kg dressed. 50% yield.

Feed efficiency is more important than feed costs, particularly as feed cost increases.

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The bottom line

Average daily gain	400 g/day
Time on feed	60 days
Total liveweight gain	25 kg
Feed efficiency	4:1
Average feed intake	1.6 kg/day
Total additional value	$112.50/head (dressed)
Total feed costs	$43/head ($475/tonne)
Margin	**$69.50/head***

**Excludes animal health, shearing and marketing costs.*

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Is it worth it?

- Our feedlot has improved the efficiency of our farming and feeding operations
- Automation makes feeding more profitable by saving time – and giving you extra time to do what's important
- A 2000 to 4000 head feedlot with all facilities costs about $240,000 to $480,000 to construct ($120/head)

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My tips for success

1. Understand the basics of ruminant nutrition
2. Provide a balanced ration, including a concentrate
3. Select quality sheep
4. Implement a thorough animal health program
5. Develop and follow a process e.g. feeding program
6. Measure and analyse results

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