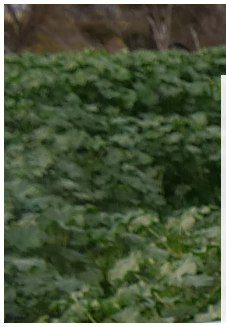

Assessing the economic benefits of confinement feeding

Kelly Gorter, SCF

Earlier this year, SCF began our MLA-funded Producer Demonstration Site (PDS) project titled 'Assessing the Economic Benefits of Confinement Feeding ' The project aims to examine the production benefits to farm businesses of different confinement feeding setups. Each site is unique in design, age, feed style, ration, and stocking density, providing an excellent demonstration of the diversity in strategies around confinement feeding.

A field walk was held in July 2022 at two of these sites and included a bonus site that was not part of the project itself. Attendees were able to view the different setups and discuss the various benefits and risks in setting up and managing each system.

Over the year, measurements were taken at each site at the time of animals entering and coming out of the confinement pens. While each farmer host may have run many mobs through their systems over the year, the project followed a single mob for each host. The main measurements taken at each site were feed tests on the grains and roughage to be fed, condition score of ewes going in and coming out, and biomass cuts on pastures that were able to be deferred due to animals being in the confinement feeding pens. A summary of each site is provided below.

Figure 1: Griffiths clover regrowth.

Jason Griffiths - Gairdner

Sheep into confinement: 4/4/2022

Sheep out of confinement: 29/4/2022

Feeding system: poly culvert pipes cut in half, mounted on posts on the outside of a plain wire fence. These were filled using a sheep feeder with an auger and scales.

Ration: oat seconds, lupins, barley mix. Ad-lib hay and straw bales on the ground

Condition score of sheep: slightly lower than desired at introduction however, increased by 0.4 over the confinement period.

Deferred pasture production: increase of 387.5kg DM/ha on a chicory, lucerne and serradella mix and 966.67 kg DM/ha on a medic pasture on canola stubble.

Jason built this setup new in the summer of 2021/22. It sits on the leeward side of a block of bush, providing protection from Autumn winds and is on a slight slope. There is no shade in the confinement paddocks. Water is supplied in cement troughs, which point into the wind to reduce the amount of dust and hay that blows into them. A laneway runs along the back of the pens leading to the sheep yards, with the feed trough on the opposite fence. Feeding is done from the outside of the pens on a well-compacted track.

Figure 2: Walkers refilling feed troughs.

Jeremy Walker – Green Range

Sheep into confinement: 21st March 2022

Sheep out of confinement: 26th April 2022

Pen size/ stock density: 6 pens, @ 4ha each.

Feeding system: Communal feed trough pen. Feed trough made of shade cloth hung from two wires approximately 200m long, divided into three sections.

Ration: Full mixed ration using a tub grinder. Hay, minerals, lupins and barley/ oats/ wheat seconds

Condition score of sheep: Slightly lower than desired at introduction but increased by 0.2 over the confinement period.

Deferred pasture production: Self-sown barley increased 1383.33kg DM/ha. Established clover/ ryegrass pasture 1166.67kg DM/ha.

Sheep are let into the central feeding pen one pen at a time after the trough has been filled with a mixed ration from the tub grinder. Jeremy observed that when the sheep had got their fill, they would take themselves back to their paddocks. The pens are built adjacent to the farm shed area so someone was generally always nearby to lock a mob out and let the next mob in or refill the feed trough as needed. Jeremy noted that it was a surprisingly quick process to rotate the six mobs through each day. Water was supplied in raised troughs with Jeremy's 'quick tip and clean' design.

Benefits of this system for Jeremy included cheap feed troughs, and he didn't have to make lots of them. Pens were big enough to plant a cover crop in and were multipurpose throughout the year. The set-up was close to the sheds so it also acted as good holding paddocks for busy sheep work periods. Ewes were held off lambing paddocks for as long as possible, saving feed for lambing.

Figure 3: July 2022 field walk drone shot Jeremy walker's.

Clare Webster - Tenterden

Sheep into confinement: 18/4/22

Sheep out: 7/6/22

Pen size/ stocking density: Small paddocks between 1 and 16 ha scattered within 1-2km of the sheds. Approx 100hd/ha in each. 5,500 sheep confined in total.

Feeding system: Trail feeding on the ground

Ration: Barley/ lupin mix treated with Home and Dry alkalising pellets. Ad-lib hay/ straw.

Clare seeded these paddocks with a variety of summer forage crops and grazed them throughout summer and early autumn. They were then grazed out with the confinement feeding mobs. The 'Home and Dry' alkalising pellets sterilise the seed so any missed grain did not germinate in the confinement paddocks. Clare is calculating the figures on the percentage and value of grain wasted in the trail feeding vs the cost of feed troughs to suit her system. Water was mainly from troughs.

Clare notes one of the benefits of the system is that it allows the pasture feed in lambing paddocks to get away more as stock are held off the pastures while in the confinement feeding pens. The system utilises multi-purpose small paddocks. Other benefits include improved weed management in the cropping paddocks due to more effective knockdowns pre-seeding because sheep are not in the way or grazing the targeted weeds. It is also quicker to feed and check sheep, so staff are less tied up during seeding.

Next Steps

The project now moves in to its second year with another set of grower hosts to further examine the benefits of different confinement feeding systems. By the end of the project SCF will have a case study booklet and short videos outlining the many different types of confinement feeding systems, and their various benefits and/or risks to farm operations and profitability.

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