

This case study is brought to you through the Grain and Graze 2 project thanks to funding received from GRDC. The Western Australian component of Grain & Graze 2 has a long-term goal of significantly increasing water use efficiency in mixed crop/livestock systems.

The right mix of wheat and sheep for optimal production in Southern Cross

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profile

Clint and Jess Della Bosca

Location: 'Terraserena' and 'Brondel', Moorine Rock

Annual rainfall: 275 mm (growing season 180 mm)

Farm size: 7600 ha arable/1480 ha non-arable land that is not used for grazing as some established plants are poisonous

Enterprise mix: 60% cropping/40% livestock (30% sheep, 10% cattle)

Soil type: Goldfields clay to wadjil sands (pH 4–9)

Farming system

Balancing the livestock and cropping mix has third generation farmer Clint Della Bosca grazing his way into optimal production. The Della Boscas currently run around 3300 head of sheep which are a mix of Merino, Finnsheep, SAMM and Poll Dorset. The average paddock size is 200 hectares with a typical rotation of cereals to pastures or lupins and some continuous cropping. Their pastures consist of clovers and serradellas and water is sourced from on farm dams as well as carted from the scheme when dams are dry.

Sheep genetics: breeding for higher birth and survival rates

The self-replacing sheep flock aims to produce fat lambs for the December market. Clint has sourced his rams from Kojonup studs Kaula and Jolma and he now has a mix of 50 per cent SAMM, 3/8 Merino and 1/8 Finnsheep. Finnsheep, originally from Scandinavia, have been bred in to the flock for their white wool and high fertility. They first arrived in Australia in the 1980s and are renowned for producing multiple births and are quick to mature.

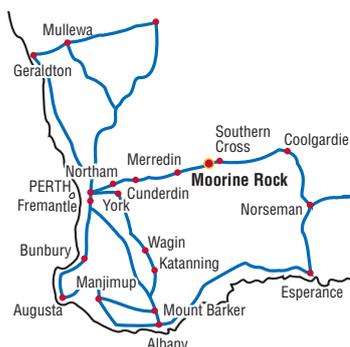
Clint put the Finn rams across about 200 of his cross ewes to create a self-replacing flock. The ewe lambs were then bred to his Poll Dorset rams for the prime lamb market. Using this breed mix, Clint is reaching 130–140 per cent lambing, which is a far cry from the straight merino mix of the 90s when the lambing rate was around 60 per cent. Clint first bred pure Merino ewes to a 3/4 Finn ram and ended up with 5/8 merino 3/8 Finn ewes. After incorporating the Poll Dorset, Clint found the fat and growth rates were hard to manage so he decided to incorporate the SAMM and has seen some great results.

'I haven't mulesed for the past two years,' Clint commented. 'I hadn't had fly strike problems until the warm, wet 2011 August, however that can be managed with an earlier crutching time.'

Grazing management—optimal feeding in a crop-oriented business

Clint's summer stocking rate is one DSE (dry sheep equivalent) and is increased to around 1.5 in winter. To get through the summer and autumn period Clint uses several different grazing strategies which include lick feeders and reducing the grazing pressure by rotations and lot feeding lambs.

Lick feeders were first used on the farm in 2009. Critical factors for the success of the lick feeder include training the animals which doesn't take long, monitoring shy feeders and a well rationed feed.



'It's an excellent way to supplementary feed sheep in the paddock, and it helps the ewe through autumn into the lambing period,' Clint said.

He adopted the lick feeding technique to control the ration of his sheep to 100–500 g per day. Using this technique, sheep can be given more feed safely and easily, while reducing waste. Clint plans to keep buying lick feeders and phase out trail feeding. He is heading towards a ration of mostly oats and lupins, placing the feed next to or near water troughs or dams.

Clint uses a low grazing pressure method to try and leave a healthy cover on the paddocks to assist with moisture and soil conservation. Selling some lambs early in October means most pastures can be left to the ewes and rams. Clint also lot feeds some lambs in small paddocks to control how they are grazing. The feedlot paddock is set up with good water and shade and lick feeders to supply a ration of oats and lupins mixed with mineral mix and hay/straw feed. The lambs spend around four to six weeks in the feedlot and are fed a home-grown ration. Clint commented that he was still working on his feed-lotting technique to optimise production on his farm.

When rotating the ewes Clint tries to leave 15–20 per cent cover, when possible. The aim is to bare the paddock as little as possible—however, when grazing, there is a fine line between not enough and too much grazing. The paddocks that are continuously cropped are excluded from grazing if possible on both his light and heavy country.

When dry seeding Clint excludes livestock from the paddocks set for crops. At this time pastures are still able to establish because of the low stocking rate and lick feeders. Although Clint admitted the past couple of years had been a bit of a struggle.

'We try to seed a paddock or two of oats and keep them locked up until they can take grazing pressure,' he said. 'We try to manage feeding at seeding time by keeping an ungrazed pasture paddock to put sheep on while seeding to reduce feed requirements.'

When seeding into wet ground Clint excludes livestock from the cropping paddocks to stop compaction. 'I'm happy to dry seed because of the size of our program and to maximise season length.'

Lambing is generally at the end of May so lambs are dropped closer to green feed and a cooler climate to encourage ewes to retain multiple births. Mature ewes throw 140 per cent and, in future, Clint wants to use pregnancy scanning and supplementary feeding multiple-bearing ewes to improve the percentage of survival.

Shearing is carried out at the end of February; however Clint is considering shearing twice a year if flies and not mulesing become a problem. Shearing in February, Clint plans to have the break in the wool as close to the end as possible which occurs when feed is tight and sheep are stressed from heat as well as lambing from January to May.

'Shearing in February gives us the ability to be growing a fleece when the sheep is not under the most stress,' Clint said. 'Also a February shearing fits in with the cropping program.'

Soil condition

When assessing the soils that have been grazed prior to seeding Clint has noticed that the soil's strength increases and is slightly compacted at depth whilst being still loose on top. He also noticed that soil cover is reduced to nothing in high impact areas such as around dams. Clint uses knife-points to cut stubbles short at harvest to make it easier to get through at seeding.

Balancing the enterprise mix

Having a mix of livestock and cropping is perceived to have a negative impact on cropping, however there are many benefits to each enterprise. The disadvantages to soil health, the lifestyle impact because of the constant workload, reduced cover, increase in weed burden and chemical costs definitely don't go unnoticed by the Della Boscas.

'If you manage grazing and rotations right, over time weeds will reduce but running pasture you certainly don't see quick reductions of weeds,' Clint said.

Despite the downfalls there are many perceived benefits to running sheep with cropping including cash-flow, reduced risk in dry years and the chance to reduce the summer weed burden, however Clint said they didn't have enough sheep to make a big impact on summer weeds in the event of summer rain.

'If we get rain this summer we still don't have enough sheep to get rid of all the weeds so we would still have to spray,' he said.

Having a mix of enterprises means Clint must juggle the timing of many jobs so they don't clash. They shear in February and crutch in October to make sure they aren't seeding, spraying or harvesting when sheep work needs to be done.

The 2011 season

This year Clint cut his program by 20 per cent due to the late start in the Southern Cross area. Most of it was sown dry in May and, in September, it was looking to yield average to above average. The varieties over the 4000 ha program include Wyalkatchem, Mace and Frame wheat, with some canola, lupins and oats. Malt barley got cut out of the program to reduce risk. Mandellup lupins podded reasonably well considering the dry and crops were looking to yield 1.4 t/ha for wheat, 0.8 t/ha for canola and 0.8 t/ha for lupins, however Clint commented that the rainfall that burdened the beginning of harvest may become a problem as they received between 30 mm and 70 mm in the ten days to November 3 and were expecting more.

