Benchmarking EP sheep enterprises

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Key messages

- **There are 3 main steps to improving your sheep enterprise:**
    - **Assess your current situation,**
    - **Set targets for key performance indicators (KPIs) and where you would like to be in the short, medium and long term,**
    - **Make plans to achieve targets.**
- **Benchmarking can assist in knowing your current situation and enables monitoring of changes over time.**

Why do the work?

The sheep and wool industry has a poor reputation for productivity gains and has lost significant ground to competing industries such as broad acre cropping. Utilising tools such as benchmarking enables producers to properly evaluate the current state of the enterprise and identify profit drivers, which highlight any opportunities where changes can occur to the business.

How was it done?

Five sheep groups, established with funding from the Eyre Peninsula Grain and Graze 2 Project and Sheep Connect SA have focused on benchmarking their sheep enterprises. Thirty eight businesses completed benchmarking for the 2012/13 season, with one group completing benchmarking for the past three years, two groups for two years and two new groups completing it for the first time in 2013. Benchmarking periods for the sheep groups run from 1 April to 31 March.

To maintain confidentiality and anonymity, the groups will be named Group A, Group B, Group C, Group D and Group E.

What happened?

The sheep flocks benchmarked were dominated by ewes with most producers having around 60-70% of their flock as breeding ewes and 25-35% as replacement ewes (Table 2). Generally, all prime lambs and merino wether lambs are sold by one year of age. There were a range of enterprise structures but the main two were self-replacing merino flocks and or terminal sire over merino ewes. There was one producer who had a self-replacing dorper enterprise. There were also three producers who operated a stud as well as their commercial flock. The studs were merino, white suffolk and poll dorset. Approximately 10% of the producers purchase lambs to utilise stubbles in most years. This however could be as high as 50% of producers, when the ideal trading opportunity presents itself with feed and prices.

There were no notable changes in the physical sheep production figures over the 3 years. There were some general trends across all groups, these included:

- Sheep losses decreased.
- Lambing percentage decreased in the 2012/13 season. Although all groups had difficult conditions for lambing due to a poor spring and limited feed reserves, Group B had a 20% decrease in lambing percentage. This may be improved with in future with planning, management and monitoring, that is, condition scoring ewes and providing the correct nutrition required at lambing.
- The stocking rates remained similar although there were variations according to the season. With a poorer season the stocking rate decreased as less area was cropped and the sheep had more winter grazed hectares.
- Although the stocking rates varied, the producers who had the highest stocking rate in a good season also had the highest stocking rate in a poorer season.
- The size of the sheep enterprises remained constant, although the sheep numbers and winter grazed hectares for group A slightly increased over the 3 years benchmarked.
- The enterprise mix in groups A, D and E were very similar with approximately 65-70% of the farm cropped and 30% for winter grazing due to majority of their farm being all arable (Table 1). Group B cropped around 45% due to more un-arable country. Group C was in a higher rainfall location and the farms in this benchmarking group had a large hill area that was un-arable and used for grazing, therefore only 50% of their farm was cropped.

The financial results are shown in Table 3. The gross margin per DSE and per hectare in 2012/13 was on average less than the previous two years, although there was a large variation within a group and between groups. The sheep and wool prices had a low period in the second half of 2012 compared to the previous 2 years. Producers with a good strategic and tactical management plan for their sheep enterprise were still able to achieve above $30/DSE, which was a good result in 2012/13.

Due to the poor spring in 2012 any producers who had stocking rates set to the extreme and/or no exit strategies did crash the system, resulting in low gross margins (per hectare and DSE). This was generally around 20% of the producers.

Table 1 Soil type, average rainfall, average percentage of farm cropped and numbers of businesses participating in benchmarking from sheep groups across Eyre Peninsula in 2013

Group	District soil type	Number of businesses participating in 2013	Av annual rainfall (mm)	Av growing season rainfall (mm)	Average % of farm cropped
Group A	Red sandy loams to sandy clay loams	9	310	212	65
Group B	Grey calcareous sandy loams	5	324	245	42
Group C	Red brown earth	6	425	344	51
Group D	Red sandy loams to sandy clay loams	11	342	248	66
Group E	Calcareous sandy loams	7	350	260	67

Table 2 Physical and production traits for all participants surveyed in the 2010/11, 2011/12 and 2012/13 seasons

Sheep	Mean	Range Low-High	Mean	Range Low-High	Mean	Range Low-High
	2010/11		2011/12		2012/13	
Total dry sheep equivalent (DSE)	1780	1110 - 3940	1520	1300 - 5570	2340	625 - 5982
Ewes (%)	70	42 - 99	72	40 - 81	65	33 - 99
Ewe Hoggets (%)	24	0 - 46	27	9 - 37	28	0 - 55
Losses (%)	5	2 -13	3	1 - 6	3	0.6 - 6.4
Stocking Rate						
Winter Grazed (WG) hectares	810	240 - 2100	790	320 - 1550	1119	166 - 6800
DSE/WG ha	2.9	1.3 - 6.4	2.1	1.0 - 4.8	3	0.5 - 8.3
DSE/WG ha/100 mm rainfall	1.0	0.6 - 2.8	0.9	0.5 - 1.8	2	0.2 - 6.7
Sheep Trading						
Marking (%)	92	78 - 103	96	73 - 120	92	65 - 150
Lambs/ha (No/ha)	1.5	0.4 - 2.3	1.1	0.3 - 2.0	1	0.2 - 4.5
Sale price (av $/hd)	122	101 - 155	112	92 - 165	85	42 - 156
Wool Production						
Wool price (av $/kg)	6.23	5.16 - 8.44	7.61	6.71 - 8.66	6.00	4.22 - 8.51
Total kg*	9540	4020 - 26080	6,780	4900 - 23940	8743	4012 - 23400
kg wool/DSE*	5.1	3.6 - 6.6	4.5	3.2 - 5.5	4	2.2 - 6.3
kg wool/WG ha*	14.8	5.7 - 32.1	9.4	5.1 - 26.7	13	1.3 - 31.6

**note, Dorper enterprise not included in wool production figures*

The low gross margins could be attributed to an over-supply in the meat market that forced prices down, when producers had no alternative but to sell. Properties in the higher rainfall environments were affected the greatest as they had higher stocking rates, no spring feed and less stubbles available.

Sheep trading income has been the major source of sheep enterprise income for all producers in the groups over the past two seasons. For example the sheep trading income for Group A in 2010/11 represented 60% of the income, in 2011/12 54% and in 2012/13 54% (data not shown). Wool still plays an important part of the sheep enterprise income and the average across all groups ranged from 37% up to 52%. The variation in sheep and wool prices in 2012/13 resulted in producers achieving mixed gross margins per DSE and per hectare depending on timing of sales.

Lower operating expenditure did not necessarily relate to a higher gross margin, and in some cases the highest expenditure on pasture, animal health inputs and feed still achieved the highest gross margin per DSE. This is due to less deaths, higher reproduction rate and, greater wool and meat production resulting in more kilograms to sell. Most producers had their costs under control with very good cost efficiencies. Due to the increased cost of supplementary feeding and reduced income for sheep and wool in 2012/13 the cost efficiency decreased and did not reach the returns of the previous two seasons. The cost efficiency (dollar of cost to generate dollar of income) is calculated by total variable cost divided by total income. The average cost efficiencies for the groups in 2012/13 were Group A $0.30, Group B $0.66, Group C $0.53, Group D $0.41 and Group E $0.47. A good cost efficiency range to be in for the 2012/13 season was $0.30 to $0.40. Many of the producers do their own crutching and shed hand work which was not included in their figures making their cost efficiencies very good.

What does this mean?

Many producers in the groups commented that it was good to improve their understanding of their sheep enterprise and get a handle on their returns on a dollar per DSE and dollar per hectare basis.

Table 3 Financial results for all participants surveyed for 2010/11, 2011/12 and 2012/13 seasons

	Mean	Range Low-High	Mean	Range Low-High	Mean	Range Low-High
	2010/11		2011/12		2012/13	
$/DSE - Income						
Wool Proceeds*	32	18 - 48	34	28 - 42	24	9 - 39
Sheep Trading Profit	48	23 - 81	38	29 - 53	28	1 - 53
Total Sheep Income	80	42 - 109	72	54 - 89	52	24 - 89
$/DSE - Expenses						
Total Variable Costs	13.2	5.6 - 19.9	11.4	7.6 - 19.5	22.9	8.8 - 38.0
Gross margin/DSE	67	36 - 97	61	46 - 79	29	-2 - 68
$/WGha - Income						
Wool Proceeds*	92	29 - 199	71	34 - 207	94	9 - 225
Sheep Trading Profit	142	37 - 328	79	31 - 215	93	2 - 208
Total Sheep Income	234	66 - 527	150	66 - 410	174	13 - 393
$/WG ha - Expenses						
Total Variable Costs	37	9 - 66	22	8 - 82	78	10 - 232
Gross margin/WG ha	198	58 - 445	128	57 - 328	96	-2 - 221

**note, Dorper enterprise not included in wool production figures*

The local information from the groups allows producers to focus on targets that are being achieved in their own district and gives them confidence to implement change as they have the support of the local group members and advisors.

The returns that sheep producers achieved in the 2010/11 and 2011/12 were exceptional due to a combination of good seasons and high commodity prices for both meat and wool. Returns were lower in 2012/13 than the previous two years of benchmarking, due to a poor spring, and sheep and wool prices fluctuating. The benchmarking has highlighted that there is a large variation between the returns producers are receiving within the same rainfall environment. However, there was no stand-out sheep enterprise, and it was generally the case of 'do what you do and do it well'.

This variation provides some opportunities for producers to be more productive and profitable. Over the 3 years of benchmarking the stand-out area in which improvements could be made was in the reduction of sheep losses and the increasing of lamb marking percentage. This could be progressed through closer monitoring of stock numbers, meeting nutritional requirements and managing animal health e.g. vaccinations and fly control.

As expected gross margin per hectare was influenced greatly by the stocking rate, which in turn impacted the number of lambs per hectare and the wool production per hectare. The producers paying attention to detail are achieving higher production with greater financial rewards.

Risk management is also important, and this will be determined by the management capabilities and the amount of risk that a producer is willing to take. The higher the stocking rate, the higher the risk and the more management required. Some producers have low stocking rates as it makes it easier to get through the 'poor season'. Many producers have an idea in their minds of what they will do in the "poor season" but there is no written strategy to implement a number of back door or 'exit' strategies.
The livestock system is critical to get right first; therefore time and effort should be made for planning. As seen by the benchmarking, sheep losses are easy to control but areas such as stocking rate and lambing percentage, which are influenced by a number of factors are harder to change within 2-3 years.

The high performing enterprises in each group based on highest gross margin per hectare had:

- Higher stocking rates
- Lower death rates
- Higher reproduction
- Higher growth rates of meat and wool

Some of the other attributes of the high performing enterprises are:

- Have a simple system
- Timeliness - get operations done on time
- Good pasture and grazing management. For example defer graze and sow some feed for winter grazing
- Pay attention to breeding and genetic improvement
- Have a marketing plan and targets
- Have stable sheep numbers
- Pay attention to detail.

Livestock

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Reference

Sheep Connect SA/EP Grain & Graze 2: EP Sheep Groups - Assessing the sheep enterprise through gross margin benchmarking, December 2013, Daniel Schuppan.