

South West Scotland Monitor Farm Project

Robert & Eileen Parker, Drumdow Farm

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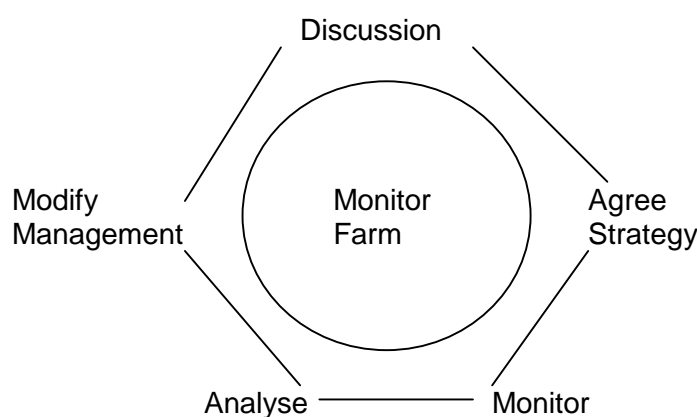
How does the South West Scotland Monitor Farm Work?

Set up in October 2004, funded by Quality Meat Scotland with SAC providing the facilitator. Local farmers selected Robert Parker as the Monitor Farmer, following interview and farm visit to Drumdow. Looking for typical farm to allow good backdrop for discussion and whole farm look see.

Each Monitor Farm Project is different and will be steered by the views of the farmers in the local group, but they all have a number of key objectives.

- To influence beef/sheep farmers attitudes to change and encourage a more rapid uptake of best practice and new ideas within the local farming community.
- To encourage development of systems that reduce production costs, improve physical and financial performance and free up more management time.
- To encourage comparison of performance through benchmarking data and a more business like approach to management.
- To collectively discuss new legislation and schemes at local group meetings and motivate farmers to apply lessons learned over the three years of the project.

Monitor Farm - Circle of Knowledge



Who is Involved?

Monitor Farmer:	Robert Parker
Facilitator:	Seamus Donnelly
Local Vet:	Kenneth Williamson
QMS/SAC Back up:	Johnny Mackey, QMS Technical Projects Officer Iain Riddell, SAC Senior Beef Specialist
Community Group:	30-35 local and not so local beef and sheep farmers, bank manager, trade representatives etc., plus guests

When are Meetings Held?

On farm, every 6-8 weeks (7 meetings held last year). Group members preferred meetings to start at 11 a.m. and finish about 3 p.m. - "gives time to get feeding done on their own farm". (Everyone brings a packed lunch, which gives opportunity for a chat as well).

What's the Format?

Robert kicks off with his Diary Summary to bring everyone up to speed with the farming issues and action taken since the last meeting.

Then it is "pile into pick-ups" to go and see points of interest round the farm to discuss issues and make decisions. Usually finish at the steading when further discussion can take place. Very useful to get 24 heads with a wide range of experience focussing on a topic, especially when local vet and guests chip in. At most meetings will usually have invited a guest. So far we have had:-

- Jimmy Hyslop, SAC Beef Specialist (Replacement Heifers)
- John Craig, Stoddart's (Cull Cows and OCDS)
- John Vipond, SAC Sheep Specialist (Preparing for Lambing)
- Stuart Ashworth, QMS Economist (Future Marketing Demands)
- Mark Crawshaw, SAC Vet (Premium Health Scheme)
- Allan Fraser, PAO, SEERAD
- Catherine McLaughlan, MDC
- Jenni Kinnaird, HAO, SEERAD
- John Logan (new facilitator for Bute Monitor Farm)

and of course good back up from Johnny Mackey and Iain Riddell. It is, however, the enthusiasm of Robert and the support of the Community Group that make it all worthwhile.

Views from the Group

"I know it's not a farm walk, but it's the best farm walk I've been on".

"I know that our Group has learned a lot from our Monitor Farm discussions - you can get out of these meetings what you put into them".

"Need to spend more time looking at performance figures - it is now all about the bottom line".

"Acts as a good platform to discuss and learn from each other".

"Always something different to see and discuss".

JM "Monitor Farm is a simple idea, but the simple ideas often work best".

KW "A lot of my clients now ask me about things that are happening on the Monitor Farm. It's a great way to promote herd and flock health".

SD "Farmers have many opportunities to attend farm talks and hear what the farmer is doing, but they don't get a chance to shape strategy".

RP "Regular meetings on my farm have been a great help in shaping my strategy".

SD "The beauty of the Monitor Farm Project is that members return to the same farm to see the results of their decisions".

RP "Helps me to focus on issues especially when I know that 30 farmers are going to turn up in 2 days time. The result has been better, clever decisions, and as a bonus, a tidier farm".

Introduction

Background

Drumdown is a 465 acre (187 ha) lowland beef and sheep unit, owned and farmed by Robert and Eileen Parker. The farm (comprising 311 acres) was purchased in 1987 and run along with the original family dairy farm. Robert split away in 1991, acquiring 66 acres from the home farm, and in 1997 an 88 acre neighbouring farm (Bankswell) was purchased to take the farm up to its present 465 acres. All graded LFA, approximately 130 acres rough moorland (used for overwintering cows).

Stocking

Cow numbers have increased to 140 suckler cows (put to Charolais bull) calving in April to June. For bio-security reasons, recent replacements have been Angus out of Hereford cows purchased from a neighbour. Has recently formulated future breeding and crossing policy. Will use Angus and Hereford bulls in a criss-cross programme to produce replacements for own herd and others. Male calves are sold as stores at 11 months (around 420 kg), heifers are taken through and sold fat around 19 months, having been grazed before moving onto an intensive cereal ration over the last 8 weeks. Barley is purchased off the combine to supplement home grown barley and provide the basis for home produced rations.

520 ewes, lambing 1st March (averaging 172%-175% lambs sold to the tup) with housing only for a fortnight at lambing. Aim is to get two-thirds of lambs sold fat before end July and rest away before December. To reduce worm pressure a partial clean grazing system is operated.

Cropping

85 acres 1 st Cut Silage	55 acres 2 nd Cut Silage
240 acres Grassland	120 acres Rough Grazing
25 acres Spring Barley	

Labour/Machinery

- 1 man employed full-time.
- Work with brother and share machinery for silage, harvesting, ploughing etc.
- Believe in maintaining a young machinery pool of essential equipment.

Farm Assurance

- One of the earlier farmers to join the Farm Assurance Scheme.

Agri-Environmental etc.

- Entered Countryside Premium Scheme in 1999.
- Entered Land Management Contract Menu Scheme in 2005.
- Currently also involved in Woodland Grant Scheme.
- Has also put his farm on the web (adoptafarm.co.uk) to help schoolchildren and non farmers to get a better idea of practical modern farming.

Just Some of the Decisions Taken as a Group

Strategic Decisions Taken	Outcome
Soil sample whole farm (23 fields)	2 fields pH 5.8, rest as low as 5.2. Desperate need for lime - applied 611 tons @ £19.50/ton
Blood analysis - 6 cows/calves for fluke, copper, cobalt and selenium	Identified need for fluke dose and selenium, but copper/cobalt okay.
Accelerate criss-cross breeding policy.	Purchased Hereford bull with 200 day EBV milk + 9kg.
How to best utilise spare 20 acres in spring	After calculating relative return, expanded cereal enterprise rather than extra cattle enterprise
Look at cost of mix	Adjusted crude protein in finishing mix (reducing cost by £15/ton and improved DLWG from 1.33 to 1.44 kgs/day)
Close the herd - move into higher health scheme	Blood sampled for Johnes and BVD
Set up Yeast Trial to decide if worth feeding to speaned calves	Extra 10% DLWG worth extra £5/head margin.
Record breakdown of losses at lambing	9% re-absorption/loss from scanning to lambing (similar to Borders Monitor Farm). Also identified areas for improvement at lambing.
Do the figures before selling cattle - look at the options	Made sense to sell big bullocks in spring (gained £70/head) over finishing, but kept small bullocks.
Monitor physical performance of speaned calves	Pneumonia dragged performance down over first 8 weeks after speaning (0.65 kg/day) - once clear did 1.1 kg/day. Minimised stress, housed dry and clipped, 2005/2006 performance improved.
Analyse individual cow records to improve herd performance	Used Cow Score to rank cows in 2004 and 2005 - any with double negative scores likely to be culled earlier.
Look at Land Management Contract Menu Scheme	Entered scheme with good mix including school visits (worth £3200 = margin from 50 bullocks).
Consider ways to improve grassland performance	Used slot seeder to rejuvenate field - cost 40% vs full reseed. Still to monitor performance this year.
Continue with poor winter barley crop	Right decision as grain yield reasonable, although straw yield down.
Change the design of the new shed	Went from 90'x90' to 180'x45' - better layout, saved £10,000.
Consolidate rather than increase cow numbers	Idea to maximise potential from existing herd size first.
Investigate Calving Index for herd	Used this to look at overall herd fertility.
Compare physical performance of Baldie cows vs the rest of the herd	Looked at speaned weights/DLWG from birth, compared Angus (out of heifers) and Charolais calves (out of cows) - identical performance.

Filling the Gaps in 2006

- Devise simple comparison figures to show relative profitability of selling speaned calves at different times (e.g. speaned, end of winter, end of summer vs finished).
- Keep a closer eye on grass height/performance of store cattle.
- Adjust fertiliser policy to match soil analysis for P and K.
- Explore best way of reducing fertiliser bill and opportunity for clover.
- Compare performance from slot seeded stitch in vs normal reseed (need grass cages).
- Quantify impact (financial and physical) of home grown heifers entering herd at 2 years or 2¾ years.
- Creep feed the first 100-120 lambs born to target high peak prices and monitor price and weight achieved.
- Use worm egg counts to reduce reliance on anthelmintics.
- Review scale/mix and profitability of each enterprise.

Analysing Farm Accounts

Look at your Accounts Profit and Loss page, split the costs into their groups and compare against overall output as a percentage to help see how well your business is performing.

<u>Gross Output Analysis</u>	<u>Target</u>	<u>Drumdown</u>	<u>Your Figures</u>
Gross Output	100%	100%	
Variable Costs (Feed, Seed, Fertiliser, Sprays, Haulage)	30-40%	30%	
Labour	15-18%	13%	
Power/Machinery (Machinery Repairs, Fuel, Electricity, Depreciation)	15-18%	20%	
Overheads (Rates, Property Repairs, Drainage, Professional Fees, Insurance, Telephone)	4-6%	13%	
Rent/Interest	15% max.	N/A	
Profit	15% min.	N/A	

If, for example, a farm has a turnover of £150,000, would be expecting £22,500 profit. Remember, sufficient profit has to be generated to cover personal drawings, tax, capital repayment (loans and machinery HP) and hopefully capital re-investment - how do you compare?

Grazing Management

Of the 220 acres, 42 acres are stocked by 80 youngstock (average weight 380 kg), equates to 30 tonnes at turnout, or 725 kg/acre. Book target is 1 tonne/acre, but would need more fertiliser and extra land released in mid summer. $\frac{3}{4}$ tonne/acre at turnout is a more realistic figure.

178 acres remaining (approximately 9 fields). Robert operates an unusual system, almost a paddock system. This means that at any time 6 fields are being stocked with 3 fields rested.

500 Sheep are run in 3 lots of 150-180.

145 Cows are run in 3 lots of 40-50 cows.

What about targets for sheep stocking - 5 ewes/acre would be realistic (although some stock at rates much higher), say 100 acres for the sheep. This would leave 78 acres for the cows, say 2 cows/acre (many dairy farmers stock at 2-2½ cows/acre).

Fertiliser Policy

305 acres of grassland gets 2 cwts Fibrophos (0:16:24) in February and 1 cwt 34% in March ready for the 500 ewe flock to graze. In April, silage fields (85 acres) shut up after getting 4 cwts 21:8:11. Remaining 220 acres good grassland gets another 1 cwt/acre, over the summer will get a further 1-1½ cwts/acre. (3½ cwts/acre 34% Nitroprill in total over the season, i.e. 119 units N).

2005						N	P	K
Spring Barley (25 acres)	4½ cwts	20:10:10	£150	5½t	£33/acre	90	45	45
Grazing (220 acres)	2 cwts	0:16:24	£120	22t	£12	0	32	48
	3½ cwts	34:0:0	£152	66t	<u>£22</u>	<u>119</u>	<u>0</u>	<u>0</u>
					<u>£34/acre</u>	<u>119</u>	<u>32</u>	<u>48</u>
1 st Cut Silage (85 acres)	1 cwt	34:0:0	£152	4¼t	£7.50	34	0	0
	4 cwts	21:8:11	£150	17t	£30	84	32	44
	2 cwts	0:16:24	£120	8½t	<u>£12</u>	<u>0</u>	<u>32</u>	<u>48</u>
					<u>£48/acre</u>	<u>118</u>	<u>64</u>	<u>92</u>
2 nd Cut Silage (85 acres)	3½ cwts	21:8:11	£150	15t	<u>£26/acre</u>	<u>74</u>	<u>28</u>	<u>38</u>
Total Silage Fertiliser for 2 cuts						<u>(192)</u>	<u>92</u>	<u>130</u>

Cattle Enterprise

Cows and Calves

- 140 cows mixed breeding, mainly AAX and LimX, but homebred Black Baldie (AAX, Hereford) now make up one-third of herd and will increase as Angus bull and Hereford bull purchased to start criss-cross replacement programme, as Baldies suit this farm.
- Previously 25 replacements purchased every year - now moved to home produced. Will expand this to sell extra replacement heifers.
- Cows calf April-June (gets lambing past first). At present 3 Charolais bulls and 1 Angus (for heifers). Bulls in end June.
- Calves castrated using rubber rings at birth - less stress for man and beast!
- Calves creep fed from August onwards using 50/50 mix of bruised barley and dark grains. Most calves weaned early December (bedded shed space for 100 stores, rest stay on Moor).
- Cows outwintered on 130 acres rough moor ground split into 7 "fields" using electric wires. Good cover and shelter - area not grazed in summer as it is in the Countryside Premium Scheme and receives management payments.
- Hard standing sites used to feed restricted silage (30 kg/day) through to April. Fill trailers three times/week (Mon, Wed, Fri). Trailers designed with inward bent bars to reduce wastage.
- Cows come off Moor well exercised, which helps reduce calving difficulties.
- Blood sampled December 2004 for fluke, copper, cobalt, selenium, revealed big problem with fluke and selenium. Since treatment, big impact on herd performance.
- Vaccinate replacement heifers for BVD and Leptospirosis, sampled for Johnes disease and not a problem.

Store/Finishing Cattle

- Sell steers at 11-12 months of age in April. Achieves 1.1 kg/day daily gain from birth to average sale weight 400-420 kg. Receive 2½-3 kg 16% mix, plus ad-lib silage overwinter after speaning into bedded shed.
- Heifers managed similar after speaning (2-2½ kg Mix), turned out to grass and get 1-2 kg barley at end August, stepped up to 3-4 kg by end October when batch sold finished (318kg deadweight R4L) off grass. Rest housed and put onto ad-lib 12½% CP home-mix for sale before January.
- Pneumonia, selenium and fluke, main problems.

Suckler Cow Profitability - Herd Basis

Each year QMS presents benchmark figures from Scottish farms. These are usually shown as £/cow. It was interesting to look at them from a whole farm basis at the August meeting, when some members were talking about whether to put on more cows.

<u>2003</u>	<u>Bottom Third</u>	<u>Average</u>	<u>Top Third</u>
Profit/Cow	-£17	£33	£83
Herd Size	121	129	98
Herd Output	£48,763	£57,663	£51,254
Variable Costs	£19,360	£17,544	£12,154
Fixed Costs	£31,460	£35,900	£30,968
Profit/Loss	-£2,057	+£4,257	+£8,134

How? The top third had:-

- 7 more calves born/100 cows
- calves were +59kg heavier at sale
- 100kg less cake/cow had been fed
- 7200kg more cattle sold.

Output

As expected greatest output came from "Average" who had the largest herds (129 cows), but "Top Third" still managed to have £2,491 more output than "Bottom Third" despite running 23 less cows.

Variable Costs

With fewer cows "Top Third" would be expected to have lowest variable costs, but they were also the most efficient spending £124/cow (£12/cow better than "Average" and £36/cow better than "Bottom Third").

Fixed Costs

Should be able to spread fixed costs (£278/cow "Average" who had 129 cows compared to £316/cow "Top Third" who had 98 cows), but still an extra £4,932 spent by "Average" compared to "Top Third". Equates to £159/cow on each of the extra 31 cows run - this doesn't make sense.

Profit

£10,000 difference in profit between "Bottom Third" and "Top Third". More important take home message is you would be better with 100 Good cows than 130 Average as herd profit is almost double (£8,134 compared to £4,257).

Quality of Life

Which group of farmers will see more of their family, have more time to spend managing their herds to improve performance further?

Key question: How good is your management? Which group do you fit in?

Rationing/Silage Quality

Silage Analysis (Drumdown)	1st Cut		2nd Cut	
	2005	2004	2005	2004
Dry Matter	190	222	312	290
ME	10.1	10.3	11.6	10.6
Protein	93	137	138	147
Protein degradability	0.78	0.77	0.85	0.77
Intake Factor (Cattle)	81	89	116	87
Intake Factor (Sheep)	60	85	115	94
FME/ME	0.69	0.65	0.73	0.66
Neutral Detergent Fibre	593	526	470	519
Sugar Content	0	0	61	0
D Value	63	64	72	66
pH (nir)	5.2	4.5	4.2	4.8
Ammonia	137	123	80	143

Similar 1st cut both years. Both 2nd cuts similar high dry matter (30% DM), but energy level is well above average with 11.6 ME compared to 10.6 ME last year. Discussion on whether low protein (9% CP) in the 1st cut would be a problem - given that this goes mainly to the dry cows, should be okay. Most farmers will spend £10,000 plus filling their silage pits every year yet many don't see the benefit of getting their silage analysed. What is the real benefit of good silage. Using 2005 1st and 2nd cut analysis as a comparison:-

300 kg Store Bullock - 16% Mix required with ad-lib silage (15-16 kg)

<u>Target Gain</u>	<u>1st Cut</u>	<u>2nd Cut</u>
0.6 kg/day	3.0 kg	0.5 kg
0.8 kg/day	3.5 kg	1.0 kg
1.0 kg/day	4.5 kg	2.0 kg

After discussion agreed that:

- (i) Priority stock to get best silage (this year 2nd cut), should be speaned calves and ewes (the high dry matter, high sugar (6%) and good fermentation makes it an ideal silage for sheep).
- (ii) Target gain for speaned stores would be 0.8-1.0 kg/day - given that Robert is still selling a proportion at turnout and weight pays. Others who were grazing them over the summer themselves would be happy with 0.7-0.8 kg/day to take advantage of compensatory gain. Lessons learned from last year that it makes sense to cut back concentrate feed 4-6 weeks before turnout to harden cattle off and make use of compensatory gain.
- (iii) Silage quality is important, particularly for finishing cattle, but also for stores. Putting costs to the rations:

Assuming 0.8 kg DLWG over 150 days.

	<u>1st Cut</u>	<u>2nd Cut</u>
16% Mix @ £100/ton	£563	£15
Silage @ £15/ton	<u>£34</u>	<u>£36</u>
	<u>£87</u>	<u>£51</u>
Feed Cost p/kg gain (120 kg)	72p	42p

The potential of improving margins by £36/head over the winter highlights the importance of aiming to make good quality silage, but that it is even more important to know the quality of the silage so you can adapt rations. With a poor silage feed more to compensate, and with a good silage ability to make real savings.

Speaning Management

Many farmers choose speaning to also carry out other tasks, e.g. dehorning, castration, worming, housing, even introduction to concentrates. This coupled with speaning itself is very traumatic for the calves. On one farm calves averaged 0.3 kg in the first 8 weeks after speaning; in effect they actually lost a lot of weight before building it slowly back on. Anything to reduce stress at speaning should be done.

At Drumdow, calves are castrated with the rubber ring at tagging. Calves are wormed 4 weeks before housing and had been on calf creep for 6 weeks before speaning. Robert also clips the backs of the calves at housing - is this worthwhile? Trials carried out by SAC quantified the benefits as:-

- (i) reduction in risk of pneumonia (calves don't sweat as much)
- (ii) extra gain of 0.05 kg/day, or 7-8 kg over the winter, worth about £8/beast clipped.

Some Group members also suggested it would not only be important to have them well onto their creep feed, but also to offer the best silage (high DM and good fermentation), or even hay to keep their feed intake up. It was worth looking back at last winter's performance to see whether there were opportunities for improvement.

<u>2004</u>	<u>Up to Weaning (244 days)</u>		<u>11/1/05 (60 days)</u>	<u>8/3/05 (56 days)</u>	
	<u>Weight</u>	<u>DLWG</u>	<u>DLWG</u>	<u>DLWG</u>	<u>Weight</u>
Steers:	301 kg	1.07 kg	0.61 kg	1.16 kg	403 kg
				(0.87 kg/.day over winter)	
Heifers:	280 kg	1.00 kg	0.53 kg	1.11 kg	376 kg
				(0.78 kg/day over winter)	

There had been problems with pneumonia last winter that had hit performance, then calves had started to really do. Only comment was that if doing over 1.11 kg/day, was this too much and would compensatory gain get a knock at turnout? It was decided to split off the batch of cattle being kept for grazing and reduce concentrate input to harden off about 4-6 weeks before turnout. This helped, but should perhaps have been considered earlier.

Store Cattle - Do the Sums First

"£100 over their bodyweight store, or else £2.17/kg deadweight in September", was the decision that host farmer Robert Parker was faced with when the Group discussed what he should do with his yearling suckled calves.

Usually, Drumdow had sold the majority of bullock calves at the Spring Store sale in Ayr. This time he discussed the option of holding back the best bullocks and finishing them indoors over the summer on intensive cereals. Seamus Donnelly, SAC Facilitator to the Group, had produced partial budget figures for the two options.

<u>Option 1</u>	Sell Store	£
	450 kg @ £1.22	550 (ie. +£100 over their on farm weight)
	less Commission	-20
	Haulage	-10
		<u>£520 Margin</u>

<u>Option 2</u>	Finish Fat on Cereals Indoors	
	(Assume sell around 640 kg, i.e. 190 kg to gain = 130 days @ 1.5 kg DLWG)	
	<u>Associated Variable Costs</u>	£
	1.2t Mix @ £115/t	138
	0.2t eating Straw @ £60/t	12
	0.3t bedding Straw @ £60/t	18
	Slaughter Charges/Haulage	<u>30</u>
		198
	<u>Fixed Costs</u>	
	Interest	12
	Labour etc.	<u>20</u>
		<u>32</u>
	Total Costs	<u>£230</u>

To get the same margin as selling store, would mean getting £750 for the finished bullock. Assuming 640 kg @ 54% KO, i.e. 345 kg DW carcass would equate to £2.17/kg in September. Whilst this is the price most finishers will need to make any margin from beef, the Group felt that when you took cashflow, work involved in feeding/bedding the bullocks over the summer, the unknown impact of OTMS being lifted, Robert was more likely to achieve £100 over their bodyweight as stores now, rather than £2.17/kg fat in September. 38 bullocks were sold store and averaged £114 over their bodyweight. 26 of these were quality Charolais that made +£128 (£1.31/kg). The actual price they would have made in September for R4L steers was £1.92-£1.97/kg, so the Group decision to sell store was correct and had left an extra £70/head margin, rather than keeping to finish off cereals. Overall the 38 bullocks averaged 404kg and had put on 1.01 kg DLWG from birth, which considering they had only been speaned and housed in December was good performance.

Robert also decided to sell the middle batch of heifers - normally they were finished on a barley ration and sold in January. Also, did the figures for smaller bullocks (380 kg in early April) - here the option looked at was to sell store or graze over the summer. They would have needed to get £135 over their bodyweight (£1.40/kg) store, or be worth less than £1.20 in September store. Decided to keep them, but the extra margin was not great.

Speaned Calves - Yeast Trial

"Knowing performance is the first step towards achieving profit".

Robert had been thinking about feeding yeast to the speaned calves and was asked by the Group to carry out a feed trial.

The calves had been speaned in December and were split randomly into four equal groups (2 pens bullocks/2 pens of heifers) and put onto the trial on 11th January. Prior to the trial each pen of bullocks was achieving identical DLWG, as were the two pens of heifers.

Experiment 1: Looked at the impact of adding yeast on performance over a 56 day period. Calves were indoors on straw and fed good quality silage (29% DM, 10.6 ME) with 16% Mix (2½ kg heifers, 3 kg bullocks).

	11/1/05	8/3/05	56 Day Gain	Av DLWG
Pen 1: Male - with Yeast	335 kg	403 kg	68 kg	1.21 kg
Pen 2: Male - Control	341 kg	403 kg	62 kg	1.10 kg
Pen 3: Female - with Yeast	313 kg	377 kg	64 kg	1.15 kg
Pen 4: Female - Control	309 kg	369 kg	60 kg	1.06 kg

Overall an extra 9-10% gain in performance (bullocks did slightly better than heifers) as a result of yeast being added. It works primarily as a rumen buffer and whilst this level of response could be expected in an all cereal ration, it was more of a surprise given the speaned calves had been on silage and a maximum of 3 kg mix.

As most of the heifers were going to be retained for grazing over the summer, there had been concern expressed that with gains of 1.00-1.15 kg DLWG, if this continued what impact could it have on compensatory gain after turnout. The decision was taken to reduce concentrate levels to 1 kg/head/day and harden them off. This also provided an opportunity to monitor performance of yeast when beasts are being fed less concentrate.

	8/3/05	12/4/05	35 Day Gain	Av. DLWG
With Yeast	377 kg	404 kg	27 kg	0.77 kg
Control	369 kg	391 kg	22 kg	0.63 kg

<u>Overall Results</u>	<u>DLWG</u>
With Yeast	1.00 kg
Control	0.90 kg

Was it worthwhile? Over a normal winter housing period (150 days from speaning to turnout), feeding 20 grams yeast/day over this period would cost £8.25. The Group calculated the extra 12 kg gain would be worth an additional £13.25 (£1.10/kg) giving £5/head extra margin.

Suckled Heifers Overwintering Performance (150 days x 0.80 kg DLWG)		<u>£/head</u>
Sale 400 kg @ £1.10/kg		440
<u>Less:</u> 280 kg @ £1.20/kg (0.9 kg)	336	
2½ t silage @ £10/ton	25	
300 kg mix @ £100/ton (av. 2 kg/day)	30	
Vet & Med.	3	
Haulage/Commission	<u>21</u>	<u>415</u>
	Margin =	<u>£25</u>

Adding yeast would lift the margin by 20% from £25/head to £30/head.

Experiment 2: Another question raised was, would these cattle retain this weight advantage, or would compensatory gain kick in at grass. Having a weigh crush meant the Group could answer that question as the grazing season unfolded. Performance from turnout to sale finished off grass was very similar, but still favoured those heifers that had been given yeast over the winter.

Experiment 3:

Heifers	12/4/05	8/11/05	Gain 207 days	DLWG
Given Yeast over winter	413 kg	589 kg	175 kg	0.85 kg
Control	398 kg	569 kg	171 kg	0.83 kg

(Both lots required 1 kg/day mix over the last 2 months at grass).

This was obviously only one relatively small comparison trial, but the message the Group took out of it was that the benefit gained over the winter will have been financially worthwhile. Robert has introduced the yeast earlier this winter to all the calves and has put it into the finishing mix as well.

One other side issue that has emerged was the question about compensatory gain. The main group of heifers averaged 0.80-0.85 kg/day over the 7 month summer period. Given that they will have averaged 1.1 kg/day over the winter, this is probably acceptable, although they were also receiving 1 kg/day mix (75 kg) since end August to supplement grazing.

However, a younger group of heifers that had averaged 1.0-1.2 kg/day in the last 6 weeks before turnout only averaged 0.4 kg/day gain (78 kg) over the summer. Was this all down to compensatory gain, or were other factors contributing? Interesting to read similar comments from the Perth Monitor Farm Annual Report - they monitored 33 steers 404 kg at turnout that had only averaged 0.48 kg/day at grass until end October.

Comment had been made at the August meeting that grass supplies were light over the fields the store cattle were grazing. The younger heifers should perhaps also have had extra supplementary feeding, but as they were grazing fields away beyond the Moor this was not done.

The Group suggested it would be better to limit winter gain for these animals to be summered to 0.8-1.0 kg DLWG, and monitor grazing performance in 2006, and be prepared to introduce concentrate earlier if grazing is in short supply.

Calf Performance - 2004 vs 2005

Calves were speaned on 12/12/05. At the August meeting the calves had already started onto their creep - 1 kg/day, but quickly increased to 3 kg/day. (This was higher than 2004 and suggests grass was under pressure - point to note for 2006!).

Drumdown Creep Mix: 500 kg Bruised Barley
 500 kg Barley Dark Grains
 20 kg Minerals
 16½% CP, 13 ME, Cost = £105/ton

	Age (Days)	Weight	DLWG	kg Speaned	240 day Adj. Calf Weight	Adj. kg Speaned
2004	257	280 kg	0.93 kg	31,330 kg	264 kg	29,300
2005	228	289 kg	1.09 kg	32,084 kg	<u>302</u> kg	<u>33,500</u> kg
					+38 kg	+4200 kg

- Despite being 29 days younger at speaning were actually 9 kg heavier. Calves had got away to a good start and cows were fitter and probably had more milk. Robert still believes that the level of fluke and to a lesser extent selenium had an effect on stock performance.
- 17% improvement in DLWG.
- If adjust to a standard 240 days, then adjusted calf weights have improved by 38 kg/calf on average, or +4200 kg for the herd.

Finished Cattle Performance

Charolais X Heifers speaned and overwintered sold fat off grass in early November, or in December (on ad-lib cereal mix).

	<u>2004</u>	<u>2005</u>
Days to Slaughter	571	569 (557-578)
% U	10%	28%
% R	80%	72%
% O	10%	-
Deadweight	318 kg (270-340)	316 kg (286-358)
Price (£/kg)	1.90	2.05
Price/Beast	£604	£648
Slaughter Premium	<u>£50</u>	<u>£0</u>
	<u>£654</u>	<u>£648</u>

- Days to slaughter (570 days or 19 months) identical.
- Improvement in grades - U4L or R4L as a result £13/beast improvement (4p/kg DW)
- Similar carcass weights, 316 kg DW (590 kg FW).
- Price/kilo rose from 190p/kg to 205p/kg, 4p/kg is due to better grades and 11p/kg is genuine price increase.
- Overall price/beast rose £44/head, **but** no Slaughter Premium, so overall £4/head worse off!

Rations - Cheapening the Mix!

A good example of how a Monitor Farm can work in practice was when the Group discussed finishing heifer rations. A number of options were looked at and compared with the existing home mix being fed.

	<u>Existing Mix</u>	<u>A</u>	<u>B</u>
Barley £80/t	925 kg	850 kg	925 kg
40% Balancer £426/t	75kg	-	-
Soya £160/t	-	-	75 kg
Barley Dark Grains £116/t	-	150 kg	-
Minerals £350/t	20 kg	20 kg	20 kg
Energy ME	12.9	12.9	12.8
% Crude Protein (FW)	12.5%	12.25%	12.75%
Cost/ton	£106	£92	£90

Both new mixes were similar in energy and protein, but were £14-£16/ton cheaper. As barley dark grains were already on the farm being used for making a 16½% CP creep mix (½ barley/½ barley dark grains), it made more sense to base the mix on this rather than buying in another feed such as soya.

How would it feed out? Robert split the finishing heifers and fed one lot on the Existing Mix and the other lot on the Monitor Group Mix A.

	<u>Previous Mix</u>	<u>Monitor Group Mix A</u>
Price/ton	£106/t	£92/t
DLWG	1.33 kg	1.44 kg
Cost p/kg	87p	71p

As most of the heifers were still needing to put on 100 kg, this meant that by switching rations, margins had been improved by £15/head. Without the encouragement of the Group, Robert would probably have continued with the same ration. The key was Robert's willingness to try something different, but most importantly he was prepared to monitor the impact.

This exercise was taken one step further when calculations were done to see how much real profit had been made by finishing these heifers, rather than selling them store. In the 2004/2005 winter, an extra £60-£70 per head profit compared to selling them store in October, but comments were made that with the demise of Slaughter Premium and a volatile store trade, it would be worth re-doing the sums.

Calving Index

At previous meetings the Group had looked at calving spread for Drumdown. Apart from a long 16 week calving period, the percentage of cows calving in the first 3 weeks (38%) had been below the target 65%. Questions were asked as to whether something had happened which had affected cows holding to first serve last year, or was it a more complex issue. Robert had gone back through individual cow records and an interesting picture emerged.

Calving index is well used in the dairy sector, with beef herds the aim is to achieve a "live calf every 365 days".

<u>Drumdown:</u>	<u>Year</u>	<u>Calving Index</u>	<u>Difference</u>
	2004	387 days	+ 22
	2005	376 days	+11

Drumdown is better than average, but is still not ideal. A recent N Ireland study revealed that less than half of suckler cows calved within 390 days. A cow loses £1 every day she is not in calf. If herds are to achieve satisfactory reproduction performance targets, need to focus on (i) interval from calving to first heat - this is affected by body condition at calving, plan of nutrition and suckling activity, and (ii) conception rate - this is affected by calving to service interval, heat detection, calving difficulty, bull management and cow health.

At first glance it looks as if Drumdown is close to achieving the target 365 days, but need to look at date bulls were put in.

Date Bulls in:	2001	20 June
	2002	10 June
	2003	10 July
	2004	23 June
	2005	27 June

Focusing on 2003, Robert had held back putting the bull in by 30 days (to free up more time for lambing), yet despite this the herd had only slipped 22 days from the previous year, so in fact had achieved a calving index of 348 days. Cows fitter due to the longer rest before bulling etc.

In 2004, however the story was reversed with Robert compromising and putting the bull in on 23 June 2004 (17 days earlier). Despite this the herd had a longer calving index of 376 days (i.e. cows should have calved possibly 17 days earlier, but were in fact on average 11 days later than the previous year).

<u>Year</u>	<u>Calving Index</u>	<u>Adjusted for Bull Entry</u>
2004	387 days	348 days
2005	376 days	393 days

Why the difference? Kenneth Williamson (local vet) felt there were three probable causes - (apart from the obvious fact of missing almost a full cycle before bulls in).

- (i) low selenium (blood samples taken in October had highlighted that cows were low).
- (ii) with the herd being overwintered on the Moor and with fluke a problem in 2003 (and 2004), had this affected condition/fertility? After blood sampling in October 2004 Robert had discovered he needed to dose all the cows for fluke.
- (iii) question mark over one bull not working. Difficult to confirm at bulling as Robert only runs 1 bulls with each group, but does rotate them - flags up the benefit of sperm testing in advance.

The Group have taken the Calving Index for individual cows and compared them against the herd average

<u>Cow No.</u>	<u>2004</u>	<u>2005</u>
1515	-51 days	-1 day
BB037	+75 days	+31 days
696	+17 days	+7 days
600283	-17 days	+37 days
Herd Average	+22 days	+11 days

Cow 1515 was doing very well and calving well within 365 days over the two years, but would be worried about BB037 - over a two year period had calved two months later than the herd average. Iain Riddell made a good point when he said, not only had this cow lost ground, but she would find it even harder to get back in calf as she would now have fewer chances with the bull (unless Robert continued with a 16 week calving period).

Group discussed ways to help cows achieve a good calving index. "Calf heifers one month before cows", makes a lot of sense - means they can stay in their own group and get special treatment. Biggest problem is usually getting a calved heifer back in calf, at least if they calf early before the main herd, even if they slip a bit they will still be calving at the right time as second calvers.

"Gestation length of bull" also needs to be taken into account, with Robert now moving to native breeds should actually work in favour compared to Continental bulls.

Keeping the Right Cows

One of the areas that the Group decided they would like to look more closely at was Cow Performance. If it makes sense to strive to get the herd moved into the "Top Third", it must also make sense to try to improve and select at individual cow level to try to have as many good cows paying their way. The Monitor Farm was a good opportunity to look at practical ways to base this selection, but it provided a wider interest, given that Robert had begun working with Black Baldies as replacements for the herd and the Group could compare their performance in relation to the rest of the herd. The single most important factor affecting profitability in the herd is the ability to produce a strong, healthy calf every year. The targets we should in theory be looking for are:-

<u>Targets</u>	<u>Measured</u>
1) Compact calving period 95% calving within 10 weeks	Date bull in plus use calving dates and calculate % herd at each bulling cycle.
2) A 365 day calving interval	Compare calving dates from BCMS passports.
3) Less than 5% of the herd culled for Reproduction failure	Look at % cows not in calf at scanning.
4) Calf performance up to weaning above 1.0 kg DLWG	Weighed calves at weaning and compared against average calf performance in the herd to arrive at individual Cow Score.

What did we find out?

(a) Make up of Herd 2005

31% Baldie; 28% AAX; 27% LimX; 6% Her X; 8% Other; (Saler, BB, Simmental)

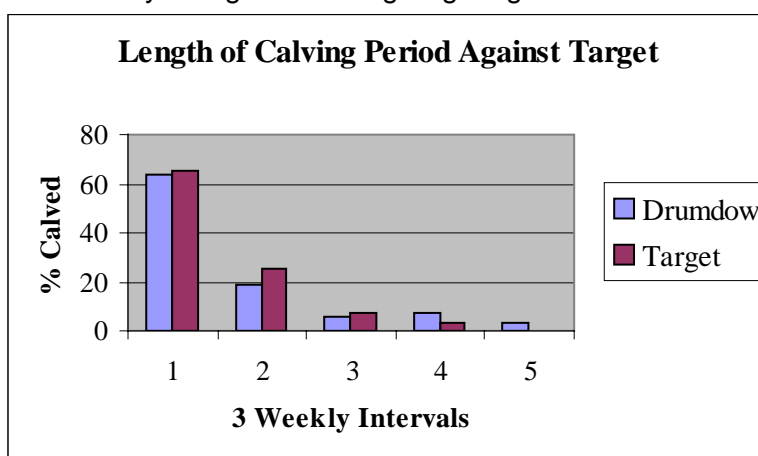
(b) Age of Herd

At the monitor meeting in May, Iain Riddell (SAC Beef Specialist), had discussed the need for beef farmers to begin to think about the age of their herd in the light of OTMS changes. The details are now clear - farmers will have 3 years to dispose of those animals born before 31st August 1996. Older animals will still be compensated for but at a reduced rate. There will likely be a two tier market developed - higher price for cows that were born after 31/8/96 (new chequebook style passport) and will hopefully be allowed to enter food chain. Using SAC figures from 20+ herds to benchmark against Drumdow figures look very similar but some of the rest of the Monitor Group need to consider the age of their cows. Rather than expanding herd size it may be made more sense to weed out some of the older cows particularly if they were not the most productive.

	SAC Group	Other SW Group Members	Drumdow	Your Figures
Cows born 2000-2003 (under 5 years)	49%	32%	56%	
Cows born 1997-2000 (5-8 years)	24%	31%	17%	
Cows born 1992-1997 (8-13 years)	27%	37%	27%	

Drumdow has 97 younger cows and 34 born before 31/8/96. The policy of introducing extra heifers over the last 3-4 years does mean the herd is younger than average. Robert explained how his policy of rearing up his own replacements will help to make the strategic reduction of the older cows easier, but did say if an old cow is still rearing a good calf every year he will hang on to her as the reduction in OCDS compensation (£50 less each year) would not be a strong enough reason to let her go

(c) Cow Fertility - length of calving/target figures



Discussion followed over length of calving period. The target is to get 65% of cows put to bull in calf from the first cycle and 25% in calf to the second, in practice performance is poorer. The 20 farmers who had contributed to Iain's survey gave 45% for first cycle and 32% for second cycle. Robert's figures were broken down for heifers, cows and also compared.

Bulling Period	Drumdown Herd	Target	Iain's Group
1 st cycle 24/4 - 15/5	64%	65%	45%
2 nd cycle 15/5 - 5/6	19%	25%	32%
3 rd cycle 6/6 - 26/6	6%	7%	15%
4 th cycle 27/6 - 17/7	17%	3%	6%
5 th cycle 18/7 - 7/8	3%	0%	2%
6 th cycle 8/8 - 28/8	1%	0%	0%

Although successfully calving 93% of cows and heifers put to the bull, this was achieved through a long bulling period (17 weeks). The aim must be to shorten this to 12 weeks, but most farmers take the view they would rather have a cow in calf than not in calf, but there is a cost for this.

(d) Cow Score - Which Cows Pay?

Robert regularly weighs calves at speaning - Why?

- (i) Provides baseline for future performance.
- (ii) Can compare calves performance and look at impact of breed, sire etc.
- (iii) To assess Cow Performance.

A few other Group members also weigh their calves, but what is the best way to utilise this information?

GOOD		BETTER			BEST			
Ear No.	Weight	Ear No.	Weight	DOB	Ear No.	Weight	DOB	Cow Score
485	300 kg	485	300 kg	4/4	574	280 kg	30/5	+31
496	280 kg	497	270 kg	23/4	557	270 kg	14/5	+6
574	280 kg	496	280 kg	23/4	581	245 kg	5/6	+2
575	270 kg	557	270 kg	14/5	485	300 kg	4/4	-1
576	270 kg	533	260 kg	5/5	496	280 kg	23/4	-3
577	260 kg	574	280 kg	30/5	533	260 kg	5/5	-12
578	245 kg	576	235 kg	30/5	497	270 kg	23/4	-13
579	235 kg	581	245 kg	5/6	576	235 kg	30/5	-14

What is Cow Score? SAC developed a method to compare cow performance within a herd. Works better with computer programme, which can quickly calculate:-

- (i) Average of calves born in days
- (ii) Average calf weight at speaning
- (iii) Average DLWG = $\frac{\text{Av. Weight} - 40 \text{ kg (birth weight)}}{\text{Average in Days}}$
- (iv) Individual speaning weight and age for each calf

It is then a case of comparing the individual calf's actual figures against a potential score.

If we use a simple example for a herd, e.g.

Average Calf Age at speaning	240 days (5 th April)		
Average Calf Weight at speaning	280 kg		
Average DLWG to speaning	<u>280 - 40</u>		
	=	<u>240</u>	= 1.00 kg DLWG

Lets look at individual calves and how their mothers have performed.

Calf Z (300 kg) born 5th March, 270 days old at speaning, i.e. 30 days older than the average calf in the herd. Should be 30 days x 1.00 kg (av. DLWG), which is 30 kgs heavier than the average weight of 280 kg giving a Target Weight of 310 kg. In reality it weighs 300 kg, so it is 10 kg lighter than its potential, therefore give the mother a Cow Score of -10.

Calf Y (262 kg) born 5th May, 210 days of age at speaning, i.e. 30 days younger. Would expect this calf to be 30 days x 1.00 kg (av. DLWG), or 30 kg lighter than average weight of 280 kg, i.e. Target Weight of 250 kg, but in reality it weighs 262 kg, so it is actually 12 kg heavier than its potential, so give its mother a Cow Score of +12 kg.

All the cows were ranked with the best cows achieving scores of +75 kg (but at the other end there were cows with negative scores of -70 kg). Presumably both cows will be fed similar rations and have similar costs, but huge difference in performance.

We now have two years results. How have the Group reacted to seeing information presented in this fashion? The first year it looks very convincing as there was only one figure, be it positive or negative to consider, but when the second year's figures are added they were still comfortable where there were two positive figures or two negative figures, but were less sure where you had a mix. Why do we get these differences? Obviously the big unknown factor we couldn't include was the impact of the sire (unless only the same bull was used), so would expect that to have an influence. The other reasons could be (i) the weather, but this should affect all the herd, (ii) impact of disease etc. (e.g. pneumonia/scour) on an individual calf could mess up its weight gain despite the cow perhaps having sufficient milk, and (iii) something that has impacted on the cow's ability to do the calf well. Most times the stockman will remember specific causes.

Cow Score is a tool to begin to use to consider which cows to cull first. If a cow has a -55 and -45 then each year it has produced a calf on average 50 kg lighter than the average calf in the herd (adjusted for calving date).

In future will we look at Cow Score (over a 2-3 year period) and also combine that with Calving Index to help pick out the under achieving cows. This would give an objective way to identify the bottom 10% passengers in the herd and earmark them for early exit.

	<u>Cow No.</u>	<u>Calving Index</u>		<u>Cow Score</u> *	
		<u>2004</u>	<u>2005</u>	<u>2004</u>	<u>2005</u>
kg	1515	-51 days	-1 day	+59 kg	+39
kg	BB037	+75 days	+31 kg	-31 kg	-28
	Drumdown Herd Av.	+22 days	+11 days	0	0

This shows that not only is Cow 1515 a good breeder, but also produces a heavier calf and will be in the top 10% of the herd. Unfortunately Cow BB037 days could be numbered - poor breeder, poor adjusted performance with the calf 31 kg lighter than average in 2004 and 28 kg lighter in 2005. She will be in the bottom 10%.

Black Baldies - The Preferred Suckler Cow

"Having a good cow goes a long way to having a good calf", but finding the good cow is more of a problem. Holstein influence, biosecurity and with replacement heifers making up to £1400 in Ayr, convinced Robert that his gradual move into buying Black Baldies for replacements was the right move.

How did it all start? A neighbour who has a pedigree Hereford herd persuaded Robert to buy some Black Baldie in-calf heifers. A Baldie is a cross between an Angus bull onto a Hereford Cow. Their temperament and ability to outwinter fitted the Drumdow system. The herd now includes 31% Baldies (28% AAX; 27% LimX; 6% Hereford; 8% Others). The Group were very keen to see how the Baldies compared with the other cows under similar management and used DLWG to speaning as an indicator. For the 2005 calf crop, all the heifers were in-calf to an Aberdeen Angus and all the cows were in calf to the Charolais.

<u>DLWG Speaned Calf Performance</u>	<u>Baldie Cows</u>	vs	<u>Rest of Cows</u>
Performance of Heifers	0.99		0.99
Performance of Cows	1.15		1.14

Points to Note: Performance of calves on the cows overall was very good - to average 1.14 kg DLWG since birth is above average. Also highlighted that the Baldie is as good as any of the existing breeds Robert has available. He would even have accepted a bit lower performance given their other benefits - temperament, condition, ease of calving etc. This perhaps isn't surprising when you consider most of the breeding cows in Argentina are Baldies.

Rearing Heifer Replacements from the Suckler Herd

Many farmers are concerned about importing disease onto the farm. Not only does this cost financially to put right, but there is also the hidden cost in labour to deal with disease, even herd testing. SAC looked at this eight years ago and began rearing their own replacement heifers from within their suckler herd using a criss-cross breeding programme involving Limousin and Angus bulls. Greenmount College, N Ireland, have opted for Saler and Limousin as the preferred breed mix for their hill herd.

At Drumdow, Robert had recently started to utilise Black Baldie as replacement cows and he has begun a criss-cross programme using Angus and Hereford bulls. The Group have liked what they saw and suggested he should consider putting more of the herd to rear up extra replacements for sale to other suckler producers.

Any other farmers would have to consider as Robert did, (i) the best breeds to use to produce replacements (in his case Angus and Hereford), (ii) the impact on cashflow as a result of not selling heifers store (14 months), or finished (19 months) compared to 24-36 months as replacements, (iii) is there sufficient feed and housing for all the heifers? (The proposed new shed will solve this problem, but realistically the older heifers will be outwintered on the Moor.

If only looking for own replacements would start by putting 30-40% of the herd to the replacement bull. If heifers are to calf down at two years of age, then they should be selected from cows which calf in the first half of the calving period, which have adequate milk (positive Cow Score); an ability to breed regularly (look at Calving Index); easy calving and good temperament (calving book).

Selecting the bull to breed replacements

Having decided on the breed of bull to produce replacements to match the farm's environment, it is important that bulls are selected which have a positive EBV for milk. The Estimated Breeding Value Robert looked for when he purchased the Hereford bull this year was 200 day Milk, but the bull also had to look well and be good on his feet. The bull had a positive figure of 9kg (indicates his daughters should have above average milk compared to the breed average). What does this mean in practice? (I am grateful to an article written by Greenmount, N Ireland, beef adviser, William McLauchlan, which explains it in simple terms).

"A bull's EBV for milk is calculated from the performance of his grandchildren. A bull produces two types of grandchildren, one group being sired by the bull's sons and the other group being born to the bull's daughters. Assuming the bull and his sons are mated to average cows and his daughters to average bulls, we would expect similar growth rates to 200 days of age in all his grandchildren. However, if those calves born to his daughters always grow faster, it suggests that his daughters are above average in terms of their milk production and this is reflected in the bulls 200 day milk EBV.

It is also important to note that bulls selected to produce heifers should not have high positive figures for calving ease, or the multi trait calving value index. If they have, their daughters though easily calved as calves themselves, may have difficulty in calving their own calves as a result of slightly reduced pelvic width".

Hereford bull purchased for £2000 with +9kg EBV milk.

Age to calve down heifers?

This has produced a lot of discussion within the Group as to how to allow heifers to come into the herd around the same calving period as the main herd. Would suggest either calving at 2 years or 3 years. It would be easier to work if Drumdow ran two herds, then one could provide replacements for the other. A compromise was suggested, which was to go for the later calving cows and breed replacements from them which would allow them to come back into the herd in February/March one month before the first cows calving and around 32 months of age. Normally wouldn't advise breeding from tail-enders (as they had got there by default), but in Robert's case some were there simply because they had originally come into the herd at that time. The Group is still thinking this one through as cost of production and rearing system will need to be thought through to achieve desired targets.

What weight for bulling heifers?

Jimmy Hyslop, SAC Beef Specialist, at the August meeting said, "normally look for 65% of the mature weight. For a 580-630 kg cow this would be 385-410 kg - if calving at 24 months of age would require an average DLWG of 0.70-0.80 kg/day up to bulling at 15 months of age". Is this achievable? The Group broke it down to three periods.

<u>Target Gain</u>	<u>Birth Weight</u>	<u>30 kg</u>
Birth to Speaning	225 days @ 0.95 kg	245 kg
Mid December - Mid April	120 days @ 0.60 kg	70 kg
Mid April - Mid July	85 days @ 0.75 kg	<u>65 kg</u>
	15 months weight	<u>410 kg</u>

At calving, aim for 85% of mature liveweight - this would mean reaching 500-536 kg at calving, or 0.5 kg/day from bulling to calving.

Premium Health Scheme

One of the action points highlighted was to screen for BVD, Johnes Disease, Leptospirosis and IBR. At the November meeting, Mark Crawshaw, Senior Vet, SAC, outlined the background risks and best ways to tackle and control these diseases, of which BVD and Johnes were considered more important.

Johnes Disease is a wasting disease - young calves can get infected, but may not show up for 3-4 years. Reduces milk production and results in higher cull rates. Even infection could cost £1700/year in a herd like Robert's. Rearing homebred replacements is a good idea if the herd is clear. If disease already there it will multiply up very quickly, so screening is important.

Two options - test all herd and any breeding animals over three years of age will need to repeat in Year 2. Thereafter, every other year, provided culls tested - will cost £4/head lab fees and cost of vet collecting samples = £1000/year. If clear will allow Robert to sell accredited heifers. Alternatively, could test all the cull cows as they leave the herd (20% of the cost).

With BVD, reckon average cost of infection if £2,500/year. Looking to see if any Persistently Infected PI animals in the herd. Kenneth Williamson recommended blood sampling 10 homebred calves 9-18 months, as they had been running with the cows - again this will cost £3.60/sample.

The Group questioned how much Robert was prepared to spend in identifying his health status and whether it would pay to go accredited, given that he would only be selling 30-35 surplus replacement heifers. If all the sampling cost is put against these heifers they would need to make an additional £60/head - would farmers pay this for extra peace of mind? Most thought yes. Decided to test all cattle over 3 years old for Johnes disease and had been given a clean bill of health. Had actually screened three groups (24 cattle), which had shown up two positives. Knew in the past BVD was on the farm, so it appears there is still at least one PI animal on the farm, although level of exposure is low. Could either blood sample heifer replacements as they come into the herd (£6/head), or vaccinate all the herd twice over the next two years (£5/head).

Environmental Issues

Robert has always been keen to put something back for wildlife and is currently involved in a Countryside Premium Scheme and has planted up new areas of woodland. There was a lot of debate about the plus/minus of entering the new Land Management Contract Menu Scheme. Over half of the Group eventually signed up to this new scheme - one Group member summed up Land Management Contracts by saying, "it's a bitty scheme, but as long as a bitty modulation money stays in my pocket then I'd be a fool not to sign up". Other farmers thought it wouldn't be worth their while, but with finishing cattle struggling to leave margins around £60/head in some cases, the income the average farmer was getting was similar to keeping 35 bullocks - which was easier to work with and which gave a guaranteed return?

To gain the maximum £3,200 for his farm, Robert opted for a good mix, which included maintenance of hedging, ditching and dyking, management of rushy pasture, animal health plans and not surprising given his interest to promote farming, a few talks and school visits.

Sheep Enterprise

- 520 crossbred ewe flock, mainly Scotch Mules with 100-120 gimmers bought in as replacements (£90/head). Some Texel X Mules are kept and tupped as gimmers.
- Texel and Suffolk terminal sire with all the lambs being finished and sold deadweight (Stoddart's). Target is to get two-thirds sold before end July and most sold off grass before end October.
- Flushing - sheep kept on bare land after weaning, moved to silage aftermath and teaser tup introduced for two weeks, then teaser taken out and tups in for six weeks.
- Effect of teaser - lambing over in 2-3 weeks. Scanning average around 210%. Downside up to 30% triplets. Feeds surplus lambs on adapted calf feeder and weans on to hard feed as quickly as possible.
- Replacement gimmers are vaccinated for EAE, toxoplasmosis and footrot. Flock is doses with anthelmintic at lambing and pre-tupping along with a flukicide (see flock health action plan summary).

- **Lamb Production**

	<u>2003</u>	<u>2004</u>	<u>2005</u>
Ewes/Gimmers to Tup	485	506	520
% Scanning	216%	214%	206%
Lambs Sold	175%	171%	172%
Number Sold	841	866	894

At scanning, ewes are condition scored and split into grazing groups based on:

1) Singles; 2) Main Twins; 3) Late Twins; 4) Triplets; 5) Thin Twins/Triplets

Having achieved a compact tupping (>90% tupped first cycle), no need to worry too much about sub-dividing into early/late singles etc, which eases management.

- Good quality silage (high DM, good ME) is introduced in feed trailers 5 weeks before lambing. Discussion has centred around risk of listeria (soil contamination), but so far no problems.
- Supplementary feeding - simple system, uses Snacker (no messing with troughs) and starts with ¼ kg every week to a maximum of 1½ kg (fed 2 feeds). Twins start with ¼kg/head a fortnight later and step up to 1 kg/head before lambing. Singles only start a fortnight before lambing and step up to ½ kg/head. Robert used to feed molasses, but found it was simpler to double the amount of cake, although he does put Crystalix licks out 2 weeks before lambing to boost sugar reserves to reduce stress.
- After lambing ewes are put into 3 large groups to reduce worm pressure a partial clean grazing system is used (3 groups sheep, 3 groups cows rotated round 9 fields). It also means there is usually fresh grass to move stock to.

Improving Scanning Results - Getting the Lambs into the Ewes

In 9 out of the last 10 years Robert has scanned over 200%. How does he consistently achieve above average figures across the 511 ewe flock? Robert puts it down to 3 P's - "Planning, Preparation and Plenty of Power in the tups". This year the flock scanned at 215% - How? About 5 weeks (7th September) before tups due to go in, all 511 ewes were shut up in a bare 7 acre field. Over the next fortnight they had their feet pared and were dosed with Combinex. On 27th September all moved into a 20 acre field that had been shut off (grass height 5-6") and 3 teaser tups were added. 2 weeks later (11th October), ewes split into 3 tugging groups, 14 tups put in (1 tup/36 ewes) and each group moved to fresh grass. After the first cycle only 45 ewes had not been tugged (<10%), so not only is this "fasting/feast" approach before tups go in helping to put lambs into the ewes, but improves how quick they come to the tup. Another secret is probably how Robert conditions the tups, he builds body condition starting 6 weeks before tugging, not by feeding concentrates, but by giving them good grazing. How many farmers leave the tups shut up on a bare paddock until a week before they are needed - "fit off grass is the aim". Worth pointing out that no minerals/tugging licks are used and ewes don't get any concentrate feed until a few weeks before lambing.

Drumdown	Yield	Singles	Twins	Triplets	Scan
2002	5%	10%	50%	35%	216%
2003	3%	11%	56%	30%	214%
2004	1%	14%	63%	22%	206%
2005	2%	11%	58%	29%	215%

Accounting for Losses at Lambing

The Group asked if lamb deaths could be recorded during 2005 lambing season.

Potential Number	1086	% of Scan Total
<u>Less:</u>	92	9%
Re-absorbed		
Still Born	45	4%
Lain on etc.	14	1%
Watery Mouth	4	½%
Losses at Grass	16	1½%
Losses from Scanning		16%
Sold	893 (172%)	

The figure for re-absorbed has been arrived at by deducting lambs produced (976) from original scan potential (1068) - at 9% this seems rather high. Interesting to compare a similar exercise done this year at the Borders Monitor Farm. Not only did they also arrive at a figure of 9%, but their losses from scanning to end April after turnout are also identical at 16% (note as a percentage of scan total). This exercise will be repeated again this year. 14 lambs lain on - is the design of the lambing pens a factor?

	2002/2003	2003/2004	2004/2005	Your Figures
Scanning %	216%	214%	206%	
% Lambs Sold/Reared	175%	171%	171%	
Difference	41%	43%	35%	

Lamb Marketing Performance

Meeting in August (see 18th August report for more details) revealed:

- 63% of lamb crop (565 lambs) sold via Galloway Primestock Group to Stoddart's.
- £2.55/kg average (identical to previous 2 years).
- First draw lambs started higher, £3.04/kg compared to £2.73/kg in 2004.
- By end July slipped to £2.33/kg compared to £2.45/kg in 2004.
- Lambs were 10 days slower to reach target 40 kg liveweight.
- Lambs were 0.77kg lighter.
- Calculated that to achieve same income as 2004, would require remaining lambs to hit 20½kg @ £2.33.
- Estimated that by end August, would have 200 extra store lambs on the farm compared to 2004 and questioned what impact this would have on overall grazing pressure. This prompted Robert to not only continue with direct reseed after winter barley, but to try a partial reseed using a slot seeder (see later). This definitely helped and ensured there was sufficient grass for tupping etc.
- Which terminal sire (Suffolk or Texel) gave the best return? Robert had followed 100 Suffolk X and 81 Texel X sold, literally no difference (2p average), but Texels were ready earlier.

Up to end July	2003	2004	2005
No. Lambs Sold	412	605	565
% Lamb Sales before end July	49%	70%	63%
Average Deadweight	18.26 kg	18.68 kg	17.68 kg
p/kg	2.55p	2.56p	2.56p
Average Price/Lamb	£46.54	£47.80	£45.38
Income	£19,178	£28,923	£25,640
kg Lamb Sold	7523 kg	11,300 kg	9989 kg

Remainder of Year	2003	2004	2005
No. Lambs Sold	441	261	329
Average Deadweight	19.68 kg	20.52 kg	20.46 kg
p/kg	2.27p	2.35p	2.21p
Average Price/Lamb	£44.73	£48.21	£45.31

Annual Performance	2003	2004	2005
No. of Ewes to Tup	485	506	520
% Lambs Sold	175%	171%	172%
No. Lambs Sold	841	866	894
Average Deadweight	19.27 kg	19.25 kg	18.68 kg
p/kg	2.40p	2.49p	2.43p
Average Price/Lamb	£46.25	£47.93	£45.35
Gross Income	£38,902	£41,506	£40,185
kg Lamb Sold Deadweight	16,200 kg	16,650 kg	16,700 kg
kg Lamb Sold/Ewe Topped	33.40 kg	32.91 kg	31.11 kg
kg Lamb Sold Liveweight (46.5% KO)	34,800 kg	35,800 kg	35,900 kg
kg Lamb LW Sold/Ewe Topped			

Comment

Interesting that over the last three years the weight of lamb sold (deadweight) off the farm has been almost constant around 16,600 kg, or 33 kg/ewe despite ewe numbers rising from 485 to 520.

Over the year discussion has taken place on how these figures might be improved.

- Increase lambs born (combination of higher scanning/lower losses at lambing). In 2004, 205% scanned, had been as high as 214% - management at tuppung already very good, could look at losses from tuppung to lambing.
- Fewer losses at lambing - 931 lambs born alive, 913 taken to field, 897 dosed (10/5) equates to 173% (ewes put to the tup). Bearing in mind that apart from Robert, a lamber is only employed for 2 weeks at the start of lambing and that ewes are kept outdoors until a fortnight before lambing - potential for making gains whilst possible are limited.
- More lambs sold in first draw (early June). This year, first lambs away had started well at £3.04/kg (12th June) compared to second draw, which made £2.64/kg (26th June). Group discussion centred on whether to move lambing forward 7-10 days from usual 1st March to 20th February. Robert felt given lack of inwintering sheds he would continue as normal, but would consider a suggestion made to creep feed the first 100-120 lambs born (enough to stock a field) with the aim of having heavier lambs/earlier lambs to hit the higher prices. Group estimated by spending £5/head on creep should generate an extra £10-£20/lamb and more importantly free up extra grass/reduce worm burden. One member makes use of calf creeps by fitting pallets to allow lambs to reach to feed (1 creep/60 lambs).
- Heavier weights at sale - partial clean grazing system in operation, 3 groups, 150-180 ewes with lambs, 3 groups of 40-50 cows and calves rotate round 9 fields. Stocking rate 4-5 ewes/acre seems to work.
- Opportunity to consider greater percentage of clover to lift DLWG. Research work has shown 25% improvement in lamb liveweight gain (140g/day to 175g/day) on good clover/ryegrass as opposed to ryegrass.
- Worth looking more closely at faecal egg counts to determine best anthelmintic policy.
- Improved price p/kg - existing grades mainly R3L. Given potential reduction in EU ewe flock will basic price rise, or will slackening in consumer demand work the other way. Stuart Ashworth, QMS, attended a recent meeting and felt the fall in lamb meat consumption, particularly in France, would cancel out reduction in production.
- Gross income could obviously be improved from the sheep side by increasing the size of flock. This is something that could be looked at once the proposed new shed is built, but the Group felt only after a full comparison against the other enterprises and a better understand of enterprise dynamics within the farm.
- Should also consider ewe losses from tuppung to lambing. 18 deaths (3½%) - 8 milk fever/sudden, 6 prolapse, 3 mastitis and 1 suicide.

Output Targets for Drumdow Sheep Flock 2006

	Monitor Farm	Your Targets
Ewes/Gimmers Topped	511	
Scanning Target (215%)	1098 lambs	
Potential Lambs Dosed (215% - 35% = 180%)	920 lambs	
Potential Lambs Sold Finished (178% to Tup)	910 lambs	
Number Sold before end July (two-thirds)	600 lambs	
Av. 18½ kg DW @ £2.60/kg gross	£48/lamb	
Remainder sold before end December	310 lambs	
Av. 20½ kg DW @ £2.25/kg gross	£46/lamb	
Gross Income Lamb Sales	£43,000	
Kg Lamb Sold Deadweight (910 @ 19¼ kg DW)	17,400 kg	
Kg Lamb Sold Deadweight/Ewe Topped	33¼ kg	

In 2005, the Group were keen to look at the physical/financial performance of the flock as a whole. For 2006, will consider ways to improve liveweight gain, better utilisation of clover swards, and potential for creep feeding early born lambs to maximise early premium. Worm egg counts will be taken to assess need for and efficiency of worm doses. Vet, Kenneth Williamson, is also keen to monitor and investigate mastitis incidence as part of the Flock Health Plan, as mastitis in lambed ewes does appear to be an increasing problem.

Investment in a Shed? - Group Workshop Session

Present Buildings

One main shed (90' x 90',) which at a squeeze can hold 100 speaned calves on straw (the remaining calves are outwintered on the moor with the 150 cows). A small finishing shed holds 25-30 fat cattle whilst the existing sheep shed allows part housing of the flock at lambing (but once lambing starts ewes and lambs have to be turned out regardless of the weather). As he is also moving to rearing his own replacements, which will mean (additional cattle to be overwintered) he had considered building another shed utilising the new FBDS grant scheme, and decided if two heads are better than one then 24 heads should do even better and asked the Community Group meeting in August for assistance.

Q1. Should Robert be considering building shed given his present/proposed farming policy?

- Group 1: No - felt that 40 extra speaned calves being overwintered etc would not justify £30,000-£50,000 investment.
- Group 2: Yes - wider benefits, some difficult to quantify financially e.g. able to buy straw and store it off the combine (£45/t) vs buying in the Spring (£80/ton), or ability to house breeding bulls - at present outwintered.
- Group 3: Yes, but could examine adapting existing shed (90' x 90') - it has a wide 15' feed pass and two scrape passages. Would it make more sense to go to all bedded and concentrate ration?

Q2 What type of building would he get most use out of?

All 3 Groups: said, "keep it flexible", so general purpose/straw bedded design in agreement.

Q3 After walking round steading decide on best site (taking into account existing sheds, holding facilities etc) and optimum size.

All three Groups selected a site close to the existing shed, (Drumdown sits on the top of a mounded hill and is exposed to winds from the South West). This was the same area that Robert had selected as it was also close to the silo etc, it would however mean moving cattle/sheep handling facilities. Whilst Robert had been thinking about building another 90' x 90' shed, (8100 square ft) every Group favoured a narrower shed (45' wide) as originally they had all opted for an outside feed barrier. Robert worried about the strong winds had opted for an internal barrier.

Q4 Having decided on optimum size, the Groups then looked at internal layout (main use is 40 speaned calves, but wants room for finishing cattle, 6 breeding bulls, lambing ewes and storing straw).

Conclusion

One of the most popular sessions, as it had provided an opportunity for small group discussion and light hearted feedback, but it also had an important outcome. Whilst Robert had already submitted an application into the first round of FBDS Investment in Holdings for a 90' x 90' general purpose shed, he changed his design and opted instead for a long and narrow 180' x 45' main shed. This meant that he had to re-submit his FBDS application in December with fresh quotations. On a positive note Robert reckons that, thanks to the Group, he will save £10,000-£12,000 on the original design.

Labour Efficiency

Possibly the greatest challenge over the next few years will be sourcing labour that is adequately experienced to assist with tasks on the farm. Robert is fortunate that he has Jim McCurdy to help, particularly as he can turn his hand to most jobs. Nevertheless, there are opportunities on most farms to actually improve labour efficiency, or make better use of your time. This is one area that Monitor Farms could help by spreading good ideas and is a feature that tends to be built into most meetings for the Group to share.

1. **Feed Mixing:** Cereals augered into bruiser with automatic shut off (can be left running without supervision) using a large front end bucket. Barley dark grains are dropped onto the bruised barley and turned/mixed by tractor before dumping into a hopper, which drops the mix into large purpose build metal bins that can be taken out into fields, or into cattle sheds. It is then an easy task to feed using plastic buckets from the bins. Main benefit is no bagging involved, also quicker to feed as bins next to beast. Also less problems with vermin as no bags to feed from.
2. **Castration at Tagging:** Uses rubber rings - first time seen, only one other Group member doing it. By the time next calving period came round almost half had switched. Obvious benefit is less stress on man and beast compared to castrating when older.
3. **Snacker Feeder:** Calibrated for dropping off different amounts to different groups of sheep - quicker and more pleasant to feed sheep, also don't have to turn over troughs to get rid of water as rolls are fed on the ground.
4. **Planning a good tuppung** means a more compact lambing - also means that extra labour can come in to cover the peak period - better use of paid labour.
5. **Feeding dry cows two/three times a week.** Fact the cows are outwintered also helps to reduce time spent scraping/bedding and mucking out. By feeding every 2-3 days makes the job more efficient and Robert can better plan other tasks for days when he knows staff are available.
6. **Right tools in the right place:** Place is tidy, workshop is well equipped, but Robert has also adopted ideas. He has built a metal workbench on wheels that he can weld off, use as a mobile bench - (one plug in, 4-5 plugs out) and tool carrier. Saves the walking back and forth from the workshop to get the tools you need. Another example of having the right tools is a small trailer that goes behind the bike, which is set up to carry all the fencing equipment. He also invested in four good quality wire tighteners, so he can tighten wire/mend gaps etc. He also uses the metal joiners to link wire. All means that jobs get done quicker.
7. **Pallet trolleys on wheels:** Has a number of these so he can set machinery on, e.g. the fertiliser spreader and then push these into corners of sheds.
8. **Not so obvious** is the decision taken by Robert to bed the finishing cattle well (2 kg/head/day). This, and the fact they are on ad-lib cereals, has kept them clean and means no one has to spend time, or risk injury belly clipping etc.