DUMFRIES MONITOR FARM  
(Beef Finishing) 

Report from 11th Meeting 
held on 
6th November 2014 
At 
Hartbush, Amisfield, Dumfries. DG1 3LN 

The Dumfries Monitor farm is supported by Scottish Government, Skills Development Scheme, Quality Meat Scotland, A K Stoddart and Highland Meats
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Front cover photograph, taken in June, from Barr Farm, showing Hartbush paddock grazing field with a strip at the far end, which was round baled and ‘the wedge’ i.e. the remaining 1 day paddocks at different stages before and after grazing.

Top Tips

Paddock Grazing Trial

The trial results indicate that, when compared to set stocking, paddock grazing can:-

1. increase stocking rate by 40 to 50%
2. increase store heifers’ average daily live weight gain by ~ 30%
3. double the kilos grown per hectare
4. produce some extra baled silage when there is surplus grass grown
5. more than double the financial margins per hectare (after costs)

Winter Diets for Suckler Cows

1. Forage and mineral analysis of forage is central to planning successful winter diets for all cattle
2. It is sensible to plan for controlled weight loss for fit cows, saving feed costs throughout the winter
3. Do not allow cows to lose weight or body condition in the final 8 weeks of pregnancy
4. Feeding straw and/or cereals/concentrates in mid-pregnancy can help to prevent Long Bone Deformity (Dwarf Calf Syndrome) in calves
5. Feed extra UDP (Un-digestible Protein) in the final 6 weeks of pregnancy to increase colostrum quality and quantity (without growing larger calves)

Health Planning

1. Each farm health plan should be individually tailored to the history of disease and health challenges experienced on the farm in question in the past and anticipated in the next year or so
2. Health Planning provides a useful opportunity to review herd and flock performance; and to compare with targets set and local / national data.
3. Include straw, and barley if required, in suckler cow diets during months 5, 6 & 7 of pregnancy to prevent Dwarf Calf Syndrome
**Hartbush Update**

John Paterson began by welcoming 75 to Hartbush for the first meeting of the third and final year of this project. He gave an update on what has been happening at Hartbush since the open meeting in early August.

- The harvest went very well, barley yield ~3 tons/acre at 18% moisture. It was then treated with Maxammon and urea to increase the protein level and enhance the feeding quality.
- We have purchased more barley (bushal weight > 64) which has also been treated with Maxammon & urea.
- On Matt Palmer’s suggestion we have treated some barley with 50% extra urea increasing protein levels even further, which should reduce the need to buy in further protein during the winter.
- We will review the winter diets in due course and report on how these all go.

- Sold 313 breeding ewe lambs with the majority going to Yorkshire at an average price of £100.20 at home.
- We purchased our ewe lambs through H&H Lockerbie and these have been vaccinated with enzo vax and toxovax. They will run on the Barr Hill to allow them to become acclimatized and build their immune systems prior to going to tup next year.
- Teaser tups went out on 10th September and tups were put out on 30th September. All signs show a busy lambing month come March.

- The spring reseed we did including Typhon turnips in the mix was a great success and ewes and lambs, followed by weaned lambs, did exceptionally well on both fields.
- We sprayed off and reseeded 20 acres of grass after second cut silage.

- We scanned cows after 12 weeks with the bulls and 195 out of 214 (91%) were in calf at that time. We will rescann again at end of December.

Amanda and I have joined the QMS SW Grazing Group at Challochmun, Glenluce with two members of the community group at Hartbush. We have attended two meetings and find it very informative. The opportunity to meet, hear from international experts and discuss grazing with other people has been very helpful to us in our first year of paddock grazing.

SRUC Barony campus students continue to visit Hartbush regularly supporting our monitoring program weighing cattle and measuring grass.

After the introductions the company was split in three to visit the different learning stations:

1. Evaluation of the paddock grazing trial
2. Winter Diets for suckler cows,
3. Health Planning
HARTBUSH PADDOCK GRAZING EVALUATION 2014

Paddock grazing produces double kg/ha and double £/ha (after costs)

John Paterson (monitor Farmer) and Judith Hutchison (Smiths Gore facilitator) presented the physical and financial results of the first year's paddock grazing at Hartbush.

John led with comments on the practicalities and challenges he faced in implementing this system of grazing for their store heifers and for a group of cows and calves this summer.

Having visited Doug & Lorna Greenshields (previous QMS Grassland farmers from Southmains at Sanquhar), spoken with Rhidian Jones (SAC) and with encouragement from Matthew Currie (Smiths Gore) ringing in his ears John had set up his first paddock grazing system in a field next to the steading where he could keep an eye on things easily. “Of course, what we didn’t realise was that this field is completely visible from the A701” John added. “So all our friends and neighbours could also see exactly what was going on as well!”

The first paddock arrangement was 8 long narrow strips running from top to bottom of the field, with the water troughs placed along the bottom of the field. (Please also see the paddock grazing report from the Monitor Farm meeting held at Hartbush on 29th May)

“Now that we have done a season, I understand that the first mistake we made was to wait until the 1st May for the whole field to be ready to take all the cattle before we put any out.” John said “This meant that when the cattle had grazed the first 2 or 3 paddocks the grass in the remaining paddocks was getting far too strong for the cattle to get on top of.”

John went on to explain that they should have put a smaller number of heifers out earlier, say mid-April, so that the paddocks had different amounts of grass in them (i.e. creating the ‘wedge’) from a much earlier point in the season. That way we would have had much more control of the system from the start. The wedge, as spoken about in relation to paddock grazing, is where each paddock has a different amount of grass in it depending on how long ago it was grazed / when it will be grazed – it is in effect a set of steps and stairs of grass quantities growing towards the day when the animals are turned into each paddock in turn.

This is a very different way of grazing livestock. You measure the grass, work out how much grass is in each paddock and match that to the feed requirements of your animals. The paddocks John started with were calculated to feed the heifers for 3 days each before they were to be moved on to the next paddock. “This all sounds a lot of work,” John said “but once you have got used to how it operates, which is pretty quick really, it is neither time consuming nor difficult. In fact it is easy and most enjoyable. Opening the fence and letting them through to new pasture is most satisfying, we often just stood and listened to them all munching away on the grass; a wonderful sound!”

“In mid May we had some very wet weather, which caused us real difficulties”, explained John. “Because the paddocks were 3 day paddocks the cattle grazed OK for the first day, the second day they were a bit unhappy and started to traipse about
making the grass muddy. By the third day the grass was so dirty the heifers wouldn’t eat it at all, understandably. They started walking up and down the length of the electric fence trying to get through to the next paddock where there was lots of nice clean grass. The result was a poached strip right up our field of one year old grass ley!! It was a horrible sight to see!”

John was so upset by this that he took down the electric fencing and let the heifers graze the remainder of the field for the next week. There followed a couple of family / farm debates over whether they should give up or persevere with the paddock grazing trial. With support and encouragement from Rhidian they redesigned the paddocks into 8 (3 day) grazing blocks, which in turn could also be split into 3 daily paddocks. From the beginning of June the cattle were in 1 day paddocks, which meant they could graze quality grass to appetite each day and were happy to lie down or wander about for the rest of the day. The next day they were moved on to a new paddock ready to graze again. “This system worked really well, thank goodness” said John “we could see how much more settled the heifers were, getting the grass they needed every day. They were just so different to work with. We did the daily paddocks until the end of July when we put them back onto 3 day paddocks, which worked well as everything was so much drier by then”

At the May Monitor Farm meeting Michael Kyle, a local dairy farmer with 20 years’ experience of paddock grazing, said he wouldn’t do anything to the poached area that everybody was dismayed to see. So John did leave it alone to let nature take its course. John told the group that he was amazed at the recovery it had made by the time the paddock was ready to be re-grazed; by the end of the summer you would never have known it had been damaged at all.

To regain control of the grass growth in June John cut several paddocks the day before the heifers were due to graze them. When turned onto the cut paddocks the heifers enthusiastically hoovered up the wilted grass, leaving a very tidy paddock when they moved on. This worked better than topping after grazing and ensured no grass was wasted. For those without a mower a similar result could be achieved by either shutting off another paddock of to round bale, or by bringing in other cattle to graze off a paddock to help manage the over-supply situation. This is just one example of the flexibility offered by paddock grazing.

John weighed the paddock grazing heifers on a monthly basis, or as near as possible. This also provided another learning experience when he chose not to move the heifers one evening as they were due to be weighed the next morning. When the weighing was completed John was “sorely disappointed” by the weight gains calculated “some were negative!” he reported. Disappointed and dejected he wondered what was going wrong. He reweighed them a few days later and discovered that the weight gains had returned. On reflection, the hungry heifers had been weighed with empty stomachs, when all previous weights were with full stomachs. Thus a reduction in ~ 30kg was enough to give completely false indications of growth rates. “Going forward we will always plan to weigh the cattle at the same stage in their feed regime, to try and prevent such variations for future recordings” John concluded.

John had also grazed a group of 40 cows and calves on a rotational system on 28 acres, where he rotated them around 8 paddocks giving them 3 or 4 days in each one. He had more cows on a smaller area than would have been possible in a set stocked system. The animals all adjusted to being moved regularly and were very settled. The bull didn’t cause any problems either. We did have a couple of taller posts to allow the
calves to forward graze if they wanted, but they didn’t really bother much until later in
the season.

Having joined the QMS SW Grazing Group where hill grazing was discussed, John
Baillie, Pature Sens, France, explained that given the opportunity livestock will come
to the bottom of the hill in early morning to graze their way back up hill during the
day and spend the night at the top of the hill. This results in the majority of dung and
urine being deposited at the top of the hill, improving soil fertility and structure at the
top of the hill/field and reducing soil fertility and damaging soil structure in lower
parts of the hill/field. On discussing this with employee Colin Rae, John decided to
electric fence a steep brae face on Barr Farm, which has not been well grazed for
many years. This forced the cattle to graze areas, which they had tended to avoid and
has already proved to be beneficial. Over time this should also improve the pasture
going forward as dung and urine will be more evenly spread across the whole field
(instead of being concentrated in the same parts of the field repeatedly.)

John rounded off by saying that he was extremely pleased with the performance of
the heifers on the paddock grazing system. “I know we are just beginners and that
we have plenty of room for improvement. We really enjoyed this way of working with
our cattle. For these two reasons we will definitely be doing this again next year and
look forward to the challenges in driving this as hard as we can, to get even better
results.”

Judith then took the group through the physical and financial figures gathered from
the trial. She explained that there were a couple of things to keep in mind during the
comparison:-

• Firstly the set stocked heifers were breeding replacements, which John did not
  want to grow too fast as they were already at their target bulling weights when
  they went to grass
• Secondly they were set stocked on older, rented grass parks, which are unlikely to
  be as productive as the 2013 reseed, which John had chosen to do the paddock
  grazing trial on.

In order to make the two groups of cattle more comparable the figures have been
calculated for the set stocked heifers as at the end of August, when the paddock
grazing heifers were brought in to the shed and put onto finishing a diet.

The data Judith discussed for the heifers grazed in 2014 can all be seen in the
attached ‘Paddock Grazing Evaluation data 2014’ hand-out. Her main points and
comments were:-

Physical comparison

• The stocking rate for the paddock grazing was 6.54 heifers/ha compared to 4.2
  heifers/ha for the set stocked heifers (or 2.65/acre and 1.7/acre) [55% higher for
  paddock grazing]
• This equates to 2,385kg/ha for the paddock grazed heifers and 1,692kg/ha for the
  set stocked heifers (at the beginning of the grazing season) [40% higher for
  paddock grazing]
• The average liveweight gained during the 114 day grazing season was 104kg for
  the paddock grazed heifers and 80kg for the set stocked heifers [30% higher gain
  for paddock grazed heifers]
• This equates to an average daily liveweight gain of 0.91kg/hd/day for paddock heifers and 0.70kg/hd/day for set stocked heifers [paddock grazed heifers gained 30% more per day]
• OR 678kg/hectare/day (paddock heifers) and 336kg/hectare/day (set stocked heifers) [the paddock grazed field grew double kg/ha over 114 days]
• The difference is due to a combination of the higher Daily Liveweight Gains and higher stocking rate on the paddock grazing field
• None of the heifers were fed during the 2014 grazing season
• 4% more fertiliser was spread on the paddocks at 848kg/ha compared to 816kg/ha on the set stocked field
• 29 bales of silage were harvested from the 2 paddocks, which were shut off when there was surplus grass in June.

Financial Comparison per hectare

• If the weight gain is valued at £2.15/kg the income for the season is £1,457.70/ha for the paddock grazed heifers and £722.40/ha for the set stocked heifers [the paddock grazed system generated double the income compared to the set stocked system]
• 29 bales of silage valued at £12/bale equates to an extra £41.38/ha for the paddock system
• The total income for the paddock grazed system was £1,499.08/ha
• Fertiliser costs, at £274/t, were £232.26/ha (paddock system) and £223.58 (set stocked)
• Costs for the electric fences and water system (depreciated over 5 years) were £34.94/ha.
• These give final, partial budget margins of £1231.88/ha (paddock system) compared to £498.82/ha (set stocked)
• The paddock system produced a margin 140% higher than the set stocked system (after the major costs had been taken into account).

Similar comparison of income and costs per head can also be seen on page 3 of the hand out, with a list of the electric fencing and water system costs is on page 4.

While the difference in pasture quality should be taken into account, the increase in performance and financial returns shown indicate that the paddock grazing system has been very successful in increasing returns per hectare. John is going to look very carefully at his plans for the 2015 grazing season and will be considering whether he can reduce the area of grass he rents in as he now believes that it is possible sustain the same number of livestock on a smaller area of land, whilst still maintaining high levels of individual performance.
Winter Diets for the Hartbush Suckler Cows

a) Dry Cow Feeding

Donald Brown from SRUC Barony Campus, commenced the talk by comparing the body condition of the spring calving cows in the adjacent pen. He classified a particularly fit Simmental Cow as a 4.0, with the rest typically 3.5 after a good summer at grass.

He advised that with careful management the cows should be allowed to lose a full condition score between now and mid February (when the cows will be 7 months pregnant) i.e. 3.5 to 2.5 or 4.0 to 3.0, at a rate of 0.6kg/day. This would save 700kg of silage over a 110 day period per head. Cows should not lose any weight in the last 6 weeks of pregnancy, as this would compromise their energy status and ability to calve successfully.

He suggested grouping dry cows according to condition:–

- very fit cows could be restricted to 25kg of a 5:1 mix of Silage and Straw (with 150 grams of a suitable mineral) and
- less fit cows should get 25% more i.e. 32-33kg of the 5:1 silage/straw mix.

The inclusion of the Straw results in cows being more contented, as it takes 24 hours to digest, and it also has the benefit of combating Long Bone Deformity or ‘dwarfism’ when fed to pregnant cows in mid pregnancy. John also feeds 1kg of rolled barley from October to January as a prevention against dwarfism (see Peter Hastings’ talk).

Feeding a source of undegradable protein (UDP) in the last 3 weeks of pregnancy (i.e. 0.75kg/day of Dark Grains or 0.5kg Soya) had proved successful last Spring, and had resulted in an improvement in the quantity and quality of Colostrum without increasing calf size. Donald indicated that the Barony intended to compare the 200 and 400 day weights of growing cattle next season with the quality of the colostrum they received as calves to see if there was a correlation.

b) Forage Analysis

Undertaking forage analysis and forage mineral analysis are invaluable in winter feed planning as this is the only way of getting the right feed ration and mineral balancer in place.

2 analyses of the silage had been taken, with the results broadly similar. One sample at 23.8% DM was wetter than the other and Donald suggested that this was probably accurate as water could be squeezed out of the silage.

The Energy and Protein levels were both acceptable for feeding to Suckler Cows, although the Ash content was a little high, suggesting some soil contamination in the ensiling process (raking?).

c) Forage Mineral Analysis

Availability of the Major Minerals (Calcium, Phosphorus and Magnesium) was average, but could be supplemented by an appropriate Mineral balancer.
The analysis indicated low levels of Manganese, which could be checked by blood testing a group of cows after a week on the silage diet. Compounds found in well fermented (good quality) silage can inhibit the uptake of Manganese and is understood to be one of several factors involved in Dwarfism in calves. Feeding straw and or cereals/concentrates in mid pregnancy has been found to be helpful in preventing dwarfism (see Peter Hasting’s report, below)).

Typically for the area, the Copper, Cobalt and Iodine readings in the forage were all low and require mineral supplementation to avoid ill thrift in new born calves and poor levels of immunoglobulins in Colostrum. Donald also advised feeding Vitamin B12.

Strangely, for this area, the Selenium reading was high. If this was not the case, Vitamin E should be included in the Mineral to improve calf vitality. Selenium deficiency can result in retained placentas. Iodine also helps calf vigour and can be given as a pour on as it is readily absorbed through the skin.

**Dwarfism (Long Bone Deformity) and Health Planning**

Peter Hastings, Nithsdale Vets, began by discussing Long Bone Deformity in calves. The first ‘dwarf’ calves appeared in 1988 in the Nith Valley. One theory was that it was as a result of the 1986 Chernobyl disaster.

In 1988 on one particular farm there were 18 cases out of 120 cows, and it was thought that this was due to a single bull. In 1989 and 1990 there were a further 18 and 38 cases respectively and by recording matings it was proved that the incidence wasn’t restricted to just the 1 bull.

Hartbush had 3 cases in 2008 and a mineral supplement was introduced. There were a further 2 cases in 2009, so the mineral hadn’t made any difference. Straw was introduced into the ration in the winter of 2009/10 and there have been no cases since.

Farms susceptible to ‘dwarfism’ tend to be as follows :-

- Beef Cow enterprises (rather than Dairy)
- All Spring Calving
- Ex Dairy Farmers who are in the habit of taking early cuts of quality silage
- A 2 cut system rather than 1 single bulky cut

To counter the risk of Dwarfism, Peter recommended feeding some Straw (plus Barley if required) in the diet during months 5, 6 and 7 of pregnancy, either 29kg Silage with 1kg Straw or 22kg Silage, 2kg Barley and 1kg Straw.

**Health Planning**

Peter explained that it is a Farm Assurance requirement to draw up a Health Plan for a business, but it is important that this is tailored to the individual farm and balances preventative measures with the level of risk and cost. It is a good medium for the farm vet to engage with the customer and discuss new products, combinations and alternative medicines and strategies for combating disease challenges.
The Hartbush Cattle Health Plan was discussed with the main routine treatments as follows:

<table>
<thead>
<tr>
<th>Month</th>
<th>Group</th>
<th>Disease Challenge</th>
<th>Treatment</th>
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<tbody>
<tr>
<td>April</td>
<td>Spring Calves</td>
<td>Navel Infection</td>
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<td>Cryptosporidia</td>
<td>Halocur</td>
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<td></td>
<td>Cows/B. Heifers</td>
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<td>Flypor</td>
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<td>Bulls</td>
<td>Fertility Test</td>
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<td>July</td>
<td>Bulling Heifers</td>
<td>Worms</td>
<td>Pour On</td>
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<td>Autumn Hfr Stirks</td>
<td>Lepto/BVD</td>
<td>Bovilis/Spirovac</td>
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<tr>
<td>August</td>
<td>Autumn Hfr Stirks</td>
<td>2nd Lepto/BVD</td>
<td>Bovilis/Spirovac</td>
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<td>Pneumonia</td>
<td>Rispoval</td>
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<td>IBR</td>
<td>Bovilis</td>
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<td>November</td>
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<td>Bovilis/Spirovac</td>
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<td>Fluke</td>
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Many thanks, once again, to:-

- Peter Hastings for his discussions on the value in pro-active health planning
- Donald Brown for another engaging presentation on suckler cow management
- Sandra Braid and her team for the goodies served at coffee and lunch time.

**Useful Contacts**

Donald Brown, SRUC – T - 01387 860 251; E - donald.brown@sruc.ac.uk
Peter Hastings, Nithsdale Vets T – 01848 330 220
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Robin Spence (Chair of the Management Committee) - M - 07831 336 539
Johnny Mackey (QMS) – T - 0131 472 4117
George Brown (Highland Meats) – M – 07971 147 775
Jim Ford (A K Stoddarts) – M – 07774 283 382
Matthew Currie (Smiths Gore) - T - 01387 263 066; E - matthew.currie@smithsgore.co.uk
James Worthington (S G) – T - 01387 263 066; E – james.worthington@smithsgore.co.uk
Judith Hutchison (S G) – T - 01387 263 066; E – judith.hutchison@smithsgore.co.uk

**Useful Websites**

QMS – [www.qmscotland.co.uk](http://www.qmscotland.co.uk)
A K Stoddart - [www.akstoddart.co.uk](http://www.akstoddart.co.uk)
Highland Meats - [www.dawnmeats.com](http://www.dawnmeats.com)
Barony Campus – [http://www.sruc.ac.uk/info/120392/barony_campus_dumfries](http://www.sruc.ac.uk/info/120392/barony_campus_dumfries)
Nithsdal Vets - [http://www.nithsdalevets.co.uk](http://www.nithsdalevets.co.uk)
Smiths Gore - [www.smithsgore.co.uk](http://www.smithsgore.co.uk)

**THE NEXT HARTBUSH MONITOR FARM MEETING:-**

**Thursday 5th February 2015, at Hartbush**

**Topics include:-**

Michael Shannon – Out wintering cattle and paddock grazing in Lanarkshire
### EVALUATION OF 2014 Paddock Grazing Trial

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<th>Set Stocking Breeding Heifers 2014</th>
<th>Paddock Grazing Store Heifers 2014</th>
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### INCOME (£/ha)

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<th>Set Stocking Store Heifers 2013</th>
<th>Set Stocking Breeding Heifers 2014</th>
<th>Paddock Grazing Store Heifers 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Season’s Av Live weight gain (kg/ha)</td>
<td>177</td>
<td>336</td>
<td>678</td>
</tr>
<tr>
<td>Value of weight gain @£2.15/kg (£/ha)</td>
<td>380.55</td>
<td>722.40</td>
<td>1457.70</td>
</tr>
<tr>
<td>Total No of silage bales produced</td>
<td>0</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td>Value of silage @ £12/bale (£/ha)</td>
<td>0</td>
<td>0</td>
<td>41.38</td>
</tr>
<tr>
<td>Total Income for season (£/ha)</td>
<td>380.55</td>
<td>722.40</td>
<td>1499.08</td>
</tr>
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</table>

### INCOME (£/head)

<table>
<thead>
<tr>
<th></th>
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</tr>
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<tbody>
<tr>
<td>Season’s Av Live weight gain (kg/hd)</td>
<td>38</td>
<td>80</td>
<td>104</td>
</tr>
<tr>
<td>Value of weight gain @£2.15/kg (£/hd)</td>
<td>81.70</td>
<td>172.00</td>
<td>223.60</td>
</tr>
<tr>
<td>Total No of silage bales produced</td>
<td>0</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td>Value of silage @ £12/bale (£/hd)</td>
<td>0</td>
<td>0</td>
<td>6.33</td>
</tr>
<tr>
<td>Total Income for season (£/hd)</td>
<td>81.70</td>
<td>172.00</td>
<td>229.93</td>
</tr>
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### INCOME (£/head)

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<td>Total Income for season (£/hd)</td>
<td>81.70</td>
<td>172.00</td>
<td>229.93</td>
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### COSTS (£/ha)

<table>
<thead>
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<th>Paddock Grazing Store Heifers 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fertiliser (kg/ha)</td>
<td>707</td>
<td>193.65</td>
<td>223.58</td>
</tr>
<tr>
<td>(cost @ £274/t)</td>
<td></td>
<td>648</td>
<td>232.65</td>
</tr>
<tr>
<td>Feed provided</td>
<td>18.90</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Water &amp; E Fence costs (£/ha)</td>
<td>88.94</td>
<td>0</td>
<td>34.94</td>
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<tr>
<td>Total Costs for season (£/ha)</td>
<td>282.59</td>
<td>223.58</td>
<td>267.20</td>
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<tr>
<td>Partial Budget Margin (£/ha)</td>
<td>97.96</td>
<td>498.82</td>
<td>1231.88</td>
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</table>

### COSTS (£/head)

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>Fertiliser (kg/ha)</td>
<td>707</td>
<td>816</td>
<td>848</td>
</tr>
<tr>
<td>(cost @ £274/t)</td>
<td>41.15</td>
<td>53.20</td>
<td>35.51</td>
</tr>
<tr>
<td>Feed provided</td>
<td>18.90</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Water &amp; E Fence costs (£/hd)</td>
<td>18.90</td>
<td>0</td>
<td>5.34</td>
</tr>
<tr>
<td>Total Costs for season (£/hd)</td>
<td>60.05</td>
<td>53.20</td>
<td>40.85</td>
</tr>
<tr>
<td>Partial Budget Margin (£/hd)</td>
<td>20.91</td>
<td>118.80</td>
<td>189.08</td>
</tr>
</tbody>
</table>