Since the last advisory group meeting the weather has certainly been a mixed bag but it definitely hasn’t stopped the grass growing! We have been putting more emphasis on monitoring grass heights on our inbye fields and using the findings to dictate when to move livestock in or out of the fields. We have been measuring the grass every 2 weeks and as you can see from the map below we still have plenty of it. 6 fields are now shut off for silage and just this week we have started to cut it, hoping to get good yields and for the weather to hold out.

All lambs have been marked and all ewes clipped and we are now looking on to weaning next month where we will back fat scan all the Kirkton Blackface and Lleyn lambs and go onto lamb finishing.

**Sheep**

**Auchtertyre**

We finally got to see how the Auchtertyre and Corrie flocks fared when they came in for marking in June. In total we gathered 306 lambs and had around 40 more ewe lambs than tup lambs which is good for replacements. All Auchtertyre lambs were shepherd sampled and we will send the DNA to New Zealand for parentage.
SRUC receives funding from the Scottish Government via the RESAS 2011-16 Strategic Research Programme. Production of this newsletter is supported by the Scottish Funding Council and its Knowledge Transfer and Exchange Programme.

As was said previously we tagged some lambs up on the hill at lambing (230 in total). Of the male lambs tagged 23% did not come in at marking and 16.8% of the ewe lambs are currently missing, giving an average of 19% not back in.

We also have 22 Black Welsh Mountain Lambs and 25 Swaledale lambs from the Corrie flock. We also got 28 blackface lambs which must be a product of a neighbouring tup! Below is a breakdown of losses from scanning to marking for the 2 flocks-

<table>
<thead>
<tr>
<th>Flock</th>
<th>Lambs scanned</th>
<th>Lambed marked</th>
<th>% loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auchtertyre</td>
<td>380</td>
<td>224</td>
<td>41%</td>
</tr>
<tr>
<td>Corrie</td>
<td>91</td>
<td>73</td>
<td>21%</td>
</tr>
</tbody>
</table>

However, we expect these numbers to change as we usually get a good few more in at weaning that we have missed in gathers previously so hopefully this will improve on the marking numbers.

**Kirkton Blackfaces & Lleyns**

The Kirkton Blackface & Lleyn flock had a good lambing with 695 lambs being born to the 562 ewes that went to the tup, giving a lambing % of 123.1% for Kirkton Blackfaces and 125% for the Lleyns. Both had similar % of lambs born dead (6.9% and 6.8% respectively).

All lambs have also been marked and are now undergoing the TST (targeted selective treatment) for worming. Only lambs which did not reach their target weight were wormed which was only 21 lambs out of a total of 571 that were in at marking. This reduces the expense of wormers, reduces the anthelmintic resistance of the worms and markedly saves on labour. We and our colleagues in the Moredun Research Institute will be saying more about the TST findings at our Open Day on 18th August.

Below is a table of the marking weights between the flocks-

<table>
<thead>
<tr>
<th>Flock</th>
<th>Kirkton Ewe</th>
<th>Kirkton Tup</th>
<th>Lleyn Ewe</th>
<th>Lleyn Tup</th>
<th>Auchtertyre Ewe</th>
<th>Auchtertyre Tup</th>
<th>Corrie Ewe</th>
<th>Corrie Tup</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average marking weights (kg)</td>
<td>16.3</td>
<td>16.9</td>
<td>16.8</td>
<td>17.3</td>
<td>17</td>
<td>18.8</td>
<td>15.1</td>
</tr>
</tbody>
</table>

Plochteach- So far this year we haven’t had many lambs with plochteach and the ones that we have had haven’t been too severe, we have only had to keep 3 out of the 22 lambs in the shed. Last year we had 30 plochteach lambs at marking time but they were a lot more severe.
Kirkton & Auchtertyre Farms
Going Forward
Update July 2016

Cattle

The bull is now in with the 2015 born heifers that recently came back from their stay at SRUC Oatridge. Cows and calves are out on Auchtertyre hill and some eild cows and 2014 born heifers are on Kirkton Face.

Having the cattle grazing the hills is a key component of the moorland management plan that we are implementing over the next five years under the SRDP AEC scheme that we have entered.

The average DLWG for the heifers at Oatridge was 0.88kg with one heifer achieving 1.2kg over 255 days. The calves are doing well with an average DLWG of 1.2kg since birth.

Visitors to the farms

Norwegian contacts. We hosted a visit in April 2016 from Lise Grova (Norwegian Institute of Bioeconomy Research) who works on a range of sheep health issues (e.g. ticks, yellowes/Plochteach) and Svein-Olaf Hvasshovd (Trondheim Technical University) who works on livestock tracking, particularly in relation to predation on livestock by wolverines. Potential collaborations identified on the visit are currently being followed up

SRUC Board Members: We hosted a visit by SRUC Board Members to Kirkton &Auchtertyre farms on 31st May 2016 to allow them to see the ongoing commercial and research activities for themselves and to discuss potential future opportunities.

Open Farm Sunday: We opened Kirkton & Auchtertyre farms to the general public on 5th June 2016. More details at https://farmsunday.org/visit-a-farm/search?location=&region=Scotland

Non-chemical control of rushes: The 3rd and final workshop focused on the two year trial being conducted in association with Soil Association Scotland was held on 7th June 2016. More details are available at: https://www.soilassociationscotland.org/news/2016/april/25/managing-rushes-without-chemicals-tuesday-7th-june-crianlarich-third-meeting/

International Agriculture & Environment Students: We hosted a visit to the farms on 10th June 2016 by a group 8 students led by 6 adults (who are a mixture of teachers and leaders) from a college in West Virginia, USA who are all doing rural studies that include agricultural projects and environmental studies. Unfortunately the midges were particularly active that day!

CIRAD – Agriculture Research for Development: We hosted a visit to the farms by colleagues from CIRAD in France on 21st-22nd June 2016 to discuss Hill & Mountain Research Centre and wider SRUC input into a H2020 RISE (Research & Innovations Staff Exchange) project proposal being prepared by CIRAD for submission in March 2017 with a focus on “Sharing and Building Initiatives and Innovations for Local Development in Highland Areas”.
Shearing Course: A two-day beginners course organised by British Wool was held at Kirkton & Auchtertyre Farms 21st – 22nd June 2016

Botanical Society of the British Isles (BSBI): John Holland hosted a field meeting on 25th June 2016 of BSBI members interested in visiting the Cam Chreag on the farms, a Corbett which forms part of the Beinn Heasgarnich Special Area of Conservation on account of the occurrence of areas of species-rich calcareous grassland, flushes and cliff ledge communities. More detail available at http://bsbi.org/field-meetings

Kirkton Grassland Group: We hosted a field meeting of the Kirkton Grassland Group on 29th June 2016. This group has provided valuable discussion on grassland management over the past three years. We are hopeful that the group can continue to operate over the coming years.

International Society for Applied Ethology: We hosted a visit to the farms on Saturday 16th July by international animal welfare researchers attending a conference in Edinburgh to celebrate the 50th Anniversary of the Society. More details at http://www.isae2016.co.uk/index.php/registration/technical-tours-and-excursions

Farmer & Industry Open Day: We have set 18th August 2016 as date for our annual Open Day. More details are available at: https://www.facebook.com/events/1631365633846465/

Off farms activities

Scot Sheep 2016: Claire Morgan-Davies and Harriet Wishart highlighted the relevance of research ongoing at Kirkton & Auchtertyre farms as part of the wider SRUC/SAC Consulting stand at Scotsheep at Blythbank farm, West Linton on 1st June 2016.

Wild Park 2020 Forum Event: Davy McCracken and John Holland attended this event on 20th June to hear about some of the projects being delivered by partners (including SRUC) across the Loch Lomond & Trossachs National Park and take part in a National Park Partnership Plan evening workshop session where we looked at where conservation action should be focussed in the National Park over the next plan period (2017-2022).

Highland Show 2016: Hill & Mountain Research Centre staff provided input in a variety of ways to the SRUC stand activities at the show between 23rd - 26th June 2016, especially to the main focus this year which is placed on highlighting where different farming systems occur across Scotland, the challenges they face and the solutions being put in place to help these systems.

Cairngorms Nature Seminar: Davy McCracken spoke about Farm woodland creation and enhancement at this one day workshop organised by Cairngorms National Park Authority held on 28th June 2016 in Strathdon with a focus on Cairngorms Forest: where next?

Game Fair 2016: Davy McCracken attended this event at Scone between 1st and 3rd July 2016 to
emphasis the synergies between research at Kirkton & Auchtertyre farms and the research focus that Game & Wildlife Conservation Trust are putting on their new upland hill farming demonstration farm at Auchnerran in the Cairngorms.

**AgResearch:** AgResearch in New Zealand have expressed interest in incorporation HMRC expertise into their development of a new Strategy for Hill Country in New Zealand. Davy McCracken met with David Stevens from AgResearch on 11th July 2016 to discuss potential for collaboration on farming system research initiatives, especially of relevance to NZ hill country issues

**Lewis & Harris Grassland Group:** Davy McCracken provided an update on the grassland management at Kirkton & Auchtertyre farms at this evening meeting on Lewis on 20th July 2016 organised by Janette Sutherland of SAC Consulting

**Kirkton Grassland Group:** The final 2016 meeting of the grassland group took place at Arnprior Farm, Stirling on 26th July 2016. At the meeting we looked at grassland reclamation and drainage that has been undertaken over the last few years as part of the Monitor Farm programme. Extensive forage crops have been introduced as part of grassland improvement using the AECS scheme, together with rotational grazing. Discussion revolved around on how this relates to grassland management at Kirkton and Auchtertyre

**Farmer & Industry Open Day:** We have set 18th August 2016 as date for our annual Open Day. The programme includes presentations from staff from SRUC Research, SAC Consulting Veterinary Services, Moredun Research Institute and Edinburgh University on:

- Benefits from Targeted Selective treatment of lambs
- Production-limiting conditions in sheep
- Investigating abortions/stillbirths in suckler cattle herds
- Differences in performance between Blackface and Lleyn sheep
- Factors affecting the increase in liver fluke on hill farms
- Changes to grassland management on the farms
- Improving suckler cow efficiency

More details available at: [https://www.facebook.com/events/1631365633846465/] .

**Oban Times**
The text of articles since April 2016 are included below:
Lambing has started at SRUC’s Kirkton and Auchtertyre farms and thankfully the rain has stopped and the sun is shining. Long may it continue! The grass has started to grow and we are expecting the team from “Soil Essentials” to come and take soil samples any day. These samples will be analysed to check the pH and nutrient levels of the soil. We will then spread lime at the required rate to neutralise the pH and apply artificial fertiliser to improve the nutrient levels. With the soil now reasonably dry, we should be able to get some ploughing done and then a bit of re-seeding when the risk of frost reduces.

Last week was spent sorting out the hoggs (last year’s ewe lambs) which had just come home from their winter holidays. We put them in a shed for a few days to train them to eat concentrated feed, something you would think would come naturally but hill sheep can be thrown to eat from a trough so this is the best stage to persuade them that it a good idea! Lambing preparations have also been taking place with neckbanding being the most labour intensive part. However this year it was much easier, as we did them on the conveyor. As I probably explained in previous years, neckbanding is putting a big plastic tag around the ewes’ neck, so that we can read its ID number from further away. This will help my colleagues greatly during lambing time, when they are recording the lamb birthweights, scoring the ewe’s maternal behaviour and making a note of its ID. Let’s hope it all goes well and I will let you know the outcome of this lambing season next month.

We still have our PhD student, Ping Zhou, who is now entering her second year of studies. As she did last year, Ping will be looking at the differences in performance at lambing between the ewes in the Kirkton flock. She will carry out post-mortems on any lamb that may die in the first week of being born. Last year, she found out that the most common reason for lamb death in the flock was dystocia – the lamb getting stuck during birth. We will see how it goes this year (though hopefully she won’t have too many cases!). She will also look again at the quality of the colostrum produced by the ewes. It is exciting for us to have someone looking at all this lambing data in more detail.

All our calves have now been born, giving us 7 bulls and 8 heifers and they have just been turned out with their mothers to the hill park as the weather has been favourable. I hope this continues to be the case as last year we turned them out too early and paid the price. The cows will continue to be fed silage and a small amount of concentrate to help improve their condition before putting the bull in with them in a couple of weeks time. All the calves were weighed at birth with the bull calves averaging at 44.7kg and the heifers at 39.6kg and all were born naturally with no assistance needed.
We also just had some interesting visitors on the farms, who, for a change, were not phased by our Scottish weather, coming as they were from Norway! These two visitors were from the Norwegian Institute of Bioeconomy Research in Tingvoll, and from the Norwegian Institute of Technology in Trondheim. Both of them are working with Norwegian farmers from the west and northern coast. They came to see what research we are carrying out here at Kirkton and Auchtertyre, but also to get more information on the way we farm in the hills of Scotland. It was very interesting to draw parallels between our two countries.

Their sheep farmers, who are organised in small grazing groups, have a system very much based on common grazings on high pastures in the summer, whilst their sheep stay indoors during lambing time. Their flocks are much smaller than ours (50-100 ewes in the norm), but their main limitation is, very much like us, the size of their inbye pastures, which determines when they have to turn their sheep out onto the common grazings. They seem to have a lot of problems with tick-borne fever and with plochteach (which they call ‘alveld’).

We were able to discuss this in detail with them, and hopefully we may be able to collaborate or share information on these two debilitating lamb diseases. They were also interested in sensors and technology. We showed them our EID handling facilities and the research we are carrying out on that topic here. We even discussed drones as an idea for making gathering of the sheep easier. They are considering this in Norway, where some of their farms can be up to 17 km2 in area, and where the farmer can spend days looking for a few sheep. All on all, it was an interesting day and very fruitful discussions.
Oban Times June 2016

Lambing has now finished, and, apart from one week when it was wet and very cold, the weather has been really good, with plenty of grass for the sheep to graze. Preliminary results from our Kirkton flock are fairly good at roughly 114% (that is, 114 lambs born and alive for every 100 ewes put to the tup), but we will get a more accurate count when they are taken in for marking (tagging and notching their ears for identification purposes) in a couple of weeks’ time. Our extensive Auchtertyre flock were lambed in the hill parks this year and the lambs were tagged before going to the hill. It will be interesting to see how many of them come in at marking time. It has been great to see so much sunshine over the last few weeks and the lambs are growing like mushrooms. However, there does seem to be more ewes and lambs with sore feet than usual and ticks also appear to have fared particularly well this spring.

We had the vet in to do our annual cattle health scheme blood test a couple of weeks ago and also to castrate the male calves before all the cattle are put to the hill for the summer. While the test was all clear, only a few days later, we were saddened to find one of our cows lying dead at the side of the hill road with no obvious reason why. Although we sent her to Perth for post-mortem, no clear cause of death was found. It’s always frustrating when these things happen and you can’t find a reason for it.

We have been quite busy this month, in addition to lambing. We had a display on SRUC’s stand at Scotsheep, which was held in West Linton near Peebles in the Borders this year. My colleagues were explaining to farmers how electronic identification (EID) and associated sheep handling facilities can be used for sheep management, how it can save up to 40% labour and be useful for worm control and decrease anthelmintic resistance. The stand also had displays from other areas of SRUC about Computerised Tomography scanning (CT scan), research on mastitis and genomics, and veterinary information on anthelmintic products and health schemes. The event was a success and a lot of farmers stopped by on our stand.

The general public visited Kirkton & Auchtertyre farms on 5th June as part of national Open Farm Sunday. The weather was fantastic, and up to 50 visitors came and learned about the history of farming in the area; heard about the challenges facing hill farmers and other land managers in the uplands; watched working sheepdogs in action; found out more about the hidden wildlife living on our farms; took a tour of our wooden wigwam enterprise; and discovered how a range of technology can help make the farmers life easier. People who came were very pleased, one of them marveling at “being able to see a sheep so close for the 1st time!”. The EID crate and sheep conveyor were also quite a success with visitors, who came from as far as London, Cornwall and Aberdeen.
Two days after this event, we also had our last rush control workshop, organised by the Soil Association. About 20 people came to hear Ian Cairns, an independent consultant, give an excellent presentation and practical workshop on why rushes have become so widespread and the different methods available to control them. Despite the odd rumble of thunder and a couple of heavy showers, the day was a great success. As well as rush control, topics such as which grass seed mixtures to choose for our part of the country and soil nutrient management were also covered.

The Caledonian Challenge was also back this year on the farms. Starting at Gairlochy, north of Fort William, it is 54 miles of running for the competitors, finishing on SRUC’s Kirkton & Auchtertyre Farms, just beyond SRUC’s Strathfillan Wigwams. All the fields were ready and marquees and tents had been erected. Another busy week-end for us too!

All in all, a busy time on the farms. Next time, I will be able to say how marking went, and with a bit of luck we might even have some silage made!