Craigmillan - new woodland

Craigmillan Estate near Dalmellington, Ayrshire is run by Mark Gibson as a mixed estate comprising hill farming, forestry, conservation and diversified businesses including holiday cottages and horse livery.

The Estate covers 1,127 hectares of hill grazing, improved pasture, young woodlands and established forestry. The estate run a flock of blackface sheep plus summer grazing of suckler cattle. Lambs are away wintered on lowland grass lets. The holding is registered organic and undertakes a range of Agri-environment schemes.

### Case Study

Find out what other farmers are doing to improve profitability and adapt to a changing climate in our series of case studies.

There are five sets of Practical Guides covering:

- Use energy and fuels efficiently
- Develop renewable energy
- Lock carbon into soils and vegetation
- Optimise the application of fertilisers and manures
- Optimise livestock management and the storage of manure and slurry

Find further information, including links to other Practical Guides and Case Studies, at

www.farmingforabetterclimate.org

Funded by the Scottish Government as part of their Climate Change Advisory Activity

### Websites

www.farmingforabetterclimate.org

www.adaptationscotland.org.uk

www.agrecalc.com
Integrating hill sheep and new woodlands at Craigengillan

Integrating woodland and hill sheep

The estate has a long history of integrating woodlands and farming driven by the owner Mark Gibson’s holistic view of land management. The estate manages its productive woodlands on a continuous cover system using horses for timber extraction on sensitive sites. The estate is recognised as a designed landscape by Historic Environment Scotland. The amenity value of the estate is extremely important in attracting customers to the holiday accommodation, livery and sporting activities. Mark has developed plans over many years to restore shelter and native woodlands to the hill grazings starting in 2002 with the planting of 17 miles of hedgerows. These benefit sheep management by providing shelter, improved grazing and parasite control. New woodlands were planted in 2007 and 2008 on poor areas of hill and wet river margins. By taking out marginal land, these plantings benefitted the management of the flock and increased amenity value. In 2015 the estate undertook large scale native broadleaves plantings. The design and location were carefully chosen to retain the best grazing and facilitate stock management. Ewe numbers have been reduced from 890 to 550 head. However early signs are that the ewes are in better condition and lambing percentages are rising, helping maintain production.

Woodland planting benefits

The new plantings comprise 95ha of native broadleaves spread across the hill grazing area. The woodlands were established with SRDP support and the land will remain eligible for farm Direct Subsidy payments. The woodland also benefited from the sale of carbon credits to help offset the loss in agricultural land value. This will result in the estimated capture of an additional 65,000t of carbon dioxide over the woodland’s lifespan.

The planting was completed in 2015/16. By locking up carbon in timber and soil the new plantings are expected to sequester an additional 1,032t of carbon dioxide equivalent per year. At the same time reduction in livestock numbers has cut emissions from farm activity. As a result Craigengillan has increased its ability to act as a net carbon sink.

Craigengillan carbon changes

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<thead>
<tr>
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<th>Pre-planting</th>
<th>Post-planting</th>
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<tbody>
<tr>
<td>Energy use</td>
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<tr>
<td>Fertiliser &amp; manure</td>
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<td>Livestock methane</td>
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<tr>
<td>Total emissions</td>
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<td>341</td>
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<tr>
<td>Woodland sequestration</td>
<td>-3,384</td>
<td>-4,416</td>
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<tr>
<td><strong>Net emissions</strong></td>
<td><strong>-2,872</strong></td>
<td><strong>-4,075</strong></td>
</tr>
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Source SAC AgRE Calc®

Find out more

For more practical ideas to improve farm efficiency and reduce the farm carbon footprint visit the website www.farmingforabetterclimate.org. You can also follow us on Twitter @SACFarm4Climate or find Farming for a Better Climate on Facebook.