

# Climate Change Programme 2008 - 2011

## Progress Report July 2009



### Project description

This is a three year skills development programme, which will prepare agricultural businesses for the impacts, opportunities and risks that both climate and economic change bring. The programme, funded through the SRDP Skills Development Scheme and Robertson Trust, will equip farmers, crofters and growers with the skills and knowledge to:

- o Plan and adapt for climate change and maintain / increase business productivity and profitability.
- o Implement practical measures to reduce GHG emissions through appropriate land management techniques and use of green technologies.
- o Make the transition to more sustainable agriculture and reduce reliance on expensive inputs.
- o Develop stable and profitable enterprises, and generate new income streams.

The skills programme comprises the following elements:

- (1) A programme of 27 regional expert-led training events held at locations around Scotland. Events will be practically-based, demand-led, tailored to suit regional SRDP priorities, and promote collaborative and innovative working. Events will also involve site visits to demonstration farms.
- (2) Technical advice and support, signposting, and help to facilitate collaborative groups to implement actions in support of SRDP priorities.
- (3) Complementary resources including information packs, fact sheets and case studies.
- (4) Dissemination of best practice including presentations at seminars, conferences and events, and a published report illustrating case studies for wide distribution.

## Summary

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From April to July, we focused on the following activities:

- Launching the Climate Change Programme.
- Organising and delivering the first two training events.
- Evaluating and monitoring the training events.
- Designing the structure and content of year two training events.
- Promoting events to farmers and the wider agricultural / environmental community.

### 1. Launch of the Climate Change Programme

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The programme was launched by Roseanna Cunningham Minister for the Environment at Newmiln Farm near Perth, which is located within her constituency. The event was also attended by Hugh Raven Director of Soil Association Scotland, Jim McLaren President of the NFUS, Ron Vass Head of the Scottish Government's Rural Business Development Branch and Alan Hendry Principal Agricultural Officer of the SGRPID Perth Office. Excellent media coverage was achieved. See Appendix 1 for examples of coverage.

### 2. Organisation and delivery of training events

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Following a series of consultative meetings with farmers and growers at meetings around Scotland, and detailed discussions with leading agricultural and climate change experts (as detailed in Report 1) we designed the first six events focusing on soil management comprising the following subjects:

- Managing soil to improve structure and fertility.
- Optimising crop productivity through fertility building and FYM.
- Nutrient budgeting.
- Improving carbon sequestration through the conservation of soil organic matter.

The first two training events were held at Newmiln Farm near Perth on May 13 and Oakwood Mill Farm near Selkirk on June 8. The events were attended by 20 and 26 participants respectively. Over 80% of the participants were farmers and food producers, and the others from the environment and education sectors. Each event comprised:

- Presentations by expert speakers on soil management and climate change.
- A questions and answers session.
- Morning break and lunch for networking.
- Afternoon visit to a farm.

Please see Appendix 2 for the full day's programme for the training event held at Oakwood Mill Farm.

Four more soil management training events will be held in 2009 on 13 August at Mid Coul Farms (Inverness), 16 September at Rainton Farm (Castle Douglas), 24 September at Great Glen Cattle Ranch (Spean Bridge), 1 October at Craibstone Estate (Aberdeen).

### 3. Evaluation and monitoring

Each participant was asked to complete an evaluation form after attending a training event to obtain feedback, provide comment on other relevant subjects that would benefit their business, and essentially inform the content of subsequent events. Please see Appendix 3 for an evaluation form.

Overall, 38 participants - of the 39 who have returned evaluations to date - rated the events as either excellent or good. We also asked participants who were farmers and food producers to respond to three questions that will enable us to measure the programme's performance under SRDP Theme 1: Underpinning performance and quality in the agriculture, food processing and forestry sectors. See Table 1.

Table 1: Number of participants proposing to make changes following training events

<b>Climate Change Programme key performance indicators / outputs</b>	<b>Number of respondents</b>	<b>Percentage of respondents</b>
Change the way you something in your business / on your farm?	25	92%
Consider applying for any recognised quality assurance or other certification schemes?	5	18%
Consider starting a new farm enterprise?	7	26%

#### **Sample of participants' comments from evaluation questionnaires**

##### ***What did you like most about the training events?***

- "Farm visit - great to put theory into practice"
- "Presentation on NPK (nitrogen, phosphate, potassium) inputs and outputs, because it could help efficiency on the farm at home and reduce leaching."
- "Networking and up to date information regarding current and very important topics."
- "Great to expand agricultural knowledge and link up climate change factors."
- "Interesting and focused information from research."
- "Soil structures and nutrient budgeting."
- "Networking, variety of people, expert knowledge and contacts in various areas."
- Finding out information to enhance N fixing and preservation."
- "Both speakers were very good. Good info throughout."

##### ***Following this event, will you change the way you something in your business / on your farm?***

- "Modify rotation therefore keeping balance of NPK correct."
- "Be more attentive to problems with waterlogging and be more resilient in testing soils routinely."
- "Follow soil management suggestions."
- "Improve FYM storage."
- "I'll be paying more attention to aeration and to grass establishment."

**Following this event, will you consider applying for any recognised quality assurance or other certification schemes?**

- “Organic Certification coupled with welfare responsibility.”
- “Already organic and farm assured, but considering environmental schemes.”
- “Farm assurance.”
- “SRDP money on better animal welfare grounds.”

**Following this event, will you consider starting a new farm enterprise?**

- “Renewable energy and soil management.”
- “Have another look at anaerobic digestion.”
- “Poultry.”

Of the critical feedback, some participants found the presentation on carbon sequestration and carbon footprinting too technical, and consequently we have simplified this aspect of the training event.

#### **4. Scottish Farm Based Greenhouse Gas (GHG) Accounting Tool**

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In our SRDP funding application for the Climate Change Programme we stated that getting farmers to use farm based footprinting / accounting tools to identify areas for reducing GHG emissions, increasing carbon sequestration and making savings were key outcomes. However, feedback from our training events suggest that there are barriers to farmers using tools to carry out an audit of their business. This is supported by a recent Farmers Weekly / RSPB survey, which found that only 8% of farmers have completed a GHG audit of their farm.

We have therefore agreed to partner the Edinburgh Centre for Carbon Management (part of the Camco group) in its tender submitted on 23 June 2009 to the Scottish Government to deliver the *Scottish Farm Based Greenhouse Gas Accounting Tool* research project. Its objectives are to:

- Review existing available GHG accounting tools and undertake an evaluation of their suitability for use with farmers in Scotland using specified criteria.
- Advise on the most appropriate GHG accounting tool option for use in guiding decisions on the selection of priorities for action from the menu set out in *Farming for a Better Climate*.
- Identify and prioritise extensions which would help to improve the utility of the carbon assessments as a diagnostic tool linked to *Farming for a Better Climate*.
- Undertake field trials to test out the recommended carbon accounting tool and any suggested extensions.
- Advise on the basis for benchmarking farms using the results from the calculator.
- Advise on the use of the calculator for a climate change quality standard for Scottish farming.
- Advise on the presentation of the recommended tool to maximise the uptake by the target user.

This partnership and the training events provide a unique opportunity to achieve key Climate Change Programme objectives, and those of the Scottish Government for trialling the GHG accounting tool with the target audience, and increase the number of farmers using tools to deliver actions directly linked to *Farming for a Better Climate*. The outcome of the bid will be known in August 2009.

## 5. Design and content of year two training events

We have used the following methods to inform the structure and content of the programme's year two training events.

- (1) Asked participants as part of the evaluation process, which subjects they would be most interested in. Participants were asked to tick boxes against specific subjects on the evaluation form, the results of which are shown in Table 2.

Table 2: Responses of 39 participants from the Climate Change Programme training events held at Newmiln Farm and Oakwood Farm

Suggested subjects for training events	No of responses
Grassland management	19
Clover master class	18
Reducing GHG emissions through green technologies	17
Selecting and managing crops and livestock to suit changing weather conditions	17
Anaerobic Digestion (AD)	16
On-farm renewables	15
Producing home grown feed	14
Introducing protected cropping	6
Other: machinery efficiency, composting	3

- (2) Consulted with a range of organisations regarding the content of the training events including SAC, Scottish Renewables, Lantra Farm Business Advisors, RPAC Chairs, QMS, SAOS, MacAulay Land Use Research Institute, NFUS, Scottish Crofting Foundation, SNH and Forestry Commission.
- (3) Consulted with Carole Christian (SAC) regarding the content of a series of six *Farming for a Better Climate* (FBC) events planned for consultants and farmers to ensure complementarity, and that the dates for both series of events do not clash. It has been agreed with Graham Kerr (SAC) that our Climate Change Programme events will be promoted at the FBC events.
- (4) Ensured that the training events will help initiate actions that directly support the Scottish Government's practical programme *Farming for a Better Climate*, to help farmers tackle climate change and improve their business through the programme's five key areas.
  - Using energy and fuels efficiently.
  - Developing renewable energy.
  - Locking carbon into the soil and vegetation.
  - Optimising the application of fertilisers and manures.
  - Optimising livestock management and storage of waste.

Based on the consultations and *Farming for a Better Climate* priority actions, we have designed a programme of 12 training events for 2010 to be held at farm locations around Scotland. Each event will comprise:

### Introduction

- Overview of climate change and agriculture.
- Introduction to Climate Change Programme and its purpose.
- Benefits of taking action to reduce GHG emissions.
- Summary of actions to reduce GHG emissions and increase carbon sequestration.
- Benefits of on-farm carbon footprinting and benchmarking.

### Presentations by speakers and on-farm visits

Each of the 12 events will look at practical measures linked to *Farming for a Better Climate* that can be implemented to reduce GHG emissions, and those that will help farmers make more efficient use of their resources and have a positive impact on their business. Each event will focus on one of the following subjects:

- **Grassland and clover management.** Topics include: selecting different seed mixtures; choosing varieties; reseeding and timing; placing in rotation; establishing clover; managing weeds; utilising grassland; managing optimum stocking rates.
- **Optimum manure management** Topics include: handling, storing and applying FYM; nutrient budgeting; composting; timing of applications.
- **Developing on-farm renewables.** Topics include: understanding how renewables work; installing renewables; funding for renewables; generating returns from renewables.
- **AD technology.** Topics include: understanding how AD (Anaerobic Digestion) works; understanding planning and cost issues; setting up joint-venture AD co-operative plants; selling to the grid.
- **Managing livestock in a changing climate.** Topics include: selecting and managing livestock to suit changing weather patterns; improving productivity and efficiency through health; producing home grown feed; identifying and managing diseases and stresses.
- **Soil management.** Topics include: improving fertility and structure; optimising crop productivity; nutrient budgeting; conserving soil organic matter. (These events will be delivered in conjunction with the Cairngorm National Park Authority.)

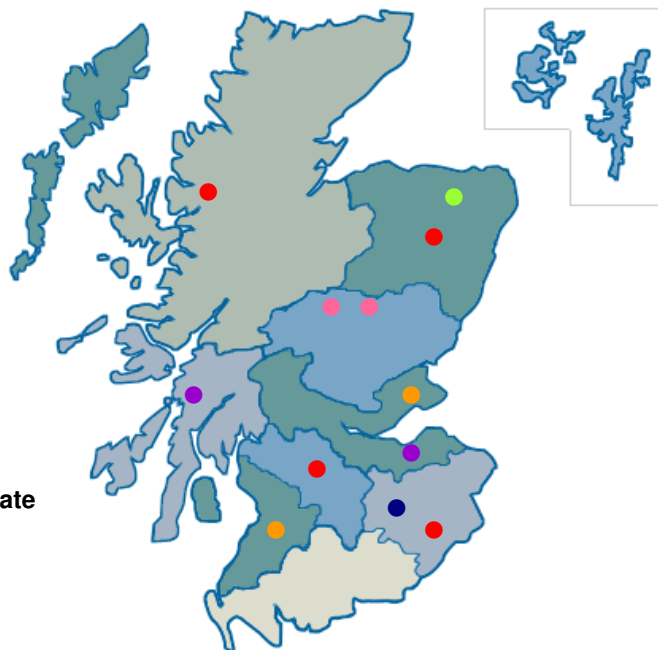
We are currently finalising the speakers and locations for each of the 12 training events. All events will provide participants with information regarding appropriate SRDP funding opportunities, and a resource pack containing supporting information tailored to each training event. RDC Case Officers / RPAC members / SAC Advisors / Lantra Advisors will be invited to attend events to provide advice on support available through the SRDP.

Each training event will involve an on-farm visit to see management regimes and machinery / equipment / plants in action. Confirmed farm visits include:

- AD (biogas) plant at Gask Farm, Turriff, Aberdeenshire.
- On-farm renewables at Balkemback Farm, near Dundee.
- Grassland management at Weston Farm, Dunsyre, Lanarkshire.

## Proposed locations of events

- **Grassland and clover management**  
4 events in Highland, Aberdeenshire, Scottish Borders and Lanarkshire
- **Optimum manure management**  
2 events in Fife and Ayrshire
- **Developing on-farm renewables**  
2 events in Argyll & Bute and Tayside
- **AD technology**  
1 event in Aberdeenshire
- **Managing livestock in a changing climate**  
1 event in the Scottish Borders
- **Soil management**  
2 events in Cairngorms National Park



## 6. PR and publicity

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The following PR and publicity activities were undertaken:

- Climate Change Programme successfully launched. Media coverage in Press & Journal, The Courier, The Herald, The Scotsman, Farmers Weekly, Scottish Farmer, Southern Reporter and SEPA View. See Appendix 4 for press release.
- Advertisements to promote the training events to target beneficiaries were produced and placed in the Scottish Farmer on 18 April, 25 April, 1 May and 23 May.
- Training events were also promoted through flyers and various farming and environmental organisations' networks, websites, newsletters and mailing lists e.g. Scotland Food & Drink, SAC, SOPA and Southern Upland Partnership.
- Soil Association Scotland staff attended the Royal Highland Show from 25-28 June to promote the Climate Change Programme. This included a lunchtime presentation highlighting the programme attended by over 80 people. Those in attendance included representatives from the Scottish Government Environment and Rural Affairs, SAC, SAOS and Scottish Crofting Foundation.

## 7. Advocacy

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We have organised a round-table discussion with key stakeholders on reducing greenhouse gas emissions from Scottish agriculture to be held on 1 September 2009 at the Royal Society of Edinburgh.

Professor Pete Smith will outline the latest science on the contribution of agriculture and land use change to emissions and to mitigation potential, both globally and in Scotland. He will explore the low-cost mitigation options, and make recommendations to the Scottish government on the least costly and disruptive ways to meeting its ambitious reduction targets.

Peter Melchett, Policy Director for the Soil Association will outline the latest science on the contribution of ecological and low-input agriculture to emission reduction, and consider which farm management practices have greatest potential to reduce emissions.

Presentations will be circulated, but discussion will be conducted under the Chatham House Rule.

Participants:

- Roseanna Cunningham, MSP, Minister for Environment and Rural Affairs.
- Hugh Raven, Director, Soil Association Scotland.
- Lloyd Austin, Head of Policy, RSPB Scotland.
- Maggie Gill, Chief Scientific Advisor, Environment and Rural Affairs.
- Professor Gavin McCrone, Royal Society of Edinburgh.