The Scottish Government’s Veterinary & Advisory Services Programme 2012/13

Working for a Better Countryside
Programme Overview

The Scottish Government's clear and ambitious agenda for Scottish agriculture and the wider rural environment is part of its commitment to creating a more successful country. Encouraging sustainable growth and broadening opportunities that will help create a more competitive and dynamic agricultural sector that contributes to the long term viability of rural communities while maintaining high standards of animal health and welfare and environmental management are the focus of Scottish Government policies. Farming and crofting continue to play a central role in the future of the rural economy and the key contribution these activities can make in relation to meeting the Scottish Government's target for a reduction in Scotland's greenhouse gas (GHG) emissions is well recognised.

The Veterinary and Advisory Services (VAS) programme is commissioned annually by the Scottish Government to meet a range of statutory obligations and to assist in the achievement of the above objectives. The VAS programme also supports the Scottish Government's strategic outcomes, primarily for 'A Greener Scotland' and its sub-outcomes of supporting sustainable agriculture, climate change mitigation, pollution control, diversification, food security and crofting in remote areas.

In 2012/13 the Scottish Government funding of the programme was £5.84m of which £3.97m was allocated to supporting livestock disease surveillance and supporting animal health planning and welfare. The remaining funding supported a range of policy objectives including climate change mitigation, pollution control, diversification, food marketing, crop health, conservation, biodiversity plus farming and crofting in remote areas.

Key outcomes are enhanced through the ability to deliver collaborative events and outputs across specific Advisory Services Programmes (AAAs). Working together, a number of AA Managers efficiently deliver outcomes that have a positive impact on the target audience and lead to sustainable industry practices. Examples of this include Joint Animal Welfare, Conservation and Biodiversity events, Animal Welfare and Woodland events, Animal Welfare, Conservation, Biodiversity and Pollution Prevention events, and Pollution Prevention and Farming for a Better Climate events. The multi-AAA format of these events connects and increases the range of information delivered, adds value for the farmer, makes best use of available budgets and allows for a range of topics to be covered at one meeting. Media reporting on such collaborative events where multiple activities are covered gets the message out to the industry very efficiently and effectively. Collaboration with external organisations is also important in specific areas and examples are indicated throughout the document where this has been successfully undertaken.

There is a statutory requirement for the Scottish Government to maintain an animal disease surveillance system. Data is collected from diagnostic materials submitted to the network of eight Disease Surveillance Centres throughout Scotland providing information on the current health and disease status of farmed livestock. Changes in the occurrence of animal diseases are detected and reported. Timely dissemination of information through the SRUC website, Animal Disease Surveillance News, monthly disease surveillance reports published in the Veterinary Record and SRUC farmer newsletters, all linked to expert veterinary and husbandry advice, supports the implementation of preventative measures. These in turn increase the competitiveness of the agricultural sector in Scotland, highlight where further research and development is needed and where specific campaigns are required. New and emerging problems are identified and significant disease outbreaks investigated.

Zoonotic diseases (diseases which may be readily transmitted between animals and humans) are monitored and expert advice on control measures is provided. This includes monitoring for signs of emerging antimicrobial resistance. Surveillance for viruses such as avian influenza virus and West Nile virus that could spread to humans is also undertaken in recognition of the fact that interactions between wildlife populations and environmental issues may have a direct relevance for human and animal health.

The Scottish Government's proactive approach to biosecurity, health and welfare in Scottish livestock is supported through the implementation of the Animal Welfare Management Programme which encourages the preparation and implementation of farm level Animal Welfare Management Plans incorporating biosecurity measures. The application of multidisciplinary expertise ensures the right advice and support is provided to the industry and Scottish Government. Maintaining a high animal health status supports high standards of animal welfare and efficient production which in turn reduces emissions per unit of output and helps meet climate change targets.

Raising awareness of the scale and nature of global problems and opportunities caused by climate change is a key area of programme activity. Actions at farm level to reduce the overall GHG emissions and consider renewable sources of energy are promoted thereby contributing to the statutory targets set out in the Climate Change (Scotland) Act 2009. Scottish woodlands can also help to mitigate the effects of climate change and are uniquely placed to make a very wide contribution to the priority outcomes identified in the Scottish Rural Development Plan. A free source of information and advice on renewable energy is provided through the website www.sruc.ac.uk/renewableenergy.

The VAS programme provides an early warning system for major pest, weed and disease problems helping Scottish farmers protect their crops without additional risk to the environment. This has been invaluable as the industry has had to deal with major weather related problems over recent years. Information is disseminated in a number of ways including the website www.sru.ac.uk/crops, a Twitter account @SRUCropClinic, Technical Notes and newsletter articles.

Cost-effective approaches to help farmers and growers address water pollution, efficient use of water and waste management planning are provided along with an explanation of the cross compliance regulations in relation to pollution prevention. Advice on organic production options also contributes to the Government's strategic objectives, particularly a greener, wealthier and fairer Scotland. Biodiversity and conservation advice is provided to support environmental sustainability.

Through the VAS programme expert advice is provided to Government, key stakeholders and the food and rural sectors in support of the opportunities identified in the Scottish Government's National Food Policy. Opportunities to add value within the local food sector have been further recognised with the development of the Think Local initiative.

Farm advisory services are provided across Scotland including the remotest areas where market failure arises. This range of support for farmers and crofters in remote areas, covering all programme activities, generates internal benefits to the farm business as well as a range of external benefits for the environment and society in general.
Animal Disease Surveillance and Control

Each year, the network of eight Disease Surveillance Centres (DSCs) undertakes diagnostic testing on some 4,000 carcasses of farmed animals and over 100,000 submissions of blood, faeces, swabs and other materials from veterinary surgeons in practice. The results of the diagnostic tests assist the veterinary surgeons to provide effective treatment and control measures on their clients’ farms. In addition, the information on the current health and disease status of farmed livestock is interrogated and changes in the occurrence of animal diseases detected and reported. A few of the conditions recognised in the past year are highlighted below.

Schmallenberg Virus

Since Schmallenberg virus (SBV) was first detected in Germany in 2011, SAC Consulting Veterinary Services (part of SRUC) has enhanced surveillance for this condition. The virus, known to be spread by midges, causes fever, diarrhoea and milk drop in cattle but the most serious form of the disease occurs if cattle or sheep are infected early in pregnancy. Infection of the foetus at this stage can cause abnormalities of the limbs and brain.

Throughout 2012/13 screening for SBV was performed on 113 foetal and blood samples with negative results. Cases of SBV were diagnosed in the south of England early in 2012 and the disease has been tracked as it moved north. Although small numbers of animals imported to Scotland had tested positive for antibodies to SBV, this was considered only to reflect infection south of the border and in continental Europe. However, early in 2013, eight cows in a dairy herd near Dumfries tested positive for SBV antibodies. These animals were homebred with no additions to the herd from outside Scotland, indicating that there were infected midges in Scotland in 2012, although at a low level and there were no deformed calves born to the 160-strong herd. Surveillance will continue in 2013/14 including a scheme to detect infection in dairy herds by testing bulk milk samples on a regular basis.

A Rise in Cases of Blackleg

During 2012, Scotland saw the highest number of blackleg cases since 2003 while the number of cases diagnosed in the rest of Great Britain was unremarkable. Blackleg is a clostridial disease that causes sudden death in cattle, normally without any previous sign of illness, though occasionally an upper limb swelling or lameness may be seen before death.

In August 2012, a press release was issued warning farmers and veterinary surgeons of a rise in incidence of blackleg; after the disease was diagnosed over the previous month at the DSCs in St Boswells, Ayr, Dumfries, Edinburgh and Perth. The aim of the press release was to highlight the risk and encourage farmers to consider vaccinating their cattle against blackleg; particularly their most susceptible stock.

At the time, above average rainfall was considered to have triggered the increase in cases. Soil disruption, poaching of fields and flooding caused by higher than average rainfall, can expose blackleg spores present in the soil.

Hygiene is the Key to Reduce Infections from VTEC/E. coli O157

During the 1980s, a type of Escherichia coli that caused outbreaks of serious illness in humans was recognised. These verocytotoxigenic strains of E. coli (VTEC), of which serotype O157 was most frequently associated with serious human disease, gained more prominence as the century drew to a close. In 1996, a butcher’s shop in the West of Scotland was the focus of one of the world’s largest outbreaks. Investigations followed and in 2001 a report was published by the joint Scottish Executive/Food Standards Agency (Scotland) E. coli O157 Task Force which produced 104 recommendations in an effort to reduce the number of cases in Scotland in the future.

Human infection arises most frequently from direct or indirect contact with farm animals or their faeces; any food, environment or water contaminated by animal excreta is a potential source of infection.

Outbreaks in Scotland have involved farming families and visitors to petting farms, and have resulted from food hygiene faults and contaminated private water supplies. SAC Consulting vets have assisted with veterinary investigations in a number of VTEC/E. coli outbreaks in recent years, and have played an important role in microbiologically confirming sources of contamination in, for instance, private water supply outbreaks. Most cases of VTEC/E. coli O157 infection in Scotland, however, are sporadic and contact with farm animal faeces has been the risk factor most strongly associated with this type of infection in Scotland.

In an attempt to reduce the number of infections from VTEC, a multidisciplinary VTEC/E. coli O157 Action Group was set up recently by Scottish Ministers, with a membership drawn from various sectors and interested parties including SAC Consulting vets. The main remit of this group has been to produce a VTEC/E. coli O157 Action Plan for Scotland. The Action Plan will be an important step in attempting to reduce the burden of infectious disease in Scotland due to VTEC/E. coli O157. It is anticipated the Action Plan will be published later in 2013.

Clostridium Difficile

The threat of growing antimicrobial resistance, whereby the options for treatment of bacterial infections are reducing, has been ranked alongside terrorism and climate change in the list of critical threats facing mankind. There are several high profile bacteria involved in this threat, one of which is Clostridium difficile, often referred to as C. diff by the media. C. diff is of particular concern amongst patients in healthcare settings. What may be less well-known, is that C. diff also occurs in animals and that related strains of the organism have been found in both human and animal populations.

In Northern Ireland in recent years, the most common type in humans, RT 078, has also been isolated from pigs. C. diff RT 078 has subsequently become more prominent amongst isolates typed from Scottish patients. A brief study of pig faeces from C. diff carried out by SAC Consulting vets during the early part of 2013 did not detect any C. diff. However, a larger study would be needed to provide greater confidence that C. diff has not been transferred to humans in Scotland from pigs.
Supporting Animal Welfare and the Fight Against Wildlife Crime

Vets and scientists at SAC Consulting Veterinary Services provide specialist services to the statutory enforcement authorities e.g. Local Authorities, Police, Food Standards Agency, Animal Health and the Scottish Government. SRUC staff work with the authorities to provide advice and support to animal keepers with the aim of improving animal health and welfare standards where welfare issues are identified on farms. Due to the difficult weather conditions in 2012 and early 2013 there were many occasions where advice was sought and given on animal health matters, rations, feeding and facility management to try to deal with particular weather related issues and encourage improvements where there were concerns for animal welfare.

There is increasing awareness of wildlife crime and over the year there were 51 investigations to determine the cause of death in a wide range of species including deer, hares, foxes, badgers, otters, red squirrels, pine martins and toads. SAC Consulting Veterinary Services staff provide scientific input, collect relevant evidence and compile reports in support of prosecutions where wildlife crime is suspected.

Smallholders and Growers

Forfar Market hosted the first Scottish Smallholder and Growers’ Festival in September 2012. Attendees included experienced smallholders as well as people new to this area of business and seeking information prior to setting up their own small holdings. SRUC took the opportunity to gauge the interest and knowledge in animal health and welfare and identify where smallholders wanted training.

Vets and livestock specialists from SRUC delivered a variety of different presentations throughout the event including information on livestock keeping courses and health and production issues. The busy SRUC stand also provided published information and advice on a number of production, health and welfare issues in a range of species. Greatest interest was shown in poultry, pigs and bee keeping.

Scottish Animal Health Planning System

One of the major roles of the Biosecurity and Animal Welfare Management Programme Advisory Activity is to support vets and farmers involved in Farm Health Planning. To facilitate this process, the Scottish Animal Health Planning System (SAHPS) was developed. The web-based system www.sahps.co.uk is provided free of charge within Scotland to vet practices and their farm clients. An annual newsletter is distributed to AWMP vet practices to highlight changes in the Animal Welfare Management Programme.

In 2012/13 a pilot study was undertaken with the objective of streamlining the health planning process. Farm production information was collected and entered on to the SAHPS system by the local SRUC contact. Then the farmers and their vets reviewed the data to devise and prioritise action plans to tackle any issues identified. In addition, farmers and vets were given anonymous reports to allow them to compare their farm performance against other herds and flocks within the pilot group. Pilot data showed herds in the upper quartile weaned 11% more calves and had 8% fewer barren cows compared to those herds in the lower quartile, whilst flocks in the upper quartile were shown to have weaned 16% more lambs and had 5% fewer barren ewes compared to flocks in the lower quartile.

This health planning process highlighted areas where intervention may be required to help maximise herd and flock productivity and provided a template for farmers, vets and consultants to plan and monitor agreed interventions. Maximising livestock health, welfare and productivity will result in increased business profitability and an overall reduction in the carbon footprint per kg of beef/lamb produced.

CPD Courses

Sixty eight delegates attended the veterinary CPD training courses provided during 2012/13. Courses included Health Planning for Suckler and Dairy Herds and Beef, Sheep and Dairy Nutrition, plus a cattle lameness/foot trimming course designed for farmers.

Honey Bee Health

Bee health is critical considering that the value of honey bee pollination of commercially grown insect pollinated crops in the UK is approximately £500m. Expertise provided enables beekeepers to manage emerging diseases. The biggest single threat to the Apiculture industry in Scotland is Varroa destructor a parasitic mite of honey bees, capable of devastating honey bee colonies.
The red-billed chough is one of Scotland’s rarest breeding birds. It is also classed as being of high conservation priority across Europe. The islands of Islay and Colonsay hold virtually the entire Scottish population of this species and so parts of these islands have been designated as Sites of Special Scientific Interest and Special Protection Areas. Unfortunately the breeding population on Islay is in decline, falling from around 60 breeding pairs in 2002 to around 45 pairs in 2012.

The Scottish Chough Forum, including researchers from the Scottish Chough Study Group, Glasgow and Aberdeen Universities, SRUC, Scottish Natural Heritage and The Royal Society for the Protection of Birds, has been monitoring the population since the 1980s. As part of the Scottish Government’s Wild Bird Disease Surveillance programme, carcasses were collected and submitted to the DSCs to screen for avian influenza virus and to establish the cause of death. Tests for avian influenza virus were negative and the post mortem findings indicated that the birds had died from starvation. It is thought that stocks of their major prey items such as sand-eels have been dwindling, in part because warmer seas have caused microscopic plankton (a key food source for young sand-eels) to move further north.

‘Wrecks’ also commonly occur after prolonged bad weather, as in March 2013, when the birds have difficulty in catching their food and when the fish stocks themselves may have moved out of the area or moved into deeper water. Information gathered as part of the Scottish Government’s Wild Bird Disease Surveillance programme provides a valuable insight into what is happening to Scotland’s wild bird populations.
The four climate change focus farms have continued to demonstrate practical greenhouse mitigation measures that can be implemented on farm and have provided data to support the monitoring of how these changes affect financial performance and the farm's carbon footprint. Early results of monitoring show that the farms have reduced their carbon footprint and made financial savings, but that unseasonal weather conditions can influence on farm decisions leading to unplanned emissions or expense.

Along with helping working farmers to improve business performance and reduce emissions, FBC has been able to demonstrate some of the benefits of the initiative to a range of visitors to the climate change focus farms, from MSPs to UK National Farmers Union representatives.

Paul Wheelhouse MSP, Minister for Environment and Climate Change visited Upper Nisbet in the Scottish Borders. Farmers Robert and Jac Neill are working with FBC and, although better known for their beef production, are showcasing some of the arable measures that farmers can consider to improve productivity and reduce greenhouse gas emissions. At Upper Nisbet, Mr Wheelhouse heard how Robert and Jac have measured their carbon footprint and carried out detailed audits of energy use and scope for improvements on farm. The project has allowed them to make better use of slurry and take a second look at previously routine practices such as livestock bedding and scope for renewables in the farm's energy use.

SRUC gave verbal evidence to the Scottish Parliament Rural Affairs, Climate Change and Environment Committee as part of their discussions on targets within the Draft Second Report on Proposals and Policies (Low Carbon Scotland: Meeting our Emissions Reduction Targets 2013-2027). The Committee recognised the importance of the FBC programme in supporting on farm behavioural change towards actions to reduce emissions, but that getting the level of behavioural change required was a challenge. SRUC will continue to develop and evolve the programme with the Scottish Government to meet these challenges. This will include a greater focus on nitrogen efficiency, extension of the network of demonstration farms and events geographically throughout Scotland and collaborative activities with other relevant elements of the VAS programme.

Collaborative Activities

Working across the Advisory Activity programme, FBC has successfully partnered with Animal Welfare, Woodlands, Conservation and Pollution Prevention Advisory Activities to increase the range of information delivered at on farm events. Combined promotion of these key livestock health and environmental messages adds value to farmer meetings, makes best use of available budgets and allows for a range of topics to be covered at one meeting.

At a Woodlands and Renewable Heat Incentive (RHI) event in Midlothian, farmers were able to hear about maintaining existing or developing new farm woodlands, which could benefit local amenity landscape and provide additional wildlife habitats, highlighting both woodlands and conservation messages alongside benefits to the farm business. In turn, a more managed woodland could provide a source of wood fuel, replacing a percentage of fossil fuels used on the farm. Additional options for wood fuel boilers were also highlighted at the meeting, exploring at first hand the farmers' own experiences in choosing and installing a woodchip boiler, allowing participants to evaluate how these ideas could be applied to their farm at home.

Meetings to support better nutrient use on the farm to reduce emissions have also highlighted opportunities for reducing pollution risks and protecting water quality. Demonstrations ranging from how to undertake a farm nutrient budget using PLANET Scotland, to considering slurry spreading equipment to minimise emissions have helped farmers assess these techniques and consider how beneficial they would be for their farm. On farm meetings and demonstrations also give farmers the opportunity to discuss new approaches or tweaks to current practice with farmer colleagues and specialists at the meetings.

FBC has also successfully partnered with other external organisations such as the Tweed Forum, Soil Association Scotland, NFUS and SEPA and will look to build on these links within the forthcoming programme.

Getting the Message Out

Along with a regular newsletter and the FBC website www.farmingforabetterclimate.org hosting Practical Guides and Farmer Case Studies, information in the press is another way that farmers have been kept up to date on low carbon ideas and developments at the climate change focus farms. FBC has a regular feature in the magazine Farming Scotland and is running a series of articles in the NFUS Farming Leader magazine, covering topics such as soils and nutrient management or ideas to optimise livestock performance on the farm. In addition, regular press releases covering FBC and partner events have been used to highlight forthcoming meetings and subsequent articles have been produced to report back key findings. This approach has helped to promote the technologies and ideas discussed at the meetings, reaching a wider farmer audience who may not necessarily attend an on farm event. The initiative can also be followed on Twitter @FBCFarm4Climate.

This past year has been poor in terms of weather; this has had knock on effects for farm management and consequently the farm carbon budget. From highlighting the benefits of knowing the nutrient value of home produced feed, to looking at ways to alleviate compaction, FBC has been able to highlight how farmers can make best use of inputs and provide ideas to improve farm management in a challenging climate.

Diversification and Renewable Energy

SRUC maintains the popular farm diversification, non-food crops and renewable energy website www.sruc.ac.uk/renewableenergy on behalf of the Scottish Government. During 2012/13 an estimated 15,000-20,000 visitors viewed well over 30,000 pages. Over 90% of the visitors were from the UK and it is estimated that about 30% of visitors returned to the site.

Throughout 2012/13 interest in renewable energy remained high, with over 320 enquiries made to SRUC consultants. The majority (40%) of these enquiries related to wind energy, but there was a small increase in the proportion of hydro and anaerobic digestion enquiries compared to 2011/12. Renewable heat opportunities also remain important, accounting for over 20% of information requests. Following this increased demand for information on renewables a Guide to Renewable Energy Opportunities, providing answers to the fundamental questions concerning renewable energy opportunities, was developed.

Impact of Extreme 2012 Weather on Scottish Crop Health

The 2012 season was one of the harshest in a generation for arable farmers. Crop yields were reduced by an average of 15% but in some areas of Scotland yield losses were much higher. Central and Eastern Scotland and the Borders suffered excessive levels of almost continuous rainfall from the end of March onwards which on heavier land was devastating to crops. Spring crops, such as barley, were particularly badly affected as they have less time to compensate for periods of stress compared to winter crops.
Continuous water logging stressed crops and caused them to die off early. Lack of sunlight in critical periods for grain filling such as June and July was another factor causing reduced yields.

Heavy rainfall also led to high levels of disease which further impacted on yields. There were two key issues. Firstly many of the diseases that are prevalent in Scottish crops such as blight in potatoes, Phytophthora in cereals or Septoria in wheat are exacerbated by wet conditions. Secondly the almost continuous rain made it very hard for growers to apply the crop protection sprays needed. Advice provided through the Crop Health Advisory Activity focused on the need to adjust spray timings and products to suit the conditions.

Delayed harvesting and the continuation of wet weather into the autumn of 2012 have already impacted on crops for the 2013 growing season. Many winter crops were sown late often into poor ground conditions and many planned winter crops could not be sown at all. Advice on the safe use of autumn herbicides and slug pellets was needed, especially where there was any risk of run-off to waterways. Crops that have survived the winter are often small and backward and have suffered badly from grazing by slugs and pigeons.

**Ear Diseases in Cereals**

Crop health in the summer of 2012 was challenged by the continuous and heavy rainfall in many areas of Scotland, but an issue of particular concern was the severity of diseases affecting the ear or head of cereal crops. Many of these caused a visual blackening on the ear known colloquially as ‘sooty moulds’. These had a negligible effect on yield but a more hidden menace, a family of fungal pathogens known as the ‘Fusariums’, caused significant yield loss.

Additionally these pathogens have two further potential negative effects. Firstly, and most critically, they produce mycotoxins – highly toxic chemicals if present to any large degree. Secondly these pathogens cause blights to seedling plants if the harvested grain is used as seed. so crop failures after drilling are a significant risk. The use of fungicides soon after the ears emerge in the crop can reduce the risk of these ear pathogens so the correct timing and the use of the most effective products is very important and was the focus of advice to growers.

Crops surveyed and assessed as part of the Crop Health programme identified that in many regions infection levels were well over 50%. Wheat growers have to carry out a risk assessment for Fusariums before they can sell the crop and where risk is high must test for the presence of mycotoxins.

The risk of seedling blight due to high levels of disease on the seed can be reduced through the application of effective seed treatments prior to drilling. In cases where this was not done for affected autumn drilled crops emergence was reduced to just 10%. Wet and cold seed beds further increase the risk of seedling blight so advice at workshops and in articles over the winter and spring focused on the need to test seed, to delay drilling until conditions improved and to use targeted seed treatments and higher than usual seed rates to compensate for some losses.

**Farm Woodland Advice**

This year two editions of Farm Woodland News were produced and distributed to over 3,500 participants in farm woodland schemes and forestry stakeholders. Articles covered a wide range of topics including rabbit fencing, tree provenance, the Carbon Code, DIY articles on planting and felling, calculating woodfuel availability and updates on the SRDP. Advice and information was also disseminated through other SRUC newsletters to farmers.

Woodlands staff also organised or contributed to seven on farm events with a woodlands theme around the country, from Shetland to Dumfriesshire. Several of these were in association with other Advisory Activity events such as Conservation, Animal Welfare and Climate Change. Feedback from these collaborative events was ‘very satisfactory’ or ‘excellent’.

**Pollution Prevention Advice Delivered Locally**

Local knowledge has benefitted the delivery of advice and increased awareness of potential pollution risks across Scotland. The main themes have included:

- slurry and muck on farm demonstration
- the use and awareness of nutrient management
- NVZ compliance through PLANET awareness
- soil management; awareness of pollution issues
- promotion of the pollution GBRs
- avoiding pesticide contamination of watercourses
- supporting SEPA in priority catchment areas

**Priority Catchments**

Approximately 100 farmers attended two meetings in the Ugie and Deveron priority catchments in January 2013. The focus was to raise awareness of the local priority catchment area, diffuse pollution and the General Binding Rules and also to provide information on the drinking quality of water in the catchments and alternative watering systems. SRUC organised and facilitated these meetings, working collaboratively with SEPA and Scottish Water to deliver expert advice.

**The Effects of Long Term Rainfall on Soil Structure**

One of the long term effects of heavy rainfall has been the effect on soil structure and the consequential pollution issues that this can cause. At a meeting in Inverness, organised by the local office and featuring a soil scientist from SRUC, discussions focused on soil structure, compaction and erosion. Farmers were encouraged to take a sample of their own soil to the meeting facilitating expert advice on specific soil samples. Organic Matter was highlighted as being very important to improve structure, hold nutrients/water and reduce soil erosion.

**Soil Aeration Day**

Over 450 people attended a soil aeration day at the Cambridge campus in January 2013 to discuss a range of soil related subjects. These included soil management and pollution prevention along with outdoor demonstrations on soil structure and drainage. Pollution General Binding Rules were highlighted along with the farm soils plan and a safe distance Quick Check Guide produced by SRUC. This guide aims to make farmers aware of their responsibilities when carrying out operations close to watercourses, and has been promoted at a range of local events across Scotland.

A number of ‘Slurry and Muck’ meetings were held, with one attracting a large number of attendees and receiving very positive feedback. One farmer quoted “the NVZ rules have made me realise the full value of slurry”. Machinery was also on display at the ‘Slurry and Muck’ events.
Local Food and Drink

Work in Food Marketing has focussed on the continued development of local food in Scotland during 2012/13. The priority has remained enabling producers to access key markets including events, food tourism activities, farmers’ markets and retail. Support has also continued in the organic sector and through the development of Protected Food Names in Scotland.

The focus on the development of farm retailing and the opportunities for food producers to highlight their unique selling point was a focus on the SAC (now SRUC) stand at the Royal Highland Show 2012. The ‘Store Trek’ event pitted farm retailing businesses in competition, asked them to highlight the characteristics that made them a destination, and demonstrated the diverse geographic locations and offering available across Scotland. The showcase event highlighted key aspects in the development of farm retail, including diversification, outlets for local food and drink suppliers, and a destination for shoppers looking to access good quality food and drink in a welcoming environment.

Ongoing support is delivered to many in Scotland’s food and drink supply chain; producers, producer groups, industry and networks. Support for farmers’ markets has continued and included the culmination of a three year initiative to deliver support through the Scottish Farmers’ Market Partnership.

The Farmers’ Market Partnership has developed initiatives to encourage greater collaboration and added value in the local food sector, enabling businesses to access support, particularly through working collectively. Support has also been given to communication, encouraging consumer engagement with the local food and drink sector, and raising awareness of the innovation and enthusiasm of farmers’ market producers.

The Partnership held its final conference at Birnam Arts Centre in November 2012 where future opportunities to develop local food were discussed, including the opportunities presented by the 2014 Commonwealth Games in Glasgow and the Ryder Cup. These opportunities, combined with the growth in demand for local food and drink, have given rise to the announcement of a new initiative ‘Think Local’.

Think Local is a three year initiative looking at the broader local food sector, including farm retail, farmers’ markets and events, food tourism and the development of added value in local food and particularly the collaboration which had been seen in the development of farmers’ markets groups and food and drink networks. Think Local will work across these strands ensuring the development of a national strategy for local food and drink and will encompass opportunities such as Homecoming Scotland in 2014. Think Local will work in partnership with a range of organisations supporting the development of local food and drink in Scotland both regionally and nationally.

The Organic Sector

Over the past year SRUC has held several successful events in conjunction with other organic bodies in Scotland, partly funded through the Scottish Government’s Organic Farming Advisory Activity. These events have successfully showcased Scotland’s organic farming sector, and provided an opportunity for a range of people within the organic farming industry to exchange information, ideas and best practice.

In October SRUC was involved, as part of the Scottish Organic Forum, in the organisation of the ‘Organics Going Forward’ conference. Speakers included Alyn Smith MEP, and James Withers of Scotland Food and Drink. Delegates heard about a range of informative topics throughout the day; including the latest on CAP reform, and how organics can contribute to the success of Scotland’s food and drink industry.

In January 2013 the 5th Annual SRUC Organic Prospects event was run alongside a SOPA-led organic monitor farm meeting in Aberdeenshire. The morning session gave participants a practical farm update, while the afternoon session included a series of talks from industry experts. Topics included an organic perspective on the implications of CAP reform, and reviews of the red meat and grain sectors.

In November a joint meeting with Soil Association Scotland was held at Rainton Farm, Gatehouse of Fleet (the home of Cream o’ Galloway ice cream). Visitors were given a tour of the new dairy facilities, and heard about and experienced the early stages of the farm’s vision for an innovative approach to managing a dairy herd. This event focused on animal welfare, environmental concerns and energy efficiency.

Diversification

The industry continues to access up to date information on diversification opportunities by way of the popular farm diversification, non-food crops and renewable energy website www.sruc.ac.uk/diversification. The impact of weather related difficulties farmers faced during the year resulted in an overall downturn of 30% in diversification enquiries to SRUC consultants. However, there was a growth in the proportion of alternative livestock enquiries, particularly on deer farming opportunities. This follows extensive press coverage in 2011 about the shortfall in supply of Scottish farmed venison, and interest has continued through into 2012. Despite trying times for core farming activities some very innovative diversification ideas continue to be pursued.

In addition to general updates of information during 2012/13 the programme included a new case study on the increasingly popular ‘glamping’ (glamorous camping). This highlights the establishment of a diversified enterprise in East Lothian that exploits the farm’s coastal location and that has expanded to host events.

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Supporting New Entrants

The ‘New Entrants to Farming Programme’, delivered under the VAS programme, is one of a number of Scottish Government initiatives aimed at addressing the barriers facing new entrants to agriculture and the issues associated with an ageing farm workforce and low level of generational turnover. The programme’s objectives are to ensure those entering or aiming to enter the industry receive specific business guidance, geared toward ensuring they are as successful as possible.

Launched by the Cabinet Secretary for Rural Affairs and the Environment, Richard Lochhead MSP at a New Entrants’ Summit, the programme was open to new entrants from across Scotland’s farming and crofting communities. Despite the issues experienced across the farming sector due to the extremely difficult weather conditions in autumn 2012, recruitment to the programme exceeded expectations with over 60 participants signing up to join four groups established in Caithness, Grampian, West Lothian and Ayrshire.

Participative training workshops provided the core of the programme, with introductory sessions being followed by topic specific workshops tailored to meet the requirements and preferences of participants. ‘Making the Most of Farm Accounts’ and ‘Preparing a Business Plan’ proved to be the ‘hot topics’ for the initial round of workshops with further sessions planned covering subjects such as succession planning and marketing.

Craig Malone is one of the new entrants to Forestry Commission Scotland’s Starter-Farm initiative.

Participation in what were designed to be thought provoking and sometimes challenging workshops was excellent and well received, gaining very positive evaluations. The high levels of commitment and enthusiasm displayed by those who have just joined the industry and by those trying to get a foothold, was particularly impressive and bodes well for the sector’s future.

A specific website www.sruc.ac.uk/info/120389/new_entrants has been created along with a series of Guidance Notes on a range of business topics to support the workshops.

Biodiversity and Conservation

River Floodplains and Natural Flood Management

During 2012/13, a Technical Note was produced on ‘River Floodplains and Natural Flood Management on Farmed Land’. This included technical advice on restoring natural processes by taking a catchment wide approach to flood risk management.

Floodplains often comprise a number of farmland habitats rich in wildlife, both on the surface and in the valley gravels. Natural wetlands and wet soils are increasingly rare. If allowed to flood naturally, floodplains can help prevent environmental damage, losses to agriculture and damage to property. Achieving natural flood management, as part of a sustainable flood management programme, involves a complex mix of agricultural, environmental, forestry, financial and social components and offers opportunities for multifunctional floodplain activities.

Grey Partridge Focus Group

Easter Ross supports a relatively stable population of grey partridge, largely due to extensive areas of suitable habitats involving mixed farming and rotational cropping and, to some extent, predator control. The Easter Ross Grey Partridge Group, facilitated by SRUC, comprises a group of mixed arable farmers who have been working together to enhance habitats and management for grey partridge since 2006. Over this period the Game and Wildlife Conservation Trust and RSPB have attended meetings and supported the group.

The Group’s objective for 2012/13 was to provide data to use in a computer model for landscape scale connectivity. This model will provide a tool for best fit and cost effective use of agri-environment options to benefit grey partridge populations which can be replicated elsewhere and with other species.

Key outcomes have helped achieve this objective and include:

- a forum for local farmers to discuss grey partridge populations, exchange ideas and build on previous work
- continuity of support, information and advice from specialists
- maps of grey partridge pairs (nests) that can be used for computer modelling
- increased group profile encouraging greater farmer input

Further opportunities to look at the landscape benefits of agri-environment schemes

Vicarious Liability and Wildlife Crime

The Wildlife and Natural Environment (Scotland) Act 2011 introduced the concept of criminal vicarious liability for specific offences against wild birds. However, the legislation also has wider implications that affect all land managers. Specific details were outlined in a newsletter article circulated to farmers and also at an event to ensure greater awareness of this liability.

Pheasant Friendly Farming

In September 2012, an on farm event was held in Fife to promote ‘pheasant friendly farming’. Advisers and farmers discussed a range of topics including the design of woodlands to hold wild birds and released gamebirds, woodland species to use, best practice in designing pheasant release pens and a reminder about the requirements of the Code of Practice for the Welfare of Gamebirds Reared for Sporting Purposes. A lively discussion took place about health plans for pheasants, environmental enrichment, the use of management devices in pheasants and the importance of maintaining good records of mortality and medicine use.

Code of Practice for the Welfare of Gamebirds Reared for Sporting Purposes.
Support to Remote and Disadvantaged Areas

SRUC’s network of local offices across Scotland continues to ensure the delivery of public good advice as well as access to up to date and relevant business advice to remote and disadvantaged areas of Scotland. With the support of the VAS programme, farmers and crofters across the country can access the advice necessary to operate their businesses viably and to sustainable standards that the Scottish Government recognises are necessary to make all of Scotland a successful country.

One major benefit of the support to the crofting counties of Scotland through the VAS programme is the presence of a locally based consultancy that provides a discounted service on a wide range of technical and business issues. The Rural Priorities (RP) component of the Scottish Rural Development Programme (SRDP) was a competitive scheme offering grant support for capital works as well as for multi annual agri-environment commitments. In 2012/13 (the last year for SRDP-RP) local SAC Consulting staff (part of SRUC) in the crofting counties assisted a total of 209 SRDP-RP applications with a 91% success rate and a project investment value to the area of some £12.6m. In the last three years a total of 959 applications were assisted with a success rate of 86% and a total value of approved projects of £50.8m, an average of £517k per year.

In addition the local offices assist with IACS applications each year and in 2012 assisted 2,069 farmers and crofters in the Highlands and Islands in completing their forms with 96% of these completed online to ensure accuracy and timeliness. The Single Farm Payment (SFP) secured for 96% of these completed online to ensure accuracy and timeliness. The Single Farm Payment (SFP) secured for 96% of these completed online to ensure accuracy and timeliness. The Single Farm Payment (SFP) secured for 96% of these completed online to ensure accuracy and timeliness.

The VAS programme funding into the crofting counties is one example of the significant impact of the programme in remote areas, which helps to support business performance. This was particularly relevant given the changes in the access to Crofting grants and the requirement for crofters to get the holding properly mapped and registered with the Crofters Commission.

Crofter Clinics

During 2012/13 a programme of Crofter clinics was delivered across Sutherland, during which advice was given to crofters on the range of options available to them within the various funding frameworks and how these could be used to sustain and develop their business in very fragile rural communities. One major benefit of the support to the crofting counties of Scotland through the VAS programme is the presence of a locally based consultancy that provides a discounted service on a wide range of technical and business issues. The Rural Priorities (RP) component of the Scottish Rural Development Programme (SRDP) was a competitive scheme offering grant support for capital works as well as for multi annual agri-environment commitments. In 2012/13 (the last year for SRDP-RP) local SAC Consulting staff (part of SRUC) in the crofting counties assisted a total of 209 SRDP-RP applications with a 91% success rate and a project investment value to the area of some £12.6m. In the last three years a total of 959 applications were assisted with a success rate of 86% and a total value of approved projects of £50.8m, an average of £517k per year.

Small Holder Courses

The provision of technical advice through training has always been an important part of the work on the remote west coast. Programmes relating to small scale pig, sheep, hen and goat production have been developed for remote producers who cannot otherwise access this technical advice. This work fed into the SRUC presence at the Scottish Smallholder and Growers’ Festival that was hosted at Forfar Market in September 2012.

Common Grazings Focus Group

SRUC facilitated a Focus Group comprising two unregulated common grazings that together make up 3000ha of ground that includes SSSI and upland grassland and heathland habitats. The objective was to look at the practical steps that could be taken by the Common Grazings Group to help improve the condition of designated site features as well as help support remote crofting communities and traditional practices on the common grazings.

Livestock Management

In July 2012 a Bull Management event was held in Ross-shire for suckled calf producers. This event was delivered by SRUC specialists in collaboration with QMS and the local vet practice. Key practical and technical subjects were covered including bull management, health, nutrition and genetics. The objective of the event was to discuss with crofters/ farmers issues regarding bull selection and management to increase profitability and improve animal welfare. Current market conditions in Scotland were outlined followed by a discussion on bull longevity, the annual cost of bulls, nutrition and social ranking. There was then a demonstration on what to look for when buying a new bull. This was followed by a presentation on bull fertility including biosecurity and general bull healthcare. Finally the delegates looked at Estimated Breeding Values and their use when selecting bulls for different purposes. Delegates rated the overall event at 4.65 where 4 is ‘very satisfactory’ and 5 is ‘excellent’. 90% of delegates indicated that they would implement what they had learned.

This was followed by a livestock nutritional event which was held in Tormentil in October 2012. At this event SRUC specialists provided a practical session in conjunction with an industry nutritionist looking at livestock rationing based on silage analysis. Key items covered included making good quality silage, explaining silage analysis, cattle rationing, sheep rationing and alternative feeds. These events brought together consideration of animal health and welfare with resource management related to climate change. Again the event was evaluated with delegates rating the overall event at 4.26 where 4 is ‘very satisfactory’ and 5 is ‘excellent’ and 92% of delegates indicated that they would implement what they had learned.

Local Croft Eggs to Market

The Portree office was approached by a new shop in Portree to help find a local egg producer who had the required registration to sell in retail premises. Working with SGRPID to identify potential crofter suppliers resulted in a number of producers coming forward as willing to supply the new retail venture. This has proved successful and the shop is now looking to expand its range of local foods.
Conservation Projects

A range of conservation and biodiversity projects have been supported as a result of the VAS programme’s support for remote and disadvantaged areas. Collaborative project activity, benefiting a range of species, has been undertaken with a number of Scottish organisations including the RSPB, SNH, Scottish Mink Initiative, Barn Owl Trust, Red Squirrel Project, Scottish Bat Project, Futurescapes project and many others.

Wader Initiatives

SRUC has worked with the RSPB and others to support and promote wader and other wetland wildlife species. Where there is a lack of natural feeding area wader scrapes have been created. These temporary shallow pools gradually dry out through spring and summer to provide a valuable feeding habitat for a wide range of birds.

Bat Support

The Scottish Government has listed all Scottish bats as ‘species of principal importance’ under the Nature Conservation Scotland (2004) Act and SRUC has worked with others to establish beneficial environments. Extended hedges provide shelter and commuting routes, while species rich grassland provides insect rich feeding areas. Woodland and habitat creation areas are also developed to provide roosting areas for bats supported by the erection of bat boxes. As well as benefiting bats many of the measures also benefit bumblebees, a wide variety of seed eating birds and promote the floristic diversity of the grass.

Mink Raft Monitoring and Trapping

Controlling the mink population helps to improve farms as sites for farmland waders and also benefits water voles and Atlantic salmon which are both UK BAP and Cairngorms LBAP Species.

Mammal Support

Three specific mammals considered as nationally and internationally important are the Scottish wildcat, the red squirrel and the water vole and support has been provided to improve the farm as a habitat. Wildcats and feral cats have been monitored to ascertain the population size and location and farmers have been involved in installing red squirrel feeding and viewing points near existing pine woodlands.

Goldeneye Duck

Scotland is on the extreme western fringe of the European Goldeneye duck’s breeding range and approximately half of the 200 breeding pairs in Scotland breed in Badenoch and Strathspey. Natural tree holes are the usual nesting place but, when absent, the Goldeneye will use specifically built nest boxes. The increase in the numbers of breeding Goldeneye in Strathspey has been directly attributed to the increase in the provision of nest boxes.

Barn Owl

Supportive habitats for barn owls have been created by erecting barn owl boxes on farms near to good foraging provided by mown grassland uncut margins, species rich grassland and the water margins.

Marsh Fritillary (MF) Butterfly

The Marsh Fritillary butterfly is a species with a very limited distribution. A working partnership has been established with Butterfly Conservation and this has been used as an example of good working practice and as a model for SRDP in the future by SNH officers and board members throughout Scotland.

Orkney Welfare Liaison Group

SRUC is involved in this collaborative group which deals with the impact of national initiatives and programmes and how they should be managed in Orkney. Key issues that have been dealt with include threats to the high health status of the resident stock from imported llamas and similar cloven hooved animals, sheep scab and small scale poultry flock management.
Programme Evaluation

Across the VAS programme each Advisory Activity is assessed for its effectiveness in meeting the Scottish Government’s strategic objectives and outcomes. A range of assessment criteria specific to each activity is used. This includes, amongst other things, disease identification, the provision of disease specific information and the uptake of animal health plans in the veterinary part of the programme. In other parts of the programme this includes the provision of industry support and information as well as the implementation of changes in management practices and best practice.

Events delivered as part of the VAS programme are evaluated to ensure that objectives and industry expectations are being met. Event attendees are asked to categorise events on a scale of one to five – from ‘poor’ to ‘excellent’. The pie charts below show a summary of event evaluation for 2012/13. It can be seen that 51% of respondents rated the events as ‘very satisfactory’, 44% rated them as ‘excellent’ and 90% of respondents indicated that they were going to make changes to their enterprises based on what they had learned.
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