



Prospects for Farmers' Support: Advisory Services in European AKIS
WP 4 – AKIS ON THE GROUND: FOCUSING KNOWLEDGE FLOWS SYSTEM | Topic 1
Country Report for the United Kingdom

The effectiveness of advisory services to respond to
demands of diverse types of small-scale farmers

New entrants to Crofting- West coast of Scotland

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List of Acronyms

ADE	Analysis for Economic Decisions
AKIS	Agricultural Knowledge and Information Systems
BCMS	British Cattle Movement Service
BioSS	Biomathematics and Statistics Scotland
CCAGS	Crofting Counties Agricultural Grant Scheme
EPIC	Epidemiology, Population health and Infectious disease Control
FSB	Federation of Small Businesses
GPS	Global Positioning System
HGCA	Home Grown Cereal Association
IACS	Integrated Administration and Control System
ICT	Information and Communications Technology
NGO	Non-Government Organisation
PRO AKIS	Prospects for Farmers Support: Advisory Services in European AKIS
QMS	Quality Meat Scotland
RSPB	Royal Society for the Protection of Birds
SAC/ SAC Consulting	Scottish Agricultural College/ Consulting
SAOS	Scottish Agricultural Organic Society Ltd.
SCF	Scottish Crofting Federation
ScotEID	Scottish Electronic Identification Device
SGRPID	Scottish Government's Rural Payments and Inspections Directorate
SLF	Scottish Land Fund
SNRN	Scottish National Rural Network
SRPBA	Scottish Rural Property and Business Association
SRUC	Scottish Rural College
UHI	University of the Highlands and Islands
UK	United Kingdom

Executive Summary

This research focused on ‘crofting’, a form of small-scale farming system common in the Highlands and Islands of Scotland. This study provides a detailed picture of the services from the perspective of both the crofters and their key advisors, utilising a case study approach on the islands of Skye, Harris and Lewis. The study indicates areas where existing approaches might be reviewed or adapted to deliver better outcomes to the small scale farmers in the system, and recommends good practices within the system that might be considered for adoption within other European contexts.

The crofting system has an important history in remote rural Scotland, where the land was historically divided into large-scale estates. ‘Crofts’ (small-scale subsistence-oriented units) on these estates were tenanted (inheritable rental agreements) by crofters, who were also employed by the estate. The history of crofting reveals a land rights struggle by the indigenous population that has profoundly influenced the institutional and regulatory framework in existence today. The poor quality of land and typically extensive grazing systems are key factors in the case study areas and the associated challenges are detailed in the main report. Crofting also remains primarily a supplementary activity for many of its practitioners who on average obtain less than 20% of their income from this source (Shucksmith & Ronningen, 2011, p.279).

A case study approach was selected and fieldwork was designed and carried out in the islands of Skye, Harris and Lewis. The study focused particularly on the experiences of new entrants to crofting (including successors), and their advisors. The study addressed the range of information sources accessed by new entrants, including formal and informal advice, training courses, previous education, work experience, tacit knowledge and the role of ICT. A qualitative research design was adopted to capture a rich picture of crofters’ knowledge systems. Thirty semi structured interviews with both crofters and their key informants were carried out between April and June 2014. In addition participant observation was used at a training course held for new entrants to crofting in June 2014. The combination of these methods produced detailed narratives which were thematically analysed in Nvivo software.

The study identified a number of challenges facing the crofters and advisory services. Crofting areas are remote, connected only by sea or air routes to the UK mainland present barriers. In addition, crofts are extensive and distributed across a large area of land (~750,000 ha) making the efficient provision of advice difficult for the concerned advisory services. There are issues with the part time nature of crofters: the major advisory service providers in the UK are primarily fee-for service, and thus emphasise larger-scale profit making farms, whereas many crofts seek small if any profits. This issue makes it difficult for both the crofters and advisory services to be able to financially justify formal advice provision. In addition crofters often produce a range of different commodities at small scales, and diversify into croft-based businesses such as tourist accommodation. This makes the delivery of advice to crofters difficult as advisors need to be ‘specialised’ in a diverse range of topics (which are also constantly evolving); crofters are also therefore attempting to operate in a number of different areas of expertise. Crofting is also both highly regulated and eligible for a number of subsidies specifically oriented towards supporting crofting. These grants represent opportunities for crofters, but often involve seeking professional advice in order to

successfully apply. The increasing regulations on crofting, designed to deter absentee ownership, has led to fear by some crofters that if they seek out professional advice the advisors may notice a problem with their croft, which could lead to their croft being taken away.

Two primary types of new entrants were evident in the study: new entrants and successors to crofting enterprises. Both could be of any age – while some new entrants are young, others inherit a croft later in life or decide to become crofters as a form of semi-retirement. While some problems are universal for both types of crofters (e.g. lack of investment capital), the two approaches represent different needs for advice: successors are often familiar with the practical aspects of crofting such as livestock production, but less accustomed to accessing advice on business diversification; new entrants to crofting are often less skilled in dealing with livestock, but bring with them a range of skills from previous employment. Owing to strong social norms within crofting on communal labour and information sharing, new entrants are able to draw on local knowledge of neighbours to learn practical crofting skills, as well as enrolling in training courses and accessing the internet. Crofting successors often ‘inherit’ the information networks of their parents, and draw on considerable tacit knowledge, so are somewhat less likely to access formal advice. Both new entrants and successors in this study are oriented towards revitalising crofting, often taking on crofts which had been underutilised in the past, and seeking to make them more productive. Both also seek to innovate, through new business diversification, most commonly into tourist accommodation, vegetable production (using polytunnels), and renewable energy production. There is increasing use of internet technologies to access growing quantities of information about both practical and administrative aspects of crofting. Respondents were very positive about targeted ‘new entrant’ training courses provided by the Scottish Crofting Federation, which addressed both practical and administrative aspects of crofting. For successors and more experienced crofters, it was suggested that ‘refresher’ courses, addressing recent changes to regulations and technological advances, could be useful.

Overall, the respondents described highly complex agricultural knowledge systems, drawing on a wide range of sources, which differed depending on the existing skills and knowledge of the crofter, and the type of knowledge sought. Formal advisors are most commonly drawn on for paperwork and administrative procedures, particularly accessing the various grants that are available to farmers in general, and crofters in particular. Local knowledge is accessed in relation to day to day crofting activities, such as livestock production and building maintenance. However, this can lead to the spreading of inaccurate information, particularly in relation to the intricacies of livestock movement recording. In light of the importance of these local knowledge systems, respondents suggested that more targeted use of these resources could be particularly beneficial to new entrants (e.g. mentoring schemes; providing training local knowledge leaders, such as grazing committee members). There is also a need to generally raise awareness of the services available, in terms of the range of topics on which they provide advice. Better access to ICT and more interactive resources could also usefully address the some of the access issues related to remote land management.

1 Introduction

This study is one component of a wider PRO AKIS study (Prospects for Farmer's Support: Advisory Services in European AKIS) investigating agricultural advisory services across Europe within the context of Agricultural Knowledge and Information Systems (AKIS). This study is one of four specifically addressing the knowledge access and information needs of new entrants to small-scale farming. The study was undertaken in Scotland and focuses on crofting, a small scale agricultural system unique to the Scottish Highlands and Islands.

Crofts are small agricultural units, most of which are situated in the crofting counties in the north and west of Scotland being the former counties of Argyll, Caithness, Inverness, Ross & Cromarty, Sutherland, Orkney and Shetland. They are held subject to the provisions of the Crofting Acts; a number of United Kingdom laws passed between 1886 and 2010 establishing land rights for small scale farmers in Scotland's traditional crofting areas. The case study comprises empirical research with crofters to evaluate the performance of advisory services that are tasked with supporting this particular agricultural system and was designed to explore crofters' access, use and knowledge creation in relation to their crofts. The study further investigates the provision of advisory services from the perspective of key informants engaged in that provision, for example, the Scottish Agricultural College Consulting (SAC Consulting) and the Scottish Crofting Federation (SCF). We were particularly interested in the experience of new crofters and have therefore sampled new entrants and successors to crofting, as well as key informants within advisory services. We explore how crofters and advisors report their interactions, and in addition, the role of information and communications technology (ICT) within knowledge transfer processes.

The primary aim of the research was to explore AKIS issues pertaining to the unique context of crofting to further increase the understanding of the problems faced by crofters and their advisors. A greater understanding should lead to improvements in the provision of reliable and relevant knowledge to crofters and may have wider benefits for European agriculture where common problems can be addressed or good practices shared. We researched the information access and needs of new entrants including recent successors to crofting, utilising contrasting case studies of the Isle of Skye and the Isle of Lewis and Harris, both located off of the West Coast of Scotland. We aimed to identify best practices in providing advisory services to crofters and typical patterns of knowledge flows (between advisors, crofters, researchers and other knowledge providers). To identify the typical knowledge flows we designed questions to study the role of ICT and use of technology, the role of agri-environmental measures, the framing of livestock movement recording (in association with The Scottish Government's Centre of Expertise on Animal Disease Outbreaks¹), business diversification and the role of the 'good farmer' in knowledge flows as an emergent issue in the data.

¹ Aka EPIC details of the centre can be found here: <http://epicotland.org/>

We examined the role of ICT for the provision, and uptake of advice, in the context of our case study believing it to be crucial for the transmission of some innovations for the new entrant crofters. The same is true of business diversification as many (but not all) new entrant crofters are diversifying their crofts. Interestingly this is not always a profit driven endeavour for crofters but can sometimes stem from a 'good life' ideal. Questions were posed connected to knowledge flows surrounding livestock reporting and movement as this is an area in which lay knowledge can sometimes be misconstrued and also information about the various associated legislative procedures may be poorly explained or understood (Hall et al, 2014).

2 Selecting and delimiting the case-study

Crofting is practiced throughout the Highlands and Islands of Scotland, which is a large geographical area (~750000ha).



Figure 1: Map highlighting the study areas

Source: Lonely Planet²

Two contrasting locations where crofting is widely practiced were selected; the Isle of Skye (closely linked to the mainland) and the Island of Lewis and Harris (the largest and most populous island in Scotland). Crofting is a key socio-economic component of both of these areas however the two locations are quite different in terms of their crofting systems, with Skye much more diversified, multifunctional (Wilson, 2007) and gentrified than the 'traditional' type of crofting of sheep and cattle on Lewis and Harris. Historically, crofting has generally been pluriactive (Fuller, 1990). In the last decade there has been a significant focus on promoting higher numbers of new entrants and successors, in an attempt to

² Map Source: <http://www.lonelyplanet.com/maps/europe/scotland/>

mediate ongoing outmigration and economic problems ('About Us', Scottish Crofting Federation Website).

Crofts in these areas typically range in size from 1 to 20ha and crofters also usually have up to 150ha of communal grazing (a large area of grazing shared between villagers which is unfenced with shared access rights generally comes along with the croft rental/ purchase). Crofts are generally comprised of poor land quality and extensive grazing with almost all of the land in the two selected areas considered to be severely disadvantaged under the Less Favoured Areas directive (in terms of soil quality etc.) Historically the crofts were deliberately created as a supplemental source of household income, oriented around self-provisioning for households which also provided labour to estates. Crofts were first established in order that land owners had a ready supply of labour for kelping³ or other operations (Hunter, 2000). Crofting remains largely a supplementary activity, as Shucksmith & Ronningen (2011, p.279), highlight, "on average crofters derive less than 20% their income from agriculture". Other sources of income have proliferated in the modern era with non-crofting jobs at airports, in tourism, in the Gaelic college on Skye, to mention just a few of the occupations the researchers encountered. Consequently, dependence on estate owners has declined but the size of land holdings or productive quality of land, when set against competition with larger agriculture ventures continues to constrain the economic potential of this form of small-scale farming. In comparison, the average farm in Scotland is over 100ha (source: UK agriculture Website) highlighting the small-scale nature of crofts, which generally are at most 20ha, and often much smaller. More information on the history of the areas and of crofting can be found in section 3.

This study has targeted new entrants to crofting (those who took over a croft in the last 10 to 12 years) because it is in the early years that new ideas and innovations (e.g. trying out different practices and novel approaches before deciding what works best) are often most evident. Furthermore, starting-up and getting businesses through the early years generates particular challenges for both users and providers of advisory systems and offers a rich insight into knowledge flows that are occurring as the new entrants to crofting navigate complex structures, often for the first time. To fully appreciate these dynamics the sample incorporates both new entrants and key informants. The objective is to build up a rich picture of the interactions between end-users and service providers.

3 General description of the case study

Crofting has been a highly politicized form of land use since its creation in the 1700s when profound social change saw the emergence of estate landowners where there had previously existed clan leaders. This transformation from what had been a kinship model of socio-economic organization to a capitalist ownership model directly led to the shaping of what are now the crofting counties, providing newly empowered owners with opportunities to pursue more lucrative business ventures chief amongst which

³ Kelping: The harvesting of cold-water seaweed for a variety of manufacturing process or for use as fertilizer.

was the creation of large-scale sheep farms on their land in response to the booming wool market. To enable pastoral expansion owners engaged in the purposeful development of small-scale plots often on inferior agricultural land where the displaced inhabitants of the newly created pastures, were often forcibly resettled. The less productive plots, often in coastal areas, generally supported only below subsistence-level farming, an arrangement that forced crofters into paid labour in local industries (e.g. kelping, fishing) or in other ventures developed by landowners (Brown, 2007; Hunter 2000, p.49). Other victims of the Highland Clearances were encouraged or coerced to leave their homeland for the growing metropolitan centres for example Glasgow or the British colonies (particularly Canada). Those that remained faced the harsh realities of a quite primitive existence against the standards of the times. Famine and hardship were commonplace in crofting communities from the 18th century up until the early part of the 20th century. These historical injustices spawned a hard-fought indigenous land rights issue, the political ramifications of which cast a large shadow over the current crofting arrangements and any proposed changes (Brown, 2008; Hunter, 2000).

Crofts are regulated by a governmental agency, the Crofting Commission (Scottish Crofting Federation, 2012). This body was established to oversee crofting arrangements largely as a result of direct action on the part of crofters between 1800 and 2012. Crofting is subject to considerable policy regulation (i.e. both agricultural and crofting) and support mechanisms operated with the assistance of a variety of agencies and commercial providers. Crofting areas constitute “approximately 25% of the land mass of the Highlands and Islands [...] which comprises over 15% of the land mass of UK” (‘About us’, Crofting Commission website). “There are over 17,700 crofts in the Highlands and Islands of Scotland and over 12,000 crofting households representing about 30,000 family members. Crofting households represent around 30% of households on the mainland Highlands and up to 65% of households in Shetland, the Western Isles [Lewis] and Skye” (‘About Us’, SCF Website).

This tradition of pluriactivity (multiple occupations) amongst crofters has persisted and is very much present in the crofting areas of Skye, Harris and Lewis where, even on poorly performing agricultural plots, crofting is more important as a source of community cohesion, identity, and knowledge exchange (Crofting Inquiry, 2008) than as a source of income (Shucksmith & Ronningen, 2011). Crofting can also have an important role to play in environmental management and wildlife conservation (About Us, SCF website; RSPB News, 23 April 2010), due to its relatively low intensity practices.

In this study we identified two groups of new entrant crofters: 1) individuals who are new to crofting, often coming from other professions, sometimes bringing transferable skills with them (for example, one new entrant had been an overseas agricultural business development consultant for an NGO). And 2) successors who may have grown up on crofts and either moved back or remained in the area to take over a family croft. Often this latter type of new entrant already has practical farming knowledge. According to the SAC/SRUC (Scottish Agricultural College Consultants/ Scotland’s Rural College) “New entrants are essential to the success of ... the long term sustainability of the Scottish farming industry. However, there are a number of barriers to entry that have meant that many potential new entrants have turned away from farming in favour of other, more financially secure, career options” (‘New entrants’, SAC Website).

In terms of the formal advisory services available in the United Kingdom: “England has a fully privately-driven extension approach, whereas Wales uses a strong publicly-driven approach supported by various private advisory networks, while Scotland and Northern Ireland operate through a fully publicly-managed system, even though some of their services are outsourced to advisers accredited according to subject” (ADE (Analysis for Economic Decisions) Consultancy, 2009 p26). In practice, the two major organisations providing advice to crofters are the Scottish Crofting Federation and Scottish Agricultural College/Consultants. Some of their work is government funded, but most is fee for service. Other important sources advice include: independent advisors, local knowledge, Scottish Crofting Federation, Woodland Trust, Royal Society for the Protection of Birds (RSPB), and the University of Highlands and Islands, although the roles of these organisations tend to be specialist focusing on their main areas of delivery such as advice on the environment and wildlife for the RSPB. Advice is also available locally through organisations which support crofting, such as the North Harris Development Trust, and through the providers of crofting inputs (e.g. staff at supply stores, machinery dealerships etc).

4 Methods and data collection, local stakeholder involvement

Qualitative interview methods were deployed in order to capture rich descriptions (Silverman, 2013) of the social interactions which were under study. Three researchers carried out 30 qualitative semi-structured interviews from April to June 2014. Eight interviews were with key informants (four of which were also crofters themselves) and 22 with crofters from Skye, Lewis and Harris. An initial sample was developed with one key informant at the Scottish Crofting Federation and subsequently augmented using a snowball technique.

A description of the proposed empirical study was prepared and submitted to an internal ethics committee and to Scottish Government prior to the commencement of the study. The researchers visited the islands at intervals of 1-2 weeks arranging interviews at the stakeholders’ convenience in their homes or places of work. The intervals allowed repeated attempts to be made to schedule each candidate’s interview, increasing the chances of success. An interview guide was developed collaboratively by the researchers to ensure that the interviews had sufficient similarity in terms of topics covered for comparative analysis to be performed. Topics addressed in the interviews included:

- history of the croft
- why they decided to become crofters
- changes made since acquiring the croft
- vision for the future of the croft
- access to and suitability of formal advice and training
- access to other sources of information and advice (e.g. local knowledge, professional experience)
- local knowledge networks

- specific issues relating to livestock reporting, business diversification, agri-environmental schemes
- role of ICT in knowledge systems
- recommendations for advisory service provision to new entrants
- demographics of the interviewee

A consent process was developed and interviewees were briefed in accordance with the ethical requirements established in the design phase. Stakeholders were advised that they could withdraw their consent at any time and that, when feasible, their contribution would be excluded from research outputs should they change their minds regarding consent. The interviews were recorded with consent and the recordings were transcribed by an external organisation and then the transcripts were subsequently entered into Nvivo software and coded. Thematic coding was developed collaboratively by the three researchers.

In terms of the attributes of the interviewees, they ranged in ages from 16 to 70 with most of the new entrants falling in the range 30-40. A disproportionate number are educated to university level. The majority are tenants of their crofts rather than owners⁴ and crofting experience ranged from prospective crofters to those who have been crofting for 15 years through to successors who have recently obtained a croft in their own name. The size of the interviewees' crofts are generally less than 10ha, with a few between 10ha-20ha and one owning a number of crofts totalling 300ha. In terms of the croft activities more than half of the crofters either have or are aiming to produce livestock, whereas others declared that they were put off keeping livestock due to the bureaucracy and paperwork that would be required. More than half of the interviewees (16) are diversifying into holiday homes and local food and very few just have one enterprise/ croft activity such as livestock. Other non-farming activities included salt-making and bee-keeping. In terms of income obtained from the crofts the majority of new entrants considered it to be an expense or at best break even, a few others received minimal income (10-20% of their total household income) and just one receiving a significant amount of income (50%) from their croft. In terms of other employment all of crofter interviewees, except for a couple of interviewees with larger and more profitable crofts, had other sources of income and employment including filmmaking, teaching and building.

A supplementary type of data collection was used, namely participant observation. Many new entrants attend an 'introduction to crofting course' and this was identified as a potential access point to both new entrant crofters and some of their key advisers. One of the researchers attended to observe how information was passed on, to assess the effectiveness of the format of the day and network with potential interviewees. The two day introduction to crofting course was run by the Scottish Crofting Federation in the Skye area in May 2014. The course was open to anyone, with SCF members receiving a discount and under eighteens attending for free. Each session (on a different topic) was run by a different local stakeholder. The topics covered in the two days were: Times past - times present (SCF);

⁴ Some of the respondents indicated that the difference between tenancy and ownership is less important than in other forms of agriculture. This is because of the regulations established around crofting, enabling intergenerational succession. Croft land can be removed from owners if it is not maintained in accordance with government standards.

Animal Health & Welfare (veterinarian); Croft Business - Finance & Marketing (Business Gateway); Wildlife, Habitats & Landscape (RSPB) Community (local crofter, formerly in SCF committee, SCF advisor and grazings clerk, Crofting Commission); Land & Environment (crofter and SCF advisor); Support Mechanisms and EU dimension (Huntaway Consulting); Horticulture (crofter and SCF advisor); and, Crofting Livestock (Huntaway Consulting). The local stakeholders (lecturers) often sat in on the other lectures, highlighting the sense of community and their personal desire to keep learning. There were 16 attendees at the course-seven women and nine males, ranging in age from around 17 to 50. Fourteen were either new entrants to crofting or aspiring crofters. Some had just acquired croft land (in the last year or so) although much of this was de-crofted land⁵. Trainees had a mixture of crofting models, both real and aspirational, ranging from sheep and cows, to pigs, a mixture of crops and livestock, organic farming, tourism, through to a vegan couple planning to be horticulturalists.

5 Results

5.1. New small-scale farmer's needs and demands for knowledge

Given that crofters have a variety of backgrounds and skill-sets, they require advice on a multitude of topics. The most common are help and advice with IACS forms and other similar legislative procedures, as well as animal welfare programmes such as BCMS⁶ and ScotEID and grant schemes. Less common, although still demanded and offered is advice on practical farming knowledge needs including information and skills development on everything from growing crops and livestock keeping to holiday accommodation, weaving, beekeeping or forestry.

SAC Consulting specifically targets new entrants in some of its publicity material, offering practical farming advice or advice on 'how to farm' whilst also offering wider services including assistance with the onerous paperwork tasks that all farmers face. These are the two main types of information provided by the advisory organisations. Other agencies such as the SCF and RSPB also produce a wide range of information and provide a range of training and advice programmes, on topics such as the support mechanisms, both national and local, courses and advice on animal husbandry and wildlife management and environmental issues, however targeting of new entrants is less evident. Information is both supply-driven (in terms of legal information on new support mechanisms and legislation) and demand-driven (in terms of advice sought by the crofters themselves). However an issue was identified as the advisory organisations, who tend to view themselves as being closely connected to the crofters, see their coverage as comprehensive whilst many of the crofters interviewed see the advisory organisations as mainly providing (albeit important) advice and assistance with the various paperwork rather than

⁵ De-crofted land is the term used to describe the process in which land is removed from crofting tenure, which can be through a number of ways. More information can be found here: <http://www.crofting.scotland.gov.uk/faq.asp?catid=3#cat3>

⁶ British Cattle Movement Service

practical farming matters. One key informant stated that “probably land improvements, funding support, you know things for like...where can we get assistance to say erect a building, or...um...improving the fences, improving the infrastructure of the croft, land improvement, grassland” are the most popular topics for formal advise.

A key distinguishing feature between the needs of many new entrants to crofting and the needs of other types of farmer is strongly connected to scale. Many crofters are part-time or hobby farmers and as such they are often not primarily driven by improving profitability. They may be looking to develop a second income or to make the operation more self-sufficient therefore the profit orientation that is often a major (but not a sole) motivation of most commercial farmers (Burton et al., 2008) is frequently of lower priority with new entrants. Furthermore, gains in productivity that may be significant on holdings with larger volumes of produce or larger numbers of animals are clearly marginal for many crofts which tend to be smaller in scale and less intensive. Less financial dependence on the croft is often accompanied by dependence on other sources of employment that place additional time pressures on many crofters. The researchers sometimes found that part-time crofters were only available for interviews in the evening or at weekends because they held full-time jobs. This absence from the croft during ‘office hours’ clearly creates additional challenges for advisory services which then as a result also need to have flexible arrangements.

The remote location of crofts, particularly on Harris and Lewis (which are connected to the mainland by ferry), but also Skye leads to higher costs of production. High transport costs, distance from input suppliers and processors, as well as poor quality land, make it difficult to achieve income from agricultural production. As one interviewee highlighted “we have all the fuel costs and the added costs to feed, and the likes of that and it's a lot. I mean you take for instance a bale a round bale of hay on the mainland, you could buy that for £15, £15-£20, its £56 to buy a round bale of hay here!” Crofters are highly dependent on agricultural subsidies – some of which particularly target crofting – but the cost of professional assistance to access these subsidies is high in relation to the amounts accessed and relative profitability of their holdings. Some new entrants judged that the value of these subsidies were not worthwhile in comparison to the difficulty and costs of accessing them, and therefore opted not to apply.

There are broadly two categories of new entrants to crofting: those that are completely new to crofting with no prior experience of the crofting ‘way of life’ (although they often bring in some useful skills from other professions - many of the interviewees spoke of accountancy/bookkeeping skills and practical DIY and gardening skills) and those who grew up on crofts and have a long family history of crofting, but are classed as new entrants as they only recently obtained their own crofts. This is a simplified way of looking at the typology of crofters and many subjects do not fit neatly into either of these categories but for our analyses it provides a useful lens. Those in the ‘new to crofting’ category tend to have little knowledge about the various state protocols associated with livestock and the movement of livestock. They hear about it for the first time at the ‘introduction to crofting’ course or when they investigate the purchase of livestock. More generally, they may have little prior knowledge about the various grant entitlements available to crofters. According to one key informant:

I've seen this a few times actually in the last couple of years where people have got farming knowledge and they come in and they think ‘right I've got uh 8 hectares so I'll be able to have

this many cows', and I'll get them in and they can work the cows no problem but they have...they don't think through the fact that your grass is not going to grow for as long, you're only going to get one cut of silage, you've got to make use of your common grazing and it's like a different way of life and I guess you're growing up on a croft you're aware of that, coming in you are possibly not.

Those in the second category have a long history of crofting but have only recently obtained their own crofts. They tend to be very familiar with the majority of aspects of crofting but again some have little knowledge about some of the protocols associated with livestock, such as disease control. Many, in this second category, grew up on crofts but had little practical experience (e.g. of administering vaccines and tagging the animals). It also worth noting that many of the interviews did also highlight that although they had grown up on crofts this does not necessarily mean that they were at an advantage to those who were completely new entrants, as the knowledge they may hold could be no longer useful/outdated or even incorrect. All of the interviewees spoke of their neighbours and fellow crofters as very important, if not the most important source of knowledge and information.

Many interviewees, both complete novices, and 'more experienced 'new entrants' expressed their frustration with some of the systems and policies such as the various grant schemes and Scot EID. As one key informant interviewee emphasised "they all need help with their sheep and cattle records regardless of who they are" because there are so many uncertainties with the schemes and systems. Many of the crofter interviewees further emphasised this citing that they would benefit from more information on how to fill out their information correctly to ensure they wouldn't lose out on money to which they were entitled. In the iteration of the course where participant observation was carried out the topics of croft business, support mechanisms and the community which were covered in the course appeared to be the topics of most interest as the participants. The support mechanisms and EU dimension stimulated a lot of questions and discussions suggesting that it was of high importance to the participants.

5.2. Processes, actors and methods to obtain and use knowledge

The following section looks at how the crofters and advisors obtain and use knowledge. The key organisations which are involved in providing advice to crofters are displayed in the table below, with the key ones (e.g. those that were frequently mentioned by the interviewees), in bold. This information was gathered through the participant observation at the training course, the interviews and an online search of the relevant stakeholders. However the importance of other crofters cannot be realized from the table, but they were mentioned by all the interviewees as a key source of information, particularly on more practical issues such as animal husbandry. These other crofters can take the form of neighbours, grazing clerks/ committees (individuals in charge of the common grazings) or people at the fank ⁷.

Table 1: *The various organisations involved in providing advice to crofters*¹

Status	Type	Organisation
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⁷ A fank is a communal sheep pen used for gathering and sheering the sheep of a village

Status	Type	Organisation
Public sector	Government departments	Rural Payments Agency Rural Payments and Inspections Directorate (SGRPID)
	Government agencies	Scottish Natural Heritage (SNH), Scottish Environment Protection Agency (SEPA) Forestry Commission Scotland (FCS)
	Local/regional agencies	Crofting Commission
	Parastatal organisations	Scotland's Rural College (SRUC/SAC)
Research and Education	Universities (Higher Education Institutes)	University of the Highlands and Islands , Gaelic College- Isle of Skye (Sabhal Mor Ostaig)
	Research Institutes	James Hutton Institute (JHI), Scotland's Rural College (SRUC) , Moredun College, Glasgow Vet School, BIOS
Private sector	Food chain actors (upstream/ downstream industries)	Merchants, processors, manufacturers, buyers and retailers, accreditation organisations, multi-national companies (e.g. supermarkets, processors, animal feed, machinery, fertiliser, Marts and Auctions)
	Independent consultants / Private agricultural advice companies/ Commercial companies	= consultancies and service providers Veterinarians Consultants – agriculture, technical, crop, livestock, energy, land, agribusiness, both individual and companies, e.g. Huntaway Consulting Building and construction companies Land agents – agribusiness/ management/ financial Quality Meat Scotland (QMS) Scottish Agricultural College (SAC, the consultancy arm of SRUC; see above)
Farmer based organisations	Farmers' cooperative	Scottish Agricultural Organisation Society Ringlink and other machinery rings
	Producer organisations	Horticultural Producer Organisations, Garden Associations such as Glendale Garden Association
	Farmers' circles/groups	Monitor farms/ crofts (run by SAC, HGCA/ SAOS, QMS) LEADER Local Action Groups (wider than farmers)
	Land manager representative bodies	NFU of Scotland (NFUS) and their associated publications Scottish Association of Young Farmers Clubs (SAYFC) Federation of Young Farmers Tenant Farmers Association/ Tenants Association Scottish Organic Producers Association (SOPA) Scottish Land and Estates (SLE, formerly SRPBA, SLF) Scottish Crofters Federation (SCF), and their associated handbooks and magazines
NGOs	Charitable trusts, foundations, NGOs	Royal Society for Protection of Birds(RSPB) Wildlife Trusts (e.g. Scottish WT) Royal Highland Show and Agricultural Society Various agricultural societies, e.g. breeding (UK) National Trust for Scotland (NT/NTS) Woodland Trust Community Trusts (e.g. West and North Harris Trust) John Muir Trust (Conservation) Business Gateway (Federation of Small Businesses)

¹Note: Major providers in **bold** i.e. those mentioned by the crofter interviewees as being of major importance

However it became clear from the interviews and participant observation that a great deal of information and knowledge is gained from other sources, through more novel methods, often in addition

to discussions with neighbours/ other crofters and advisors. Some of those noted at the participant observation and highlighted by the interviewees are listed below:

- Internet searches (e.g. Google)
- Websites from the organisations involved,
- Influential individual blogs (opinion formers), e.g. Air an Lot on the Isle of Lewis,
- Facebook and other social media
- YouTube videos
- Use of PowerPoints and other ICT - all participants at the Training Course were given a memory stick at end of course containing all of the training material
- Databases used to keep files for livestock recording e.g. BCMS, ScotEID
- On-farm records including farm management systems, Excel spreadsheets of stock numbers and compulsory medicine records, as well as budgeting, and finance records
- GPS satellite guiding system for spraying crops and for field mapping (accurate maps are required for farm payment schemes)

Generally ICT is being used as a medium to present or obtain information from rather than in new innovative ways with a few exceptions such as blogs, YouTube videos and the GPS Satellite system. In addition one key informant highlighted that people often come to speak to them after conducting initial research on the internet as “it's not because people don't come to us because they're scared of computers, a lot of them are more than happy to use computers it's just they want the advice on what to do with the information the computer gives you” which corroborates with our point that in general ICT is not yet being used to its full potential as it is still mainly just being used as a medium to present information rather than in more innovative ways, but it is heading this direction. However, there remains a persistent need for one-to-one advice, particularly in relation to the conditions on a specific croft. As one key informant highlighted “I think it [advice] should be very personalised and supportive. I think directing people or signposting them to websites is completely useless because it makes them feel very uncared for, and impersonal, and most people just don't want to read from a website they actually just want to have a chat about it”. While the participants in the study did not completely agree - many appreciated the instant nature of internet-based advice, and the quantity available – they also identified the need for practical, ‘hands-on’ assessment of the needs of their specific crofts.

In terms of how the knowledge is obtained/ supplied we identify three primary means: individual, group and mass media methods. At the individual level this takes the form of one-to-one advice, either in person, by email or over the phone. Examples of this included walking the land with an adviser; observing others working on your croft such as construction workers/builders; speaking to other crofters at the fank, to the grazing committees clerk, or crofter neighbours or even ‘looking over the fence’ to see what neighbouring crofters are doing; and also speaking to other attendees of the training sessions. Knowledge provision in the group method can take the form of a group training course either intensive over one day or two, or dispersed over a number of weeks/evenings, and both practical and/or classroom based, such as those run by SCF, SAC and UHI; attending monitor farm/ croft meetings and speaking to a larger group at the fank, or grazing committee meeting. And thirdly, mass-media advice takes the form of reports from any of the organisations involved in providing advice, social media sites

and blogs, magazine and online articles and publications such as the SCF's 'crofter's handbook'. No interviewees indicated that they used/ obtained their information from just one single source, instead using a mixture of sources, and both 'local' and 'professional' information'. They also tend to use a mixture of all three methods. These methods are always constantly adapting and evolving to fit, for instance "I want to see it [the SCF intro to crofting course] evolving a bit more now because of changes in certain areas and yeah we want to see that, and also people have demanded people have sort of said we really want to know how to register land you know so to maybe make it a bit more informative in that area", and this adaptation is key encourage new entrants into crofting and thus ultimately maintaining their own existence as (crofting) advisory organisations.

5.3. The supply of knowledge to the new small-scale farmers

Crofters utilise a range of advisory services and advice platforms to obtain information and knowledge on a multitude of topics, and through a variety of methods, for instance from standard face-to-face advice on legislation and grant schemes through to YouTube videos and blogs. However, despite this range of approaches it appears that a number of topics are not adequately covered by formal organisations, or at least if they are offered, this is not always apparent to the crofters. From carrying out the interviews and participant observation it seems these 'information gaps' are covered by speaking to fellow crofters with mixed, but generally positive results.

Interviews with stakeholders and crofters revealed a number of important features about knowledge exchange in crofting communities. There are many interlinkages between advisors and successor crofters in terms of a common background in crofting enterprises. Advisors were often reported to be 'knowledgeable' because they were also crofters themselves or from crofting backgrounds. This gave legitimacy to the advice this group of advisors held. This credibility advantage did not seem as strong with new entrants who were not successors although some effect may still have been present. The interviewees highlighted a number of ways in which knowledge is supplied to the crofters (see also section 5.2 for further information). These include training days and remote advisory 'clinics' whereby advisors travel to remote areas and provide advice through office space there.

Whether the organisation giving advice was close to the community it served was not necessarily a matter of universal agreement, with some interviewees holding the view that advisors were remote and separate from the community. Conversely, advisors represented themselves as closely connected to the crofting community, and sought to achieve this through attending local events. Information on numerous topics is generally available within the advisory services but the crofters are not always aware of the full range of topics that the services cover. There is also a credibility issue, in that formal advisory services are generally believed to be less helpful in addressing practical crofting needs such as livestock production or building maintenance (i.e. addressing administrative needs such as accessing subsidies, is viewed as the primary role of formal advisors). However, SAC has successfully run a number of training events relating to livestock production which were viewed positively by participants.

In terms of the topics that they provide, these are a mixture of supply and demand. SFC, for example, put out general advertisements to ask potential participants to register their information requests.

However the crofters interviewed highlighted concerns that not all crofters are aware of or make use of this process, simply believing that they (as crofters) are not well represented or provided for in their local areas.

In terms of problem areas, there are ongoing problems with the information/ knowledge shared on the topics of animal recording systems such as ScotEID and BCMS as well as grant schemes and legislative forms such as CCAGS (Crofting Counties Agricultural Grant Scheme) and IACS forms. These appear to be both topics where advice is frequently sought as well as the topics which are surrounded in the most confusion. As one key informant concluded:

“These are intelligent people, they've been to university, they've been to college, they've had further education and they come back and they come to us and they don't know how to do it so there's something wrong in the system! I don't know how you correct it, you know like everyone else I have to become primed before even I understand half of what they're trying to [understand]”

As such, the advisory organisations themselves are not always as familiar with the systems and schemes as they would hope to be, as these systems and schemes are continuously changing. This has led to many crofters approaching the advisory organisations as soon as any new legislation is put in place, for fear of making a costly mistake if they try to understand it by themselves.

Research observations from the interviews can be summarised as follows:

- Key informants who have their own croft/ crofting backgrounds appear to have particular credibility for the crofters themselves, and have experiences closer to those of the crofters
- A variety of methods, from standard to novel approaches should be used in the provision of advice to crofters, and the importance of the internet as a platform for providing this advice should be recognised but not solely relied on.
- Organisations represent themselves as being connected to the crofting community, but the crofters do not necessarily see things in the same way; for many they are seen as there to help with IACS and other legislative forms
- A significant amount of information and knowledge is exchanged between crofters themselves with mixed, but generally effective results.

The participant observation of the SCF training course demonstrated that organisers had taken into consideration the importance of practical experience to credibility for participants. The speakers were all very knowledgeable and had a lot of expertise on their topic, which combined practical experience and formal training. Six of the 8 speakers were crofters themselves or had grown up on a farm. They also had formal training in their respective area of expertise (e.g. conservation science, veterinary science, business development). The participants often discussed the information given to them based on their experiences (especially over tea breaks and lunchtimes) but the speakers were always able to answer any queries the participants had, emphasising their high level of expertise on their topic.

Research observations from the SCF Training can be summarized as follows:

- High level of subject specific expertise was in evidence
- Practical crofting backgrounds allowed trainers to ground advice in real-world examples
- Trainers were locally based people who had a good understanding of the local environment

5.4. The knowledge flows for new entrants to crofting in Scotland

This section, through the aid of an illustration (see Figure 2) looks at the relevant knowledge flows for the crofters and their advisors, the types of knowledge that is exchanged and between which actors and through which interactions. Firstly the types of knowledge that are exchanged will be discussed.

What type of knowledge is exchanged?

The types of knowledge that are exchanged and transferred between crofters, advisors and other crofters can be categorised as factual, conceptual and procedural. The diagram below gives some further information regarding this categorisation.

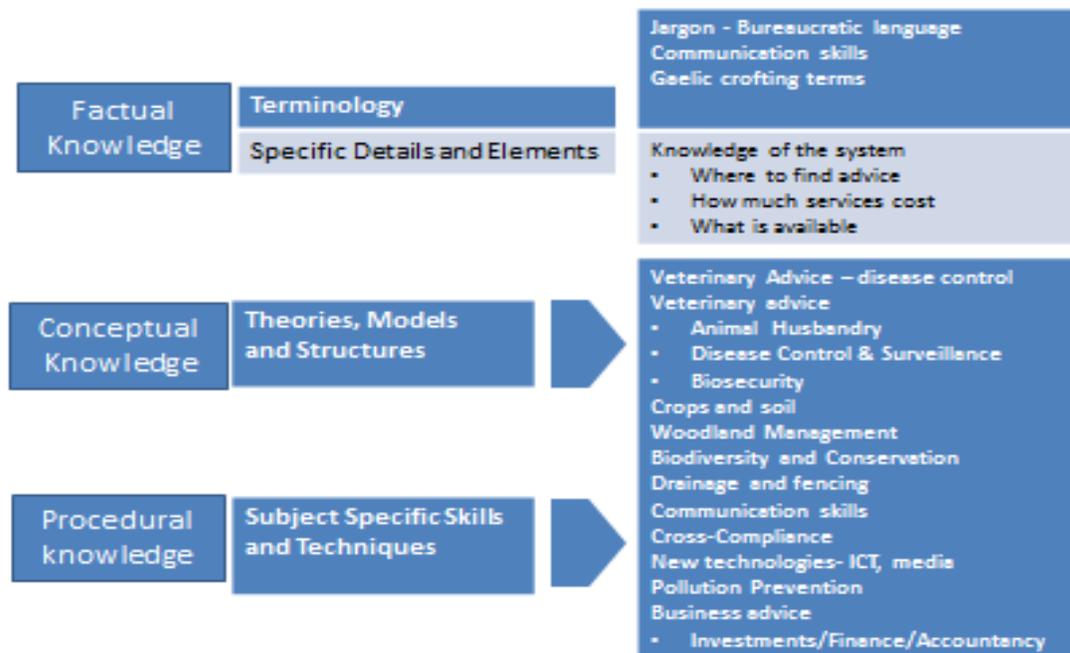


Figure 2: *Typology of knowledge – general categories to specific pieces of advice involved in the AKIS information flows for the crofting system.*

For further explanation, factual knowledge encompasses both information on terminology and more specific details and elements such as information on the various systems and schemes, e.g. IACS and grant schemes. Knowledge on terminology is often obtained through internet sources and discussions with other sources, as well as the major crofting organisations such as SCF and SAC to a lesser extent. Conceptual knowledge, namely theories, models and structures includes the more scientific knowledge

such as soil analysis and veterinary treatments and are offered by the professional organisations such as veterinarians and SAC Consulting. Procedural knowledge on the other hand includes subject specific skills and techniques such as animal husbandry, business advice or environmental skills and techniques are offered, in some form, through all formal and informal advisory options (e.g. SCF training courses, specific organisations such as RSPB, other crofters and internet sources). It should be noted that the categories of factual, procedural and conceptual should be considered as being very fluid, along with their contents, as this is just one interpretation of the data. Crofters, and with anyone seeking advice, will make use of whatever advisory services/options they have available to them, be this formal or informal routes. But in general we have found that the formal advisory organisations such as SAC and SCF mainly provide advice or are sought out by crofters to obtain legislative knowledge and other crofters and internet sources and novel approaches are utilised for the majority of other knowledge gathering. However it appears that SCF and SAC are realising this issue and a one key informant highlighted “we want to look at things like Facebook sites, and things like that as well. I think more social media, we're going to have to think of a way of really getting that working for us, tweeting or whatever it that we don't do but I think its maybe something we'll have to look at because I think we've got the audience for it” so it may not be long before this issue is addressed.

Who exchanges knowledge?

In terms of the major actors involved in exchanging knowledge (see Table 1 for further examples) a small number of actors and institutions were critically important in terms of knowledge flows and these are highlighted in further detail below.

Crofters – The importance of crofters themselves as conduits for knowledge flows between each other and in their interactions with the various institutions is hard to over emphasise. All the crofters interviewed stressed the importance of speaking with their neighbours and of learning from established practices. Innovative practices often derived from seeing other crofters already implementing new ideas (i.e. learning by example). Neighbours often knew what would and would not work either through direct or indirect personal experience (e.g. erecting polytunnels which were sufficiently durable for the challenging environmental conditions. Neighbours were able to advise regarding brands and siting considerations.) Where new entrants were successors there was more likely to be a generational dimension to the knowledge flow. Younger crofters benefited from experienced crofters and conversely shared new ideas acquired through college (including SRUC and UHI). New entrants without family connections in crofting were likely to bring with them transferable skills resulting in innovations that inspired or encouraged others such as construction skills or business and administrative skills. Another example was the construction of ‘eco’ holiday accommodation in a wooded area on Skye, which was completed using skills obtained before becoming a crofter. The innovator (the crofter interviewee) reported considerable interest from impressed neighbours.

SAC Consulting provide a range of formal interactions with the crofting community including a program designed to engage with new entrants directly. They offer a two year package aiming to support new entrants to crofting in two distinct ways. Firstly, practical

and technical advice is provided including a visit to the croft, soil sampling and analysis, plus detailed explanations of grant and subsidy schemes. Secondly, assistance is given for the completion of paperwork including registration of the croft with various agencies, applications for schemes, setting up of livestock reporting, mapping (for SGRPID), IACS completion etc. This service currently costs £750 plus VAT over the two years. SAC Consulting is the consultancy arm of the SRUC (Scotland's Rural College) and it is "Committed to excellence in the advancement, communication and translation of knowledge throughout the rural sector" (Values, SRUC website). In terms of its provision of advisory services to the crofting sector it undertakes a range of advice and assistance on a commercial (fee-paying) basis including the following: Agricultural and rural business advice; Completion of Assignations; Croft Maps for Crofting Commission or SGRPID; Advice on croft registration; Livestock record keeping; Grassland and crop advice including soil analysis; Horticulture advice; Agri-environmental advice; and, Forestry scheme implementation and management; Renewables feasibility studies (source www.sac.co.uk). SAC receives funding from the Scottish Government to subsidise provision of services in remote regions.

The Scottish Crofting Federation is a member-led organisation founded to promote crofting. It is the largest association of small scale food producers in the UK. Their stated mission "is to safeguard and promote the rights, livelihoods and culture of crofters and their communities" ('About Us', SCF website). The SCF organised the training course for new entrants (described in section 4). SCF: "Rooted in our community, the Scottish Crofting Federation (SCF) is the only member-led organisation dedicated to promoting crofting and is the largest association of small-scale food producers in the UK... [and their]... mission is to safeguard and promote the rights, livelihoods and culture of crofters and their communities" ('About Us', SCF website). The SCF offer a number of services to its members (and sometimes non-members) such as one-to-one advice at their offices on crofts and group training on a variety of topics. They also produce a website, a newsletter and a comprehensive handbook.

The Crofting Commission is the official regulator for crofting, overseeing registration of crofts, transfers of ownership, de-crofting (when crofts or parts thereof are converted into private property) and lettings. It is legitimized through Acts of Parliament in particular the Crofting Reform (Scotland) Act 2007 and the Crofting Reform (Scotland) Act 2010. It sets out "to promote occupancy of crofts, active land use, and shared management by crofters as a means of sustaining and enhancing rural communities" (Crofting Commission website). This organisation does not formally provide advisory services, but does provide information specifically addressing compliance with crofting regulations, both through its web-site and a telephone helpline.

Business Gateway is an advisory service provided by the Federation of Small Businesses who are the UK's largest campaigning pressure group promoting and protecting the interests of the self-employed and owners of small firms (FSB website; Business Gateway

website). With many of the potential income streams comprising rural businesses distinct from traditional agricultural provision (a key example being holiday accommodation on crofts) this organisation offers a wide range of advice to its subscribers including developing business plans to help secure finance.

It is also important to highlight that these organisations (as well as the crofters themselves) do not work in isolation but rather they exchange information and knowledge between each other (to an extent) to improve the advice that is then given to (other) crofters. However there are some barriers between SAC and SCF, because advisory services provided by SCF could be construed as competing with SAC, or reducing clients for SAC's services. Instead, SCF rely on social media websites, SNRN the Scottish National Rural Network, smallholders' websites, direct mail, posters, talking to people, meeting people, going to shows". SAC and SCF do collaborate in terms of staffing SCF training forces. In fact a wide range of organisations were involved in the SCF's introduction to crofting course attended by one of the researchers, more information on which can be viewed in section 5.

The changing legal regulations around crofting have led to increased requests for advice from the Scottish Crofting Federation, which was not established to provide formal advisory services. Respondents seek information in relation to these regulations directly from the source (i.e. the Scottish Crofting Federation) but staff could only comment on general principles, rather than providing definitive answers to specific issues. Similarly, crofters sought information from the Scottish Government's Rural Payments and Inspections Directorate (SGRPID) in relation to compliance with reporting, but found themselves frustrated by lack of personalised information.

6 Discuss and assess the performance of the knowledge flows and identify best-fit practices for advisory services

Access to formal advice was just one of a number of ways in which crofters accessed information. Informal knowledge from other crofters was often identified as more important. Crofting respondents also drew on their own formal education, professional experiences, and experiential knowledge (trial and error), as well as information from the internet, family members and books. Overall, the cultural history of communal labour and knowledge exchange has led to a wealth of information being made available to both successors and newcomers, although it is not always up-to-date, particularly in relation to changing regulations. Crofters also particularly emphasise the value of tacit knowledge – real life experience – to establishing the credibility of the information they acquire.

On the whole the organisations from which crofters obtain advice view themselves as successful in terms of the topics they cover, although they admit that funding restricts the quantity of services they are able to provide. Key informants were also very positive about the influence of advisory services and training. The various organisations involved, such as SAC, SCF, SGRPID, have reported good levels of cross compliance of livestock reporting such as ScotEID and BCMS, which has helped in the fight against

livestock disease in recent years. There have also been successful agri-environmental schemes put in place, assisted by advice from the aforementioned organisations, along with others such as RSPB and the Woodland Trust which are more closely connected to wildlife and environmental issues. There has been a lot of diversification on crofts in recent years and many new and vibrant businesses set up such as new holiday accommodation, especially in the Isle of Skye area. Some new approaches to advisory services have also been developed. SAC have recognised that a major challenge for knowledge flows between crofters and advisory organisations is the remote location of many of the crofters, and so to counter this challenge staff have begun visiting villages to provide advisory clinics and training sessions, rather than expecting the crofters to travel to their offices, which are often far away and sometimes not even on the same island. Holding open day events to demonstrate practices of good crofters on poor quality land (i.e. land similar to that of other crofters) have also been well received. There was also a monitor croft set up in the case study area in 2007 by Quality Meat Scotland and SAC, whereby crofters could observe the changes occurring on a particular croft over several years, and learn about the changes and associated advice over a series of meetings.

However there are also a number of challenges that these organisations have to deal with such as a heavy work load. This means that many advisors have to spend a lot of their 'advisory time' assisting with (continuously changing) administrative tasks (e.g. filling out IACS forms) rather than providing practical advice and as these are legal requirements; with insufficient time available for advisors to provide advice on both aspects of crofting (legislative and practical) the legislative aspects take priority.

However an achievement which is well appreciated by the crofting respondents are the SCF training courses which are run over a series of evenings or a weekend (timed to fit in with crofters' schedules). The courses are relatively affordable (~£60) and cover a wide range topics from a general introduction course to sheep husbandry or dry stone wall building. The courses were highly regarded by the interviewees who had attended and the majority of those who had not said they would be keen to attend a course in the future. In addition SCF publish the 'crofter's handbook' which was again considered positively by those interviewees who had made use of a copy. However there does appear to be a gap in terms of 'refresher'-type training courses for crofters who have been crofters for a number of years but are keen to refresh their knowledge on particular topics, or even for some new successor crofters, particularly for legislative procedures which are constantly changing.

In contrast, crofters reported experiences which were sometimes at odds with organisational perceptions. Some new entrants did not engage with SAC and were unaware of the services provided. In fact the SAC only deal with 400 out of the 1200 crofters on Lewis. With only two advisors, 400 is a substantial number, and the team are taking steps to increase their impact through regional clinics. However, owing to the limited profitability of providing services to crofters, expansion opportunities appear limited without additional state supports. Generic information (e.g. leaflets and web-site) from SAC in particular is often more suited SAC's primary customer base – medium and large-scale commercial farms.

Crofters' reliance on local knowledge can also be problematic, in that sometimes it is not current, or has been 'simplified' to make it intuitive and is therefore not accurate. Sheep movement recording and associated tagging were found to be particularly confusing, and advisors noted large numbers of errors

in the cases they had observed. In some cases, the complexity of livestock movement recording as presented at training events led to a decision not to have livestock on their crofts. This is problematic in Scotland, where there has been a major reduction in sheep production on small-scale farms in the highlands and islands in recent years (Sutherland et al., 2014).

Key points on the performance of knowledge flows and identifying best-fit practices for advisory services:

- A lot of lay knowledge exists between the crofters themselves, which can be strengthened by input from the advisory organisations.
- New entrants highly value the 'new entrant' training courses offered by SCF
- Advisory services are dispersed and therefore require time to access; one successful strategy has been to hold service clinics in villages. Another is to hold training courses over a weekend.
- New entrant crofters would like more access to advanced-level training courses. There also appears to be a gap in that longer term crofters are not accessing training. Refresher courses would be particularly useful.
- Crofters often have paid employment: holding courses over a series of evenings or a weekend allows more crofters to attend.
- Crofters themselves face many challenges which limit the time they can spend accessing advice (e.g. juggling two jobs and living in remote regions).
- For organisations such as SAC Consulting, crofters make up only a small percentage of their clients. The majority of advisory organisations provide services to profit making farms, not those that are simply self-sufficient or which intentionally operate at a loss. This makes it difficult for both the crofters and advisory services to be able to afford to provide advice effectively.
- Regulatory bodies could become more active in providing personal advice, and seek to create a learning culture (i.e. dispel fears of penalties)
- New advisory methods which draw on and enhance local knowledge (e.g. mentoring services, providing free training to grazing committees) could improve knowledge flows

7 Conclusions

What are the challenges new small-scale farmers pose to advisory services?

Crofters are a heterogeneous category that challenges a 'one size fits all' approach to the provision of advisory services. Some are running extremely small operations (~1ha) while others have developed substantial holdings by acquiring crofts and amalgamating them. Commercial extension services that seek to generate income by appealing to farmers' profit motives are failing to reach some smaller operations who regard fees as expenses rather than investments.

Key challenges of new crofters to advisory services:

- *There are two broad categories of new crofters- successors and new entrants- but some problems are universal for all crofters, such as lack of capital funds, lack of profits, remote location of their crofts/nearest advisory service.*
- *Some do not have any experience with the various legislative forms that crofters are legally required to complete such as IACS, ScotEID. Advisory staff spend a lot of their time assisting with administration (e.g. filling out IACS forms) rather than providing practical advice, but there is also an issue that crofters do not necessarily credit advisory services with being able to provide this practical advice or alternatively do not wish to pay for 'formal' advice that they can get free of charge from their neighbours..*
- *Crofts are often located in remote areas, sometimes connected only by sea or air routes to the UK mainland. Crofts involve extensive land use and are spread across a large area of land (~750,000ha) – these factors make it challenging for advisory services to provide advice efficiently.*
- *There are issues with the part-time nature of crofting - the majority of advisory organisations provide services to profit making farms, not those that are simply self-sufficient or which intentionally operate at a loss. This makes it difficult for both the crofters and advisory services to be able to afford to provide advice.*
- *Crofters' advisory services have to provide advice on a wide range of topics at the small scale level, (i.e. address a wide range of knowledge needs).*
- *There is a fear by some crofters that if they seek out professional advice the advisors may notice something is wrong with their croft and their croft will be taken away.*

Are new small scale farmers knowledge creators?

New entrants are knowledge conduits. Sharing information between neighbours was reported to be an important means of knowledge transfer. In addition new entrants often bring transferable skills into the crofting system when they have worked in other fields for example a building contractor on Harris applied skills acquired on the mainland, and a business development consultant had worked in Africa providing advice to rural enterprises before buying a croft on Skye.

Some new entrant crofters can be considered to be knowledge creators because:

- *They are bringing transferable skills from other professions which lead to new knowledge/ a new combination of skills being produced.*
- *The interviewees highlighted some diversification into new areas such as beekeeping, salt mining and ideas for a microbrewery and a writing retreat.*
- *Many new entrants are establishing new, diverse knowledge networks (e.g. utilising a combination of expertise of different types and from different locations)*

Other new entrant crofters cannot be considered to be knowledge creators because:

- *Some simply carry on traditional crofting activities, with limited changes to practices (e.g. keeping livestock).*
- *Some just want a croft to have the idealistic 'rural lifestyle' of the 'good life' narrative, and so do not work on their croft or bring any transferable skills to it.*

How does the provision of advisory services to new small-scale farming differ from the overall provision of agriculture advice?

The knowledge needs and demands of crofters differ from those of larger scale farmers across the rest of Scotland quite significantly. Because agriculture is generally not the crofters' main source of income (in fact many obtain no income from it or class it as a net loss), the costs of paying for consultancy are for many, unlikely to be recouped in productivity gains. An obvious example is the £7508 cost of the 2 year start up package provided by SAC. The financial outlay exceeds the turnover of many crofting enterprises making it unappealing on a purely financial basis. Conversely, the systems crofters are required to comply with may be equally complex, even identical with those faced by much larger enterprises, for example completing IACS forms or implementing electronic sheep tagging (EID). One scheme operates specifically for crofts, namely the Crofting Counties Agricultural Grant Scheme (CCAGS). SAC Consulting assists applicants with the paperwork for this (i.e. administrative knowledge).

Key points on how the provision of advice differs for small-scale farmers:

- *Small scale crofters are less significant for the advisory services providers due to their small scale and their low profitability*
- *As described previously, crofts are spread over a large geographical area, making them difficult for advisors to adequately service.*
- *Small-scale crofters often work full time and are therefore not available during business hours.*

What types of novel methods addressing the specificities and needs of small farmers have been developed?

Models of community ownerships have been set up such as the North and West Harris Community Trusts. For the North Harris Trust their aim is "to achieve the regeneration and development of the North Harris community by managing the North Harris Estate as an area of outstanding wild and rugged beauty through local participation and working with other partners where appropriate, all for the benefit of the local community and the wider public" ('Aims and Objectives', North Harris Trust website). There was also a monitor croft set up in the case study area in 2007 by Quality Meat Scotland and SAC, along with many monitor farms in which new technologies and procedures are trialled on one 'demonstration farm' in an attempt to improve the profitability and productivity of that farm/ croft and increase the knowledge transfer between participating farmers (Monitor Farms, QMS website). The monitor farms and crofts in this area are purposefully set up on poor quality land to highlight what can be achieved on even the poorest quality land.

⁸ This includes practical and technical advice such as croft visits, soil samples and help with the various paperwork

Another novel method used to address the specifics and needs of the small farms are the use of social media and crofting blogs. These include Facebook sites and the Air an Lot Crofting blog. Also important are the crofter specific trainings courses such as those run by the SCF, specifically those geared towards new entrants. Finally is the importance of local advice, with organisations such as SAC and business Gateway travelling to the local villages to provide advice or a helpdesk type service to a whole crofting village, rather than expecting them to travel to their offices. This then has a dual purpose of an advisory clinic as well as a social gathering, and a good way to meet fellow, local crofters.

The key points on the novel methods used to address the specific needs of crofters are:

- *Community ownership models such as West and North Harris trusts*
- *Monitor crofts/ farms set up on the poorest quality land*
- *Social media by and for crofters*
- *Crofter specific training courses*
- *SAC going to villages rather than the office, also then a social gathering, and way to meet fellow crofters*

How do small-scale farmers resort to ICT as a tool to get knowledge and information? What for?

The use of ICT is extremely varied, ranging from some crofters obtaining a great deal of their information from the internet and using farm management systems, through to those crofters who get poor to no internet coverage in their home, which is unsurprising given the remote location of some of the crofters in this study.

In terms of how ICT is used as a tool to get knowledge and information and on what topics, the key points are:

- *ICT systems exist in the context of crofting both to facilitate the flow of knowledge and information to crofters and to capture information from them. SAC Consulting reported that many crofters seek assistance completing on-line IACS forms.*
- *Air an lot crofting blog and the use of social media as a source of information*
- *keeping excel spreadsheets and medical type records for their animals*
- *GPS for keeping track of crop spraying*
- *ICT used for soil analysis*
- *SCF website advertises croft accommodation and food*

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Air an Lot crofting blog: <http://airanlot.com/>

Business Gateway: www.bgateway.com/

Crofting commission: <http://www.crofting.scotland.gov.uk/>

Federation of Small Businesses: www.fsb.org.uk/about

Lonely Planet: www.lonelyplanet.com/maps/europe/scotland

Monitor Farms (Quality Meat Scotland): www.qmscotland.co.uk/monitor-farms

North Harris Trust: www.north-harris.org

Quality Meat Scotland: www.qmscotland.co.uk

RSPB: www.rspb.org.uk/news

SAC Consulting: http://www.sruc.ac.uk/info/20005/sac_consulting

Scottish Crofting Federation: <http://www.crofting.org/>

