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The Land Based Sector in NE Scotland

facing the future

Aberdeenshire COUNCIL

Angus Council

Moray Council

Forestry Commission Scotland
Coimisean na Coilltearachd Alba

Scottish Enterprise

HIE
Highlands and Islands Enterprise

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A Study for the NE Scotland Agriculture Advisory Group

Image Courtesy of Neva Murdoch (Farming Photos: Plain & Simple)

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FOREWORD

AGRICULTURE and the ancilliary industries are vital to the prosperity and sustainability of our rural communities. We disregard them at our peril, whether economically, culturally or intellectually. Traditional farming sits as part of tapestry of land-based industries in a changing rural world where there are daunting challenges, but equally vast reservoirs of innate resilience, adaptation and innovation.

Change is a perennial driver, which repeatedly begs the pivotal question: Is what is done today, fit for tomorrow? And, what are the future scenarios for the rural world in its broadest sense?

There is no one answer. However, this report, The Land Based Sector in NE Scotland, Facing the Future, underlines the different hinterlands of the three council areas, Aberdeenshire, Angus and Moray – all going in discrete directions and responding in a way that mirrors their history, culture, and economies.

The report does not offer a panacea for the future, and nor should it as that is a matter for the industry, but provides an evidence based narrative that should prompt comment, debate and interest. The focus on case studies in particular opens a window on the entrepreneurial endeavours of individuals and provides a personal commentary on their work, aspirations and thinking.

Some vital issues are highlighted in the report, not least the accelerating pace of change in farming, the role of processing, food and drink, agri-tourism, farm woodland and labour – all of which are fundamental to the sustainability of that part of rural Scotland that stretches from Dundee in the south to Forres in the north.

I am delighted that the North East Scotland Agriculture Advisory Group (NESAAG) has been able to commission this study with support from partner organisations which collectively reflect the wide interest in, and commitment to this part of rural Scotland.

I believe the report, as did its predecessor, will make a thoughtful contribution to progressing one of our great indigenous industries at a time when greater attention is being paid to the potential of the landward areas as contributors to the regional economies of the North-east.

Cllr. Bill Howatson, Chairman
NESAAG

HEADLINES

- NE = 16% of Scottish agricultural area, but retains big shares of Scottish production: almost half the crops, third of finishing cattle, two thirds of pigs, quarter of beef cows
- Unique mixed farming structure
- Much more change at farm level 2007 – 2014 than in previous study periods
- Despite being a period of high prices, all livestock numbers are down
- Simplification in response to subsidy decoupling in 2005. Livestock down, malting barley up, farmer numbers down, part-time farming % static
- Labour force up, but all part-time/seasonal and mostly fruit/veg areas
- Hollowing out of farm size accelerating – more very small units and more big units. Average farm size increasing rapidly.
- Small number of farms produce big share of output
- Big differences emerging between areas: Aberdeenshire staying mixed and part-time, Moray extensifying, Angus dominated by intensive cropping
- Big differences within areas: Buchan has gone farming, Garioch part-time, South East Angus intensive cropping, Angus Glens going out of production.
- "Thin" processing sector – few buyers, tiny margins, focussed on single outlets, international ownership. But NE share of red meat processing sector increasing. Local processing critical to anchor production e.g. loss of broiler production north of Aberdeen
- Intensive livestock turmoil – pigs and poultry numbers down, reflecting markets and processor rationalisation. Now stabilising.
- Food and drink sector strong and positive, wants to expand, adds many jobs and value, agri-food tourism potential. Distilling has driven major expansion of barley area.
- NE has been a wealthy area supporting farm balance sheets and off-farm incomes. Oil price crash is a big threat
- The change to area based CAP direct payment will hit NE beef units and input suppliers
- LFASS reform 2018 may shift that support west, out of the better upland areas of the NE
- Some tremendous examples of market led, collaborative growth: Angus and Kincardine soft fruit and vegetables
- Strong entrepreneurial farming and food culture, lots of farmer organisations, vibrant show circuit, Grampian Food Forum, new farm-based food businesses
- Strong coop sector
- Farm woodland area much larger than previously thought and more being used, stimulated by RHI and stove/ biomass demand
- Aberdeenshire has a big share of the renewables supported by the Feed-in-Tariff scheme - a major new source of income, but expansion now constrained by reduction in support rates
- Big share of SRDP food processing/ marketing grants, lot of SRDP supported farm investment
- Reliance on migrant labour, poor supply of local skilled staff
- Lack of enough local research links. Little technical improvement in cattle and sheep enterprises
- Legislation concerns for competitiveness: GMOs, land reform, wages board, constitutional uncertainty, carbon, "legal rights", education funding
- Opportunities in restructuring: focus on business, lots of new technologies and ideas, partnership options, but big effort required to get message out to all.

1. INTRODUCTION

Are our land-based industries fit for the future? The industry faces some major challenges: another reform of the Common Agricultural Policy (CAP); a reshaping of the Less Favoured Area Support Scheme; a major commodity slump affecting grain and timber prices (and the oil price which has underpinned the previously buoyant local economy); severe climate events; a Euro crisis and a slowdown in the world economy. It is within this context that NESAAG (the NE Scotland Agriculture Advisory Group) commissioned this study, supported by Aberdeenshire, Angus and Moray Councils, Scottish Enterprise, HIE Moray and Forestry Commission Scotland. The study covers the local authority areas of Aberdeenshire, Angus and Moray focusing on the period 2007 to 2014. It builds on a series of previous reviews of agriculture in Aberdeenshire, the last covering the period 2003 to 2007.

NESAAG is a cross-sector partnership drawn from public and private sectors comprising 4 local authorities, Scottish Enterprise, HIE Moray, agriculture, forestry, tourism, food safety and environment agencies, academia, advisory and business representatives. The group meets regularly and adopts a pro-active approach towards the sustainable development of rural and land-based industries in the NE of Scotland. For this study, the NESAAG steering group comprised Jamie Bell and Gina Ford (Scottish Enterprise), Alison Smith and Merlyn Dunn (Angus Council), Gordon Sutherland (Moray Council), Steven Hutcheon (HIE Moray), James Nott and Ian Cowe (FCS), Prof Ken Thomson (Univ of Aberdeen) and Clive Phillips (Brodies LLP and Aberdeen and Grampian Chamber of Commerce). The Group was chaired by Cllr Bill Howatson and the project was managed by Derek McDonald (both Aberdeenshire Council).

This document summarises the main report, which is structured into an analysis of the current position of the land-based sectors focusing on change over the 2007 to 2014 period, an analysis of the impact of imminent policy changes including CAP reform, a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis of the land-based sectors, and the preparation of future scenarios. The key issues for the industry as a whole are identified and recommendations made for the commissioning organisations. Agriculture, farm woodlands, farm diversification (including renewables), the input supply and processing sectors, the skills and education infrastructure and the wider rural economy are considered. Case studies on real businesses are used to explore how individual players are facing the future. The study involved desk research, modelling, widespread consultation with the industry, workshops in each local authority area, workshop sessions with NESAAG members and the preparation of illustrative case studies. An important aspect of the study has been analysis down to sub-region level – Aberdeenshire, Angus and Moray have been split into sub-regions, representing areas of differing agroclimatic conditions and topography. See Figure 1 below, which shows that the total area stretches from Forres in the north-west, to Dundee in the south. This has allowed us to identify where change is happening and postulate why.

Figure 1. NE Study. Local authorities and their sub-regions.

Local authority and subregion boundaries are based on Agricultural Parish Boundaries (Scotland). (Copyright Scottish Government) Contains Ordnance Survey data © Crown copyright and database right (2015). Some parts of parish boundaries differ very marginally from Local Authority boundaries, but otherwise 'fit' the LA boundaries. All subregions except Glens and Uplands and Strathmore were derived from the electoral wards which parish centroids were located within. Aberdeenshire subregions are based on wards grouped to committee areas (see http://www.aberdeenshire.gov.uk/elections/areas_wards_settlements_map.pdf). Actual ward and LA boundaries are not shown. Ward spatial data and information: OS Boundary-Line(TM) data. Selected locations derived from OS 1:250 000 Scale Colour Raster.

The main report, this summary and one page infographics prepared for Aberdeenshire, Angus and Moray to capture the essence of each of these areas and the changes they face can be accessed at

http://www.aberdeenshire.gov.uk/facingthefuture/

In this summary, unless otherwise stated, "NE" (NE) means Aberdeenshire, Angus and Moray local authorities plus the small amount of farming within the Aberdeen City boundary. Dundee City is not included as it has virtually no farming within its boundary. The "study period" means 2007 to 2014, while the "previous study period" means 2003 to 2007.

2. WHAT IS DISTINCTIVE ABOUT NE AGRICULTURE AND ITS RELATED SECTORS AND HOW HAS IT CHANGED?

2.1 How does the NE compare to Scotland?

Farm Structure

The NE corner of Scotland represents only 16% of Scotland's agricultural area, but carries a high proportion of its crops and livestock (Table 1). Approaching 50% of Scotland's crop area falls within the study area, and the estimates at Figure 1 suggest that crops account for around half of the value of output – even higher once the value of grain grown for feeding on farm is added. Spring barley for the malting sector is by far the dominant crop. Arable production also supports finishing and intensive stock enterprises, with a third of Scotland's cattle finished in the area and two thirds of its pigs, especially in Aberdeenshire. Nearly a quarter of the national beef breeding herd lies within the NE, but only 10% of the ewes, mainly in west Aberdeenshire and Speyside. Despite the supply of grain, poultry has declined, with around a fifth of the national flock still in the area. Dairying has become a rare enterprise – only 5% of Scotland's dairy cows are in the area – with most production migrating to the South West of the country.

The farm woodland area (not including commercial forestry in estates and owned by the Forestry Commission) reported in the agricultural census has increased massively since 2007 (by 99% in NE, 71% in Scotland). However, this is almost all due to farmers recently including in the census areas of woodland which they have ignored in the past. This probably reflects a change in the IACS regulations and a desire to show all farmed hectares as we move toward an area based CAP support regime. The area of new grant assisted planting over the period was small. The farm woodland area is now just over 9% of total holding area, very similar to Scotland as a whole. The highest percentages are in Moray (Keith and Cullen 25%), lowest in Angus and Buchan.

Image Courtesy of Iain Sarjeant Photography

Table 1. NE, Aberdeenshire, Angus and Moray shares of Scottish crop areas, livestock numbers and farm labour, 2014

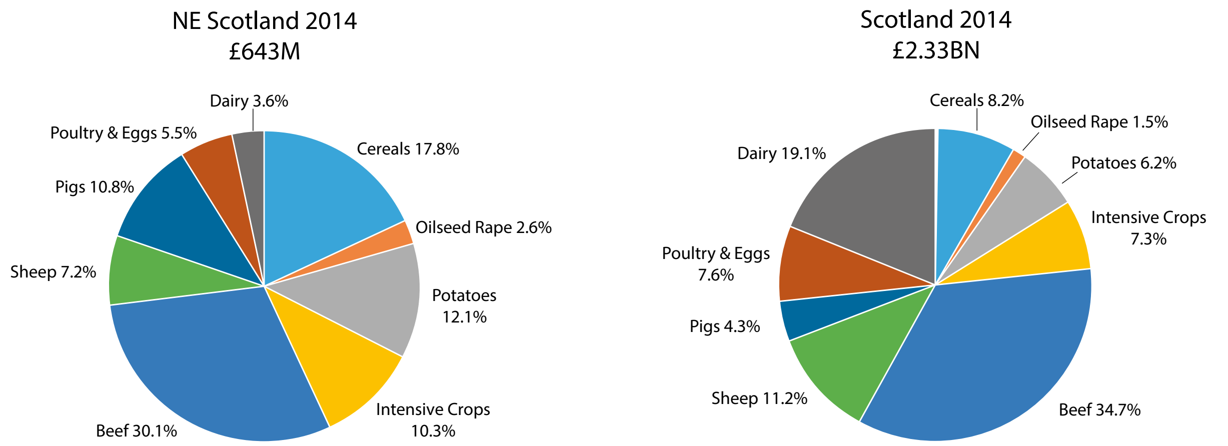
	NE	Aberdeenshire	Angus	Moray
Total Agricultural Area (ha)	874,284 (16%)	515,845 (9%)	190,250 (3%)	160,236 (2.8%)
hectares				
Total arable area	254,963 (43%)	156,316 (27%)	70,109 (12%)	26,305 (4%)
Cereals	201,396 (44%)	131,074 (28%)	48,461 (10%)	21,861 (5%)
Oilseed rape	17,190 (46%)	11,218 (30%)	5,339 (14%)	633 (2%)
Potatoes	14,615 (51%)	4,759 (17%)	8,981 (32%)	875 (3%)
Intensive crops	7,272 (39%)	1,801 (10%)	4,904 (26%)	568 (3%)
numbers				
Suckler cows	101,095 (23%)	65,890 (15%)	12,424 (3%)	21,263 (5%)
Feeding cattle (2012)	129,322 (33%)	101,479 (26%)	12,720 (3%)	13,110 (3%)
Dairy breeding herd	11,084 (5%)	8,774 (4%)	1,707 (1%)	603 (0.3%)
Breeding ewes	272,207 (10%)	163,847 (6%)	48,374 (2%)	57,811 (2%)
Total pigs	213,219 (67%)	164,210 (52%)	31,777 (10%)	17,188 (5%)
Total poultry	2,762,400 (19%)	1,845,895 (13%)	848,982 (6%)	64,959 (0.5%)
hectares				
Farm woodland area	80,021 (17%)	46,515 (10%)	9,599 (2%)	23,494 (5%)
number	Including Aberdeen			
Total farm labour (excl. occupiers)	6,751 (25%)	3,130 (8%)	2,719 (7%)	764 (2%)
Total farm occupiers	5,205 (20%)	3,656 (14%)	708 (3%)	733 (3%)
number				
Total population (2013)	843,630 (16%)	257,740 (5%)	116,240 (2%)	94,350 (1.7%)

Source: June Agricultural Census 2012 and 2014

The NE remains one of the most mixed farming areas of the UK if not Europe. All of Scotland's farming enterprises are found in the NE (see Figure 2 below), and it is not unusual to find beef cows, pigs, cereals and intensive cropping in close proximity. Given the economic advantages of specialisation, this mixed structure is unusual, and probably reflects the great variability in land quality and the higher climatic risks of farming at this latitude.

Figure 2. Individual enterprise shares of total NE and Scottish agricultural output 2014 (excluding subsidies)

Source: Output modelled using data from June Agricultural Census, Economic Report on Scottish Agriculture (ERSA) and technical



data from a range of sources including SRUC FMHB and QMS enterprise costings. Scottish Output above differs from the ERSA figure of over £3 billion due to the exclusion of capital formation, other agricultural activities, non-agricultural activities, and minor crops and livestock. The NE total excludes Aberdeen City.

Beef and cereals have dominated NE output (providing almost 50% of the £643M total), especially in recent years of high grain and cattle prices. However, it is worth noting that a few hundred pig, potato and intensive crop producers have a disproportionately large impact on regional output due to their high productivity per head and high value per hectare. In Scotland as a whole, milk is much more important, but pigs and all types of cropping much less so.

Establishing the exact number of farmers and the average farm business size in the NE is surprisingly difficult. The census data gathers information on individual holdings (each of which has a unique holding number), but an individual farmer may own or rent several holdings and operate others through contract farming and seasonal agreements. The number of individuals submitting an IACS form (the annual subsidy claim form) may be a better indicator of the number of actual farm businesses.

Table 2. Estimated numbers of farm businesses and average farm size in Aberdeenshire, Angus and Moray 2014

	No. of occupiers from census	Average farm size (ha) based on census	No. of IACS claims	Average farm size (ha) based on IACS claims
Aberdeenshire	3,656	141	2,587	199
Angus	708	269	590	322
Moray	733	218	578	277

Source: June Agricultural Census 2014, SGRPID

Even the IACS-based figure is likely to underestimate farm size as some businesses claiming the area-based payments may get someone else to actually farm the land. The study team also expect that financial output is even more concentrated than farm size, with perhaps 500 businesses (around 10%) producing at least 40% of the output value. This means that the fortunes of the industry and its related sectors depend on the actions of a relatively small number of people. However, the smaller businesses are not unimportant – they are increasingly integrated with the bigger ones, providing land for specialist crops, providing contract labour, growing feed grains and providing a home for surplus slurry. Small 'horsiculture' and hobby units buying high-value supplies, underpin the input supply sector.

The number of farmers is declining faster in the NE (-8% 2007 to 2014) than the rest of Scotland (-3%), and in the northern half of Aberdeenshire the decline is over 10%. Of the remaining farmers, the proportion stating that they are part-time (see Table 6) has remained static over the study period both in the NE (55%) and in Scotland (63%), but varies enormously across the study region from 64% in the Garioch to 39% in Strathmore. Overall, the industry is more full-time than in the rest of Scotland.

The "hollowing out" of farm size has accelerated over the study period. This is a well-established national trend, but is happening much faster in the NE. The number of medium-sized holdings is falling fast, and the relative number of both large and very small holdings is increasing. Commercial farms are getting bigger, and as they do so amenity units are being broken off, often consisting of a farmhouse or converted steading plus some land. This trend is having wide-ranging impacts: less supply of labour from small farms; less intensive use of the micro units; a new supply of seasonal lets for new entrants and established farmers; a whole new hobby farming and equine market for the traditional farm input suppliers; and possibly some environmental benefits coming from low-intensity use. Despite the increase in small units, average farm size (based on the number of IACS claims) is increasing steadily – up by around 30 ha in Aberdeenshire since 2007.

In both Scotland and the NE, around 77% of holdings are owner-occupied (rather than tenanted); an increase of approximately 7% over the 2007 to 2014 period. This is another long-established trend. The owner-occupation rate varies across sub-regions, with more tenanted land in upland/hill areas, though even here the lowest rate is 67% (Speyside and Glenlivet). However, it should be noted that many farms have mixed tenure, very often with an owner-occupied core, but tenanted land, annual lets, winter grazing and, increasingly, contract -farmed land added on. The official census has not been capturing the changes in Scottish farming – especially contract farming agreements which cover thousands of hectares, and annual lets which run on for many years.

The average age structure of those recording themselves as occupiers in the June census form is increasing. In the NE the percentage of occupiers aged under 55 has fallen from 46% to 40%, and the percentage aged over 65 has gone up from 25% to 32%. These percentages almost exactly match those for Scotland as a whole. Anecdotally, however, there is no shortage of young people wanting to take over existing businesses.

While occupier numbers have declined, in contrast to previous study periods the employed labour force has increased (by over 7% in the NE, 5% in Scotland), though most of this is due to large increases in seasonal and casual labour in SE Angus and Kincardine/Mearns. In Aberdeenshire and Moray, the family proportion of the labour force is increasing while in Angus and Kincardine the majority are non-family.

The Wider Economy

The previous Aberdeenshire study noted that the rural economy was shaping agriculture rather than the other way round, and this has continued to be the case over the 2007 to 2014 period. The economy has until recently been very buoyant, driven by the oil sector. Weekly gross household incomes in Aberdeenshire (£595 in 2008-09) have been over a quarter higher than the Scottish average. Indeed, in all parts of the study area they are above the national average. Unemployment rates have been very low (2.55% in Aberdeenshire, 4.77% in Scotland). Population has increased in every sub-region – well above the Scottish rate in Aberdeen/Aberdeenshire, but below the national increase in Angus. Demographic projections to 2037 suggest that Aberdeen/Aberdeenshire will see major growth in population, and Angus and Moray will see declines and an ageing population profile. Aberdeen and Aberdeenshire have had the highest business formation rates in Scotland. Based on the Scottish Government's four indices of socio-economic performance (wealthier/fairer, healthier, safer/stronger, smarter), the NE and especially the rural hinterland of Aberdeen has very high performance ratings. Lower ratings in health, wealth and education are seen along the north coast of Aberdeenshire, parts of Moray and parts of rural Angus as well as Dundee.

The strength of the wider economy has created pressures for agriculture and food processing. Local labour has been in short supply. Rural youngsters have headed for the high incomes and attractive working hours of the oil and related professional service sectors. This has pushed farmers towards simplification, including reducing livestock numbers and the use of contractors with their economies of scale. Near to Aberdeen, many farmers have gone part-time as they exploit opportunities in the booming economy. Many of the remaining dairies have switched to robotic milking. Pig units are competing for labour within a small skilled pool. Migrant labour, almost all East European, underpins the entire meat processing, vegetable and fruit sectors, and indeed forms a big share of the workforce in timber mills, fish processing, food companies and many larger farms.

However, there have also been many gains for the industry from this economic buoyancy. Property values have increased sharply, and many farms have secondary income flows from family members working in oil, from let cottages, sales to the equine sector, etc. This has allowed NE farms to be leaders in investment in renewables and in updating their buildings and infrastructure. It has broadened the outlook of primary producers.

A strong local economy also provides opportunities for diversification. On-farm diversification rates have been higher in Angus and Moray (and in the rest of Scotland) where jobs in oil-related sectors have been less accessible. Agri-tourism is less well developed in the NE than in other regions of Scotland, and indeed other countries, as the classic response to a lack of profitability has been to seek off-farm work since this has been available.

Despite the strength of the wider economy, primary sector employment is above the Scottish average.

Table 3. Primary Sector Employment 2011

	% employed in agriculture, fishing and forestry
Scotland	1.66
NE (including cities)	2.41
Aberdeenshire	4.38
Angus	4.03
Moray	3.22

Source: 2011 Census

In upland areas such as Marr and Speyside and in fishing areas such as Banff and Buchan, the percentage is slightly higher. Over 16% are employed in primary sectors in the Angus Glens.

One impact of a strong economy and wealthy consumers has been the growth of farm-based food processors covering everything from cheeses to speciality meats to vegetable oils. The quantity of primary product they use is relatively insignificant, but along with farmer markets they are creating a local food culture. The food sector is buoyant. Aberdeen, Aberdeenshire and Moray alone account for a high share of Scottish food manufacturing employment (22%) and GVA (21%), and employment in the sector has been growing at well above the Scottish rate. Seafood and whisky are the top exports, but other sectors have high growth and export expectations. England is the critical market, generating perhaps 50% of export revenue. Food and drink manufacturing employment is 3% in Aberdeenshire, 2% in Angus and over 7% in Moray, and the vibrancy of the sector is evidenced by the NE absorbing 30% of the SRDP (2008-14) food-related grant awards.

It should be noted, however, that the recent sharp decline in oil prices could totally change the picture painted above for Aberdeenshire in particular. This was a major concern of those who attended our future scenarios workshops. In contrast the expected £1 billion investment in the riverside developments of Dundee could make the city a more important driver of the wider economy and provide new rural-urban linkages.

Agri-Processing, Marketing and Input Supply

Local primary processors anchor entire production sectors. The NE is too high-cost and too remote to profitably transport livestock and crop products long distances south.

There could be no clearer illustration of this during the study period than the demise of the broiler chicken sector north of Aberdeen. With the only Scottish chicken processor being based at Coupar Angus, the operator, under extreme retailer price pressure, decided that transporting birds from north of Aberdeen was too expensive. The whole Aberdeenshire and Moray broiler chicken sector, once consuming large quantities of local grain, was lost. To further illustrate the key role of local processors, the exact opposite has occurred in the egg sector. A local egg packer, Farmlay at Strichen, has led an expansion of local production.

Image Courtesy of PSingerPhotography: AgriPhoto & Design

The NE dominates Scottish red meat processing. Four cattle and sheep plants in the study area and one pig plant handle an increasing share of Scotland's livestock.

Table 4. NE Share of Scottish Slaughterings 2008 and 2014

	Cattle			Sheep			Pigs		
	NE	Scotland	NE %	NE	Scotland	NE %	NE	Scotland	NE %
2008	147,330	504,344	29.2	342,138	1,395,226	24.5	32,592	679,530	4.8
2014	154,929	468,879	33.0	573,473	1,370,406	41.8	215,631	297,728	72.4

Source: QMS

This is a very low margin sector squeezed at one end by price competition between retailers coping with the recession in consumer spending, and a reducing supply of all types of livestock at the other end. The figures in Table 4 conceal a tremendous amount of restructuring. During the study period the only high-volume Scottish pig plant closed. The collaborative action of the two Scottish pig supply coops and Tulip of Denmark is providing a new outlet at Brechin. The McIntosh Donald meat plant at Portlethen changed hands, as did most of Scotland's chicken processing capacity, resulting in the cut in production north of Aberdeen described earlier. In Inverurie, the Scotch Premier Meat beef and sheep plant merged with Scotbeef of Bridge of Allan and the adjacent Mathers Meat plant. They now plan to build a state of the art facility at nearby Thainstone.

Despite recent changes, the red meat processing sector is still thought to be 20% over-capacity and mainly only does primary processing. Exports outwith the UK are small – perhaps 9% of sales – and are unlikely to grow given the strength of Sterling and the lack of livestock. Waste product has low value as the renderers are well south (the Kintore plant has never re-opened) and Far East markets for fifth-quarter products have recently become less lucrative. However, the Scotch Beef brand is well recognised, and Scottish cattle consistently secure some of the highest prices in Europe. Turnover in the NE is estimated at over £300M, supporting around 1,000 jobs directly and many more indirectly.

The milk sector has seen tremendous price volatility. Retailer wars, the worldwide recession, the weak Euro, producers across Europe gearing up for the ending of production quotas, and the Russian ban on EU dairy product imports have all contributed to a sharp fall in milk prices. Arla (a Europe-wide coop) and Muller Wiseman (a private German company) now dominate the UK milk market. In Scotland there is too much liquid milk and not enough processing capacity to turn it into added value products. In the NE there is one processor – Muller Wiseman at Altens, Aberdeen – which buys almost all local producers' milk and which is thought to be operating at 50% capacity due to the loss of retailer contracts. As a result, surplus milk is being trucked to East Kilbride. There is real concern over its long-term viability and hence the future of the remaining NE dairy farms. Many NE dairy farms are however on favoured contracts as members of a single retailer producer group, though the value of these if there were no local processor is unclear. Mackie's and a number of other small dairy product manufacturers have grown in recent years, but they consume a very small proportion of local milk output. There is hope at Scottish level of inward investment in dairy processing.

The whisky industry underpins the entire cereal sector in NE Scotland. Premium prices are paid for malting barley, hopefully more than covering the extra costs of production in a northern climate, and therefore supporting the whole arable rotation. Whisky production has been at full capacity over most of the study period due to worldwide growth in demand, but there has been a check in growth over the last two years and a reduction in farmgate prices. The NE is home to 5 maltsters providing 60% of Scottish capacity. While there is not enough malting capacity in Scotland (750,000t out of 1,000,000t demand), there may be little prospect of investment as there is plenty of spare capacity in England due to the reduction in beer demand. Wheat for distilling for blends used to be processed at a plant in Invergordon, but it has switched to imported maize. This has hit wheat production in areas such as Moray which used to have the highest wheat prices in the UK and now have the lowest. Local feed grain prices have also been hit by the reduction in intensive livestock production. Three of Scotland's major feed companies are based in the NE, but they are producing less compound feed. This is not only due to livestock reductions, but also to farmers maximising use of their own feeds by purchasing by-products and proteins to mix with home-grown produce. Surplus feed grain must be exported, and there is good port infrastructure at Banff, Fraserburgh, Peterhead, Aberdeen and Montrose. The NE climate suits oilseed rape production, and most of this is also exported through ports. Two grain coops, one only a few years old, provide over 110,000t of centralised drying, storage and marketing.

Case Study:

SEIZING OPPORTUNITIES IN THE INPUT SUPPLY SECTOR

NORVITE is one of the NE's three major feed production companies, and has grown steadily from its humble beginnings in 1973 as a supplier of mineral supplements and protein concentrates. It now turns over £14M per annum, employs 60 staff, has three manufacturing sites, and is one of only two Scottish mineral supplement manufacturers. Its development shows the entrepreneurial nature of the business, but also tells a story of the changing nature of farming and of the NE economy.

To the mineral supply business, Norvite in 1998 added blended feeds matching farmers' shift away from expensive compound feeds. Farmers increasingly wanted mixes of proteins and minerals to add to their own grain and forage. There are now blending plants at Oldmeldrum and in Ayrshire.

In 2002 hi-tech mobile mill and mix lorries were introduced, allowing farmers to accurately produce complex feeds on the farm. These are commonly used by poultry and pig producers. In 2012, Norvite invested £750,000 in a new mineral plant at Wardhouse near Insch to allow the preparation of generic and bespoke mineral mixes for individual farmers.

The growth of the horsiculture and hobby farming sector and the wealth of the NE economy have stimulated the business to open three Farm and Country Stores, at Wardhouse (2005), Oldmeldrum (2009) and Aboyne (2012). These stores supply feeds and a huge range of inputs and accessories for all types of livestock, pets and wild birds, and also stock large clothing and footwear ranges.

In 2015, Norvite invested £600,000 in a new oilseed rape crushing plant at Oldmeldrum. Using initially around 4,000t of locally grown rapeseed, it will supply oil for monogastric rations as a substitute for imported soya oil. The high protein by-product meal will be included in feed mixes.

The business is expanding geographically into Northern Ireland where it has captured a share of the pig feed business, and into Scandinavia with novel animal feed products.

Blueberries Image Courtesy of Castleton Farm

The intensive crop area (potatoes, vegetables, fruit) has increased markedly over the study period, especially in Angus and Kincardine.

Potatoes are a major crop as Scotland produces 22% of total GB production. However, in Scotland there are only two markets – pre-packed ware potatoes for the major retailers (5 main packers in Scotland), and seed mainly for export (60% England, 40% overseas). There is very little processing capacity (for chips, crisps, etc.), and so no alternative markets in a surplus ware year. Transporting potatoes south is prohibitively expensive. Prices fall sharply if there is a glut. To make things worse, consumption of fresh potatoes is falling steadily (-15% over the last 5 years). Over the last 15 years, producers in Angus with their higher yield potential have shifted steadily toward ware production, and producers north of Aberdeen have concentrated on seed. Poor prices have driven a small shift back to seed in Angus, but the availability of eelworm-free land is poor given the concentration of ware production in recent years. Companies such as Bartletts have developed their own varieties and brands to generate premium markets, but more work on convenience is required.

The growth of the soft fruit sector, mainly in Angus and Kincardine, is a tremendous case study in marketing, exploiting natural advantage and in cooperation between growers, researchers, plant breeders, and EU and UK grant sources. In the 1980s, the industry was dying, but over the last 10 years it has grown spectacularly on the back of new growing technology, polytunnels and new varieties. The sector is worth approaching £100M, and produces around a quarter of UK strawberries and raspberries. New crops are being added: blueberries, cherries, blackberries. The 20 growers comprising Angus Soft Fruit in Arbroath may account for around 60% of Scottish soft fruit output. The sector relies on young East European pickers, so that migrant labour policy, the higher minimum wages imposed by the Scottish Agricultural Wages Board than in the rest of the UK, and the planned living wage are major concerns.

The farm woodland sector is small, most forestry being on estates or owned by FCS. However, it is well supported by a diverse processing sector, with several major sawmills, the composite board plant at Nairn, and in recent years a massive growth in demand for firewood, woodchip and pellets for domestic and industrial biomass boilers and stoves. This includes at least 30 grain driers, largely driven by the Renewable Heat Incentive subsidy and until recently the high price of oil.

Case Study: FARM WOODLANDS AS A KEY FARMING ENTERPRISE

John Munro started his career as a farm grieve, and along with Shona his wife, secured the tenancy of Braco near Hatton 26 years ago, starting with 89 ha and expanding to 162 ha. It is a typical mixed farming business, growing 60 ha of barley and finishing 300 store lambs and the progeny from its 110 suckler cows.

In 1991, John bought a 60 ha block of very heavy clay land nearby, with the aim of establishing woodland. Capital costs were covered by the Farm Woodland Grant Scheme, and the Farm Woodland Premium Scheme provided an income for 10 years. Sitka dominated the planting and has done well. The wood is now producing its first thinnings. Assisted by a plan facilitated by Ringlink and SAOS, 70 m3 to 100 m3 will be harvested annually over the next 15 years. The Ringlink work stimulated a lot of other farmers to look again at their woodland, creating a business for John's son Stuart, who has specialised in extraction from small woods with appropriate scale machinery.

This has meshed perfectly with a huge increase in local demand for dry firewood as many householders have installed wood-burning stoves. In 2014, John installed a 175kW Glenfarrow biomass boiler to heat the farmhouse and a wood-drying kiln (an adapted shipping container). Demand grew strongly, and so a second boiler was installed to heat a second kiln (a converted insulated calf house). Logs are dried on a cart reversed into the kiln or in IBC cages. It is labour-intensive but profitable, and justifies retaining an employee. The RHI income is paying off the boilers. The work can be easily fitted around farm jobs, building up a stock for delivery over the winter.

Buoyed by experience, two 225kW turbines have just been installed, operating as a partnership on the tenanted land. With these innovations, the reduction in farm subsidy support to 2019 has ceased to be a threat.

Knowledge Infrastructure

In general, the NE has an active and entrepreneurial farming culture. The area tends to lead in uptake of new opportunities such as SRDP grants (including food processing) and renewable energy schemes. There is an encouraging number of new farm-based food processors. The restructuring of businesses over the last 8 years, described in the following sections of this report, is evidence of a willingness to think freely, adapt and change. One reason for this activity is the willingness to use consultants and to tap into other sources of advice. The area has a large number of independent consultants. Knowledge transfer meetings and programmes – such as QMS Monitor Farms – tend to be better supported than in some other regions. Many farmers are members of the many small discussion groups, the Royal Northern Agricultural Society, the two Farm Management Associations, and the North of Scotland Grassland Society, all of which are independent farmer-run organisations. Most farmers are members of at least one input supply or marketing cooperative, and the region is home to Scotland's largest and most successful machinery/ labour ring – Ringlink. The Grampian Food Forum has led the development of local food businesses, awards and events. Despite the attractions of the oil industry, there are plenty of keen young people who want to farm. The Young Farmers Clubs remain surprisingly well supported and active despite the reduction in the number of farms.

SRUC at Craibstone remains the focal point for agricultural education. Student numbers are good, though small numbers progress to degree level. Aberdeen University ceased its agricultural degree programme during the study period, but has recently received high ratings for the quality and impact of its agriculture related research. Dundee University has also been rated highly on its plant science research. The James Hutton Institute (JHI) in Aberdeen provides research on environmental issues associated with land use and has strengthened its rural research including policy impact assessment. JHI at Dundee has an international reputation in plant sciences and especially plant breeding. The benefits of this type of expertise in the region filters out to local industry.

2.2 Change at Local Authority and Sub-Region Level: Aberdeenshire, Angus and Moray Summaries

There are clear differences between the NE study region and the rest of Scotland, but how do Aberdeenshire, Angus and Moray compare, and are the sub-regions of each local authority area developing differently? Table 5 provides a comparison of the structural differences.

Image Courtesy of Ringlink. Interns 2014

Table 5. Selected structural differences between Scotland, the NE (NE), Aberdeenshire, Angus and Moray, 2014

	Scotland	NE	Aberdeenshire	Angus	Moray
Arable % of total agric area	31%	53%	51%	70%	39%
Proportion of cereals winter-sown	37%		27%	39%	11%
Seed potatoes as % of total potatoes	47%		81%	48%	73%
Proportion of grass under 5 years old	32%		66%	43%	58%
Proportion of total cattle which are feeding cattle	22%	33%	37%	28%	20%
Lambs per ewe	1.26	1.44	1.48	1.31	1.42
Proportion of total labour which is part-time/ seasonal/ casual	61%	59%	57%	64%	54%
Proportion of labour that are hired	68%	71%	61%	85%	61%
Proportion of hired labour that are part-time	48%	51%	42%	66%	38%
Proportion of part-time occupiers	63%	55%	57%	44%	54%
Occupiers aged over 65 years	31%	32%	32%	31%	26%
Migrant labour days per holding with migrant labour	1,969		398	1,155	353
Mean holding size (ha)	107	86	71	146	118
Median holding size (ha)	9	13	11	35	17
Estimated average farm business size (ha) based on IACS numbers			199	322	277
		Excluding Aberdeen			
Proportion employed in agriculture, forestry, fishing 2011	1.66%	2.41%	4.38%	4.03%	3.22%
Median household income, 2008-09 (£/week)	468	520	595	499	529
Proportion of installed capacity of Scottish FIT schemes, March 2015	100%	26%	15%	4%	4%
Proportion of installed Scottish wind capacity, March 2015	100%	41%	28%	5%	7%
Proportion of total SRDP food processing/ marketing grants awarded at Feb 2014	100%	30%	12%	12%	4%

Source: June Agricultural Census 2014, Dept. of Energy and Climate Change, Scottish Neighbourhood Statistics, 2011 Census

Table 6. Selected Farm Level Changes (%) 2007 to 2014 and Part Time % 2014 at Local Authority and Sub-Region Level

	Suckler Cows	Feeding Cattle	Breeding Ewes	Dairy Herd	Total Pigs	Total Poultry	Cash Crops	Barley	Intensive Crops	Total Farm Labour	Part-time Farmer %
Scotland	-8	-11	-11	-24	-30	+4	+12	+17	+37	+5	63
NE Scotland	-7	-11	-8	-49	-37	-17	+14	+22	+32	+7	55
Aberdeenshire	-7	-9	-8	-41	-36	-10	+14	+21	+30	+2	57
Banff & Buchan	-3	-9	-9		-81	-28				-7	57
Buchan	+3	-2	-25		-8	+121				+5	62
Formartine	+2	-25	+3		-61	+25				-14	54
Garioch	-17	+1	+3		-26					-9	64
Kincardine	-5	-2	-14		+40	-27				+34	54
Marr	-12	-7	-8		+8					+1	54
Angus	-10	-19	-12	-44	-4	-23	+14	+26	+35	+17	44
Glens & Uplands	-36	+9	-15			-19				+2	43
S & E Angus	-1	-23	+1			-25				+25	48
Strathmore	-2	-19	-13			-15				-8	39
Moray	-5	-16	-2	-84	-63	-66	+11	+23	+8	+2	54
Keith/Cullen	+4	-18	-13							+4	58
Laigh of Moray	-10	-8	+1							-5	54
Speyside/ Glenlivet	-9	-22	+1							+15	51

Source: June Agricultural Census 2007, 2012 and 2014. Where sub-region changes are not shown, this is due to disclosure and data restrictions.

2.2.1 Aberdeenshire Summary

Figure 3. Aberdeenshire Farmland Breakdown 2014

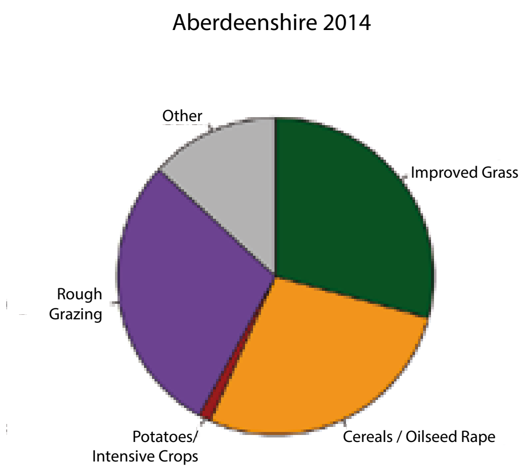
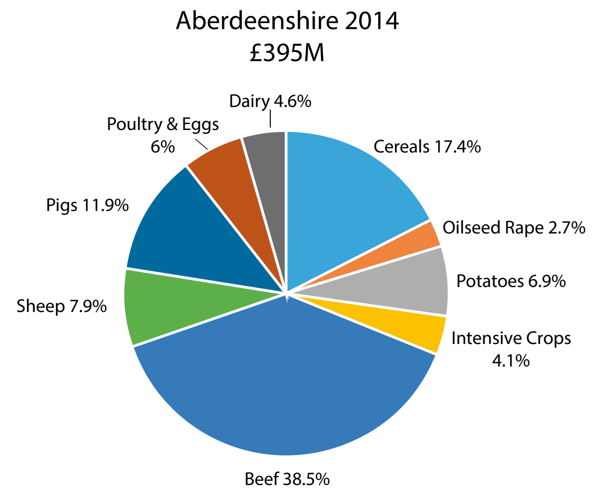


Figure 4. Estimated Aberdeenshire Agricultural Output Structure Excluding Subsidies 2014



- Aberdeenshire farmland (Figure 3) can be neatly classified as a third rough grazing (mainly in the west), a third crops and a third improved grass. This remains an area of very mixed farming with short-term grass in most rotations – 66% of the grass is declared as under five years old (see Table 5), compared to 32% for Scotland and 43% in Angus.

- Total output for the main enterprises is estimated at around £395M in 2014 (Figure 4). Scottish output calculated on the same basis is estimated at around £2.33BN. Beef dominates output in Aberdeenshire, reflecting the number of cattle bought into the county for finishing. Given Aberdeenshire's large cereal area, output might have been expected to be higher, but a large proportion, perhaps 30% to 40%, is retained for feeding. However, crop sales still constitute almost a third of the area's output. It is worth noting that intensive livestock enterprises (eggs, broilers, dairy, pigs), though operated by few producers, account for more than a fifth of output.

- Looking across the individual enterprises (Table 6), the major change in Aberdeenshire over the 2007-2014 period has been the reduction in the pig herd and the increase in cropping. The fall in pig numbers resulted from the cost:price squeeze of the 2008-2012 period when feed grain and soya prices rose sharply and pig prices stagnated. The shift by one or two large producers away from finishing pigs to selling or transferring weaners into England has also had a big impact on pig numbers.

- Numbers of suckler cows, finishing cattle and sheep have crept downward – a sharp contrast to the 2003 to 2007 study period when Aberdeenshire breeding cow numbers remained static and finishing cattle numbers actually increased. The dairy herd has continued its sharp decline. Poultry numbers have fallen 10%, but this hides a major reduction in broilers (the full extent of which will not be shown in the 2014 figures) and an increase in egg-laying hens.

- The cropping increase has taken up the grass area released from cattle, and has been led by more spring barley production aimed at the malting market. This is a response to market signals, but also a result of simplification of farming systems. The proportion of winter-sown cereals has fallen from 33% to 27%.

- The proportion of farmers stating they are part-time is static, though Aberdeenshire with its smaller average farm size (199 ha) – the smallest of the 3 local authorities – has the most part-timers (57%).

- The Aberdeenshire averages hide major differences between sub-regions. In the Garioch, with its small average holding size and proximity to Aberdeen, there is a high level of part-time farming (64%), a sharp reduction in binding breeding stock, an increase in cropping, and a fall in the total labour force with much more reliance on family labour. In Buchan, there seems to be a commitment to farming solutions. With its concentration of large finishers, cattle numbers have remained static, a number of producers have moved into egg production, and the total labour force has increased. Kincardine and the Mearns has been influenced by the expansion of the soft-fruit, bulb and vegetable sectors. Employment here has increased by 34% (almost all part-time/seasonal, and hired rather than family) and the proportion of part-time farmers is lower. The few pig producers have seen some expansion. Marr, the large mixed upland area stretching from Alford and Huntly up to Braemar, has seen a steady extensification of systems, with beef cow numbers falling by 12% and breeding ewes by 8%, and some increase in cereals on the better land. Producers are getting rid of unproductive stock, reducing their cost base, and making their systems less demanding on purchased feed and fertiliser, labour and management time.

- In April 2010, a Feed-in-Tariff (FiT) scheme was introduced to promote small scale renewable and low-carbon electricity generation. Uptake was rapid in Aberdeenshire. As at March 2015, Aberdeenshire alone had 28% of Scotland's installed wind energy capacity supported by Feed-in-Tariffs – much higher levels than Angus or Moray. In 2013, Aberdeenshire had 64 installed commercial woodfuel/biomass facilities, the second highest number in Scotland (Highland Local Authority area had 153). Much of this is farmer-owned, and will, alongside a smaller level of photovoltaics and hydro schemes, generate very substantial levels of additional income for many of these farmers and introduce them to a whole new set of skills and the wider possibilities of the energy and woodland sectors.

- Aberdeenshire's processors, heavily biased towards primary processing of red meat, are under pressure. Food businesses in the area were awarded 12% of SRDP food processing/marketing grants, but this looks small in relation to the scale of agricultural production.

Case Study: A FUTURE FOR THE BUCHAN FINISHER?

Gray Gall and his son Noel farm 230 ha Kininmonth Home Farm to the north of Mintlaw. In many ways it is a typical Buchan farm with a mix of cropping and livestock finishing. Two thirds of the farm is in combinable crops, half spring barley. Half of the barley is retained for feeding cattle. The other third of the farm is in mainly rotational grass. 500 cattle and 500 lambs are finished annually, and there is a small suckler herd.

Cropping area and cattle numbers have increased. A feed wagon, simple cereal-based rations, new buildings, the conversion of old courts for machinery, and bigger arable kit have allowed more output per person. They have used the SFP support to invest in infrastructure – a grain store, straw sheds, cattle courts, drainage. A 75kW biomass boiler has been installed for heating the farmhouse and outbuilding.

This type of farm is typically losing a third of its direct subsidy support by 2019, and low grain prices are making the transition tougher. What will they do?

The business is well invested for the future, so no farm capital expenditure is planned for the next few years. They will stick with the beneficial livestock/crop mix and self-sufficiency in feeds. Store cattle prices and the actions of local abattoirs will inform their decisions. Given low grain prices, they would consider increasing cattle numbers. Improving the efficiency of use of purchased inputs is critical, so they have invested in precision farming technology and Noel has joined an arable benchmarking group.

A major strength is the family nature of the business. Gray's wife Kate is a partner in the farm, and Noel's wife Jo runs her own café and has a background in the high-end hospitality industry. In a major move and with confidence in the future of the NE, the family has recently taken over the Saplin Brae Hotel with plans to deliver the best in Buchan food, drink and hospitality.

2.2.2 Angus Summary

Figure 5. Angus Farmland Breakdown 2014

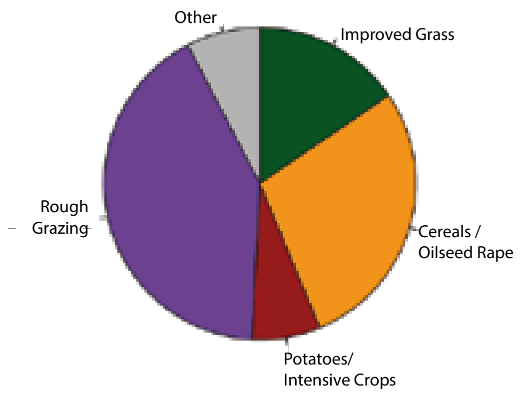
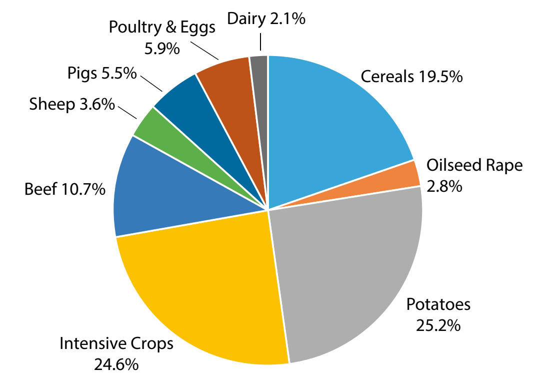


Figure 6. Estimated Angus Agricultural Output Structure Excluding Subsidies 2014



- While the farmland area of Angus is roughly 40% rough grazing, 20% improved grass and only 40% arable (Figure 5), in terms of output (Figure 6) this is very much a cropping area. The high output per ha of potatoes and intensive fruit, vegetable and flower crops means that these generate around 50% of regional output (estimated total output £182M in 2014). Cereals and oilseed rape provide another 22%.

- Angus alone grows almost a third of Scotland's potato area, and at 13% of the cash crop area the crop is almost at saturation level if a 1 year in 6 rotation (16%) is observed to avoid PCN build-up. This is a concern as there has been a move back toward seed production (40% of the area in 2007, 48% in 2014) and away from ware.

- Unlike Aberdeenshire, beef production in Angus is relatively insignificant as a share of regional output. Intensive livestock (mainly pigs and poultry) on arable units are more important.

- In terms of agricultural output value, the large rough grazing area of the Angus Glens contributes very little, though it clearly has other values and opportunities in tourism, forestry and amenity. However, Angus has one of the lowest levels of farm woodland, covering only 5% of total farm holding area, and in the Glens it is only 3%. Aberdeenshire and Moray have 9% and 15% cover respectively.

- Over the 2007 to 2014 period, the trends in individual enterprises (Table 6) could be described as a very clear shift away from horn toward corn and high-value crops. Finishing cattle, once common on Angus arable units, have declined by a fifth (by a quarter in SE Angus). Beef cow and breeding ewe numbers have declined by more than 10%, and the very small dairy sector continues to shrink. Pig numbers have remained fairly static, in stark contrast to Aberdeenshire and Moray, but many farms now have no livestock.

- Unlike Aberdeenshire and Moray, there is no evidence of a simplification in cropping. The proportion of winter cereals has dropped by about 4%, but the wheat, barley and rape areas have increased, by 7%, 26% and 2.5% respectively. The intensive crop area has expanded by more than a third. Angus has some very good soils which can cope well with all-arable systems, but farmers are concerned about the reduction in organic matter and potentially poor soil structure after wet harvests.

- Part-time farming is far less prevalent in Angus (44%) than in Aberdeenshire (57%) and Moray (54%), and the estimated average farm size is the largest of the three areas at 322 hectares. This is not simply a reflection of very large upland units in the Glens. Farms in the lowground areas of Strathmore and South and East Angus are on average much larger than in lowground Aberdeenshire.

- There are distinct differences across the three sub-regions of Angus. The Glens and Uplands is a large geographic area, but small in terms of numbers of farmers and livestock. However, the statistics paint a picture of sharp agricultural decline in the Glens. Beef cow numbers are down by more than a third over the study period, and ewes by 15%. However, the majority of farmers state that they are full-time, so the reductions may be more of an extensification than a restructuring to free up time for alternatives. The situation in South and East Angus is starkly different, with an intensification of cropping and a 25% increase in the labour force. This labour force is 75% part-time/seasonal, and 90% is hired rather than family (compared for example to 47% hired in Buchan). Migrant labour is critically important for the fruit and vegetable sectors – among farms using migrant labour, the census suggests that those in Angus use 3 to 4 times more than Aberdeenshire and Moray units.

- Farm tourism and diversification in general is more prevalent in Angus than in the rest of the NE. Non-agricultural activities were operating on 13% of Angus holdings in 2010, compared to around 6.5% in Aberdeenshire and 9% in Moray.

Renewable energy developments are, however, less common than in Aberdeenshire and Moray, with only just over 5% of Scottish installed FiT supported wind capacity at March 2015. Angus has a higher share of hydro developments, however, than Aberdeenshire or Moray, and has a good number of photovoltaic installations.

- Angus has attracted more SRDP Food Processing and Marketing grant than Aberdeenshire in the 2008 to 2014 period, partly due to the large investments in the new Angus Cereals Coop in Montrose and the refurbished pig abattoir at Brechin, but also due to a number of intensive crop processing investments. The Brechin pig abattoir is the only abattoir in Angus so small-scale red meat processing is difficult. There were no Food Processing and Marketing grant awards in the Angus Glens.

Image Courtesy of Carol Littlewood (Littlewood Land Care)

2.2.3 Moray Summary

Figure 7. Moray Farmland Breakdown 2014

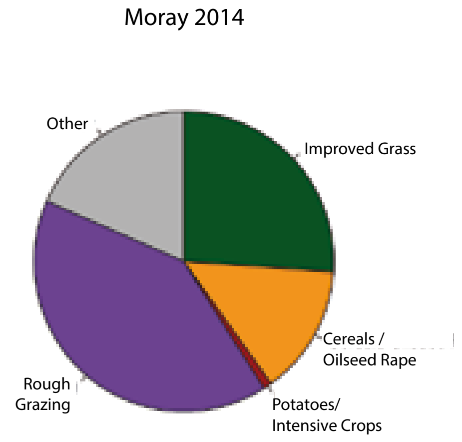
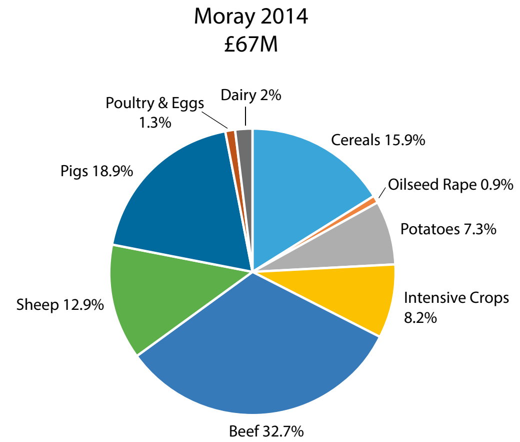


Figure 8. Estimated Moray Agricultural Output Structure Excluding Subsidies 2014



- In terms of land area, Moray could be described as half rough grazing, a third improved grass and a fifth arable. Like Aberdeenshire, this is a very mixed farming area, and like Aberdeenshire beef dominates providing around a third of regional output (Figure 8). Sheep are more important than in the rest of the NE, reflecting the large numbers in Speyside and Glenlivet. Cereals and other crops occupy a similar share of regional output, as in Aberdeenshire. Pigs, though with numbers declining sharply, provided a very significant share of output in 2014, while poultry output is heading towards zero. Total Moray agricultural output for the major crop and livestock enterprises, at around £67M in 2014, is a third of the Angus level, reflecting the smaller arable area, large rough grazing area and smaller scale of intensive cropping and livestock in the area.

- Moray has possibly seen the biggest enterprise changes over the 2007 to 2014 study period (Table 6). Intensive livestock enterprises have been decimated, with around two thirds of the pigs and poultry disappearing. A once-significant broiler sector has disappeared as a result of the decision by 2 Sisters group to cease supplies from north of Aberdeen. The loss of some large outdoor pig units and the switch by Karro Foods toward transporting weaners south rather than finishing locally has greatly reduced pig numbers. The dairy sector was already very small in 2007, but over 80% of the herd has since gone. Feeding cattle numbers have also dropped sharply, by 16%. However, beef cow and breeding ewe numbers have held up, and cropping has increased.

- Cropping has simplified massively. Wheat area is down by 25%, oilseed rape and oats by around a third, and the winter-sown cereal percentage has fallen to 10% - far lower than in Aberdeenshire (27%) and Angus (39%). There is some carrot production, but unlike Aberdeenshire and Angus the field vegetable area has increased very little. The barley area, mostly spring barley aimed at the local malting market, has increased by 23%.

- Morayshire may be suffering from its peripheral position and distance from major processors. Producers' response has been to simplify and cut out risk, with a shift to store cattle production and spring barley.

- The number of farmers has fallen by around 7% over the study period, but the employed labour force has increased very slightly, though a larger proportion of these are family members and part-time. However, the overall percentage of part-time workers (38%) is lower than in Aberdeenshire (42%) and Angus (66%). The proportion of farmers who are part-time is slightly lower than in Aberdeenshire, but well above that in Angus. Average farm size is estimated at 277 hectares – much larger than Aberdeenshire, but smaller than in Angus.

- There are subtle differences between the 3 Moray sub-regions. The Laigh of Moray and Forres area has seen the biggest reduction in beef cows and a concentration on cereals. Cow numbers have kept up in Keith/Cullen, but cattle finishing and ewe numbers have declined. Sheep numbers have been maintained in

Speyside and Glenlivet, but cattle numbers, especially finishers, have reduced.

- Farm woodland percentages are much higher in Morayshire (15%) than in Angus (5%) or Aberdeenshire (9%). Much of the Moray area may be non-commercial open woodland, but there clearly is potential to better utilise this resource.

- Moray has had median household incomes well above the Scottish average, but suffers lower socio-economic performance scores in wealth and income distribution than much of the rest of the NE. The area has more reliance on public sector jobs than Aberdeenshire, but has clearly benefited from the buoyant oil sector. The military installations at Lossiemouth and Kinloss are very important for the local economy. Levels of farm diversification are higher than in Aberdeenshire, especially along the Moray coast. Moray has a high level of installed wind energy capacity when compared to its population.

- The primary processing sector in Moray is small, though there are two small abattoirs – one within Moray (Dunbia at Elgin) and one just outside (Millers at Grantown). The food and drink sector, including the whisky industry and companies like Baxters and Walkers of Speyside, is very significant. Moray has more than double the rate of employment in food and drink manufacturing of Aberdeenshire and three times that of Angus.

3. ARE WE FIT FOR THE FUTURE?

3.1 Important Policy Challenges

CAP and LFASS Reform

A major change to the Common Agricultural Policy (CAP) is underway, moving away from historic payments to each business based on what headage and area payments they claimed in the past (the Single Farm Payment Scheme or SFPS), and towards a flat-rate support payment per hectare, with different rates in each of three land-quality-based regions. This will be phased in between 2015 and 2019. These changes are accompanied by "Greening" rules including the requirement for larger businesses to grow a range of crops and to have 5% "Environmental Focus Area" (EFA) of fallow land.

In addition, the existing Less Favoured Areas Support Scheme (LFASS) will be replaced by a new Areas of Natural Constraints (ANC) scheme by 2018. The new scheme will have the same budget, but must apply the funds on the basis of income foregone and extra costs incurred due to the constraints of the Less Favoured Area, not on the basis of previous stocking.

The levels of support under the old SFPS and current LFASS in 2014 are shown below.

Table 7. SFPS and LFASS total and average payments NE, Aberdeenshire, Angus and Moray, 2014.

	SFPS Total (£)	No. of SFPS claimants	Average SFP payment per claim (£)	LFASS Total (£)	No. of LFASS claimants	Average LFASS payment per claim (£)
Aberdeen City	1,755,248	57	30,793	108,075	19	5,688
Aberdeenshire	67,382,858	2,530	26,633	3,562,894	869	4,100
Angus	16,806,879	590	28,486	1,019,051	115	8,861
Moray	13,747,228	578	23,784	2,651,130	302	8,778
Total NE	99,692,215	3,755	26,549	7,341,151	1,305	5,625

Source: SGRPID

In addition, a Scottish Beef Calf Scheme (SBCS) delivers around £3.8M into the NE annually. This headage-based scheme has been replaced by a similar calf scheme under the new CAP regime which will deliver a higher level of payment.

In total, these support schemes deliver around £110M into the NE. This compares to total NE agricultural output before subsidies of around £650M.

Likely Impact of 2014 CAP Reform?

- The biggest SFPS payments on a per-hectare basis have been to intensive cattle businesses due to high historic headage payments. As a result NE cattle breeders and finishers, especially in Aberdeenshire, will be the biggest losers.
- Previous modelling by JHI for Scottish Government suggested that this type of regime would result in both losers and winners, but with more big losers in Aberdeenshire.
- Perhaps the NE could lose £17M of the £99M SFP, but the improved beef calf scheme would fill some of the gap, perhaps resulting in a £14M net reduction.
- Greening rules are complex, but will create some relatively small additional costs and income losses. However, there is a big variation between businesses.

Likely Impact of the shift from LFASS to ANC?

- The biggest potential impact is on upland Aberdeenshire and Moray. The proportions of businesses receiving LFASS payments are: Aberdeenshire 34%; Angus 19%; Moray 53%. Half the NE LFASS is received in Marr and Speyside/Glenlivet.
- If the ANC is applied on a strict income foregone/extra costs basis reflecting constraints on the ground, then support will shift to the west of Scotland and "up the hill". Farmers with better NE LFA land (Marr, Buchan, upland Moray) will lose out.

3.2 Current Strengths and Weaknesses of the Industry

The key strengths and weaknesses identified by the study are summarised below.

STRENGTHS

The NE rural economy

- The rural population is increasing everywhere in our study area, and Aberdeen City and Shire have been an **economic powerhouse** over the study period. This has a wide range of positive impacts on the land-based sectors – from well-paid part-time job opportunities to high property values and direct marketing opportunities.

Farm-Level Strengths

- **Strong balance sheets** = stability and ability to invest. This is reflected in the high level of investment in farm infrastructure over the last 7 years, assisted by the availability of SRDP grants. Even in volatile sectors such as pigs and dairy, the committed producers have made large investments.
- While having only 16% of the total agricultural area, the NE has retained **large shares of Scottish farm production**: 43% of the arable area, 51% of the potato area, 39% of the intensive crop area, approaching 50% of the oilseed rape area, 44% of the cereal area, a third of the feeding cattle, and 67% of the pigs.
- The sheer mix of enterprises and predominance of **mixed farming** within the NE, especially in Aberdeenshire and Moray, was outlined in the previous 2003 to 2007 report, and remains a major strength. It allows synergy between enterprises (straw to cattle and pigs, dung and slurry for crop land, poorer-quality grains to livestock, higher cereal yields after break crops, spreading the costs of machinery and staff, rotational benefits on yield, and reduced business risk).
- **Expansion of the intensive crop sector** (soft fruit and vegetables) in Angus and Kincardine is a tremendous example of market-led growth, reversing the "normal" trends of employment decline and consolidation. This has created a hub of expertise in Angus. The growth of the seed potato export business throughout the NE is a similar success.

- **Restructuring** of the traditional sectors is happening at a controlled pace. Following the decoupling of subsidies in 2005, it could have been much more extreme. The reshaping of businesses and reallocation of labour and capital resources is essential if the NE land-based sectors are to provide what the region most needs – profitable businesses in rural areas. There is a general belief in finding a way forward rather than ceasing production.
- **Specialisation at the sub-region level** can be seen as a strength. For example, South and East Angus dominates intensive crop production, playing to its strengths in soils, micro-climate, proximity to markets, research facilities and skills.
- The emergence of a large number of **small-scale units** – hobby farms, horsiculture, amenity units – provides some strengths for the region: maintaining the rural population; environmental benefits; income to commercial farmers selling horse hay and machinery services and renting their land; start-up opportunities; and supply trade opportunities in "rural stores".
- **Hill areas are close to lowground arable** areas, allowing the beneficial movement of feeds and livestock in each direction.

Processing, Marketing, Input Supply and Infrastructure

- The NE has a **large share of Scotland's meat processing capacity**; 33% of cattle, 42% of sheep, 72% of pigs. All these shares have grown since 2008. With this comes a lot of expertise and the anchoring of a lot of production within the area. The new Brechin pig abattoir and the planned Scotbeef Inverurie plant at Thainstone are major votes of confidence in the future.
- The NE has a strong and **vibrant cooperative sector** assisting marketing, production and input supply. For example, Ringlink has a major impact on how farms organize labour, machinery, training and input supply, and Scottish Pig Producers played a major leadership role in saving the entire sector when the only processor closed.
- The **combinable crop sector** in the area has some major strengths, including its proximity to what has been a rapidly expanding whisky sector, the extensive port infrastructure and the large cattle, pig and poultry sectors.
- **Egg production** sector has expanded substantially, led by Farmlay at Strichen. They have a range of contract growers and have exploited the demand for barn, free-range and organic eggs.
- Farm woodland expansion has been small, but there is a greater awareness of the scale and **value of woodlands on farms**. The RHI incentive and the cost of fuel have created an awareness of the value of biomass for drying grain and heating buildings and houses.
- The successive **SRDP Food Processing and Marketing grant schemes** have been a major strength, helping local businesses to invest and expand.
- There are a good number of relatively new **farm-based food and drink businesses** in the NE, and there are more consumers who want interesting, local products with provenance. These are great entrepreneurial role models for young people in the industry and along with Farmers' Markets, they are creating a local food culture.
- As stated in previous reports, the strength of **farmer networks** and support services has been a very important aspect of the NE: two Farm Management Associations, the Royal Northern Agricultural Society, the Grampian Food Forum, a large number of discussion groups, a Grassland Society, a vibrant agricultural show circuit, the James Hutton Institute at Dundee and Aberdeen, SRUC at Craibstone, Angus, Aberdeen and Moray Colleges, five SAC consultancy offices, an unusually large number of independent crop and business consultants, and a crop advice coop. Aberdeen and Dundee Universities are now getting back into agriculture and rural issues, especially reacting to the carbon and food security agendas. There is a strong local agricultural press and vibrant Young Farmers Clubs. There is a positive culture around new ideas, and lots of keen young people who want to farm.
- The diversity of ownership and the **range of mechanisms for occupying land** are major strengths, allowing businesses to grow in the long term and flex in the short term.

Case Study: FARMING AS A FOOD BUSINESS

The Devenick Dairy is based on the 320-acre dairy farm of Bishopston, Banchory-Devenick, just to the south of Aberdeen. Farmed by the Groats (Richard and sons Kenny and Iain), it is one of the last of the many dairies which used to ring Aberdeen. The dairy had followed the usual progression of doubling cow numbers, taking on more land and adopting high input/ high output technology, but ended up running faster to stand still. When sons Kenny and Iain returned from College, things had to change. They were keen to diversify. Fast-maturity yoghurts and soft cheeses were the first products, and the new Farmers' Markets provided cash, rapid consumer feedback and a relatively safe learning environment.

Today, Devenick Dairy is renowned for its wide range of Doric-denominated cheeses – "Fet Like", "The Coos R Oot", The Reeds A Richt" and "Crynoch Blue". Cheesecakes are a major product, as are homegrown veal, related local meat products and unique flavoured oatcakes manufactured by Kindness the Bakers. As well as the family, there are 6 employed staff, all local. There are weekly van deliveries to 200 shops, delis, restaurants and food service outlets from Keith to St Andrews. Eight Farmers' Markets and around 30 mainly summer events are the second most important route to market. At the farm, there is a small shop, a cheese factory and a butchery.

Labour and management time is at a premium, so the farm has been totally reorganised to operate as a one-man unit. A NZ-style paddock grazing system has been adopted to maximise production from grass and self-feed silage is the main winter feed.

For the future, they want to avoid multiple retailers – margin, not volume, is key. However, they only add value to half their milk production, and see only low prices from the milk processors, so expanding van sales is important. At the farm, they aim to convert the old steading into a café, shop, kids' play centre and viewing gallery over the milking parlour.

WEAKNESSES

The wider economy

- Dundee and some parts of rural Angus have **high levels of economic inactivity**, low incomes and low scores on wellbeing indicators. These areas also have a severe demographic outlook, with large proportions of the population retired in coming decades.
- Moray lacks the beneficial impacts of a **city focal point**, and some parts share low average incomes and wellbeing indicators with Dundee and parts of Angus.
- Infrastructure has been a problem. Internet sales are given a low ranking by small food businesses in the area, partly due to **slow broadband**.

Farm-Level Weaknesses

- **Livestock numbers of almost all types have declined**, despite good prices. The industry in general has not as yet found routes to profitably expand cattle and sheep numbers. The loss of critical mass in the pig and poultry sectors is a real concern. Potential new entrants fear the loss of local processing and volatility in returns.
- **Subsidy reliance**, especially on what were intensive cattle farms, is a major weakness.
- There are **structurally weak areas**. The Angus Glens show sharp livestock decline, poor economic indicators and does not seem to benefit from its location close to intensive arable farming. Lack of livestock skills and interest in the lowground may be an issue.
- Outwith the pig and poultry sectors, there is **little sign of any improvement in technical efficiency/ productivity**. Labour per unit of output, stocking rates and lambing percentages are roughly static. Cereal yields have plateaued, and oilseed rape yields may be falling. Abattoir feedback is that lots of cattle are surprisingly old when slaughtered and have often been through several farms over their life. Cattle supplies are skewed to spring/early summer, reflecting the shift to spring calving, but also an inability to finish cattle at grass.
- Increasingly specialized intensive crop farms are worried about the **loss of soil organic matter**, tight potato rotations, disease build-up and lack of spread of risk.
- The **hollowing-out of farm size** reduces the pool of skilled family farm labour and reduces the scope for new entrants. The large number of **small holdings** may create risks and weaknesses, for example for biosecurity. It also shifts land into low output uses (undermining processors) and may not always have environmental benefits.

- A greater **reliance on part-time**, casual and seasonal staff, especially migrant labour in some sectors, may be a weakness. There could be a lack of continuity, commitment, and local farm knowledge. **Skilled, capable staff are scarce**, but projections show that more will be needed as the existing workforce ages and retires. **There is not a local pool** of interested people despite proximity to some areas of high youth unemployment.
- The steady increase in owner-occupation rates clearly provides strengths, but it also reduces the **pool of land for tenancies** for new entrants. There is a complete **lack of share or contract farming mechanisms in the livestock sector**, which would allow the progressive movement of new entrants into the capital-intensive breeding livestock sectors.
- There is a **shortage of linkages and cooperation between specialized cropping farms and livestock businesses**. These could benefit both types, e.g. lower wintering costs for upland cattle farms, and higher organic matter for intensively cropped soils. The cooperation/ management skills (and physical infrastructure) are missing.
- After the difficult 2012 season, many bigger farms felt they had a **lack of resilience** – they had adopted lean low-labour systems and big areas of cereals, but were caught out by a bad year.
- Angus is **saturated for potato production**. Rents are high, and a greater shift to seed will be very difficult given the difficulty of finding PCN-free land in the area.
- Fewer occupiers/farmers means more **management pressure per individual**. This must be one of the drivers of livestock reduction. Management skills, organization and on-farm infrastructure need to improve. There has been a lot of investment in handling facilities, so this change is happening.
- There is a cultural **lack of appreciation of opportunities from farm woodlands.**

Processing sector and wider infrastructure weaknesses

- The **meat processing sector has very tight margins**, underutilized capacity, low added value, and heavy reliance on migrant labour. The weakness of the red meat processing sector results in poor market signals. The need for sheer throughput means that overweight and over-fat carcasses are not sufficiently penalized. Producers and processors do not often work together to maximize returns and reduce costs and waste. The lack of a **local renderer** means extra cost in transporting offal and Specified Risk Material south.

Case Study: NE RED MEAT PROCESSING

McIntosh Donald at Portlethen (owned by the UK wide 2 Sisters Group) is one of the largest red meat processors in Scotland, with a £125M turnover, employing 315 FTE staff (50% East European) and processing weekly 1,500 cattle and 2,500 lambs. Around 1,000 farm businesses supply cattle and 500 lambs, although approximately 250 supply 80% of the cattle required. The plant has moved steadily to add more value, with a cutting/deboning facility producing vacuum-packed cuts and chill capacity to allow meat to mature.

An abattoir is a disassembly business, breaking down carcasses into constituent parts and marketing them to deliver the greatest value. The key to profitability is not just getting premium prices for the high-value steaks and roasting joints, but finding a profitable market for all the cuts and by-products (such as hides). Very strict health and environmental management regulations impose significant costs, with a vet permanently on-site and six Meat Hygiene Inspectors.

Sales to the multiple retailers dominate, accounting for two thirds of the plant's output. Food manufacturers take another 15%. Export outwith the UK is small (6% of output), as is now typical across the sector. After the 1996 BSE crisis and export ban, the company had to focus on the UK market. The strength of sterling, inherent higher risks in exporting, and tight cattle supplies mean that the focus remains domestic. The Scotch brand is critical – without it, there would be no local processing on this scale.

McIntosh Donald was one of the first companies to establish a farmer producer group to improve communication in both directions and to get farmers to think of themselves as food producers. They meet three to four times and produce two newsletters over the year. Getting sufficient local supply of cattle and lambs is a major concern for the future.

- **Milk processing in the NE** is in a very fragile condition, reliant on one under-utilized plant and with fears that 51 herds is insufficient critical mass.
- Scotland lacks **potato processing capacity** (24,000t versus total production of 1.22Mt) and there is none in the NE. This makes the ware market very volatile.
- **Broiler processing** has disappeared from the NE, and the nearest plant at Coupar Angus has reduced throughput by a third and takes no birds from north of Aberdeen.
- There is a lack of **local control** – most processors are international businesses. If times get tougher, they may not be committed to the NE.
- **Pig sector scale** – throughput of the Brechin plant will be well below what Tulip would regard as viable, and is totally reliant on the need for a Scottish product.
- The small farm-based food and drink businesses which have sprung up over the last 10 years handle a small proportion of even their own farm produce, and **few expand from micro business to SME scale** where they could have a wider industry impact.
- A strong SRUC presence is critical for the local industry to deliver the **range and quality of courses** required for the future. Aberdeen University and RGU currently have no agricultural courses and little rural focused education.
- There is **little industry link with R&D programmes and organisations** within or outwith the area. Exceptions are JHI involvement in plant breeding and NE feed suppliers working with SRUC researchers. Links into existing NE organisations such as the Grassland Societies and Farm Management Associations are poor or non-existent. There have been a good number of farm technical improvement programmes, mainly sponsored by QMS, HGCA and to a lesser extent Scottish Government, but the KT effort is often uncoordinated. Overall, the **NE lacks a centre or hub where lessons can be learned and retained**, where links can be made between producers and researchers, and where advanced management skills can be learned. In the past, this was provided by SAC Aberdeen and the Universities, but a less expensive model will be required for the future.
- **Diversification activity is fragmented,** e.g. no over-arching agri-tourism group sharing best practice.

3.3 Future Prospects for Agriculture in NE Scotland

THREATS

- The **NE faces more subsidy support threats** than most other areas of Scotland. The new CAP regime is a major threat to intensive beef farms, and processors fear that producers may slash numbers. The tightening of criteria for the new LFASS scheme could hit the better upland areas of Aberdeenshire and Moray. "Greening" is seen as a threat, especially the loss of land to EFA, though its major cost may be in complicating systems.
- What now looks like a long-term **drop in oil prices** will affect small Aberdeenshire farmers' ability to operate on a part-time basis; it may start to hit property capital values, and reduce opportunities for all sorts of diversification including small-scale food businesses which rely on wealthy consumers. It will also hit input suppliers who have diversified into the horsiculture and smallholder markets.
- A **long-term world commodity slump** and slow-down in East Asia will mean a longer period of low grain, milk and meat prices.
- Large portions of the NE **processing sector are threatened** by their small margins, the volatile and highly competitive business environment, and large international competitors. Given that much of NE production is handled by single processors, this is a huge threat to farm production in the NE. Supermarket wars and a **permanent change in the retailing model** from a large range of brand and product choices to a smaller number of key brands and own-label copy-cats may cut out smaller players, including the small NE food businesses which are hoped to be the drivers of future growth. For some of our main products – ware potatoes, lamb - there is **declining UK consumption**.
- Great chunks of the farm and processing industry are **reliant on migrant labour**. There are signs that East and Central European workers are moving up to better jobs, and UK policy has moved toward restricting migrant labour and could get tighter. In a similar vein, retention of the Scottish Agricultural Wages Board keeps **teenager wage rates** in the fruit and vegetable sectors higher than in England and other competitor countries, and the new "living wage" may make this worse.
- **Skill shortages** are a concern – not enough people are coming into the industry with high skill and education levels. There will not be enough young people in general as the rural population ages rapidly. In addition, there is the ongoing threat of **rationalization of agricultural education**.
- If **GM technology** is introduced in England, this could disadvantage Scotland in some products. For example, it could allow the growth of seed potatoes in England. Researchers and breeders may find Scotland unattractive. High agro-chemical usage may put consumers off Scottish produce. The counter argument is that the non GM position enhances the perception of Naturalness of Scottish produce.
- Specialisation within the NE has many advantages, but on heavily cropped land there is a long-term concern over **declining soil organic matter** and structure.
- **Climate change** is an accepted threat – for example mild winters could result in aphid problems in seed potatoes. More extreme weather events such as the recent floods and a perception of higher risk drives farmers to reduce intensity, including livestock numbers. Similarly, the **Carbon agenda** is a worry for livestock production – red meat is a target.
- Currency movements, especially **£ to Euro** rates, are a constant threat to margins. However, **leaving the EU** is seen as a bigger potential threat with huge impact on subsidy support, access to markets (especially if not in the linked trading area), support for research/development/KT, access to the EU labour pool, and the prosperity of UK consumers.
- **Leaving the UK** is seen as a business threat by most respondents in the land-based sectors, as the rest of the UK is such an important market for Scottish food products. In the 2014 NE Food and Drink Sector Survey, businesses selling outside the NE generated half their revenue from England. Concerns revolve around two areas: the higher costs and uncertainty of trade (a separate currency, non-tariff barriers for trade such as food safety rules, labelling, transport rules, immigration policy) and the fiscal situation (potentially higher taxes, higher interest rates and lower public spending due to the very large Scottish deficit, especially when oil revenues are low). Smith Commission changes could soon cut funds available for public spending in Scotland. This has obvious knock-on effects. The biggest concern is perhaps **constitutional uncertainty**, which might hold back essential inward investment in the processing sector.
- There are specific concerns over the **separation of powers** without a true federal structure to decide supremacy. For example, if the Scottish and UK Food Standard Agencies disagree, it is unclear which would have supremacy, and what impact this would have on movements across the border.
- The **Land Reform** debate is seen as never-ending and immensely divisive. The major concern is that it will accelerate the decline in the area made available for letting and reduce the ability of the industry to adjust and welcome new entrants. The Scottish Government proposal to extend **Legal Rights** to immovable assets in inheritance law, could have a profound impact on family farms which have not organized succession during the lifetime of the parents, forcing their break-up.

OPPORTUNITIES

- **Premium product** developments must be a major opportunity: more seed potato exports and other seed crops; fruit expansion, e.g. blueberries; more small-scale food and drink businesses; further whisky industry growth and closer links between distilleries and grain growers. There are lots of new food and drink product opportunities including functional foods.
- The **growth of currently small food businesses** into medium-scale and large businesses using large quantities of local farm produce is a major hope. **Inward investment** in processing is vital for some sectors such as milk. **Co-op led investment** in processing must also be a priority, anchoring processing to local production.
- For these to become reality, an **end to the EU/World recession** is important, providing more disposable income for niche and local products, plus a resumption in the growth of the whisky industry.
- The **decline in CAP support can create opportunities**. It will force an **increased business focus** and an emphasis on professional business management – setting targets, planning, budgets, monitoring performance. Many commentators feel there is huge scope to pull average producers up to **best-practice levels**, plugging the gap created by SFP reductions. The new SRDP provides opportunities for agri-environment schemes, woodland and a Beef Efficiency Programme.

Facing The Future

Case Study: GETTING INTO FARMING THE INTENSIVE WAY

Derek Robson and his father operate a stand-alone 370-sow pig unit at Crossfields, Turriff. Derek's wife Sally, a qualified vet, helps out at peak times. Derek built up his experience in pigs firstly by helping out his father, a pig manager at a unit near Kintore, and then as a unit manager in a large pig business near Glasgow while his wife was studying at vet school. Vion's move out of the UK and resulting reduction in pig production in the NE created an opportunity to move north again and to get into farming in their own right – they leased the empty but modern Crossfields unit in 2010.

They had limited capital and couldn't afford to employ labour. Banks wouldn't look at them. Asset finance was used to expand the farrowing space with portable units, and two units were leased from another farmer. Sows were sourced from Derek's previous employer. They need a simple cash generating system, so 4-week-old weaners are sold to a finisher in Yorkshire. To concentrate their limited labour and to supply full lorry-loads of uniform piglets, they have adopted 5 weekly batch farrowing. Typically, 90 to 100 sows farrow over 3 days. The family operate night and day shifts, maximising attention to detail. Performance is good: 13.3 piglets weaned per farrowing, just over 30 piglets per sow per year. They expect to sell 13,000 weaners this year.

To reduce risk, they have a minimum price contract with their buyer and fix feed prices months ahead with their supplier on the basis of a base weaner price. There are very few movements on and off the unit, so disease risk is minimised. The rolling lease is a risk, but their rapid turnover system means they could exit quickly if required. High performance is their greatest security - they are fitting a new auto-feed system and trialling "balanced floors" to avoid "laid-on" piglets. With an eye to the future, they are doubling the size of their house, partly to meet the needs of their young family, but also to build up collateral.

They have a clear strategy to build up capital using a simple but highly technical efficient system with a fast turnover. Surely the pig sector is an opportunity for more new entrants in the NE?

- The restructuring of cattle production can be an opportunity for new entrants and expanding businesses if **"phased entry" mechanisms such as share farming** or similar partnerships, which allow risk sharing, labour-sharing and phased purchase of breeding stock, can be established.
- There is no shortage of ideas, new technologies and best-practice examples, including rotational grazing systems, genetic tools, EID, precision farming and integration of hill livestock and lowground cropping resources. **The real opportunity is to get greater uptake of these up-and-coming technologies and systems**. Leadership by local organisations is required.
- There are opportunities in **farm woodlands**: biomass, timber, tourism, and amenity. These improve a farm's long-term resilience, as it grows another asset. The SRDP agro-forestry scheme provides an innovative route into woodland.
- Well-planned tourism diversification must be an opportunity for the NE, especially **food tourism**, given the range of local food, fish and drink product available.
- **Renewable energy** may be an opportunity despite support cuts, especially if oil prices return to their long-term upward trend. The recent **oil industry decline** may itself be an opportunity, to attract high-calibre minds back into the sector, and to reduce the cost of labour and oil-based inputs (fuel, fertilizer, transport).
- **Labour and skills improvements are essential**: there is an opportunity to get more people interested in agricultural education courses; expansion of "work-ready" and apprenticeship schemes is popular; a reduction in East European labour could re-create links to the local labour force and create progression routes from casual work to full-time, though this needs more local commitment and engagement.
- **Local community engagement** may be an opportunity – community renewables, community paths, community allotments. Government policy is heading in this direction.
- **Infrastructure improvements** will create opportunities – the AWPR and broadband improvements will improve the speed and reach of doing business.

4. WHAT NEEDS TO BE DONE?

Over the 2007 to 2014 period, the local agricultural industry has gone through much more change than we may realise.

The industry has simplified, in most areas scaling back its livestock, simplifying and expanding cereals, reducing staff and attempting to reduce risk. This has been done to eliminate the most unprofitable livestock, to accommodate a lack of labour and ageing farmers, to exploit higher but more variable grain prices, to make space for developing other sources of income or an off farm job, and all with an eye to potential reductions in future support as a result of CAP reform. Intensive livestock took a battering in the NE, but may have now stabilized.

The sub-regions within the NE show an increasing degree of specialization in land use, exploiting their natural advantages. A few areas are maintaining beef cattle intensity, some are going sharply part-time, a couple are becoming centres of intensive fruit and veg cropping, and others are extensifying.

There has been a lot of investment in renewables aided by FITs and RHIs, and in buildings and environmental schemes supported by the SRDP. This has created big positive cashflows for some land managers, and an increase in capacity. Forestry has been very active at the processing end, aided by the biomass boom, although this has not been reflected in much more farm woodland planting.

However, while there has been real change over the last 7 years, a key message from this study must be that there is **potential for much more radical change over the next 7 years**. With the change in CAP direct support and a review of the LFASS imminent, we are at a critical decision point, especially for beef farmers. Cashflows are tight, grain prices have recently crashed, and the support for new renewables is ending abruptly. The primary processing sector is weak. In addition, the oil industry is in recession, reducing off-farm and diversification opportunities in Aberdeen and Aberdeenshire.

In addition to changes in the CAP, the Land Reform Bill, changes in UK government energy policies and the forthcoming EU referendum all have potentially major implications for land managers and processors in NE Scotland and make decision-making more difficult.

The outlook is not all negative. There are gainers from the CAP reforms, as well as losers. Land prices are still high, and many of those who have invested are ready to expand. There is no shortage of ideas for tackling the underlying lack of profitability in sectors such as beef. The local food sector is positive and wants to expand. But there is a real threat that, as described in our scenario planning workshops,

Image Courtesy of Colin Prior Photography producers may react to uncertainty by cutting back livestock numbers, with a resulting loss of processor viability, and a knock-on to the food industry and the input supply infrastructure.

What is needed?

A vision for the future. This has more impact on decisions than we generally realise. Producers need models for how they can build a successful future on their farms and in related businesses by utilizing their resources to best effect. For example, there are tremendous models for profitable high-output farming developed by grazing groups and models for successful diversification incorporating active farming in agri-tourism groups. If people do not believe that there is a way to farm successfully, they will scale back and work elsewhere.

Leadership. This is strongly related to the point above. Successful sectors, which survive shocks, generally do so because there is locally rooted leadership. Scottish Pig Producers would be a good example. The industry needs more leadership in other sectors to provide a business/ market-led vision of the future, to give producers confidence in the future.

Flexibility. There will be change. But the more flexible the business and policy environment, the easier it will be for one business's reduction to become another's expansion. The industry needs flexible land tenure laws, flexible labour, the full use of rings' ability to flex machinery and labour, new share-farming mechanisms, a culture which supports innovation and change which includes leadership by the industry's representative bodies, good sources of advice, and good linkages between all the land-based sectors – farming, food processing, tourism, forestry, country sports, environmental interests and the heritage sector. Planning strategies have their part to play.

Education/ Research/ Knowledge Transfer. The NE must have better-than-average technical performers and business people to compete at a distance from markets and with natural disadvantages. Very few land managers feel that they are plugged into their local education centres or into national researchers. There are some good examples of groups of producers working with researchers, but they are few and far between. The input supply sector is more likely to adopt this role. The old Knowledge Transfer structures – RNAS, Grassland Societies, FMA, discussion groups with which the NE is well served – provide a good service and interesting programmes, but are not at the forefront of applied research or knowledge transfer. If there is no national KT leadership, then local structures could take on part of this transformational role. Monitor farms and similar initiatives have been a real success in the area. There is a need for a hub or a focal point within the NE to facilitate all of this. Building up human capital is key to overcoming our peripherality.

Collaboration/ Cooperation. It could be said that this is always trotted out as a panacea when the industry is under pressure, but it was one of the strongest messages from the future scenario workshops, and especially from farmers famed for their independence. If profits are not there, the industry needs ways to cut costs – sharing machines and labour is an obvious option. Reciprocal cropping – I graze stock on your arable farm, you grow some crops on mine – is an obvious way to specialize without losing the benefit of rotations. And it is a way to add value by organizing marketing, if done properly. The rings are already major facilitators, but more could be done.

Business Skills. It is arguable whether business management knowledge is any better in the industry today than it was 30 years ago. Few farms prepare a forward budget and use it to manage the business. Only small numbers get a third party view of how well they are performing. Few do any sort of benchmarking at all. Only a small proportion could do a robust financial appraisal of a new venture.

Processors. Perhaps the strongest message from this study is that entire sectors depend for their survival and prosperity on having fairly local primary processors, and they are worried about how few there are and how viable they are in the long term. Most sectors are down to two or three main buyers, several effectively down to one. The industry needs to help secure them. Communication with producers needs to improve. More collaboration or simply communication might help eliminate costs in the chain. Contingency planning may be required for those local sectors left with one outlet so they have a plan if it closes. The NE has a surprising number of small farm-based processors, but few ever get up to even SME scale where they would start to use significant levels of local production. The barriers to their expansion need to be explored. New companies need to be attracted into the area, and macro and constitutional stability/ clarity is required to attract that inward investment to what is a small supply base on the edge of the UK and the far edge of Europe.

Regional Branding. This is strongly related to the point above. Grampian Food Forum and its local awards are looked upon enviously by other regions. More needs to be done, and further afield, to let people know that the NE including Angus has a forward-looking, opportunity-driven food sector closely linked to professional farmers and processors, and with a tremendous provenance story to tell.

Quality Labour. This is a long-standing issue. Oil, image and the loss of the small farm labour pool has made it difficult to find young people who want to work on farms. Mechanisation and East European labour has filled the gap. There are lots of young people looking for jobs, but it has been difficult to get them on to farms early enough to learn simple work skills and the complex requirements of livestock systems. Statutory wage rates and a lack of vocational training have been barriers. The Ringlink model supported by Aberdeenshire Council is a tremendous development if it can be rolled out to a larger-scale apprenticeship/trainee scheme. This needs more work and more farmer commitment. The lack of local labour on farms does not help the image of the industry. The fact that (despite the best efforts of many farmers in the past) thousands of seasonal jobs in Angus are not taken up by youngsters from local towns and Dundee, where there is relatively high youth unemployment, is surely a tragedy.

Adding Value on the Farm. Relatively few farmers develop on-farm enterprises, though one of the features of the last 10 years has been the emergence of very successful farm-based processors of a range of local products including cheeses, meats, drinks and rapeseed oil. They use a relatively small quantity of farm production, but secure a number of businesses, employ more people, and most importantly develop a local food culture which underpins so much tourism and town/city visitors to rural attractions. These developments reflect the emergence at global level of the "slow food" agenda. One or two of these processors may become big and eventually have a major impact on the NE.

Good environmental and carbon credentials. NE Scotland has a reputation for environmentally friendly land use, and much local tourism is underpinned by the region's unique and extremely diverse landscapes. However, balancing environmental objectives against production objectives is becoming more challenging given Scottish and UK policy in relation to carbon targets. While changes in farm production technologies may go some way towards reducing the level of emissions from agriculture, there is clear potential for better integration of agriculture and forestry to satisfy carbon targets: at present it seems that the two sectors remain very distinct. Dealing with carbon targets and looking after the environment are part of the NE brand.

5. RECOMMENDATIONS FOR THE STUDY PARTNERS

Individual businesses and organisations can and should tackle the issues raised in this study. However, the public bodies supporting this study (NESAAG, Aberdeenshire, Angus and Moray Councils, Scottish Enterprise, HIE Moray, FCS) and other development organisations need to concentrate their effort where individual businesses cannot be expected to take action. The following recommendations are presented as a basis for discussion with the commissioning organisations and the wider industry. All of these recommendations are linked. For example, rural trainee development links into the support for local rural education provision.

1. Leadership and the role of NESAAG

NESAAG has no financial or direct political power, but it can communicate the vision of what the industry needs to do, and it can lobby business, industry organisations and Government to tackle some of the specific recommendations listed below. NESAAG can also lead by maintaining its biennial review of the NE land-based sectors and by informally monitoring the delivery of the recommendations.

2. A Forum for the Angus Agri-Food Sector

It became clear through our consultations and the Angus Scenario Planning workshop that the Angus industry would very much like a forum similar to NESAAG, to discuss key local issues and provide an ongoing dialogue with public bodies.

3. Supporting Rural Trainee Development – Modern Apprenticeship Development

To some extent, this is already underway under the auspices of Ringlink, SRUC and Aberdeenshire Council. Evidence suggests that many more trainees are needed.

4. Rejuvenation of the Local Knowledge Transfer Infrastructure, prioritising action on CAP change and creation of an Agri-Food Hub

For the NE industry to prosper, it needs to be better informed than its competitors, with better business skills and stronger links to local processors and food industry.

In the short term, getting the whole industry to plan for subsidy reduction must be a priority. There are lots of consultants who can provide CAP information and advice on business changes. However, there is a general feeling that a sizeable group of farmers have not yet looked at the implications for their business and may suddenly have to cope with lower income without options for change.

The Aberdeen City Region Deal proposes an Agri-Food centre, so there may be scope to expand this to be a centre for knowledge transfer and business skills. It is critical for local farmer organisations to get involved.

5. Supporting Local Agri/ Rural Education Provision

Good local agricultural education and learning in its broadest sense must be a cornerstone of our competitiveness. Good education also creates networks, aspirations and a culture of continual learning. NESAAG and the industry can lobby for SRUC Aberdeen, but it would be great to also get the Universities and JHI involved at degree level and above. The industry can help improve quality by opening up farms to students and getting students on to the many KT programmes. More KT partnerships could be created to link the industry to Universities and research establishments.

6. Mechanisms for getting New Farmers into the Industry

New entrants = new ideas and enthusiasm. More programmes like the ones operated by FCS and Scottish Pig Producers are required to help young people get started with less capital. Share/ partnership mechanisms are required to allow new entrants to slowly buy in to existing breeding livestock businesses. The legal and business expertise is here to do it.

7. Building the Local Food Brand and Wider Rural Sector through the City Deal and Opportunity NE

The City Deal and the Opportunity NE initiative established by Sir Ian Wood are tremendous opportunities for coordinating and funding action to build the local food brand and to deliver the programmes needed to get the industry fit for the future. NESAAG and the study partners need to engage with these initiatives immediately, armed with this report.

8. A Strong Role for the NE in the Forward Strategy Consultation Process

There is a great opportunity to feed in the results from this study to the Scottish Government Forward Strategy consultation, to the benefit of the NE.

9. A Small Processor Forum

To a great extent, the Grampian Food Forum and other general business growth programmes already provide a means by which small farm-based food processors can learn and hopefully expand. However, this report identifies the expansion of existing small food processors, and the establishment of more, as a priority. A farm-based food producer forum, with an allied outreach programme to attract new entrants, might have more impact.

10. An Agri-Tourism/ Food Tourism Strategy

Tourism has not been an important diversification in most of the NE, given the opportunities available in the oil-related industry. However, this is changing. There is a great range of food and drink products, tremendous scenery, a unique Doric culture and a fantastic history. There are great examples around the world of how networks of farm-based food tourism providers have developed profitable businesses. The same could be done here. Indeed, an excellent group is being developed with Council support in Angus. There is a need to replace oil visitors. Dialogue is needed with the new and stronger VisitAberdeenshire.

11. Contingency Planning

This may seem a negative action, but in volatile times it is essential. The NE pig industry was well ahead in its thinking when the only volume processor closed, and to a great extent this saved much of the local pig farming sector. Are the dairy and other sectors prepared? NESAAG may be able to play a facilitation role.

GLOSSARY

Acronym	Description
ANC	Area of natural constraint
BSE	Bovine spongiform encephalopathy ('mad cow disease')
CAP	Common Agricultural Policy
EFA	Ecological Focus Area
EU	European Union
FCS	Forestry Commission Scotland
FiT	Feed in Tarriff
FMA	North East Scotland Farm Management Association
GM	Genetically Modified
GMO	Genetically Modified Organism
Greening	Environmental measure under CAP 2014-2020
GVA	Gross Value Added.
ha	Hectare
HGCA	Home Grown Cereals Authority
HIE	Highlands & Islands Enterprise
Horsiculture	Commercial and hobby-based activity related to horses
IACS	Integrated Administration and Control System
JHI	James Hutton Institute
LFA	Less Favoured Area
LFASS	The Less Favoured Area Support Scheme
NE	North East of Scotland, for the purposes of this document covering Aberdeenshire Angus and Moray local authority areas.
NESAAG	North East Scotland Agriculture Advisory Group
NZ	New Zealand
PCN	Potato Cyst Nematode
QMS	Quality Meat Scotland
R&D	Research & Development
RHI	Renewable Heat Incentive
RNAS	Royal Northern Agricultural Society
SAC	Formerly Scottish Agricultural College. See SRUC
SAC Consulting	College Consultancy Service, part of SRUC group
SBCS	Scottish Beef Calf Scheme
SFPS	Single Farm Payment Scheme
SME	Small and medium-sized enterprises
SRUC	Scotland's Rural College – formed from merger of SAC with Barony, Elmwood and Oatridge Colleges
SRDP	The Scotland Rural Development Programme (SRDP) 2007-13

Further information on EU acronyms at ec.europa.eu/agriculture/glossary/index_en.htm#h

This document uses data and information derived from a range of sources. Some figures may differ from other published figures, and some summary data have not been published for disclosure control reasons. Responsibility for any errors in statistics or interpretation rests solely with the project team.

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