Agriculture Statistics

March 2009

Aberdeenshire COUNCIL

Aberdeenshire has 9% of Scotland's land area but 26% of the national arable total. Although there are 7,122 agricultural holdings in Aberdeenshire, the number of farm businesses is estimated at 2,900, resulting in an average farm business size of 180 hectares (440 acres). Over 9,200 people were recorded as being employed or engaged in agriculture within Aberdeenshire in June 2007 (2% of local employment) contributing to a food and drink sector which provides 10,500 jobs in Grampian – 30% of the Scottish food industry total.

These statistics are drawn from the report 'Agriculture in Aberdeenshire – Looking to the Future' which analyses trends for the sector during 2003-2007 and was published on 26 November 2008. It can be found at: www.aberdeenshire.gov.uk/support/agriculture/future.asp

Land and Holdings

The total agricultural area recorded for Aberdeenshire in 2007 was 517,817 ha – around 9% of the Scottish total, but it contributes a much higher proportion nationally of most crops, livestock and farm labour. Arable land in Aberdeenshire stands at 156,000 ha and comprises 26% of the national total. Around 40% of land in Aberdeenshire is rough grazing, 30% is arable and the remaining 30% is in grass. In 2007, approximately 13% of the arable area of Aberdeenshire (20,000 ha) was in set-aside or left fallow.

Between 2003 and 2007, the number of holdings recorded in the June census in Aberdeenshire rose by nearly 180, or 2.56% (just above the Scottish average) to 7,122 (*see Table 1*). The average holding size in Aberdeenshire in 2007 was 72.71 ha, down from 73.86 ha in 2003 while the national average was virtually unchanged over the period (109.7 ha in 2003 falling to 109.07 in 2007).

Table 1 - Holdings Data

Number	2003	2005	2007	2003-07
Aberdeenshire	6,944	7,044	7,122	+2.56%
Scotland	50,322	51,094	51,319	+1.98%

Average Size (ha)	2003	2005	2007	2003-7
Aberdeenshire	73.86	73.22	72.71	-1.56%
Scotland	109.70	107.97	109.07	-0.58%

There are 4,500 occupiers, of which only 2,000 are full-time, but there are 2,900 Single Farm Payment Recipients, perhaps the best measure of the number of farming businesses, suggesting an average farm business size in Aberdeenshire of 180 ha (440 acres). The average figures mask rapid growth at both the smaller end of the range (hobby farms) and of large commercial units. There are more owner-occupied farms in Aberdeenshire than in most of the rest of Scotland. Around 10% (300) of farm businesses account for 40% of Aberdeenshire farm output.

Within Aberdeenshire, the rate of increase in the numbers of holdings was greatest in Buchan, Banff and Buchan and Garioch, and smallest was in Marr. The average holding size in Kincardine and Mearns actually increased by over 3%.

Table 2 - Holdings Data (Number and Size) by Administrative Areas

Number of Holdings by Admin Area 2003-07			
Admin Areas	2003	2007	% Change
Banff and Buchan	1,049	1,084	+3.34%
Buchan	1,045	1,096	+4.88%
Formartine	1,432	1,459	+1.89%
Garioch	1,151	1,185	+2.95%
Marr	1,423	1,440	+1.19%
Kincardine and Mearns	844	858	+1.66%
Aberdeenshire Total	6,944	7,122	+2.56%

Average Holdings Size (ha) by Admin Area 2003-07			
Admin Areas	2003	2007	% Change
Banff and Buchan	52.21	50.59	-3.11%
Buchan	46.96	44.35	-5.56%
Formartine	51.99	51.09	-1.72%
Garioch	43.58	42.17	-3.25%
Marr	159.70	159.65	-0.03%
Kincardine and Mearns	67.78	69.90	+3.14%
Aberdeenshire Total	73.86	72.71	-1.56%

Holding Size Distribution

When comparing the size distribution of holdings in Aberdeenshire with Scotland as a whole, it is helpful to exclude rough grazing, which gives a misleading impression of scale in upland areas. The following table therefore lists the size distribution data for crops and grass only.

A comparison of the size profile of Aberdeenshire and Scotland as a whole reveals that the former is characterised by a higher proportion of holdings in all size categories over 20 hectares. Aberdeenshire is also distinguished from Scotland as a whole by having significantly positive trends in the number of holdings in the two smallest categories This again highlights the increasing importance of hobby farming and splitting off pieces of land when steading and cottage sites are sold. The size categories higher up the distribution are rather broad (to avoid disclosure), and this probably masks an increase in the number of large holdings.

Table 3 - Crops and Grass Size Distribution in Aberdeenshire and Scotland 2003-2007

Hectares Crops and Grass	Aberdeenshire			Scotland		
	2003	2007	% Change	2003	2007	% Change
< 5	2,128	2,163	1.6	15,324	15,213	-0.7
5 to < 10	645	659	2.2	4,613	4,632	0.4
10 to < 20	582	574	-1.4	3,999	3,901	-2.5
20 to < 30	449	424	-5.6	2,514	2,435	-3.1
30 to < 40	346	331	-4.3	1,886	1,788	-5.2
40 to < 50	306	278	-9.2	1,672	1,531	-8.4
50 to < 75	620	574	-7.4	3,293	3,061	-7.0
75 to < 100	448	409	-8.7	2,412	2,225	-7.8
100 to < 150	471	492	4.5	2,862	2,750	-3.9
150 to < 200	232	216	-6.9	1,423	1,325	-6.9
200 to < 250	124	124	0.0	701	729	4.0
250 to < 300	67	59	-11.9	388	383	-1.3
300 and over	92	100	8.7	613	683	11.4
Total	6,510	6,403	-1.6	41,700	40,656	-2.5

Arable Production

Aberdeenshire, traditionally seen as a livestock area, is a very important cereal growing area. *Table 4* shows that cereals account for 27% of Aberdeenshire agricultural output (15% for Scotland) and this ignores the value of cereals fed on-farm (which may be as much as a third of the total, compared to less than 10% in other arable areas of Scotland). The proximity to a large number of grain handling ports and an expanding malting industry is under-pinning the importance of the crop sector despite the apparent remoteness of the North East.

Table 4 - Aberdeenshire Share of Scottish Crop Areas 2007

	Aberdeenshire Hectares and Numbers	Aberdeenshire as % of Scotland
Total Agricultural Area	517,817	9
Cereals	110,754	27
Oilseed Rape	12,847	35
Potatoes	4,704	16
Total Cash Crops	131,841	26

Cash Crops

The cash crop area of Aberdeenshire (all potentially marketed crops, excluding forage crops and set aside) continued its established downward trend from 2003 to 2006. In those three years, 5% of the region's cash crop area was lost. In 2007 roughly half of this was restored to cash crop production, so that the net change from 2003-07 was only about -2.6% (*see Table 5*). Similar shifts were seen in the other Scottish regions, although the reduction tended to be greater, exceeding 10% (2003-06) in South West Scotland. The Aberdeenshire area has been the most stable area nationally.

Table 5 - Cash Crop Area Aberdeenshire, Regions and Scotland 2003-07

Cash Crop Area 2003=100	2003	2004	2005	2006	2007	% Change Cash Crop Area 2003-07
Aberdeen-shire	100.00	102.80	96.60	94.90	97.37	-2.63
North East	100.00	102.66	97.15	94.19	96.46	-3.54
North West	100.00	102.40	97.31	92.81	95.60	-4.40
South East	100.00	102.71	97.77	94.91	96.23	-3.77
South West	100.00	101.66	94.24	88.66	91.02	-8.98
Scotland	100.00	102.57	97.21	93.94	95.76	-4.24

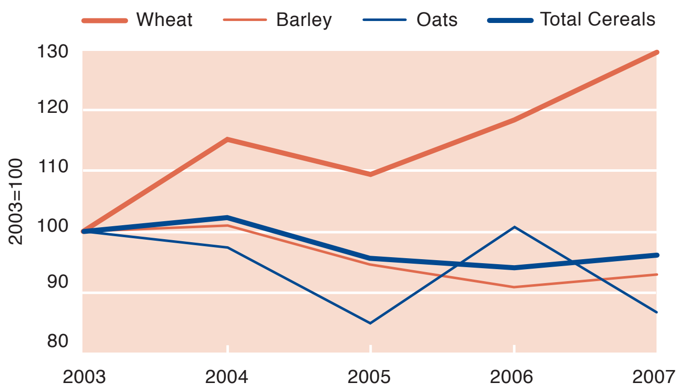
Cereals

The area under cereal crops showed a similar (if more extreme) pattern of change during the period (*Table 6 and Figure 1*).

Table 6 - Cereal Area Aberdeenshire, Regions and Scotland 2003-07

Cereal Area 2003=100	2003	2004	2005	2006	2007	% Change Cereal Area 2003-07
Aberdeen-shire	100.00	102.05	95.44	93.85	95.87	-4.13
North East	100.00	102.18	96.37	93.13	94.79	-5.21
North West	100.00	99.33	94.64	90.22	93.21	-6.79
South East	100.00	101.57	96.44	91.78	92.24	-7.76
South West	100.00	102.36	94.41	88.14	90.46	-9.54
Scotland	100.00	101.67	96.06	91.71	92.95	-7.05

Figure 1 - Trend in Areas of Main Cereals in Aberdeenshire 2003 to 2007



The trend in area under cereals (*Figure 1*) has been accompanied by a steady shift from spring sown barley and oats to winter sown wheat and barley. Over the 5 year period the Aberdeenshire area saw an increase in winter cereals of 8.5%, so that winter cereals now account for almost one-third of cereals grown. This reflects the greater profit potential of winter cereals, the benefit of spreading the harvest and machines, the attractive price of distilling wheat and the agronomic benefits of a rotation which includes oilseed rape (a break crop especially suited to the North East). However, a higher winter cereal area, especially wheat, increases risk (more working capital and more chance of a late wet harvest). Of the Scottish regions; South East Scotland, with its more favourable conditions, has the highest levels of winter cereals cultivation, almost half the total cereal area, and an increase of 12% over the past 5 years. At the other extreme, the North West has seen a decline of 2.6%, and the South West a decline of 15.7%.

Oilseed Rape (OSR)

Oilseed rape accounts for almost 10% of crop area in Aberdeenshire. The area sown has stabilised during the past five years, after rapid contraction in the late 1990s and the first couple of years after 2000. Elsewhere in Scotland, the North West and South West regions have seen significant declines in rape cultivation, while the South East has seen a modest increase. Clubroot disease provides a major rotational constraint on oilseed rape area, limiting the region's ability to expand output.

Potatoes

Potatoes account for approximately 3.6% of the cash crop area in Aberdeenshire (*Table 7*). The area planted declined by about 10% between 2003 and 2006 due to poor prices and some mediocre harvests, but recovered about half the lost area in 2007 in response to price improvements.

Of the Scottish regions the South East has shown the most positive trend in potato cultivation, increasing its area by almost 7% over the past 5 years. In 2007 potatoes accounted for about 8% of cash crop area in the South East region. The North West has also shown a modest increase in potato cultivation, whilst the South West, like the North East, has experienced a decline.

Seed potato cultivation, which now accounts for 75% of overall potato production in Aberdeenshire, showed a 5% increase from 2003-07 in contrast to an overall decline from 43% to 39% of total production across Scotland.

Table 7 - Potato Cultivation: Aberdeenshire, Regions and Scotland 2003-07

Potato Area 2003=100	2003	2004	2005	2006	2007	Potatoes as % of Cash Crops 2007
Aberdeen-shire	100.00	97.32	92.31	89.79	95.29	3.57
North East	100.00	97.85	92.67	88.81	93.74	3.60
North West	100.00	101.15	95.28	91.27	101.23	3.49
South East	100.00	105.40	101.70	102.69	106.65	8.20
South West	100.00	98.13	95.15	93.55	89.17	2.25
Scotland	100.00	103.34	99.26	98.91	103.01	5.88

Potatoes are a small crop by area in Aberdeenshire, but a big crop by value, and are produced by a small number of mainly large businesses who have made the commitment in capital investment and technology to this high risk, export-orientated crop.

Intensive Crops

Intensive crops are here defined as field vegetables, soft fruit, and glasshouse crops. Although they account for less than 1% of the arable area, they are increasingly important in Aberdeenshire, rising by almost 50% over the 5 years since 2003, the highest growth rate in Scotland.

Soft fruit accounted for the biggest increase in Aberdeenshire in this sector, rising 84% to 102 ha from 2003-2007, whereas the area under field vegetables rose 44% to 1,300 ha.

Fodder Crops

Fodder crops (e.g. swedes, kale, forage rape) are a relatively minor land use in Aberdeenshire, accounting for less than 3% of the arable area and but area increased slightly during 2003-2006 before falling back below 2003 levels in 2007.

Livestock Production

Aberdeenshire is the lead area in Scottish cattle finishing, carrying a quarter of Scotland's total at stocking densities more than twice the Scottish average (forage hectares). Despite a decline in breeding cattle numbers across Scotland as a whole, feeding cattle numbers in Aberdeenshire have increased over the study period, with around a third imported into the area from the rest of Scotland.

Table 8 - Total Cattle: Aberdeenshire, Regions and Scotland 2003-07

Total Cattle 2003=100	2003	2004	2005	2006	2007	Cattle per Forage Hectare
Aberdeen-shire	100.00	100.84	102.76	101.46	99.51	0.90
North East	100.00	100.99	103.25	100.82	98.87	0.84
North West	100.00	100.74	100.36	97.18	94.75	0.12
South East	100.00	100.59	101.66	98.90	96.69	0.43
South West	100.00	100.87	101.31	99.35	97.92	0.65
Scotland	100.00	100.82	101.63	99.26	97.45	0.41

The Beef Breeding Herd

The beef breeding herd (including heifers and followers) in Aberdeenshire has changed very little since 2003, accounting for a little less than one-third of all cattle in Aberdeenshire. This stability is remarkable given the stresses of BSE and FMD (Foot and Mouth Disease) restrictions, poor prices and the opportunity which decoupling of subsidies has provided to reduce numbers without affecting SFP (Single Farm Payment). However, producers do lack alternatives in many areas of Aberdeenshire.

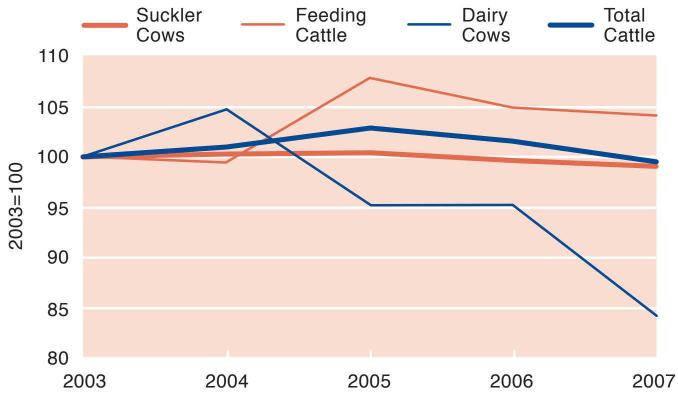
According to QMS (Quality Meat Scotland), even bottom-third suckler herds make positive Gross Margins, but once all fixed costs are allocated, net margins are recorded. However, as long as herds make a positive contribution to covering overheads, and the rest is covered by the SFP, most committed producers are considered likely to stay in the business.

It should be noted however that the study only covered two years of census data post-decoupling and so a major change over this short period was unlikely.

Table 9 - Beef Breeding Herd: Aberdeenshire, Regions and Scotland 2003-07

Beef Cows 2003=100	2003	2004	2005	2006	2007	Beef Breeding Herd % of Total Cattle 2007
Aberdeen-shire	100.00	100.20	100.35	99.59	98.93	31.20
North East	100.00	100.62	101.51	99.42	98.50	32.75
North West	100.00	101.22	100.39	97.71	94.84	44.04
South East	100.00	100.57	101.27	99.75	96.00	37.77
South West	100.00	102.14	102.58	100.25	96.45	26.12
Scotland	100.00	101.30	101.66	99.51	96.45	31.96

Figure 2 - Trend in Total Cattle, Sucklers, Feeding Cattle and Dairy Cows in Aberdeenshire 2003 to 2007



Feeding Cattle

Feeding cattle represent almost 38% of all cattle in Aberdeenshire – a higher proportion than anywhere else in Scotland. This dominance has been strengthened since 2003, as feeding cattle numbers in the area have increased by 4% (*see Figure 2 and Table 10*). In 1998 there were 103,070 feeding cattle recorded in Aberdeenshire while in 2007 there were 112,124.

In all other parts of Scotland the trend has been slightly negative. There is a structural difference between the breeding and feeding sectors, with finishing concentrating into larger units while the average size of suckler herds is quite small.

Table 10 - Feeding Cattle: Aberdeenshire, Regions and Scotland 2003-07

Feeding Cattle 2003=100	2003	2004	2005	2006	2007	Feeding Cattle % of Total Cattle 2007
Aberdeen-shire	100.00	99.40	107.67	104.84	104.08	37.74
North East	100.00	99.57	107.88	104.81	103.49	34.80
North West	100.00	94.78	97.99	95.22	91.87	19.02
South East	100.00	97.34	101.29	97.14	95.03	23.37
South West	100.00	101.52	103.11	100.46	98.55	18.63
Scotland	100.00	99.33	103.52	100.42	98.48	22.79

The Dairy Herd

Dairy cattle accounted for less than 5% of cattle in Aberdeenshire in 2007. This compares with a Scottish average of 15%, and a figure of 26% in South West Scotland. Dairy cow numbers have fallen in all Scottish regions except the South West, and by over 15% in 5 years in Aberdeenshire. Thus a period of retrenchment in the industry has served to increase the degree of regional specialisation.

Taking a longer perspective, in 1998 there was 21,254 dairy breeding stock in Aberdeenshire while in 2007 there was only 14,101. This is a function of steadily increasing yields as well as poor prices and a shift out of dairying due to poor profits.

While the Scottish average herd size is creeping up, some of the largest Aberdeenshire herds have ceased production. Total cattle numbers in Aberdeenshire have declined, but this is almost entirely due to decline in dairying while the beef sector has remained stable (*see Figure 2*).

The Aberdeenshire sub-regions show strongly divergent trends: dairy cow numbers have fallen substantially in Garioch, Marr and Kincardine and Mearns, but have increased slightly in Banff and Buchan, Buchan, and Formartine.

Sheep

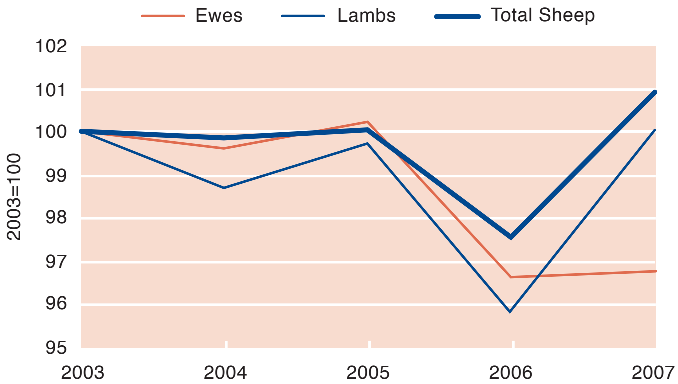
Aberdeenshire farms recorded almost 500,000 sheep in June 2007. The number of breeding ewes declined by approximately 3% between 2003 and 2007, a smaller decrease than both the North West and South West regions, but roughly equivalent to the change in the South East.

Aberdeenshire continues to enjoy a relatively high lambing rate, almost 1.5 lambs per ewe. This is significantly above the Scottish average. The rise in total sheep numbers, shown in *Figure 3* for 2007, reflects the good lambing conditions that spring and the subsequently high number of lambs recorded on farms at June 2007.

Table 11 - Breeding Ewes: Aberdeenshire, Regions and Scotland 2003-07

Breeding Ewes 2003=100	2003	2004	2005	2006	2007	Lambing Rate 2007
Aberdeen-shire	100.00	99.62	100.23	96.63	96.78	1.47
North East	100.00	100.29	102.05	97.63	98.24	1.45
North West	100.00	97.68	95.56	87.05	82.41	1.04
South East	100.00	101.60	102.01	99.58	96.99	1.37
South West	100.00	100.53	100.02	95.08	91.16	1.27
Scotland	100.00	100.06	99.56	94.42	91.02	1.26

Figure 3 - Trend in Sheep Numbers in Aberdeenshire 2003 to 2007



Of the administrative areas, Banff and Buchan and Garioch saw a small increase in the number of ewes, whilst Formartine saw a 20% reduction in breeding ewes between 2003 and 2007. Hogget finishing is a major enterprise in Aberdeenshire and usually takes place on farms which do not have breeding ewes and which are also cattle finishers.

Pigs and Poultry

Almost 60% of Scotland's pigs (about 5% of UK total) are reared in Aberdeenshire (nearer 70% in the North East as a whole). Over the past five years, numbers have been fairly stable, in contrast to the other major pig-producing region, South East Scotland, where numbers have fallen by more than a quarter.

Table 12 - Pigs: Aberdeenshire, Regions and Scotland 2003-07

Total Pigs 2003=100	2003	2004	2005	2006	2007	% of Scottish Total 2007
Aberdeen-shire	100.00	98.69	98.23	100.32	98.45	57.05
North East	100.00	97.54	99.92	101.10	100.03	67.23
North West	100.00	88.30	97.67	102.85	107.34	5.92
South East	100.00	93.59	85.24	76.15	73.26	21.23
South West	100.00	105.76	106.94	107.54	103.28	5.62
Scotland	100.00	96.41	96.19	94.77	93.33	100.00

Of the administrative areas, Banff and Buchan and Buchan saw 24% and 42% increases respectively in pig numbers over the 5 years to 2007. There was a small increase in Garioch, whilst Kincardine and Mearns saw a sharp fall (almost 25%). Marr saw a 15% decline.

The South East of Scotland is the main poultry-producing area in the country, with almost two-thirds of all birds. Numbers have been relatively stable there, but have fluctuated in Aberdeenshire, reaching almost 30% above the 2003 level in 2005, and then falling back, to almost 10% below the 2003 level in 2007, when Aberdeenshire accounted for slightly less than 15% of Scotland's poultry.

During the 2003-07 period the number of poultry in Banff and Buchan and Banff administrative areas more than doubled, whilst in Formartine they increased by almost 30%. At the other extreme the number of birds in Garioch declined by 75%.

Aberdeenshire is a large feed-grain producing area, has ample space for dung, has some health advantages and a relatively good stock of available buildings, but it is difficult to pinpoint any clear competitive advantage for local pig and poultry production which has made these sectors so important, other than the historic influence of major local processors such as Lawsons of Dyce, Grampian Pig Producers and the Grampian Country Food Group.

Labour and Employment

A total of 9,229 people were recorded by the June 2007 Census as being employed or engaged in agriculture. The long-established downward trend has continued, with Aberdeenshire's workforce declining by 3.4% between 2003 and 2007 (*Table 13*).

Only the South East increased its numbers, due to an influx of casual and seasonal workers. In 2007 almost 60% of Aberdeenshire's workforce was part-time (including seasonal and casual) - higher than the two regions of Southern Scotland, but lower than the North West, where crofting pushes the proportion up to almost 80%.

Table 13 - Total Labour: Aberdeenshire, Regions and Scotland 2003-07

Total Labour 2003=100	2003	2004	2005	2006	2007	% Part Time 2007
Aberdeen-shire	100.00	99.20	97.19	95.66	96.58	59.38
North East	100.00	98.99	97.77	97.75	96.23	58.69
North West	100.00	99.66	99.39	98.14	94.15	79.67
South East	100.00	100.82	99.79	99.55	107.95	56.09
South West	100.00	99.16	98.85	97.22	95.76	53.25
Scotland	100.00	99.67	99.04	98.14	98.35	62.10

The age and physical capability of the labour force is not reflected in this table.

Taking occupiers separately (*Table 14*), the reduction in numbers in Aberdeenshire has been of a similar order to total labour, and the pattern across Scotland is rather similar. In 2007 almost 55% of Aberdeenshire occupiers were part-time. These are mostly smaller farms, but also larger ones where the occupier has other business interests. Again the proportion in the North West was about 80%.

The largest reduction in the number of occupiers (other than in the Aberdeen City area) was in Kincardine and Mearns, at 7% over 5 years, whereas numbers in Buchan seem to have increased slightly. Buchan also had the highest proportion of part-time occupiers in 2007, at 65%. The proportion in Garioch was similarly high (64%). In Marr and Kincardine and Mearns the proportion fell below 54%. These percentages may reflect the opportunities for part-time working close to Aberdeen and the major towns while the Mearns is the main large-scale commercial farming area.

Table 14 - Occupiers: Aberdeenshire Administrative Areas 2003-07

Area	Total Occupiers 2007	Total Occupiers 2007 (2003 = 100)	Total Occupiers 2007 % Part Time
Banff and Buchan	659	99	56.8
Buchan	629	101	65.0
Formartine	802	97	56.0
Garioch	624	99	64.1
Marr	844	95	53.8
Kincardine and Mearns	445	93	53.5
Aberdeenshire	4,003	97	58.1
Aberdeen City	111	92	61.3

The number of staff employed in Aberdeenshire fell between 2003 and 2007 slightly faster than that of occupiers, i.e. by 5.6% (*Table 15*). Nationally, both the North West and the South West showed larger reductions in staff, but the South East showed an increase (because casual and seasonal workers are included).

Table 15 - Staff: Aberdeenshire, Regions and Scotland 2003-07

Staff 2003=100	2004	2005	2006	2007	% Hired 2007	% Part Time 2007
Aberdeen-shire	97.22	91.79	88.90	94.39	74.11	46.27
North East	96.80	94.38	95.90	93.86	62.69	42.72
North West	96.01	97.94	93.97	86.41	50.04	61.84
South East	101.68	100.14	100.29	117.25	82.05	51.69
South West	97.33	96.60	94.59	93.04	58.69	42.46
Scotland	98.56	97.69	96.71	100.64	67.70	48.84

Aberdeenshire and the North East seem to have retained a higher proportion of their hired staff than most other parts of Scotland (the exception is the South East); almost three quarters of Aberdeenshire farm staff are hired. Aberdeenshire also has a part-time staff percentage below the Scottish average, at 46% (in the North West the proportion rises to almost 62%). However, as in other parts of Scotland, part-time and family staff are increasingly relied upon in Aberdeenshire.

The largest reduction in staff numbers over the five years to 2007 was in Formartine district, at 11% (*Table 16*) whereas Buchan showed a 3% increase. Most of these staff would have been part time, however, as the area had over one third of its staff in this category. Marr too had over 30%. At the other extreme Banff and Buchan, Garioch and Kincardine and Mearns still had more than 70% of staff employed full-time.

Table 16 - Staff: Aberdeenshire Administrative Areas 2003-07

Area	Total Staff 2007	Total Staff 2007 (2003 = 100)	Total Staff 2007 % Part Time
Banff and Buchan	466	95	26.2
Buchan	373	103	34.0
Formartine	666	89	28.8
Garioch	473	93	26.4
Marr	510	95	31.8
Kincardine and Mearns	589	96	27.0
Aberdeenshire	3,077	94	28.8
Aberdeen City	130	94	37.7

Agricultural Output

a) Output Volume

The assumptions for calculations of agricultural output are set out under 'methodology' in the main report (p 59). The volume of wheat and barley output in Aberdeenshire declined sharply between 2003 and 2004, recovered slightly in the two subsequent years, and then rose strongly (as a result of increased area sown) in 2007 (*Table 17*). Oat output followed a similar trend, but without an increase in 2007. Rape output increased slightly between 2003 and 2004, but fell sharply in 2005, recovering to some extent in 2006-07. Potato output was rather low in 2004, but in 2006 and 2007 substantially exceeded the tonnage of the first three years under study. All of these patterns of change were broadly similar to those exhibited by Scotland as a whole (*Table 18*).

Table 17 - Crop Output Volume, Aberdeenshire 2003-07 ('000 Tonnes)

	Wheat	Barley	Oats	Oilseed Rape	Potatoes
2003	86.0	408.4	21.6	69.5	175.8
2004	68.0	343.8	9.9	71.3	149.5
2005	75.0	331.8	16.6	44.8	176.0
2006	74.9	321.4	18.7	53.2	204.9
2007	77.4	325.2	15.2	56.6	203.7
2003-07	76.2	346.1	16.4	59.1	182.0

Table 18 - Crop Output Volume, Scotland 2003-07 ('000 Tonnes)

	Wheat	Barley	Oats	Oilseed Rape	Potatoes
2003	679.6	1,069.6	134.6	189.7	1,246
2004	757.5	989.2	101.4	200.4	1,096
2005	716.6	872.4	106.8	121.2	1,176
2006	708.3	808.5	122.0	143.4	1,398
2007	715.5	860.2	110.0	160.1	1,354
2003-07	715.5	920.0	115.0	162.9	1,254

Amongst livestock products, milk output volume in Aberdeenshire fell every year between 2003 and 2007, so that by the end of the five years it was 18% below the level of 2003 (*Table 19*). Fat cattle output volume was very stable for the first three years, but fell off in 2006-07. Lamb output showed a similar pattern of change, except that it recovered to 2003 levels in 2007. Finished pig production was consistent throughout the period, except for an increase in 2006.

Table 19 - Livestock Output Volume, Aberdeenshire 2003-07

	Milk (Million Litres)	Fat Cattle ('000 Head)	Lambs ('000 Head)	Fat Pigs ('000 Head)	Eggs (Million)	Broilers ('000 Head)
2003	79.5	75.2	195.7	166.8	26.3	10,042
2004	85.0	75.3	193.2	166.7	27.5	10,465
2005	78.2	75.8	195.1	165.2	77.5	11,931
2006	77.3	72.5	187.5	170.7	77.6	11,045
2007	65.2	70.9	195.8	166.8	75.2	8,050
2003-07	77.0	73.9	193.5	167.2	56.8	10,307

Egg production in Aberdeenshire underwent a step change between 2004 and 2005, when the number of laying hens increased from less than 100,000 to almost 300,000. On the other hand, broiler production fell by about 20% between 2006 and 2007.

Table 20 - Livestock Output Volume, Scotland 2003-07

	Milk (Million Litres)	Fat Cattle ('000 Head)	Lambs ('000 Head)	Fat Pigs ('000 Head)	Eggs (Million)	Broilers ('000 Head)
2003	1,318.5	375.0	2,896.6	289.2	807.0	47,530
2004	1,331.6	378.2	2,888.1	282.0	812.9	53,603
2005	1,361.4	384.1	2,895.8	289.7	750.7	46,103
2006	1,342.0	356.2	2,769.7	290.1	755.0	48,232
2007	1,272.7	351.1	2,758.0	285.2	805.9	41,575
2003-07	1,325.3	368.9	2,841.6	287.2	786.3	47,408

Livestock output volume trends in Scotland as a whole were broadly similar, though, as one might expect, the amplitude of change was rather lower.

b) Output Value

Table 21 shows the estimated value of output from Aberdeenshire and Scotland as a whole, and by crop and livestock enterprise, between 2003 and 2007. *Figure 4* shows the trend on a line graph. In current prices the value of Aberdeenshire's output increased in each of these years, from a little under £178m in 2003 to £224m in 2007. This represents an increase of about 25%. Most of the increase was in 2007 and is due to crop increases – the proportion of total Aberdeenshire output value from crop increased from 42% in 2003 to 50% in 2007. In Scotland as a whole the increase over the five years was of a similar magnitude, although there was a slight drop between 2004 and 2005.

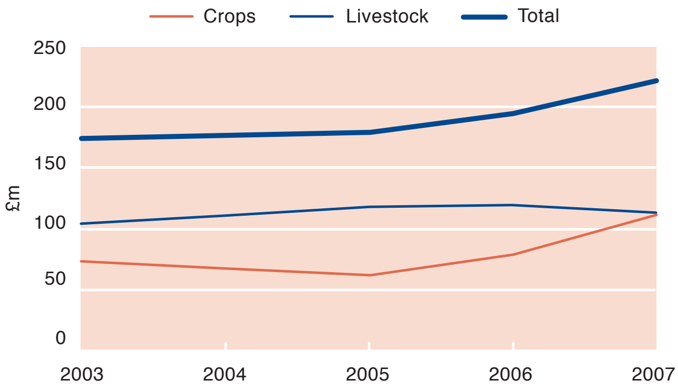
Table 21 - Value of Output, Main Crop and Livestock Enterprises, Aberdeenshire and Scotland, 2003-07

Aberdeenshire - £m Current Prices (excl. subsidies)											
	Cereals	OSR	Potatoes	Dairy	Beef	Sheep	Pigs	Poultry	Crops	Livestock	Total
2003	38.82	10.88	17.76	16.93	41.05	7.59	22.40	15.86	73.72	103.82	177.54
2004	30.70	10.63	19.17	18.47	43.99	8.96	22.85	17.16	67.46	111.44	178.90
2005	28.68	6.67	18.61	17.15	44.80	9.04	22.63	24.03	62.55	117.64	180.20
2006	32.44	8.16	27.23	16.38	47.93	8.03	23.81	22.63	77.88	118.78	196.66
2007	54.50	11.12	32.44	15.67	47.78	8.40	21.11	19.60	111.35	112.56	223.90

Scotland - £m Current Prices (excl. subsidies)											
	Cereals	OSR	Potatoes	Dairy	Beef	Sheep	Pigs	Poultry	Crops	Livestock	Total
2003	143.66	29.68	118.00	246.18	309.24	132.54	39.91	115.59	389.99	843.46	1,233.45
2004	137.07	29.88	134.81	253.96	329.98	157.10	40.74	129.18	400.11	910.95	1,311.06
2005	116.11	18.03	109.67	261.67	343.81	156.82	40.44	124.02	370.69	926.76	1,297.45
2006	130.15	22.00	182.94	249.23	366.79	137.00	40.79	125.17	475.18	918.98	1,394.16
2007	211.38	31.45	220.99	267.83	364.63	137.89	36.56	134.35	612.04	941.26	1,553.30

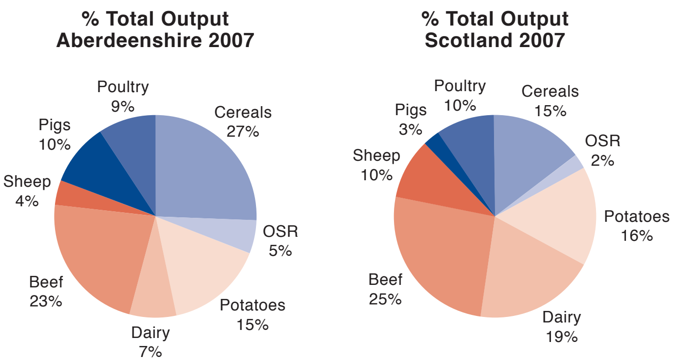
Notes:
1. These estimates exclude subsidies.
2. The estimation procedure excludes the value of cereals assumed to be fed to livestock within the region, and store stock assumed to be finished locally.

Figure 4 - Trends in Livestock, Crop and Total Output (excluding subsidies) in Aberdeenshire 2003 to 2007



In 2007 more than a quarter of Aberdeenshire's output value (*see Figure 5*) was accounted for by cereals (Scotland 15%). This excludes the value of grain fed on farm which in one survey (SAOS Combinable Crop Storage Survey 2008) constituted 35% of grain production in Aberdeenshire, but only around 7% in the less mixed Angus/East Perthshire area. Oilseed rape was also relatively more important in the study area than in Scotland as a whole (5% compared with 2%). Potatoes accounted for 15%, slightly less than the national average.

Figure 5 - Share of Output Value by Main Crop and Livestock Enterprises, Aberdeenshire and Scotland, 2007

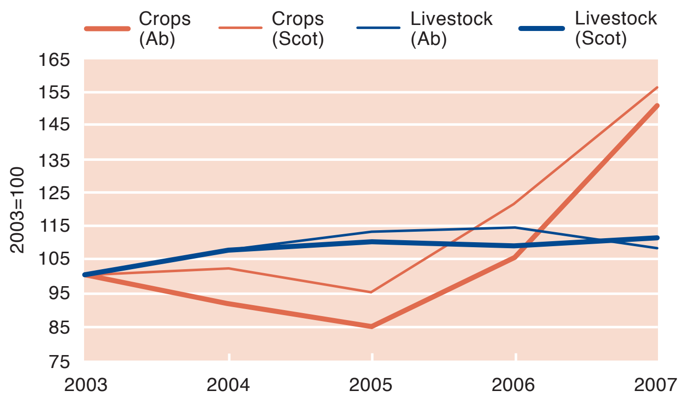


Of the livestock enterprises, the largest share of output came from beef, at 23% of total output. This was (surprisingly) slightly lower than for the country as a whole. Pigs are important in Aberdeenshire, accounting for 10% of output value (3% in Scotland). Sheep (4%), poultry (5%) and milk (7%) were all relatively less important than in the country as a whole.

Table 22 presents the output value profile for Aberdeenshire as a percentage of the Scottish total. Overall the study area accounted (consistently) for about 14% of Scottish output. In terms of crop output the proportion was (in every year) higher, ranging from less than 16.5% in 2006 to almost 19% in 2003. The livestock sector in Aberdeenshire accounted for between 12% and 13%. Of the individual enterprises, pigs stand out, accounting for from 56% to 58% of Scottish output. Oilseed rape is also very important (35-37%). At the other end of the scale are sheep (about 6%) and milk output (about 7%).

Figure 6 shows the trends in crop and livestock value in Aberdeenshire and Scotland, over the period 2003-07. The Aberdeenshire and Scottish trends are rather similar. The crop output estimates move gently downwards during the first three years, and then move sharply upwards in 2006 and 2007. Livestock output value is rather more stable, rising gently until 2005, levelling off in 2006, and then, in the case of Aberdeenshire, falling by about 10% in 2006. This fall is not reproduced in Scotland as a whole, where livestock output value increased slightly.

Figure 6 - Crop and Livestock Output Value, Aberdeenshire and Scotland 2003-07



More detailed trend data is presented in *Table 23*, where it may be seen that over the 5 year period the value of potato output in Aberdeenshire increased by over 80%. The trend in cereal output is 'U'-shaped, ending 40% up on the 2003 level. Poultry output is also substantially up in 2007, though it had reached a peak (50% higher than 2003) in 2005. Beef and sheep output reach levels 16% and 11% higher in 2007 respectively. Pigs and milk output are both significantly lower in 2007 compared with their 2003 level.

Table 22 - Aberdeenshire Output Value as a Percentage of the Scottish Total, by Main Enterprise, 2003-07

Aberdeenshire as % of Scotland											
	Cereals	OSR	Potatoes	Dairy	Beef	Sheep	Pigs	Poultry	Crops	Livestock	Total
2003	27.02	36.66	15.05	6.88	13.27	5.73	56.13	13.72	18.90	12.31	14.39
2004	22.40	35.58	14.22	7.27	13.33	5.70	56.09	13.28	16.86	12.23	13.65
2005	24.70	37.00	16.97	6.55	13.03	5.77	55.95	19.37	16.87	12.69	13.89
2006	24.93	37.08	14.89	6.57	13.07	5.86	58.37	18.08	16.39	12.93	14.11
2007	25.79	35.36	14.68	5.85	13.10	6.09	57.75	14.59	18.19	11.96	14.41

Table 23 - Output Value Aberdeenshire and Scotland, by Main Crop and Livestock Enterprise, 2003-07, (2003=100)

Aberdeenshire (2003=100)											
	Cereals	OSR	Potatoes	Dairy	Beef	Sheep	Pigs	Poultry	Crops	Livestock	Total
2003	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
2004	79.09	97.69	107.94	109.13	107.18	118.01	102.02	108.23	91.50	107.34	100.76
2005	73.89	61.30	104.83	101.30	109.14	119.12	101.02	151.53	84.85	113.31	101.49
2006	83.58	74.95	153.38	96.77	116.77	105.79	106.30	142.72	105.64	114.41	110.77
2007	140.41	102.18	182.67	92.57	116.40	110.62	94.24	123.62	151.03	108.42	126.11

Scotland (2003=100)											
	Cereals	OSR	Potatoes	Dairy	Beef	Sheep	Pigs	Poultry	Crops	Livestock	Total
2003	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
2004	95.41	100.64	114.24	103.16	106.71	118.53	102.09	111.76	102.59	108.00	106.29
2005	80.82	60.73	92.94	106.29	111.18	118.32	101.34	107.29	95.05	109.88	105.19
2006	90.60	74.11	155.03	101.24	118.61	103.36	102.22	108.28	121.84	108.95	113.03
2007	147.14	105.94	187.27	108.79	117.91	104.04	91.60	116.23	156.94	111.60	125.93

The Processing Sector

a) Meat Processing

Aberdeenshire has four approved slaughterhouses and 10 cutting plants out of a national total of 38 abattoirs and 83 cutting plants. Data was obtained from QMS on livestock slaughtered in the North East during the last five years and compared to national figures. The North East data includes the throughput from two relatively small slaughterhouses which are located outwith Aberdeenshire (Rhinds of Elgin and Millers, Grantown-on-Spey).

North East slaughterhouses processed 203,317 head of prime cattle in 2007, 43% of the total prime cattle killed in Scotland (488,268 head). Over the period 2003-07 the North East region's share of the prime cattle slaughterings increased from 37% to 43% and the average annual kill of prime cattle in the region was 196,000 head.

These figures underline the regions importance as the principal destination for finished cattle in Scotland. Only a small number of cull cows are killed in the region: 1,492, only 3% of the national kill (2007).

Figure 7 - Prime Cattle Slaughterings, North East and Scotland 2003-07

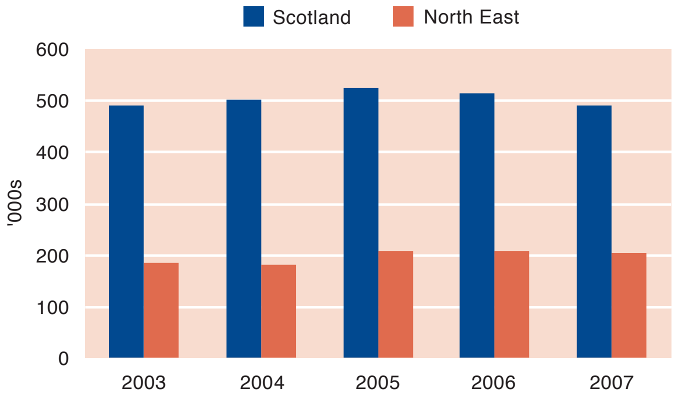
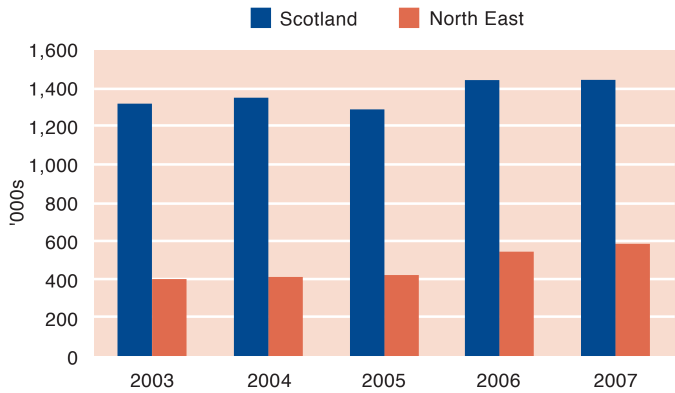
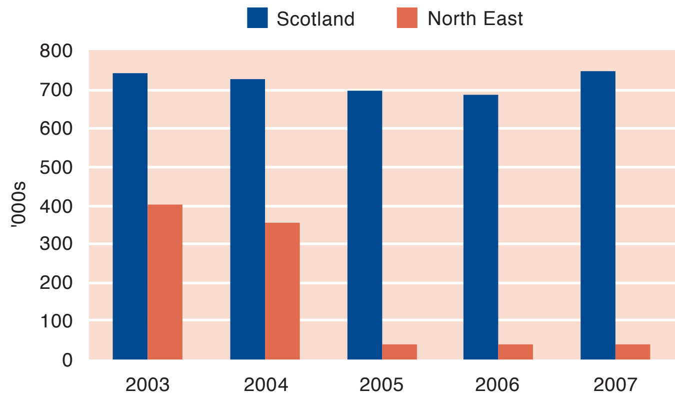


Figure 8 - Lamb Slaughterings, North East and Scotland 2003-07



A total of 585,218 lambs were slaughtered in the North East in 2007, some 41% of the total finished lambs killed in Scotland (1,432,054). Over the period 2003-07, the North East region's share of finished lamb slaughterings increased from 30% to 41%. In addition to lambs, since 2006, the region now slaughters over half (51%) of the total ewe and ram kill in Scotland: 33,654 head in 2007. This again is clear evidence of the region's increasing importance for processing sheep.

Figure 9 - Pig Slaughterings, North East and Scotland 2003-07



Pig slaughterings in the region have experienced significant change. In 2005 the North East region's share of finished pig slaughterings collapsed from 54% (2003) to only 5% (2007), the result of the closure of Grampian Country Food Group's pig slaughterhouse in Buckie. Although the North East has 67% of the national breeding herd, finished pigs now have to be transported to Scotland's principal pig slaughterhouse at Broxburn, near Edinburgh where 85% of the Scottish pig kill is processed.

b) Milk Processing

The number of dairy producers in Aberdeenshire has contracted from 120 in 1999 to 70 herds in 2008. Nationally, milk production is also in steady decline due to lack of profitability, the need for reinvestment, and the demanding hours of work.

There is only one major milk processor in the region – Robert Wiseman Dairies – and two further small processors; Mackies Ice Cream and Mitchell's Dairy. There are a few small producers of yoghurt drinks and farmhouse cheese.

Wiseman's plant in Aberdeen formerly processed 2.3ML of liquid milk per week, tankering in milk from outwith the region into the factory to meet demand until the loss of a major retail contract in 2005, since when it has been running at 60% capacity and sending surplus milk south.

c) Eggs

Farmlay in Aberdeenshire has grown rapidly over the past ten years, supplying supermarkets, convenience stores and the food service industry from their base in Strichen, attaining a turnover in 2008 of £8M and employing over 40 staff.

d) Combinable Crop Processing

The markets for malt and malting barley expanded in 2008, driven by the growing international demand for Scotch whisky, resulting in significantly increased prices for growers. Prior to the expansion in the demand for Scotch whisky, the distilling and malting sector was in decline, with weakening sales, over-capacity and low profitability resulting in the closure of facilities.

The new market conditions heralded significant investment by distilleries and maltsters for the first time in decades, signalling good future prospects for malting grain growers in the region.

Table 24 shows the capacity of malting plants in the North and North East which draw malting barley from Aberdeenshire. The national demand for malting barley is estimated by the trade at 750,000t (2008).

It should be noted that the distillery sector requires low nitrogen (N) malt which is a speciality of Scotland and not widely available from competitor countries. Scotland is unique in that virtually all the malting barley produced (90%) is low N for malt distilling, with only a small percentage (10%) high N for the grain distilling market.

Table 24 - Capacity of Existing and Planned Malting Plants in North and North East Scotland, 2008 (Tonnes)

	Current	Additional
Greencore, Buckie	50,000	25,000
Diageo, Roseisle	200,000	
Crisp, Portgordon	50,000	
Highland Distillers, Tomdhu	18,000	
Bairds, Inverness	25,000	
Greencore, Glenesk, Montrose	65,000	25,000
Bairds, Arbroath	45,000	35,000
Total	453,000	60,000

Source: Trade Estimates

The animal feed sector is the largest market for combinable crops nationally. Aberdeenshire is fortunate in having a number of animal feed companies and mills in the region which provide compounds and straights to the beef, pig, poultry, dairy, and sheep livestock sectors.

The tonnage of feed barley and wheat purchased annually by feed mills varies depending on ration formulation and the relative prices of substitutes but is estimated at 200,000 tonnes annually. The decline in livestock numbers and over-capacity in feed mills means the animal feed sector is very competitive.

The grain merchanting sector has experienced considerable restructuring over recent years. The number of national companies has declined, but the number of regional firms has remained steady.

Overall, the number of people employed in the sector has declined as firms centralise their business functions. It is not unusual to have specialised functions such as accountancy, HR and logistics planning removed from a local level and undertaken at a central location to improve efficiency. Improved IT and operating systems have facilitated change with minimal disruption to operations and farmers.

The market appears to operate effectively with a good range of suppliers and competition. It was reported that there is a trend towards less loyalty to individual merchants from growers. The sector experienced considerable challenges when grain prices were at record lows – for example, in the period 2002-06 when grain was at £60 - £80 per tonne.

For further information, access the main report 'Agriculture in Aberdeenshire – Looking to the Future' available at: www.aberdeenshire.gov.uk/support/agriculture/future.asp