Statistical Publication

Agriculture Series

A NATIONAL STATISTICS PUBLICATION FOR SCOTLAND

RESULTS FROM

2012 DECEMBER AGRICULTURAL SURVEY

14th March 2013

1. Introduction

This publication contains results from the 2012 December Agricultural Survey covering winter sown crops, hay and silage production, livestock and machinery. It provides commentary and graphics on the latest annual changes and trends over the past ten years, together with comparisons with June Census results.

A comparison of livestock population profiles between June and December has also been included. These comparisons are used in the estimation of output of finished livestock in the government's calculation of total income from farming.

Unlike the June Census, which produces results for all agricultural holdings in Scotland, the results of the December Survey are a representative sample of main agricultural holdings only, involving about 14,800 holdings, and do not cover minor agricultural holdings at all. The implications of this are covered in the commentary of this publication. Minor agricultural holdings are generally those of less than one hectare in size. In the June 2012 census main holdings accounted for 93 per cent of agricultural land.

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Contents

2. Main findings

Please note that the figures below contain a correction from the original publication. In the third bullet point, the change in the number of dairy cows has been corrected from 1,788 to 450.

Comparisons between the 2011 and 2012 December Survey results show:

- An overall decrease in **winter crop** areas of 9,773 hectares (5.2 per cent), down to 179,718 hectares. Within this there was a drop in areas of **wheat** (down 14,556 hectares or 14.8 per cent to 84,070 hectares) and **oilseed rape** (down 611 hectares or 1.7 per cent to 35,045 hectares), while there were increases in areas of **barley** (up 5,079 hectares or 10.4 per cent to 53,908 hectares) and **oats** (up 315 hectares or 4.9 per cent to 6,695 hectares). **(Table 1)**

- Annual production of **grass silage/haylage** fell by 218,677 tonnes (3.3 per cent) to 6.4 million tonnes. Similarly there was a decrease in the production of **hay** of 80,191 tonnes (30.8 per cent) to 179,750 tonnes and in **arable silage** production of 17,582 tonnes (5.6 per cent) to 298,938 tonnes. **(Table 1)**

- The number of **cattle** decreased by 8,412 (0.5 per cent) to 1.72 million, a slightly smaller percentage fall than the 0.9 per cent shown between the 2011 and 2012 June figures. As has been the case for the last ten years, the December numbers were slightly lower than the June numbers. Since December 2011 there was a decrease in the number of **beef cows** of 3,952 (0.9 per cent) to 456,155, and a decrease in the number of **dairy cows** of 1,788 (0.3 per cent) to 179,173. **(Table 2)**

- The number of **sheep** increased for the first time since 2004, by 198,301 (4.4 per cent) to 4.66 million. The number of **lambs** decreased by 1.56 million (47.6 per cent) between June and December 2012, compared to the 1.76 million (52.9 per cent) decrease seen in 2011. **(Table 3)**

- The number of **pigs** decreased by 46,971 (12.8 per cent) to 321,097, showing a larger drop than the 6.8 per cent decrease seen in the 2012 June Census. **(Table 4)**

- The number of **poultry** increased by 0.84 million (6.0 per cent) to 14.80 million birds, higher than the 1.2 per cent increase reported in the 2012 June Census. **(Table 5)**

- There was a decrease in the number of **tractors** of 225 (0.6 per cent) to 39,999. **(Table 6)**

3. Commentary

3.1 Winter Crops (Table 1)

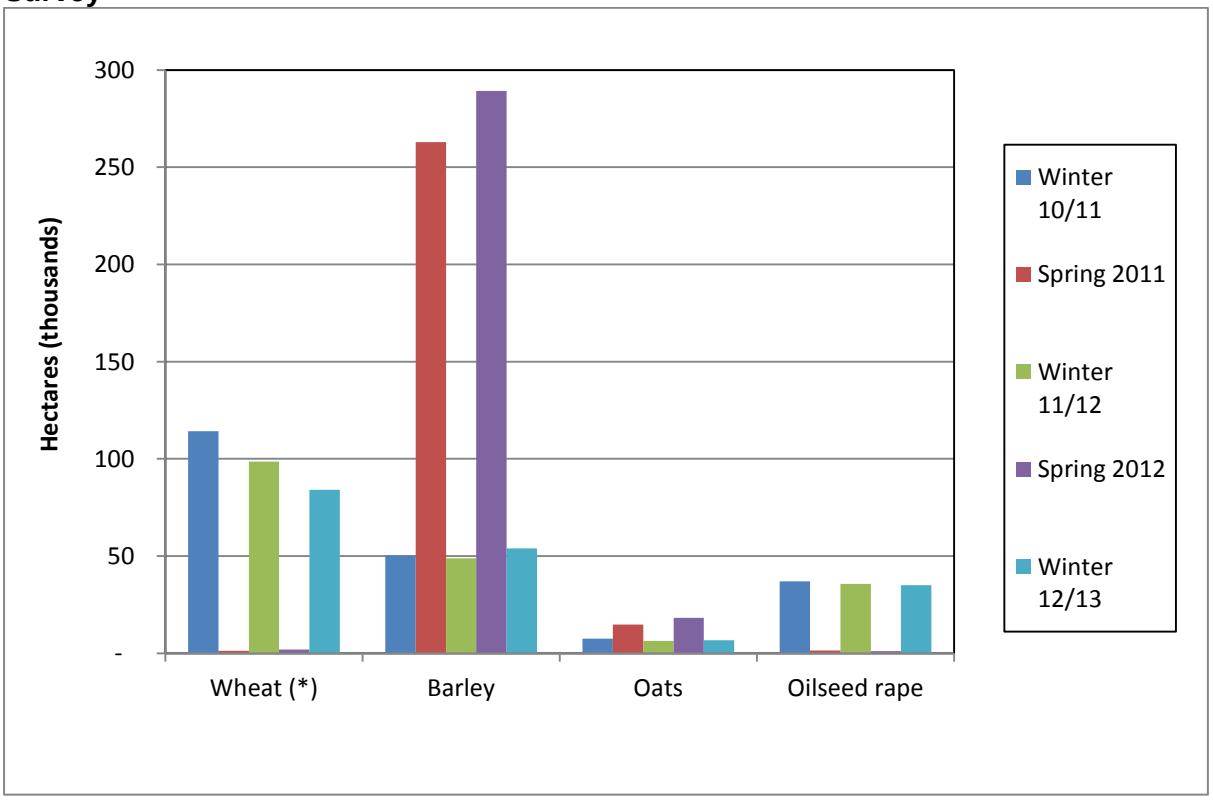
Year-on-year comparisons between 2011 and 2012 December Survey results show:

- An overall decrease in the area of winter crops, of 9,773 hectares (5.2 per cent) to 179,718 hectares.
- A decrease in winter wheat of 14,556 hectares (14.8 per cent) to 84,070 hectares.
- An increase in winter barley of 5,079 hectares (10.4 per cent) to 53,908 hectares.
- An increase in winter oats of 315 hectares (4.9 per cent) to 6,695 hectares.
- A decrease in winter oilseed rape of 611 hectares (1.7 per cent) to 35,045 hectares.

The decreases in wheat and oilseed rape reflect the wet weather in autumn 2012. These conditions meant the 2012 harvest was delayed and some farmers had difficulties in sowing winter crops for the 2013 harvest. Wheat displayed the greatest change of all of the winter crops, down 14,556 hectares (14.8 per cent). Despite this, areas of oats and barley rose, perhaps owing to some substitution with winter wheat.

Chart 1 illustrates winter and spring crop areas from the 2010/11 and 2011/12 growing years, together with the latest December 2012 data, with spring varieties prominent for barley and oats and winter varieties prominent for wheat and oilseed rape. Changes between crops have accounted for more of the change than changes between winter and spring sowing, so reductions in oilseed rape this winter may not result in an increase in spring oilseed rape.

Chart 1: Winter and Spring Crops, 2011 and 2012 June Census, and December 2012 Survey

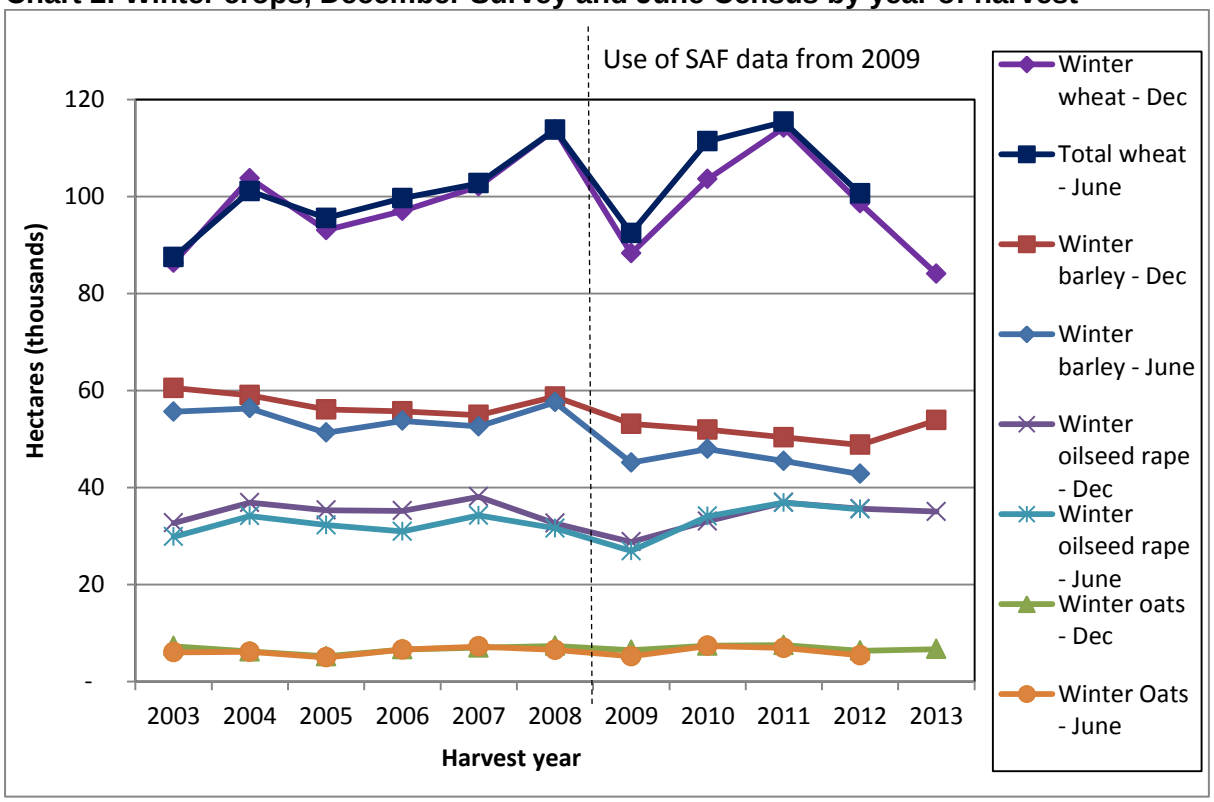


* Spring wheat estimates are calculated by subtracting December figures from June figures from the following year.

The December Survey provides the first indication of trends of winter sown crops, with more comprehensive results produced from the June Census in the following year. June Census results are more comprehensive in the sense that they are based on a larger sample of holdings, and since 2009, include all crop areas reported by holdings claiming Single Farm Payments and other schemes through the Single Application Form (SAF). In addition, June Census results include crops grown on minor holdings, which are excluded from December Survey results, although these are estimated to comprise less than one per cent of crop areas.

Chart 2 shows trends in winter crops reported in the December Survey and June Census over the past ten years. Results are presented against the year of harvest, so for example the 2011 December Survey results are presented against June Census results from 2012, which is when these crops would be harvested. For wheat, the chart shows winter wheat reported in the December Survey and total wheat (including any spring wheat) reported in the June Census, as these are not split in the June Census.

Chart 2: Winter crops, December Survey and June Census by year of harvest



For most years, December Survey and June Census results are similar to each other. It is interesting to note that for barley and, until 2010, oilseed rape, the December Survey results have tended to be slightly higher than June Census results. One possible explanation for this could be that the June Census specifically requests crop areas for combine harvesting and the production of grain and oilseeds, which excludes any areas used for other purposes such as whole crop arable silage or where lower quality crops will not be combine harvested. This distinction is not made in the December Survey, which reports all crops sown by 1st December. For most years, June Census total wheat areas have been slightly higher than December Survey results. This is partly due to June Census results including small areas of spring wheat. Also, it is possible to sow winter wheat after the 1st December, which will not be picked up by the December Survey.

Further information on long term trends of cereal and oilseed rape areas in the context of other land use can be found in the 'Final Results From the 2012 June Agricultural Census'[1] publication.

Further information on long term trends of cereal and oilseed rape production can be found in the 'Final Estimate of Cereal and Oilseed Rape Harvest 2012'[2] publication.

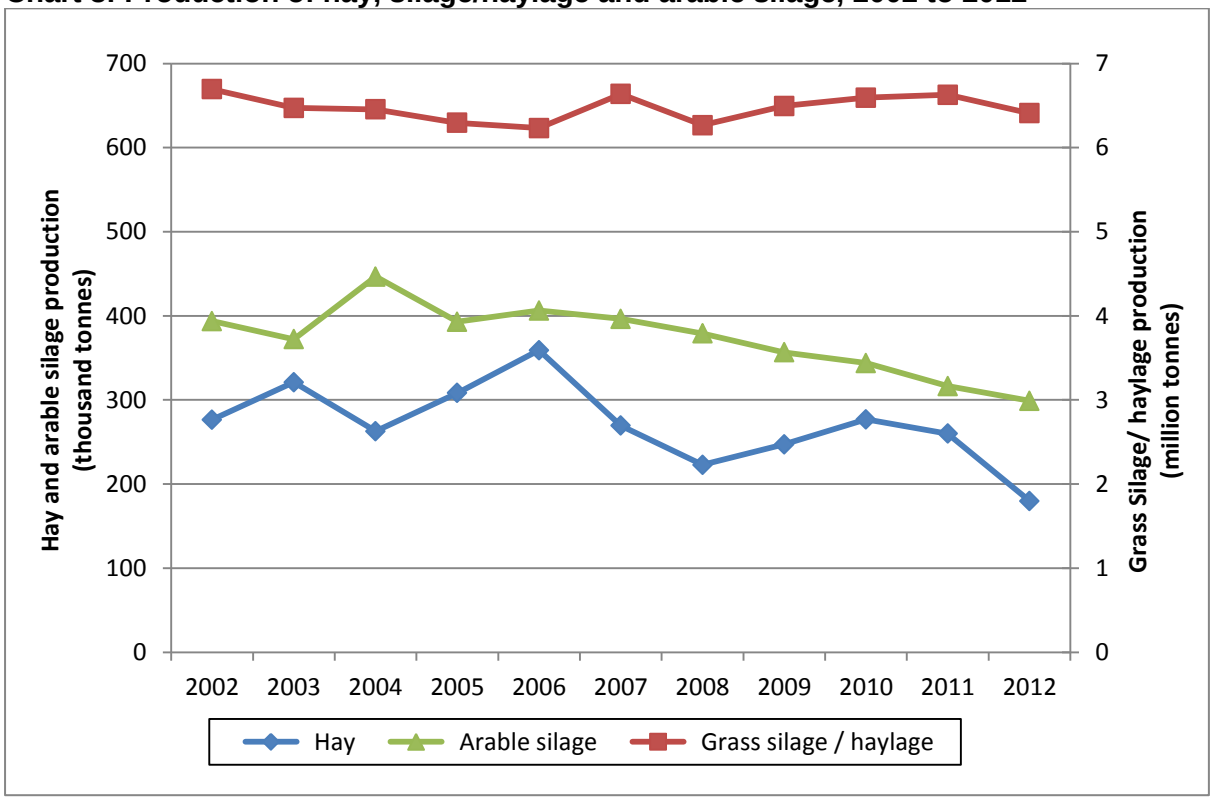
3.2 Production of hay, silage/haylage and arable silage (Table 1)

Chart 3 shows the production of hay, silage/haylage and arable silage on main agricultural holdings between 2002 and 2012. These results exclude any production on minor agricultural holdings, which, for example, accounted for 12 per cent of grassland and one per cent of crops in 2008 when data were last available. Note that these proportions will have varied slightly over the ten year period and therefore contributed to some of the variation in the trends.

Year-on-year comparisons between 2011 and 2012 show:

- An decrease in grass silage/haylage production of 218,677 tonnes (3.3 per cent) to 6.41 million tonnes.
- A decrease in arable silage production of 17,582 tonnes (5.6 per cent) to 298,938 tonnes.
- A decrease in the production of hay of 80,191 tonnes (30.8 per cent) to 179,750 tonnes, the lowest quantity on record.

Chart 3: Production of hay, silage/haylage and arable silage, 2002 to 2012



[1] http://www.scotland.gov.uk/Publications/2012/09/1148
[2] http://scotland.gov.uk/Publications/2012/12/5477

Please note that to aid comparison of trends the production of grass silage/haylage is shown against the right hand axis in Chart 3, which is expressed in terms of million tonnes, whereas hay and arable silage production is expressed in terms of thousand tonnes on the left hand axis.

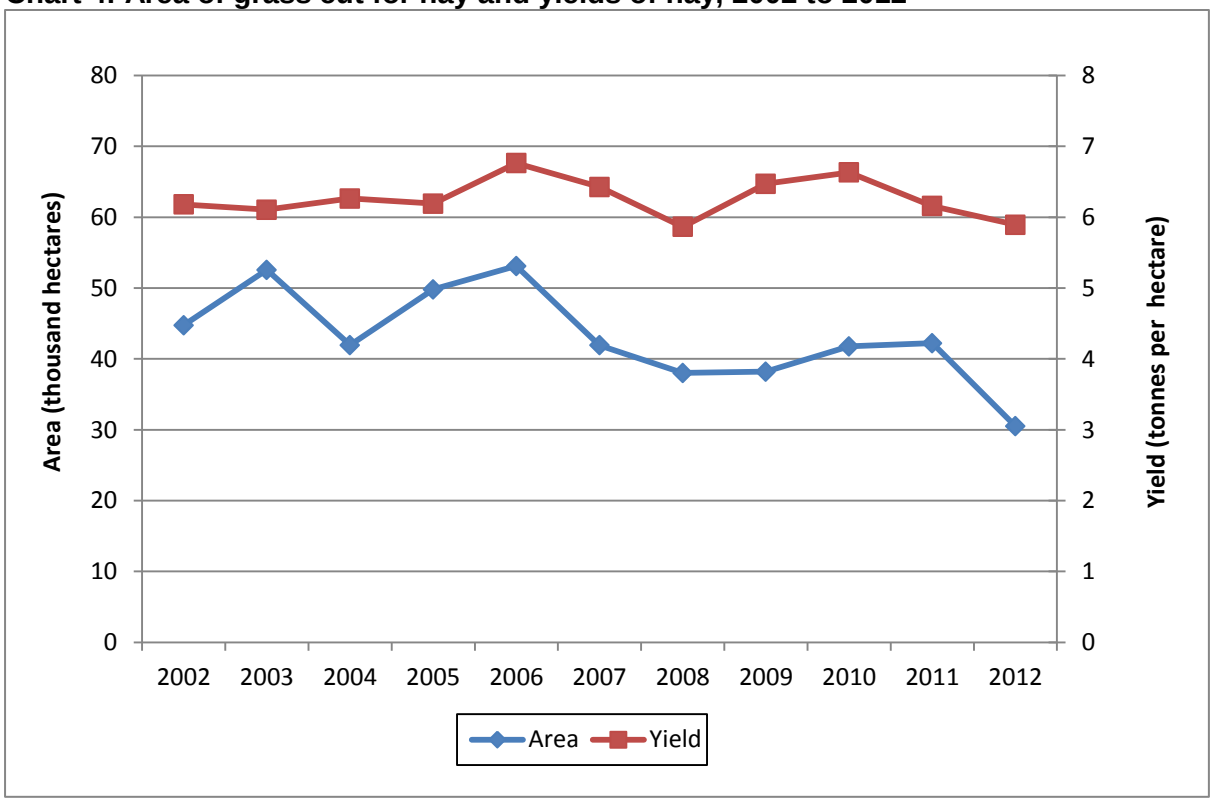
In terms of total tonnage, grass silage/haylage accounted for 93 per cent of production in 2012, with arable silage four per cent and hay three per cent. However, this does not take into account dry matter and nutrient content, which is higher per tonne in hay and arable silage.

Longer term trends show that the production of silage/haylage has ranged between 6.2 and 6.7 million tonnes over the past ten years. Arable silage production increased between 2002 and 2004 and has generally decreased each year since then. Hay production decreased greatly over the last year, due to the wet conditions described in section 3.1.

3.2.1 Hay: Areas & Yields

Trends in the production of hay are determined by associated areas of grass cut for hay and by yields. Chart 4 illustrates how the area of grass cut for hay has decreased substantially, by 14,244 hectares (32 per cent) over the past ten years, to 30,505 hectares in 2012 (using the left hand axis). During this period, yields also fell by 0.3 tonnes per hectare (4.6 per cent) to 5.9 tonnes per hectare in 2012 (using the right hand axis).

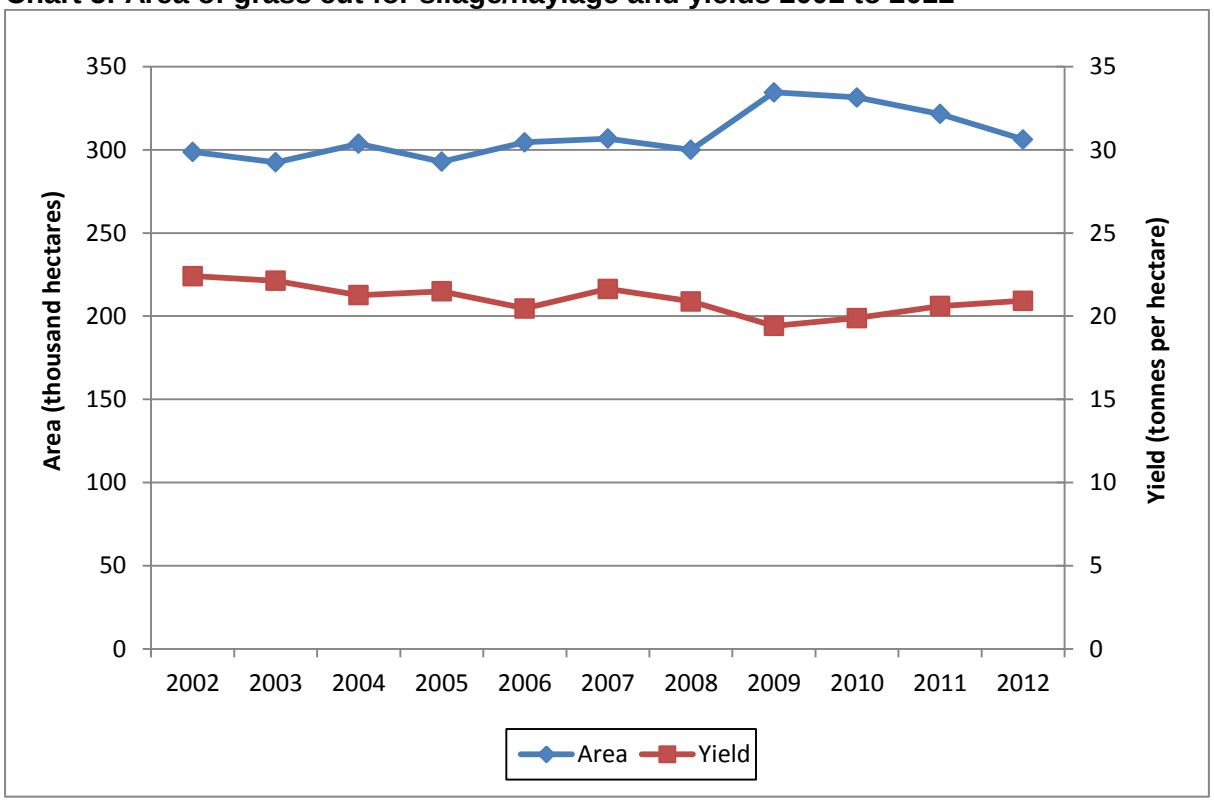
Chart 4: Area of grass cut for hay and yields of hay, 2002 to 2012



3.2.2 Silage and Haylage : Areas & Yields

Chart 5 shows trends for areas and yields of grass cut for silage/haylage production. Over the past ten years, areas have increased by 7,541 hectares (2.5 per cent) to 306,271 hectares (using the left hand axis), whereas yields have decreased by 1.5 tonnes per hectare (6.6 per cent) to 20.9 tonnes per hectare (using the right hand axis).

Chart 5: Area of grass cut for silage/haylage and yields 2002 to 2012



For silage and haylage production, several cuts of grass can be taken from the same area in a single year. The yields reported here correspond to total production, which incorporates all cuts of grass taken from the corresponding area.

In 2012, the total area of grass reported on the December Survey for the production of hay, silage and haylage was 336,776 hectares. This represents 25 per cent of the 1.33 million hectares of grass area reported on main holdings in the 2012 June Census.

3.2.3 Arable Silage : Area, Yield and production

Separate information on the area of arable silage is not collected on the December Survey, so it is not possible to produce a corresponding analysis of areas and yields. Production of arable silage will be determined by a range of factors. These include trends in areas of arable crops, which are collected on the June Census, but also decisions by farmers on how much of this crop to use for arable silage. This in turn may be determined by the quality of these arable crops, with poorer crops generally being used for animal feed, including arable silage.

3.2.4 Grass sown

The area of grass sown in each of the last ten years has ranged from between 40,813 and 63,000 hectares. In 2012 there was a decrease of 1,484 (3.2 per cent) to 45,576 hectares. The total area sown equates to 3.4 per cent of the total grass area on main holdings at 1st June 2012 (1.33 million hectares). Of the total sown, 18,222 hectares was under-sown to cereal or other crops (grass and cereals grown together allowing grass to establish ready for autumn grazing whilst still giving a useful yield of grain) and 27,354 hectares was directly sown or reseeded.

3.3 Livestock overview

The next four sections present livestock results from the December Survey alongside comparisons with the June Census. The December Survey provides complementary information to the June Census, as it provides a snapshot of the livestock populations for the winter months, as at 1st December. A more comprehensive analysis of longer term livestock trends can be found in "Final Results From the 2012 June Agricultural Census"[3].

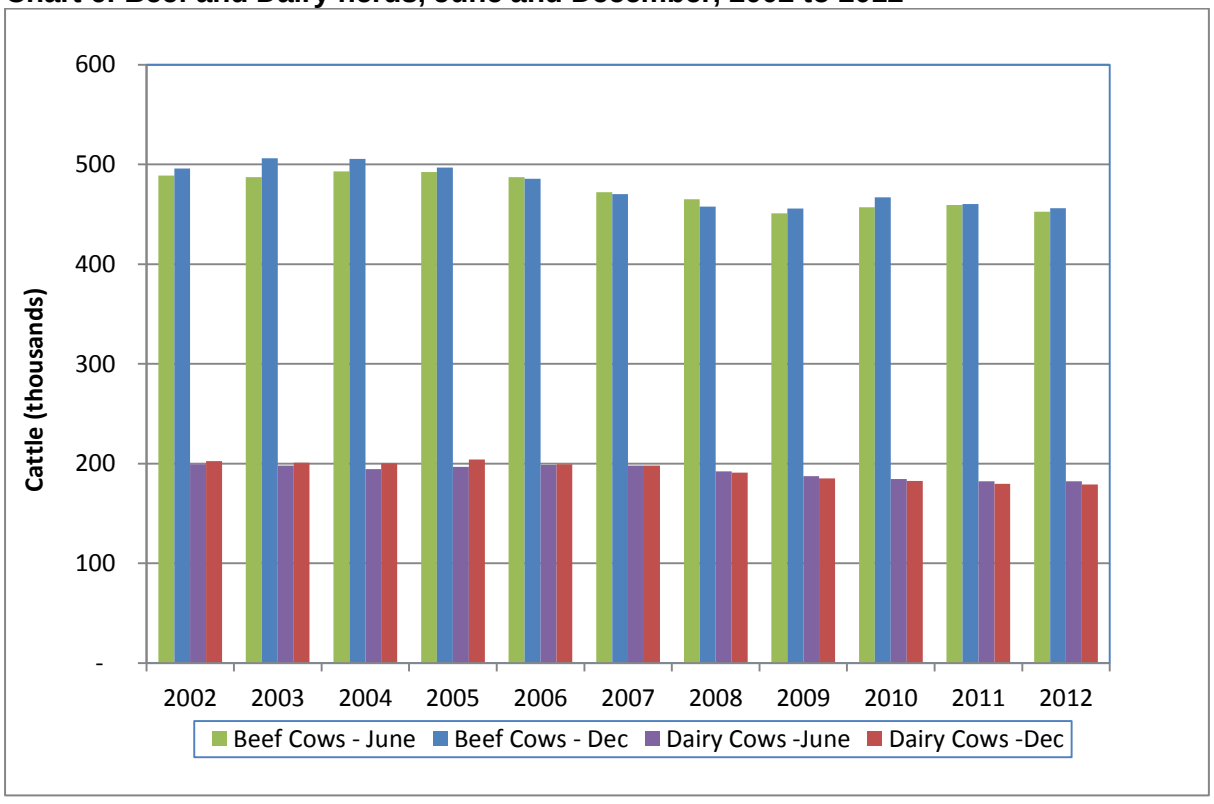
The December Survey results are based on main agricultural holdings only, so exclude any livestock kept on minor agricultural holdings. Livestock on minor agricultural holdings in 2008, when December data were last available, was estimated as: 8,926 cattle (0.5 per cent of the total); 228,864 sheep (3.2 per cent of the total); 1,826 pigs (0.4 per cent of the total) and 49,683 poultry (0.4 per cent of the total). Note that these totals will have varied slightly over the last ten years and therefore contributed to some of the variation in trends and comparisons between the December Survey and June Census results.

3.4 Cattle (Table 2)

Year-on-year comparisons between 2011 and 2012 December Survey results show:

- A decrease in total cattle of 8,412 (0.5 per cent) to 1.72 million - lower than the 0.9 per cent decrease reported between June Census results.
- A decrease in the beef cows of 3,952 (0.9 per cent) to 456,155 – slightly lower than the decrease of 1.5 per cent reported between June Census results.
- A decrease in the dairy cows of 450 (0.3 per cent) to 179,173, a new record low. The fall is similar to the small 0.02 per cent decrease reported between June Census results.

Chart 6: Beef and Dairy herds, June and December, 2002 to 2012



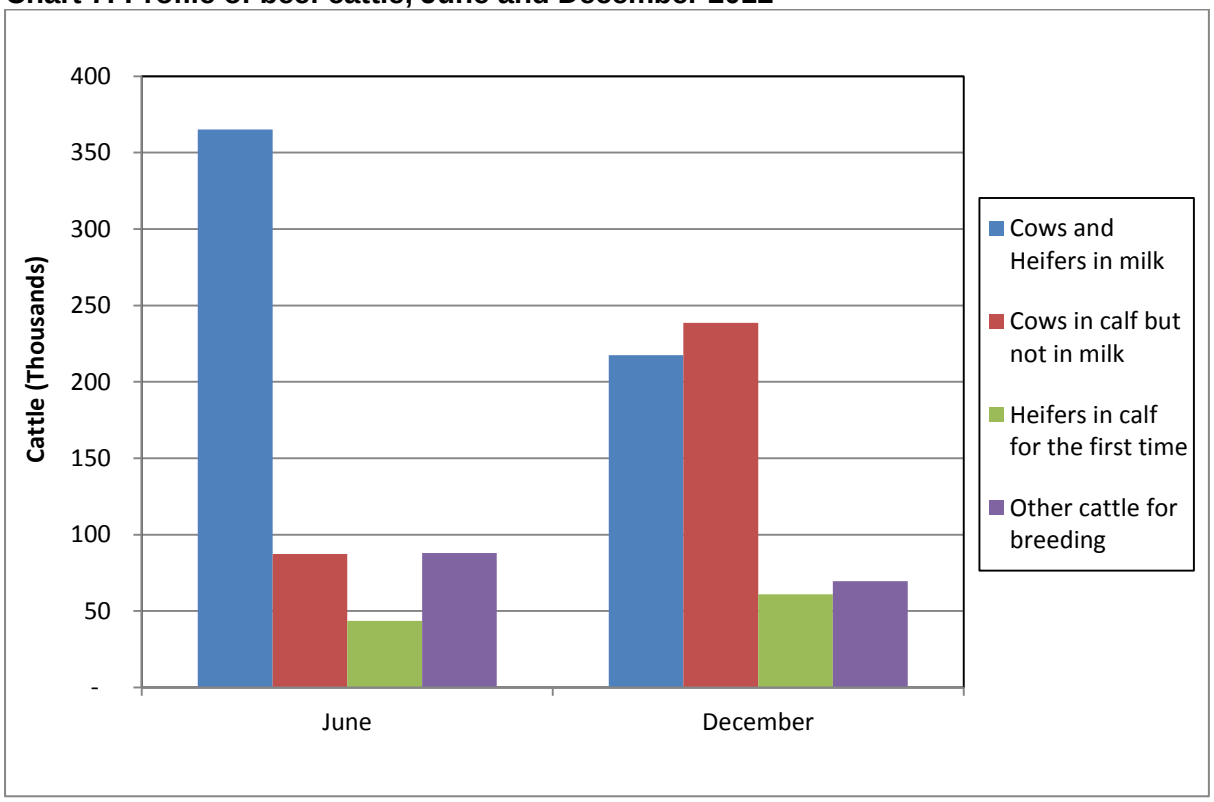
[3] http://www.scotland.gov.uk/Publications/2012/09/1148

Declining numbers of beef cows in both the December Survey and the June Census may be attributed in part to farmers reacting to high beef prices by selling more of their beef cows for cull.

A comparison of trends over the past ten years for the beef and dairy herds from the December Survey and June Census are shown in Chart 6. It shows that numbers vary little between the December Survey and June Census results, though since 2009, the dairy herd has tended to be marginally smaller in December, and the beef herd marginally larger. Over the past ten years, December Survey results for the beef herd have ranged between being 1.6 per cent lower (in 2008) and 3.5 per cent higher (in 2003) than June Census results. For the dairy herd the differences have ranged between being 1.7 per cent lower (in 2012) and 3.9 per cent higher (in 2003) than June Census results.

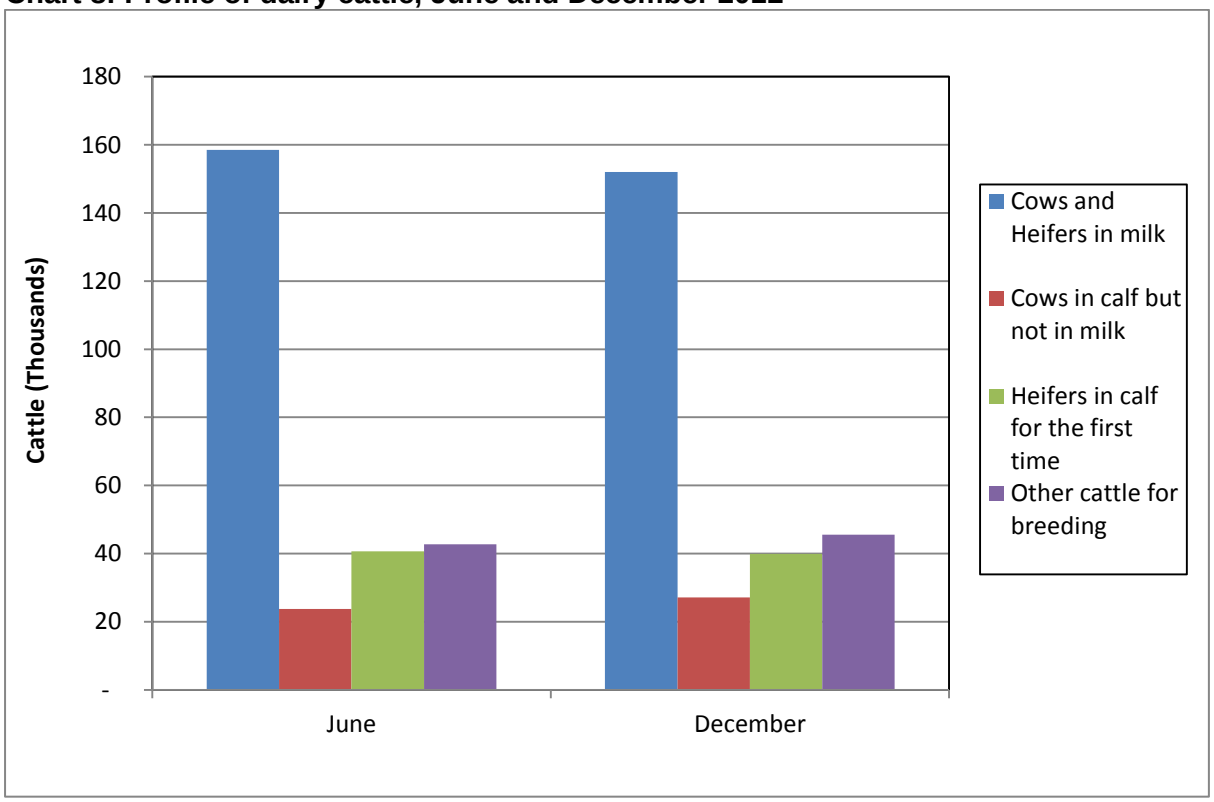
Greater differences occur between December Survey and June Census results when considering the profile of cattle at different stages of the production cycle. Chart 7 shows the profile of beef cattle in June and December 2012. In December there were 147,718 (40 per cent) fewer "cows and heifers in milk" but 151,435 (174 per cent) more "cows in calf but not in milk" than in June, reflecting the seasonal pattern of spring calving in the herd.

Chart 7: Profile of beef cattle, June and December 2012



The strong seasonal pattern of spring calving in the beef herd is also reflected in the total number of calves and younger cattle reported in the June Census and December Survey. In 2012, there were 346,997 calves under six months old in June, compared to 191,605 in December. Conversely, there were 183,312 cattle aged six months to one year in June, compared to 322,379 in December.

Chart 8: Profile of dairy cattle, June and December 2012



In comparison, in Chart 8, we can see that dairy cattle display a more stable profile between June and December 2012. In December there were 6,430 (four per cent) fewer "cows and heifers in milk" and 3,419 (only 14 per cent) more "cows in calf but not in milk" than in June, suggesting that compared to the beef herd, the pattern of seasonal spring calving is less pronounced in the dairy herd. This ensures less seasonality and a more constant supply of milk throughout the year.

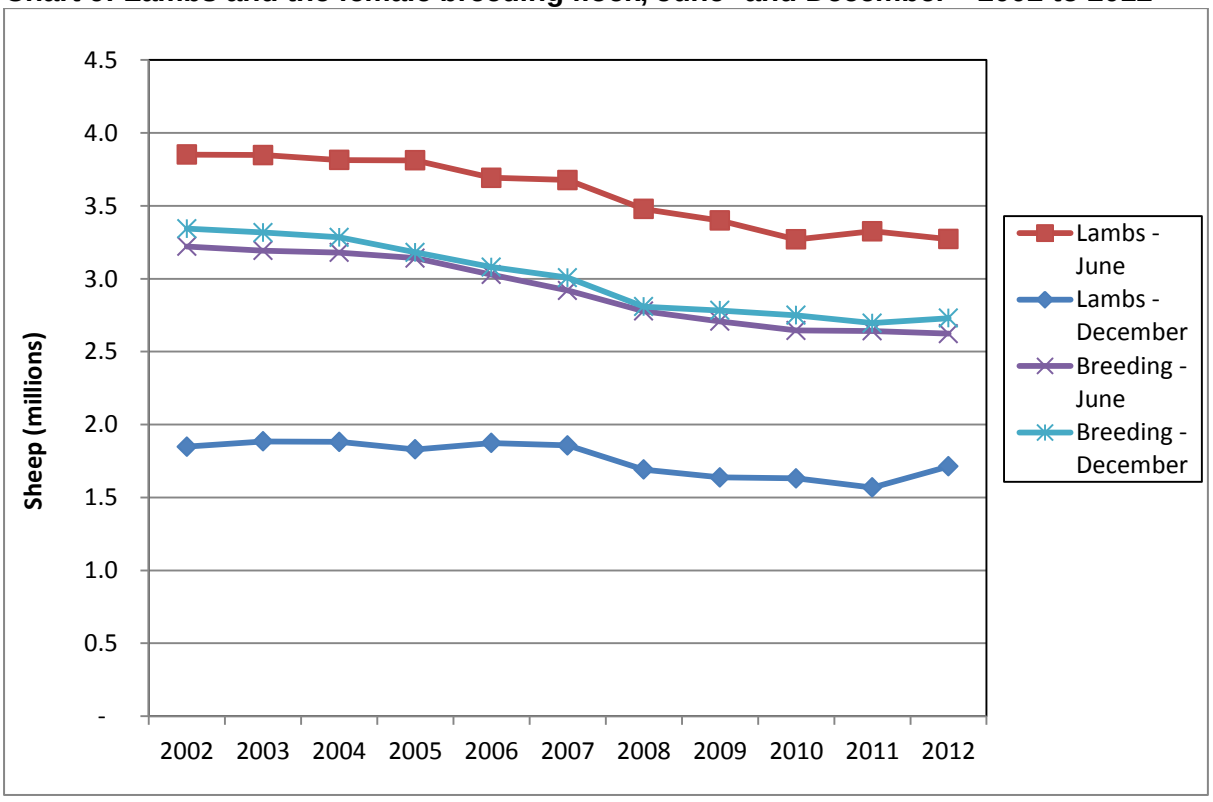
3.5 Sheep (Table 3)

Year-on-year comparisons between 2011 and 2012 December Survey results show:

- An increase in the total number of sheep of 198,301 (4.4 per cent) to 4.66 million seen for the December survey contrasting with the one per cent decrease shown in the June Survey.
- An increase in the breeding flock of 33,750 (1.3 per cent) to 2.73 million – in contrast to the 0.7 per cent decrease reported between June Census results.
- An increase in the number of sheep under one year, up 145,091 (9.3 per cent) to 1.71 million – this is, again, in contrast to the 1.6 per cent decrease in lambs seen between June Census results.

Chart 9 shows trends over the past ten years for lambs and for the breeding flock from the December Survey and June Census. The trends are very similar, with the December Survey and June Census both showing reductions of 14.5 to 16.5 per cent (or around 800 thousand sheep in terms of December figures) over the past ten years.

Chart 9: Lambs and the female breeding flock, June* and December 2002 to 2012**



* The June breeding flock comprise ewes used for breeding in the previous season.

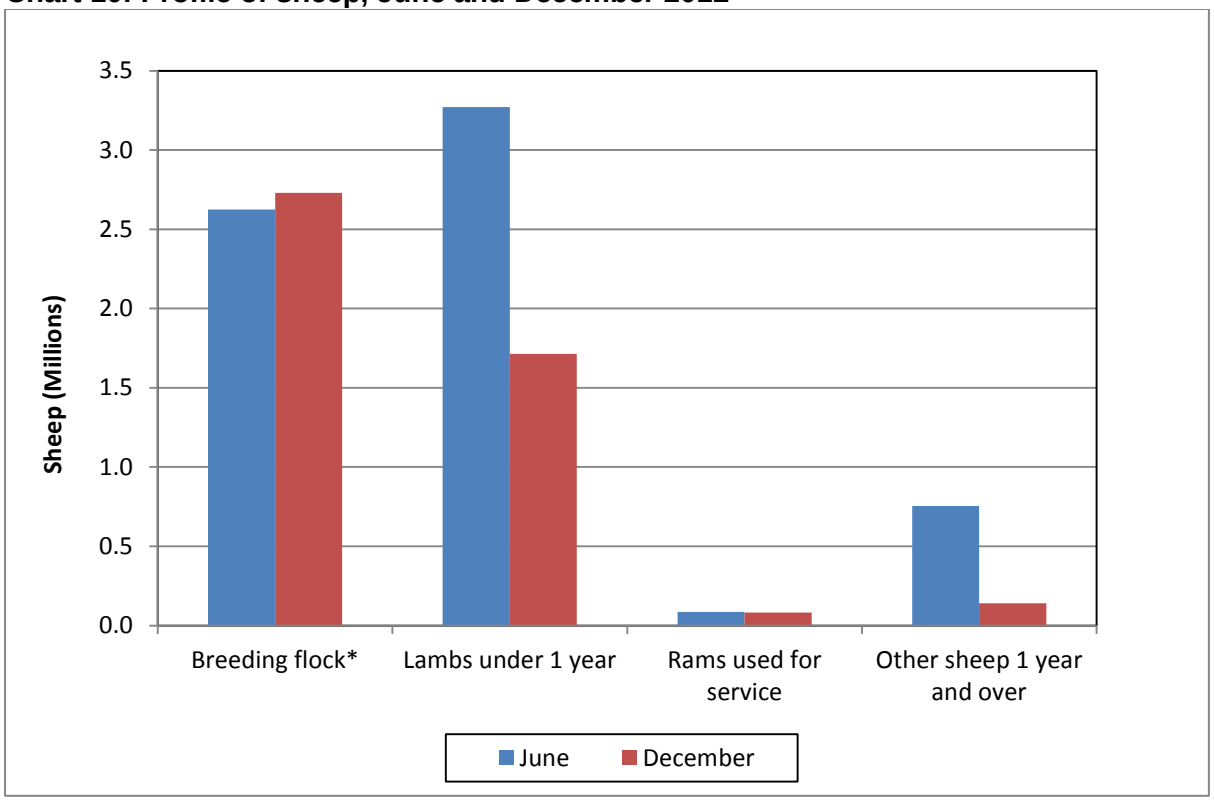
** The December breeding flock comprises ewes kept for breeding and shearling ewes or gimmers put to ram within the calendar year.

Over this period, the December Survey results for breeding females have ranged between being 1.1 per cent higher (in 2008) and 3.9 per cent higher (in 2012) than June Census results. Some of this disparity may be down to the differences between how sheep figures are collected in June and December, with the June Census reporting 'ewes used for breeding in the previous season' and the December Survey reporting "ewes kept for breeding" and “shearling ewes or gimmers put to the ram". This may explain some of the difference in results, as not all of the breeding intentions reported in December may have been carried out or been successful by the following June.

Greater differences occur between December Survey and June Census results when considering the profile of sheep, which are at different stages of the production cycle when each survey is undertaken. Chart 10 shows the profile of the sheep in June and December 2012. The biggest difference is in "lambs/sheep aged under one", with 1.56 million (48 per cent) fewer in December, reflecting the large number of lambs which are finished and slaughtered in the autumn. However, this reduction of 1.56 million between June and December 2012 compares with the figure of 1.76 million (53 per cent) between June and December in 2011, with the smaller figure in 2012 possibly due to falling lamb prices.

There is also a large difference in "other sheep aged one year and over", with 0.61 million (81 per cent) fewer in December. It should be noted that most of the sheep counted as “other” in June will be counted within the breeding flock by December, having replaced older ewes which have been slaughtered after coming to the end of their productive lives.

Chart 10: Profile of sheep, June and December 2012



* The June breeding flock comprise ewes used for breeding in the previous season. The December breeding flock comprises ewes kept for breeding and shearling ewes or gimmers put to ram within the calendar year.

3.6 Pigs (Table 4)

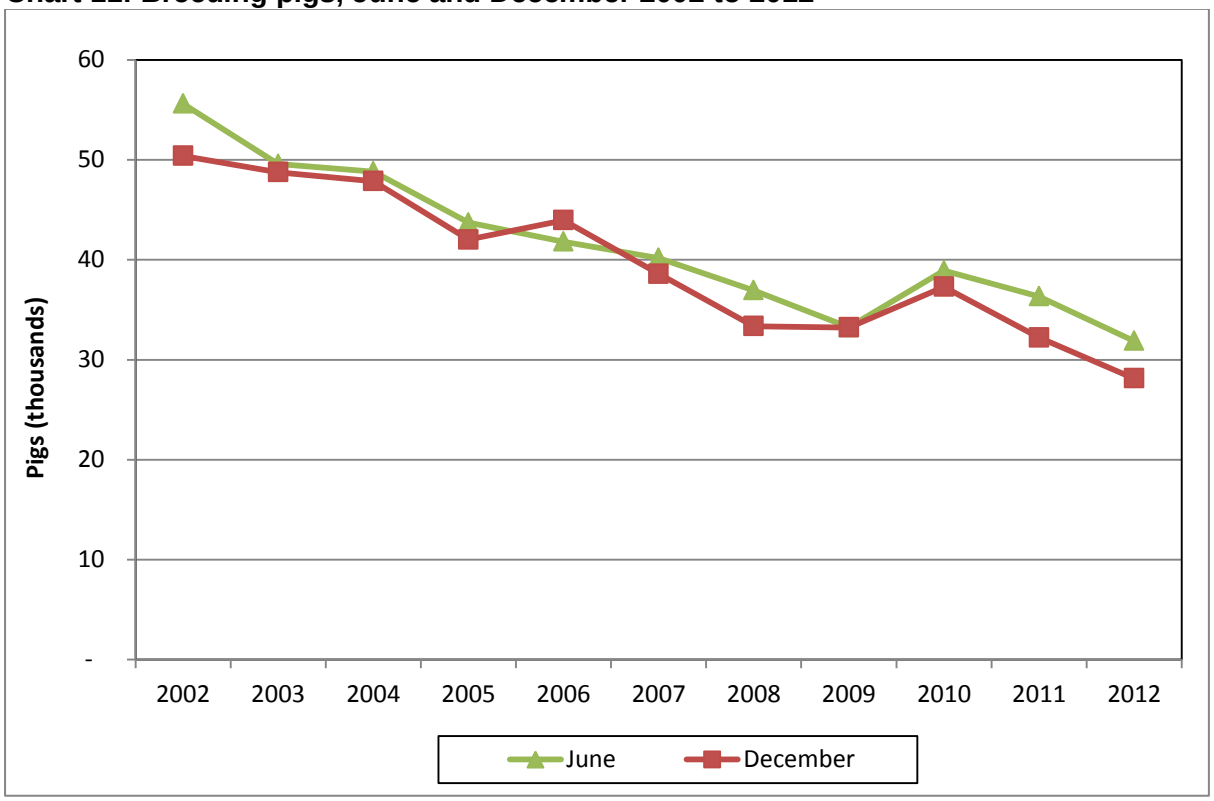
Year-on-year comparisons between 2011 and 2012 December Survey results show:

- A decrease in the total number of pigs of 46,971 (12.8 per cent) down to 321,097, the lowest on record. The drop was larger than the 6.8 per cent decrease reported in the 2012 June Census results.
- A decrease in breeding pigs of 4,092 (12.7 per cent) down to 28,135 – comparable to the 12.3 per cent decrease reported in the 2012 June Census results.

The higher rate of decline for pigs reported through the December survey in comparison with the June Census may be largely attributable to movement of stocks to England following the closure of Hall's meat processing plant in October 2012, as well as to high feed prices.

Chart 11 shows trends over the past ten years for breeding pigs from the December Survey and June Census. The long term trends are fairly similar with the December Survey showing a decrease of 22,269 (44.2 per cent) over the ten year period, compared to a decrease of 23,744 (42.7 per cent) from the June Census.

Chart 11: Breeding pigs, June and December 2002 to 2012



Over this period, December Survey results for breeding pigs have been lower than June Census results for most years and range from being 11.7 per cent lower (in 2012) to 5.1 per cent higher (in 2006).

Chart 12: Pig profile, June and December 2012

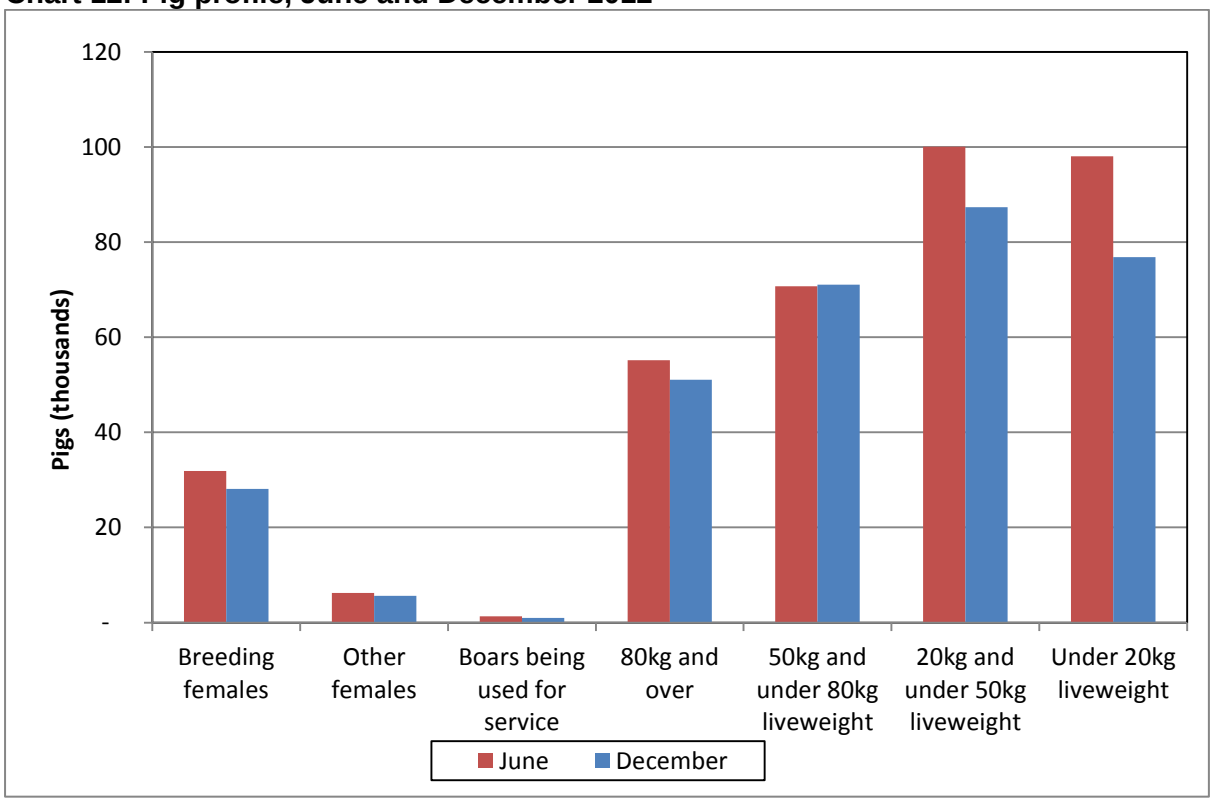


Chart 12 compares the profile of pig populations in June and December 2012. The biggest difference is for pigs weighing under 20kg, with 21,198 (22 per cent) more recorded in June. There were more pigs in June than in December for all categories apart from pigs between 50kg and 80kg, where December figures exceeded June's by 302 (0.4 per cent). Looking back over the last ten years, there tends to be fewer small pigs in December but there are not always more of the larger pigs. Pig populations do not show clear seasonal profiles as with other livestock, as the production cycle is not annual, with pigs able to produce two sets of litter in a year.

3.7 Poultry (Table 5)

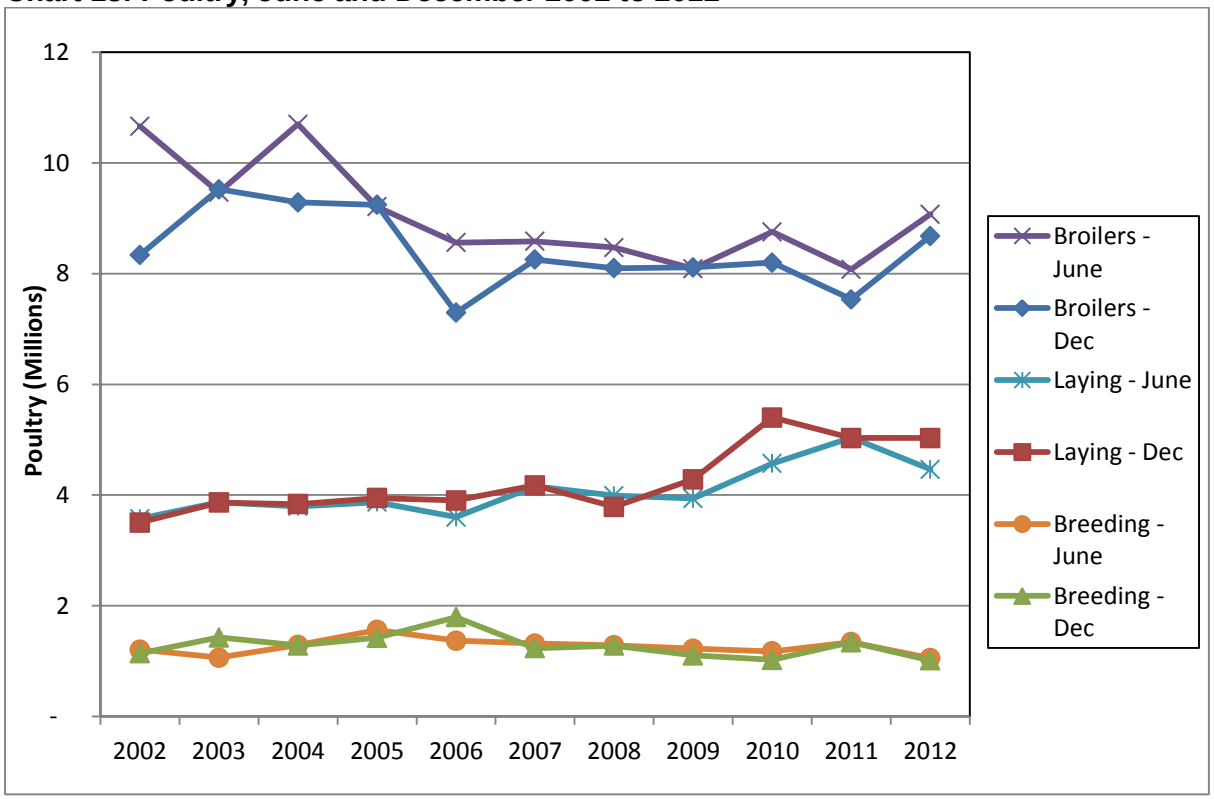
Year-on-year comparisons between 2011 and 2012 December Survey results show:

- An increase in the total number of poultry of 0.84 million (6.0 per cent) to 14.80 million - higher than the 1.2 per cent increase reported in the 2012 June Census results.
- A small decrease in birds for laying eggs of 2,098 (0.04 per cent) resulted in the number of layers remaining around five million - in contrast to the 11.4 per cent drop reported in the 2012 June Census results.
- An increase in the number of broilers of 1.15 million (15.2 per cent) to 8.68 million - similar to the 12.3 per cent increase reported in the 2012 June Census results.

Chart 13 shows trends over the past ten years from the December Survey and June Census for broilers (used for meat production), laying fowls (used for egg production) and breeding birds (used to produce broiler and layer chicks). It should be noted that there is some inherent variability in the annual poultry data, which can be affected by operational factors.

For some years, the chart shows large differences in the number of broilers between June and December. This variability can occur if large poultry units reduce the number of birds on their holdings on the survey date for operational reasons such as the cleaning of premises. Also the poultry production cycle is very short compared to other livestock, which provides producers with the flexibility required to change production levels in response to market conditions.

Chart 13: Poultry, June and December 2002 to 2012



For broilers, after some quite differing figures in 2002, 2004 and 2006, the December Survey and June Census show similar steady numbers.

The figures for laying fowls had been similar until 2010. Over the ten year period the December Survey results show an increase of 1.53 million (44 per cent) compared to an increase of 0.43 million (16.4 per cent) from the June Census.

The trends in the annual number of breeding birds have been fairly constant with the December Survey and June Census both averaging just under 1.3 million birds over the ten year period.

3.8 Machinery (Tables 6, 7 and 8)

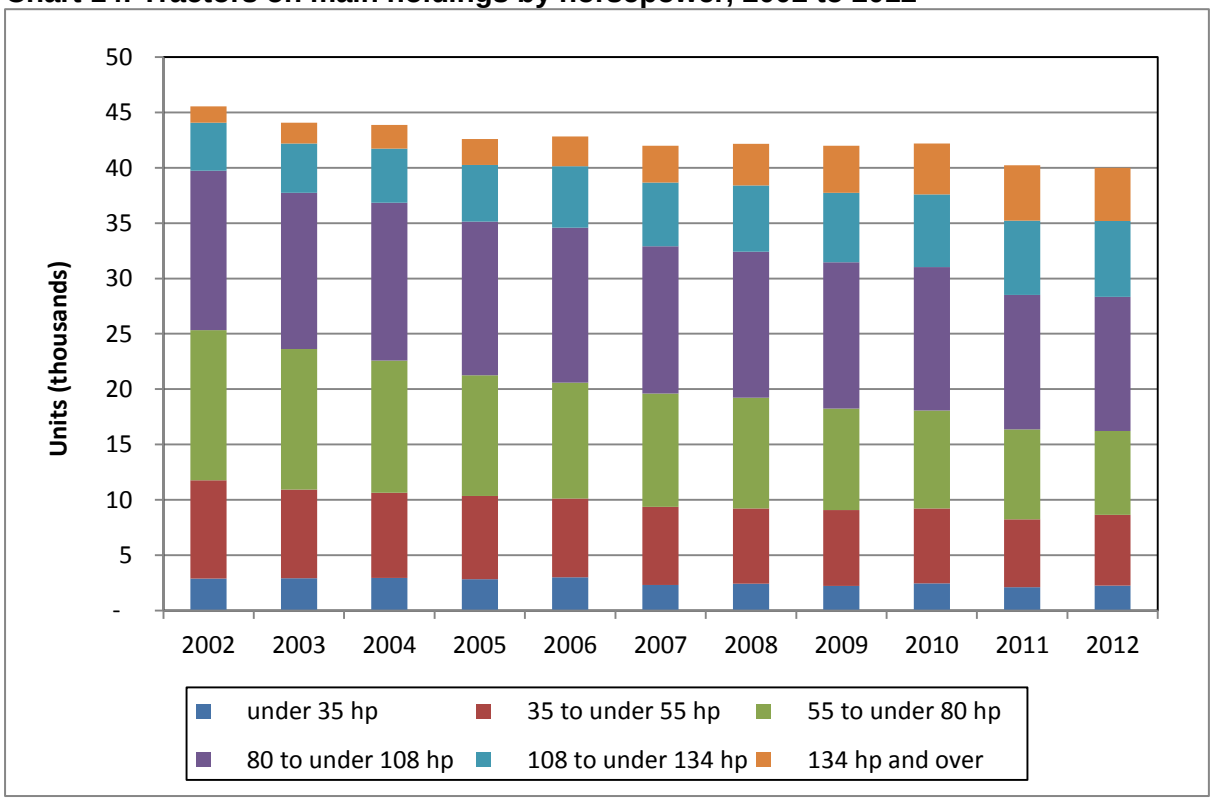
Information on machinery is only collected through the December Survey and not the June Census. Information on tractors and transport is collected every December but questions on other machinery types are alternated between odd and even reporting years. Commentary in this section only refers to trends in tractors and to those machinery types for which information is collected for in even years. Results for machinery information collected in odd years is presented in table 8 for reference.

When considering trends in machinery, it is worth noting that there has been an increase in the value of agricultural contract work being carried out over the past ten years (as reported in the farm income statistics). If it is the case that there are more holdings using contractors and their machinery to carry out certain work, it is possible this may have led to a decrease in machinery observed in the survey results,.

Tractors (Table 6)

Chart 14 shows that the number of tractors on main holdings has declined over the last ten years by 5,552 (12.2 per cent) to 39,999. Over this period, the number of more powerful tractors over 108 horsepower has doubled, from 5,819 to 11,670, whilst the number of less powerful tractors has declined, most notably those between 55 and 80 horsepower which have fallen from 13,568 to 7,580 (a drop of 44.1 per cent) over the period.

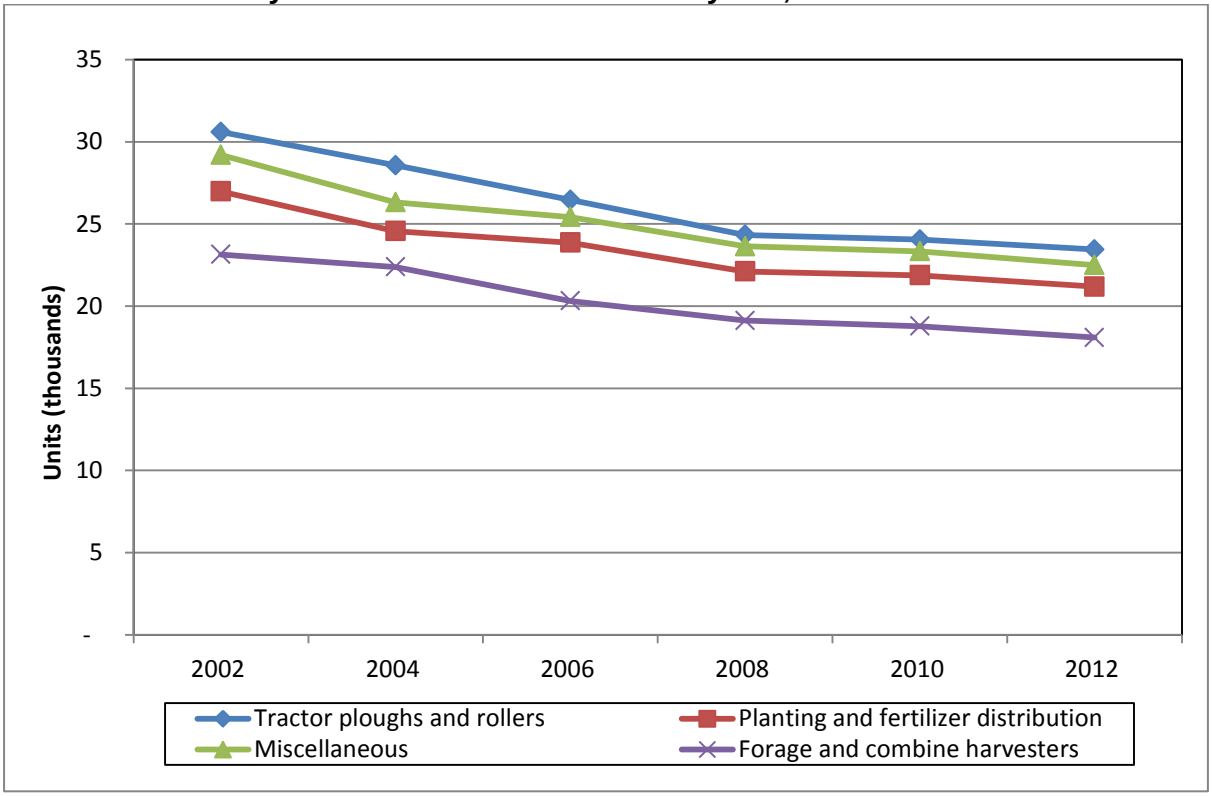
Chart 14: Tractors on main holdings by horsepower, 2002 to 2012



Other machinery (Table 8)
Charts 15 to 17 show the trends for other types of machinery for which information is only collected on even years of the survey. These charts show that there have been downward trends for all groups of machinery since 2002 except for transport.

Cultivation
Between 2002 and 2012 cultivation machinery, comprising tractor ploughs and rollers, decreased by 7,152 (23 per cent) to 23,441 units. There have been differing rates of decline within this total, with reversible tractors declining at a much slower rate (six per cent) in comparison to non-reversible tractors (41 per cent) and ridging tractors (34 per cent). Information on other cultivation machinery such as harrows, diggers and hoes is collected in odd years of the survey (see table 8 in the annex).

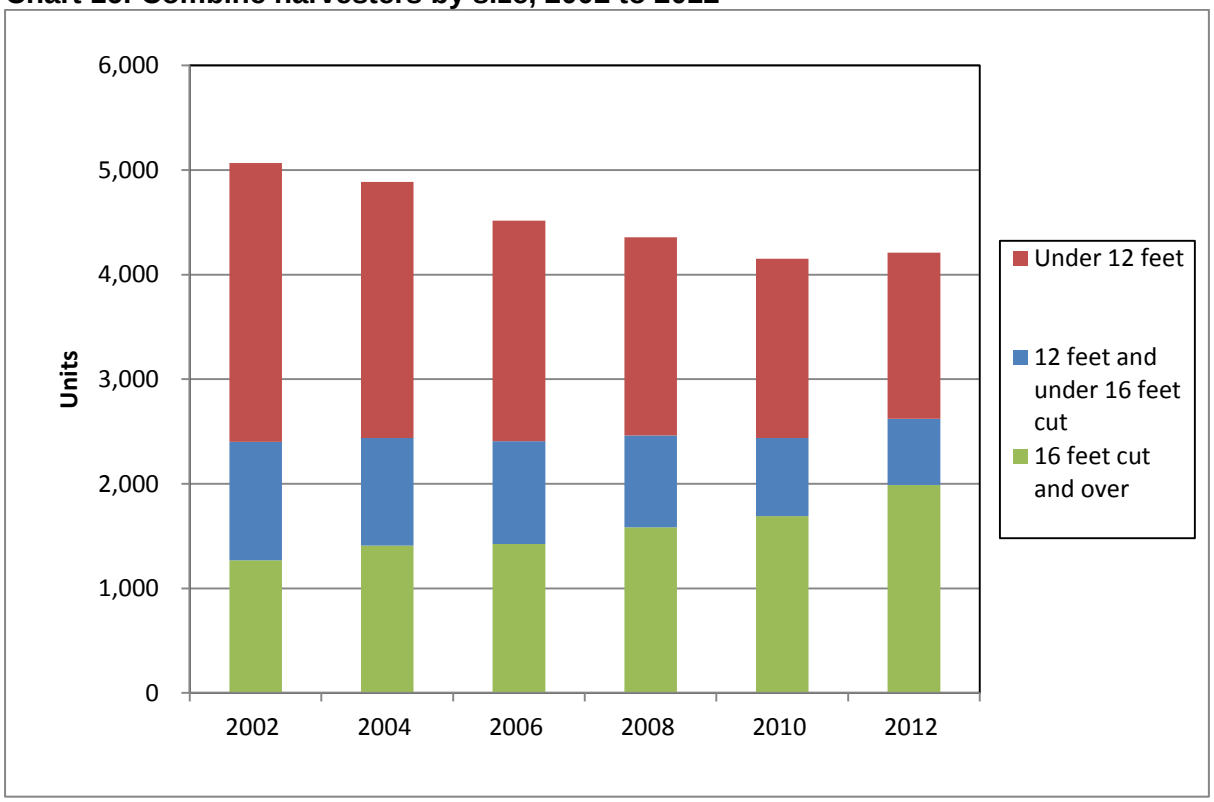
Chart 15: Machinery information collected in even years, 2002 to 2012



Harvesting
Harvesting machinery for forage harvesting, combine harvesters, root harvesters and balers, as denoted by the forage and combine harvesters line in chart 15, have seen an overall decline of 5,054 (22 per cent) to 18,089 units since 2002. Within this total the greatest decline has been for forage harvesting machinery, down 1,203 (42 per cent) to 1,641 units. This compares to slower rates of decline for combine harvesters (down 17 per cent to 4,210 units) and balers (down 16 per cent to 11,354 units).

It is important to note that although combine harvesters have declined overall, larger machines with a 16 feet cut and over have increased (up 57 per cent since 2002). In contrast, smaller combines, with under 16 feet cuts, have been in decline as farmers move to using larger, more powerful machinery (see chart 18 below).

Chart 16: Combine harvesters by size, 2002 to 2012



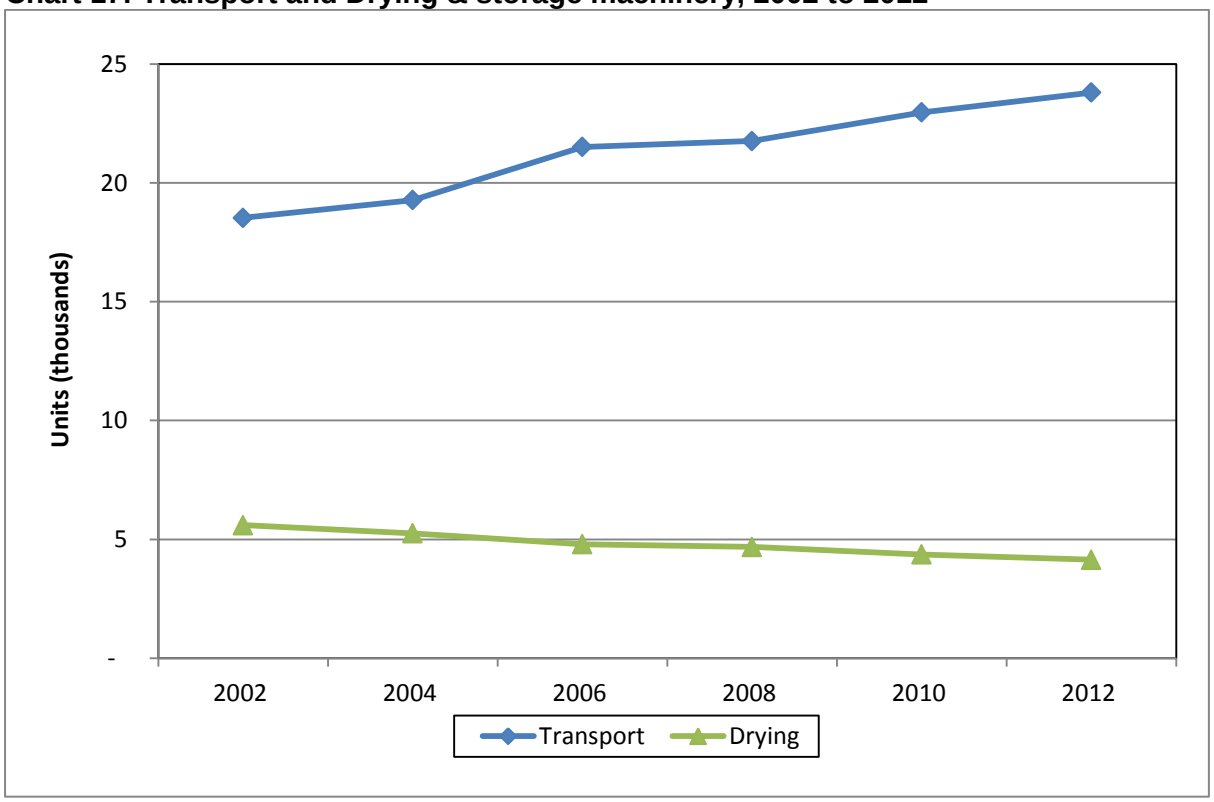
Planting and fertiliser distribution

Planting and fertiliser distribution machinery is down 5,791 (21 per cent) since 2002, to 21,184 units. Most of the decline has been driven by mechanical dung spreaders (down 32 per cent to 6,314 units) and fertiliser distributors (down 21 per cent to 10,675) rather than by slurry and effluent tankers (down 2 per cent to 4,195), which have declined at a slower rate (though rising between 2010 and 2012).

Drying and storage

A 26 per cent drop in drying machinery was observed between 2002 and 2012, down 1,458 to 4,142 units. This has been driven by a decline in grain dryers installed on floors or in bins (down 1,017 to 1,086 units) rather than by other dryers such as continuous flow, batch or mobile engine driven fans.

Chart 17: Transport and Drying & storage machinery, 2002 to 2012



Transport

The number of transport vehicles, comprising lorries, vans, pick-ups and all-terrain vehicles increased by 28 per cent to 23,802 vehicles between 2002 and 2012. Within this increase, all-terrain vehicles such as three- and four-wheeled motorcycles and eight-wheeled vehicles increased at a faster rate (up 35 per cent to 12,209 vehicles) than the number of lorries, vans and pick-ups (up 22 per cent to 11,593 vehicles).

4 Notes

4.1 Background

This publication contains results for the December Agricultural Survey for 2012 and includes trends for the last ten years. Where appropriate, comparisons have been made between results of the December Survey and the June Agricultural Census.

4.2 Uses of the information

The December survey is conducted for a range of purposes. The statistics help the government to form, monitor and evaluate policy, and to assess the economic well-being of the agricultural sector.

Most of the data collected is required by the Statistical Office of the European Communities, specifically Council Regulation No 1165/2008 which sets out requirements for provision of cattle, pig, sheep and goat statistics in both May/June and November/December. It defines the category, age or weight of livestock for which statistics are to be provided and specifies the provision of quarter-year or half-year production forecasts. There is also a separate EC Regulation covering the provision of winter crops. This information is collated by DEFRA for submission at member state (UK) level.

December Survey results are not as widely used as results from the June Census as the survey only covers main holdings, whereas the June Census is representative of all agricultural holdings in Scotland. However, December results supply supplementary information not available through the June census on machinery, winter livestock levels, grass sown as well as detail on hay and silage production.

Some examples detailing how the December Survey data is or has been used are:

- Estimates of Total Income From Farming (TIFF), which is used to estimate the value of agricultural productivity in Scotland. Statistics from the December Survey are used to provide estimates of livestock numbers where the production cycle occurs between each June. For example, although the June Census records the number of lambs present in Summer each year, it does not (on its own) give an indication of the volumes of finished sheep and lambs that are being processed each year. The December Survey allows us to estimate the activity and subsequent worth of sectors such as sheep, pigs and poultry.

- It is also useful to monitor livestock maintained for the next breeding season and winter crops in December so that the farming industry can better understand what to plan for in the coming year.

- The data on machinery that is collected on the December Survey is also used to help estimate some of the input costs incurred within Scottish agriculture (for example, machinery repairs, depreciation, fuel and asset worth).

- The December Survey contributes to the formulation and publication of UK statistics on agriculture. These publications are co-ordinated by DEFRA and more details are available here.
  http://www.defra.gov.uk/evidence/statistics/index.htm

Results from the December survey are available to the public as follows:

This statistical publication is available for download from the Scottish Government website along with previous releases of December Survey results:

http://www.scotland.gov.uk/Topics/Statistics/Browse/Agriculture-Fisheries/PubFinalResulsDecCensus

Headline results for TIFF (mentioned above) are published each January and more detailed analysis presented in the Economic Report on Scottish Agriculture (ERSA), which is published in June of each year. Results for TIFF can be accessed as follows: http://www.scotland.gov.uk/Topics/Statistics/Browse/Agriculture-Fisheries/ResultsTIFFFBI

Economic Report on Scottish Agriculture (ERSA) is a compendium publication containing detailed statistics on Scottish agriculture, combining further information from Total Income From Farming (TIFF – see above for more details), Farm Accounts analysis (income and expenditure statistics by different farm types) and additional statistics/analysis from the June census.
http://www.scotland.gov.uk/Topics/Statistics/Browse/Agriculture-Fisheries/PubEconomicReport

4.3 Methodology - data collection

The December Survey was sent to around 14,800 main holdings in 2012. These were selected using stratified random sampling where the sampling frame comprised of a list of all the main holdings in Scotland stratified by farm size and region as measured through the 2012 June Census. This spread is intended to ensure a good representation across the country and by farm size. Optimal allocation was used to calculate the sample size required in each strata in order to maximise precision of results. Following this a random sample could be selected from each strata.

The results are based on information returned from approximately 10,400 holdings, providing a response rate of 70 per cent.

4.4 Methodology - non-response

In Scotland there are around 52,600 agricultural holdings registered with the Scottish Government. We use these register details to maintain a full holding-level data set of Scottish agriculture for statistical purposes. This provides us with virtually complete coverage of agricultural activity in Scotland. However, please note that:

- we very rarely conduct a full census of holdings as this would place an unnecessary burden on farmers;
- for the selected holdings that are surveyed, not all farmers return data to us;
- where we have gaps in our holding-level data set, we ‘maintain’ records by producing estimates.

The December Survey is representative of main holdings (around 24,400 holdings at December 2012), which are generally those holdings over one hectare in size. Estimates are produced for those holdings which were (i) main holdings but not sampled, and (ii) surveyed but did not provide a response.

Two stages of estimation are undertaken to calculate the December results:

- For information items collected both in June Census and December Survey a trending technique is applied to estimate the current year December values. This applies to livestock items and winter crops. The holdings are divided into strata using farm size and region. Where holdings have reported for both surveys, the total change between June and December for holdings within individual stratum are calculated. These rates

of change are then applied to June Census results for main holdings who were not sampled or who have not responded in December.

- For information items only collected in December such as machinery, hay/silage production and grass sown, an expansion technique is applied to estimate for the holdings we have no information for. A raising factor is calculated for each strata by counting the number of holdings in the strata and dividing it by the number of holdings a survey form was received for. These raising factors are applied to fill in for those holdings no information has been supplied for.

4.5 Methodology – future developments: Cattle Tracing System

Statistical data on cattle populations are currently collected through the June census and December survey in Scotland. In order to reduce the burden on survey respondents we plan, in future data collections, to obtain this data through the Cattle Tracing System (CTS), an administrative data source held by the British Cattle Movement Service (BCMS) which holds records of cattle numbers and movements across Great Britain. Defra have been using CTS to obtain cattle figures for England and Wales since 2007.

The table below compares cattle data collected via the 2012 December Survey with data from the CTS and shows that, over the last five years, there has been a difference of between 0.9 per cent and 2.5 per cent between the two sources.

As the December Survey only collects information on main holdings, the figures below incorporate estimates for minor holdings in order to provide a comparison of cattle figures for the whole of Scotland.

Table: Comparison of Cattle Data collected from December Survey form and from the CTS, 2008-2012

	December survey	CTS data	Difference	Percentage difference
2008	1,786,376	1,825,565	-39,189	-2.2
2009	1,764,869	1,809,329	-44,460	-2.5
2010	1,776,908	1,805,083	-28,175	-1.6
2011	1,741,035	1,757,551	-16,516	-0.9
2012	1,732,547	1,755,442	-22,895	-1.3

4.6 Data quality

Data undergo several validation processes as follows; (i) checking for any obvious errors on the paper census forms upon receipt, (ii) auto-checking and identifying any internal inconsistencies once loaded onto the initial database, (iii) auto-checking for any sudden changes in comparison with previous annual returns and other holdings, (iv) assessing any trends or switches in item areas or quantities that look unreasonable.

If necessary farmers are contacted to ensure data are correct. Additional quality assurance is provided at the later stages by utilising expert knowledge within the Scottish Government and the agriculture industry.

4.7 Main sources of bias and other error

The December Survey will be subject to **measurement bias** since we are reliant on farmers completing the form accurately. Ideally livestock counts should be undertaken to ascertain precise numbers of animals but, given time constraints, exact numbers of livestock are likely to be estimated. This bias will impact particularly on sub categories of livestock (e.g. weight categories for pigs or ages of cattle) rather than the total population for a livestock type. Other categories likely to be estimated by farmers include the tonnage of hay and silage produced in the year.

Guidance notes detailing what to include on the form are supplied to avoid farmers misreporting information. With regards to livestock, we require farmers to report those animals located on the holding that are either owned by the farmer or animals that are owned by someone else but are held under formal contract. It has been noted that animals are sometimes double counted in situations where animals are held under contract with both the owner of the livestock and the farmer looking after the livestock reporting the animals. To avoid this double counting we have added specific guidance on the form itself in attempt to avoid this **reporting bias**.

The survey may also be subject to an element of **non-response bias** with farmers on certain farm types being more likely to respond to the survey than others. This means that we need use older information to estimate values for farm types less likely to supply us with current information.

A stratified random sample, grouped by farm size and region, is used to select holdings for the December survey. Individual strata are sampled to different extents. However, in estimating the results we weight by strata in order to produce a full dataset and to counteract the effects of some strata being sampled to a greater degree than others. This helps to address any **sampling bias** that is inherent in the sample design.

4.8 Survey burden

In December 2011, a representative sample of around 110 farmers participated in a telephone survey in order to calculate the burden of participating in the December survey. It was not considered beneficial to repeat this survey this year, and but applying an RPI inflator to last year's estimate give a total compliance cost of £66,586. Please refer to the December 2011 publication for how this figure was calculated and the range of times reported[4].

4.9 Other publications

The next large agricultural survey is the June census of agricultural holdings. This is a larger exercise which surveys around 35,000 holdings with results being published in September 2012. Results for the 2012 December survey will be released in Spring 2013.

Results from all Scottish Government agricultural surveys can be accessed here:

http://www.scotland.gov.uk/Topics/Statistics/Browse/Agriculture-Fisheries/Publications

Results from previous June Censuses can be accessed here:
http://www.scotland.gov.uk/Topics/Statistics/Browse/Agriculture-Fisheries/PubFinalResultsJuneCensus

Publications relating to cereal and oilseed rape production can be accessed here:
http://www.scotland.gov.uk/Topics/Statistics/Browse/Agriculture-Fisheries/PubCerealHarvest

Agricultural Facts and Figures pocketbook. This provides a useful summary of the key statistics in the Scottish agriculture and food sector in a convenient pocketbook format.
http://www.scotland.gov.uk/Topics/Statistics/Browse/Agriculture-Fisheries/PubFactsFigures

[4] http://www.scotland.gov.uk/Publications/2012/03/7513/4#a47

5. Tables

AGRICULTURAL STATISTICS: RESULTS OF DECEMBER 2012 SURVEY OF MAIN HOLDINGS

Table 1 Crops and grass area, hay and silage production, 2002 to 2012 [(1)]

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	% Change between 2011 & 2012
Crops and grass sown by 1 December (hectares)												
Wheat	86,355	103,751	93,062	97,021	102,118	113,795	88,299	103,616	114,183	98,626	84,070	-14.8%
Barley	60,544	59,046	56,116	55,703	54,961	58,750	53,140	51,966	50,382	48,829	53,908	10.4%
Oats	7,293	6,219	5,225	6,630	6,996	7,352	6,509	7,392	7,547	6,380	6,695	4.9%
Oilseed rape	32,716	36,893	35,358	35,236	38,134	32,639	28,817	33,065	36,926	35,656	35,045	-1.7%
Grass sown	63,000	59,317	52,007	58,701	57,098	46,440	40,813	57,761	58,586	47,060	45,576	-3.2%
Grass cut (hectares)												
For hay	44,749	52,563	41,946	49,791	53,102	41,922	38,014	38,196	41,753	42,219	30,505	-27.7%
For silage / haylage	298,730	292,513	303,677	292,831	304,508	306,734	299,996	334,565	331,503	321,573	306,271	-4.8%
Production (tonnes)												
Hay	276,516	320,958	262,735	308,249	359,118	269,365	222,873	247,155	276,899	259,941	179,750	-30.8%
Grass silage / haylage	6,694,726	6,472,344	6,455,704	6,295,154	6,231,721	6,637,856	6,267,161	6,495,446	6,594,048	6,627,610	6,408,933	-3.3%
Arable silage	393,731	372,140	446,661	392,945	406,313	396,353	379,041	356,545	343,923	316,520	298,938	-5.6%
Yields (tonnes/hectare)												
Hay	6.2	6.1	6.3	6.2	6.8	6.4	5.9	6.5	6.6	6.2	5.9	-4.3%
For silage / haylage	22.4	22.1	21.3	21.5	20.5	21.6	20.9	19.4	19.9	20.6	20.9	1.5%

[(1)] - Minor holdings accounting for about 13% of grassland and 1% of crops are excluded from these results

AGRICULTURAL STATISTICS: RESULTS OF DECEMBER 2012 SURVEY OF MAIN HOLDINGS

Table 2(a) Number of cattle, 2002 to 2012 [(1)]

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	% Change between 2011 & 2012
Dairy cows												
Cows and heifers in milk	166,919	165,655	167,125	171,055	166,718	165,937	160,070	156,781	154,043	151,991	152,049	0.0%
Cows in calf but not in milk	35,536	35,221	33,158	33,107	32,629	32,087	30,706	28,335	28,559	27,632	27,124	-1.8%
Total	**202,455**	**200,876**	**200,283**	**204,162**	**199,347**	**198,024**	**190,776**	**185,116**	**182,602**	**179,623**	**179,173**	-0.3%
Beef cows												
Cows and heifers in milk	257,875	262,752	259,104	257,503	244,568	248,273	230,322	226,851	226,436	225,053	217,473	-3.4%
Cows in calf but not in milk	237,923	243,310	246,272	239,317	241,000	222,046	227,336	228,954	240,480	235,054	238,682	1.5%
Total	**495,798**	**506,062**	**505,376**	**496,820**	**485,568**	**470,319**	**457,658**	**455,805**	**466,916**	**460,107**	**456,155**	-0.9%
Heifers in calf for the first time												
Dairy - 2 years and over	24,631	25,608	24,260	25,359	25,414	23,056	23,339	22,108	23,124	21,984	21,558	-1.9%
- Under 2 years	15,143	19,007	17,665	17,031	16,077	17,040	15,189	16,049	15,976	15,972	18,376	15.1%
Beef - 2 years and over	42,287	39,820	41,181	41,495	40,435	43,703	40,249	41,595	44,286	39,554	37,979	-4.0%
- Under 2 years	20,942	21,463	22,803	21,342	21,196	22,966	20,896	23,009	22,886	22,295	22,858	2.5%
Total	**103,003**	**105,419**	**105,130**	**104,400**	**103,122**	**106,765**	**99,673**	**102,761**	**106,272**	**99,805**	**100,771**	1.0%
Bulls for service												
2 years and over	16,126	16,696	17,059	17,467	17,815	18,064	17,121	17,048	17,840	16,765	16,885	0.7%
Under 2 years	3,979	4,297	3,770	3,996	3,396	3,605	3,509	4,076	3,930	3,912	3,819	-2.4%
Total	**20,105**	**20,993**	**20,829**	**21,463**	**21,211**	**21,669**	**20,630**	**21,124**	**21,770**	**20,677**	**20,704**	0.1%

[(1)] - Minor holdings accounting for about 0.5% of total cattle are excluded from these results

AGRICULTURAL STATISTICS: RESULTS OF DECEMBER 2012 SURVEY OF MAIN HOLDINGS

Table 2(b) Number of cattle, 2002 to 2012 [(1)]

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	% Change between 2011 & 2012
Other cattle 2 years and over												
Male	29,376	25,476	26,592	29,478	30,786	30,716	29,182	33,049	28,906	26,748	26,121	-2.3%
Female for breeding - dairy	8,049	7,172	8,161	7,772	7,598	7,794	6,597	6,998	6,420	5,544	5,812	4.8%
- beef	20,831	22,585	16,955	17,520	17,138	18,627	19,340	17,220	19,052	15,042	19,059	26.7%
Female not for breeding	15,181	13,613	15,104	17,273	19,996	20,068	19,215	18,566	19,685	16,002	17,940	12.1%
Total	**73,437**	**68,846**	**66,812**	**72,043**	**75,518**	**77,205**	**74,334**	**75,833**	**74,063**	**63,336**	**68,932**	8.8%
Other cattle 1 year and over but under 2 years												
Male	213,988	212,512	214,905	202,054	204,990	193,256	190,169	186,689	180,185	177,732	180,165	1.4%
Female for breeding - dairy	40,110	42,066	38,998	39,659	38,882	36,699	36,682	39,397	39,882	41,157	39,772	-3.4%
- beef	51,070	54,186	52,185	53,503	50,810	52,646	50,135	52,188	53,695	50,675	50,536	-0.3%
Female not for breeding	134,951	133,717	136,381	141,704	140,687	133,793	132,462	122,798	118,080	116,206	113,290	-2.5%
Total	**440,119**	**442,481**	**442,469**	**436,920**	**435,369**	**416,394**	**409,448**	**401,072**	**391,842**	**385,770**	**383,763**	-0.5%
Other cattle 6 months and over but under 1 year												
Male	162,710	167,221	172,136	169,336	166,028	160,264	159,842	156,350	160,224	161,029	158,116	-1.8%
Female	164,963	168,622	173,770	176,131	169,566	166,109	166,447	159,130	164,550	167,159	164,263	-1.7%
Total	**327,673**	**335,843**	**345,906**	**345,467**	**335,594**	**326,373**	**326,289**	**315,480**	**324,774**	**328,188**	**322,379**	-1.8%
Other cattle under 6 months												
Male	115,590	116,016	113,106	111,110	103,072	100,078	94,254	95,501	94,325	92,919	90,880	-2.2%
Female	120,663	120,090	120,720	121,036	112,630	109,400	104,393	103,519	101,692	101,469	100,725	-0.7%
Total	**236,253**	**236,106**	**233,826**	**232,146**	**215,702**	**209,478**	**198,647**	**199,020**	**196,017**	**194,388**	**191,605**	-1.4%
Total cattle	**1,898,843**	**1,917,105**	**1,921,410**	**1,914,248**	**1,871,431**	**1,826,227**	**1,777,455**	**1,756,211**	**1,764,256**	**1,731,894**	**1,723,482**	-0.5%

[(1)] - Minor holdings accounting for about 0.5% of total cattle are excluded from these results

AGRICULTURAL STATISTICS: RESULTS OF DECEMBER 2012 SURVEY OF MAIN HOLDINGS

Table 3 Number of sheep, 2002 to 2012[(1)]

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	% Change between 2011 & 2012
Sheep 1 year old or over												
Ewes kept for breeding	2,566,309	2,540,941	2,494,487	2,438,146	2,380,091	2,302,063	2,134,176	2,130,697	2,066,584	2,038,330	2,063,496	1.2%
Shearling ewes put to ram	777,491	776,161	789,873	743,253	700,234	705,721	674,431	651,643	682,852	657,376	665,960	1.3%
Shearling ewes not put to ram	38,385	35,379	40,891	31,336	31,910	32,122	28,839	25,788	19,298	23,905	30,351	27.0%
Rams kept for service	94,576	94,790	94,883	93,496	90,842	89,969	84,041	81,898	81,961	80,368	80,996	0.8%
Other sheep	127,492	115,649	146,708	123,099	124,630	129,289	110,071	92,365	103,300	97,116	109,502	12.8%
Total	**3,604,253**	**3,562,920**	**3,566,842**	**3,429,330**	**3,327,707**	**3,259,164**	**3,031,558**	**2,982,391**	**2,953,995**	**2,897,095**	**2,950,305**	**1.8%**
Sheep under 1 year old												
Ewe lambs put to ram	78,993	100,047	90,890	85,911	87,127	88,883	70,679	94,213	95,109	102,263	85,867	-16.0%
Ewe lambs for future breeding	698,350	698,574	621,806	605,466	586,746	605,395	560,784	560,662	561,361	551,787	579,651	5.0%
Ram lambs intended for service	30,959	32,898	33,033	30,598	28,982	29,575	28,416	28,711	29,595	28,474	29,939	5.1%
Other sheep and lambs	1,039,543	1,052,712	1,135,663	1,107,923	1,170,344	1,132,978	1,031,516	953,407	944,707	885,562	1,017,720	14.9%
Total	**1,847,845**	**1,884,231**	**1,881,392**	**1,829,898**	**1,873,199**	**1,856,831**	**1,691,395**	**1,636,993**	**1,630,772**	**1,568,086**	**1,713,177**	**9.3%**
Total sheep	**5,452,098**	**5,447,151**	**5,448,234**	**5,259,228**	**5,200,906**	**5,115,995**	**4,722,953**	**4,619,384**	**4,584,767**	**4,465,181**	**4,663,482**	**4.4%**

[(1)] - Minor holdings accounting for about 3.6% of total sheep are excluded from these results

AGRICULTURAL STATISTICS: RESULTS OF DECEMBER 2012 SURVEY OF MAIN HOLDINGS

Table 4 Number of pigs, 2002 to 2012 [(1)]

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	% Change between 2011 & 2012
Breeding herd												
Sows in pig	35,128	34,197	33,510	31,729	31,416	27,769	23,537	24,387	26,306	21,941	17,647	-19.6%
Gilts in pig	4,326	4,151	7,421	3,689	4,679	4,448	4,145	3,897	5,224	4,580	4,974	8.6%
Other sows for breeding	10,950	10,421	6,932	6,604	7,860	6,383	5,680	4,949	5,774	5,706	5,514	-3.4%
Total	**50,404**	**48,769**	**47,863**	**42,022**	**43,955**	**38,600**	**33,362**	**33,233**	**37,304**	**32,227**	**28,135**	-12.7%
Barren sows for fattening	**962**	**720**	**916**	**510**	**713**	**1,061**	**558**	**542**	**521**	**419**	**579**	38.2%
Gilts 50kg and over, not in pig but expected to be used for breeding	**5,069**	**4,557**	**6,026**	**6,325**	**4,693**	**4,317**	**4,056**	**4,653**	**5,258**	**5,272**	**5,072**	-3.8%
Boars being used for service	**1,851**	**1,596**	**1,658**	**1,304**	**1,373**	**1,342**	**1,214**	**1,220**	**1,448**	**1,095**	**955**	-12.8%
All other pigs												
110kg liveweight and over	2,598	6,375	5,144	9,841	6,184	4,788	4,793	6,325	6,488	3,296	3,708	12.5%
80kg and under 110kg liveweight	53,860	56,103	80,487	78,437	62,846	65,438	50,175	68,998	67,975	55,415	47,376	-14.5%
50kg and under 80kg liveweight	94,942	99,026	93,834	89,709	105,815	100,974	78,947	88,377	87,731	83,880	71,028	-15.3%
20kg and under 50kg liveweight	129,088	128,521	122,498	131,328	121,664	111,847	105,462	100,609	99,377	94,150	87,385	-7.2%
Under 20kg liveweight	147,732	131,260	131,723	133,808	122,422	121,507	103,817	90,748	104,116	92,314	76,859	-16.7%
Total	**428,220**	**421,285**	**433,686**	**443,123**	**418,931**	**404,554**	**343,194**	**355,057**	**365,687**	**329,055**	**286,356**	-13.0%
Total pigs	**486,506**	**476,927**	**490,149**	**493,284**	**469,665**	**449,874**	**382,384**	**394,600**	**410,218**	**368,068**	**321,097**	-12.8%

[(1)] - Minor holdings accounting for about 0.2% of total pigs are excluded from these results

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Table 5 Number of poultry, 2002 to 2012[(1)]

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	% Change between 2011 & 2012
Fowls for producing eggs for eating												
Pullets & hens in the laying flock:												
- Hens in first laying season	2,666,080	2,888,061	2,714,110	2,972,939	2,963,953	3,063,395	2,974,388	3,074,212	3,749,800	3,635,069	3,601,429	-0.9%
- Moulted hens	35,457	27,231	31,877	30,309	34,020	39,062	32,908	41,563	37,683	27,811	28,543	2.6%
Pullets being reared for laying	801,252	948,336	1,089,741	943,750	905,380	1,071,295	779,965	1,168,417	1,611,523	1,368,054	1,398,864	2.3%
Total	**3,502,789**	**3,863,628**	**3,835,728**	**3,946,998**	**3,903,353**	**4,173,752**	**3,787,261**	**4,284,192**	**5,399,006**	**5,030,934**	**5,028,836**	0.0%
Fowls for breeding												
Breeding hens	1,033,838	1,319,630	1,235,486	1,302,298	1,680,717	1,118,773	1,161,724	995,723	921,148	1,201,613	885,892	-26.3%
Cocks	107,075	107,742	46,331	117,504	112,422	114,660	118,612	106,845	101,415	137,685	126,190	-8.3%
Total	**1,140,913**	**1,427,372**	**1,281,817**	**1,419,802**	**1,793,139**	**1,233,433**	**1,280,336**	**1,102,568**	**1,022,563**	**1,339,298**	**1,012,082**	-24.4%
Broilers and other table birds	8,336,755	9,523,751	9,286,306	9,244,288	7,293,316	8,254,386	8,097,766	8,111,445	8,200,194	7,534,294	8,680,128	15.2%
Other Poultry	21,149	58,726	20,734	23,764	69,314	33,285	46,240	57,633	49,853	58,391	79,300	35.8%
Total other poultry (turkeys, broilers and other table birds, ducks, geese, guinea fowl)	**8,357,904**	**9,582,506**	**9,307,040**	**9,268,052**	**7,362,630**	**8,287,671**	**8,144,006**	**8,169,078**	**8,250,047**	**7,592,685**	**8,759,428**	15.4%
Total poultry	**13,001,606**	**14,873,506**	**14,424,765**	**14,641,966**	**13,059,122**	**13,694,856**	**13,211,603**	**13,555,838**	**14,671,616**	**13,962,917**	**14,800,346**	6.0%

(1) - Minor holdings accounting for about 0.5% of total poultry are excluded from these results

Table 6 Number of tractors on main holdings, December 2002 to 2012 [(1)]

	2002	2003	2004	2005	2006	2007[(1)]	2008	2009	2010	2011	2012	% Change between 2011 & 2012
	number	*number*	*number*	*number*	*number*	*number*	*number*	*number*	*number*	*number*	*number*	
Tracklaying tractors (Caterpillars)	237	224	251	315	379	231	379	334	358	366	579	58.2%
Wheeled tractors:												
under 35 hp	2,882	2,898	2,949	2,834	2,994	2,313	2,415	2,230	2,442	2,102	2,258	7.4%
35 to under 55 hp	8,871	8,018	7,675	7,510	7,112	7,044	6,813	6,847	6,789	6,145	6,371	3.7%
55 to under 80 hp	13,568	12,712	11,951	10,921	10,478	10,237	10,000	9,160	8,852	8,125	7,580	-6.7%
80 to under 108 hp	14,411	14,102	14,258	13,876	13,997	13,325	13,202	13,229	12,935	12,154	12,120	-0.3%
108 to under 134 hp	4,334	4,484	4,901	5,130	5,560	5,753	5,986	6,287	6,585	6,694	6,873	2.7%
134 hp and over	1,485	1,861	2,140	2,343	2,686	3,313	3,757	4,244	4,587	5,004	4,797	-4.1%
Total wheeled tractors	**45,551**	**44,075**	**43,874**	**42,614**	**42,827**	**41,985**	**42,173**	**41,997**	**42,190**	**40,224**	**39,999**	**-0.6%**
of which:												
tractors under 10 hp	325	342	202	284	306	nc	nc	nc	nc	nc	nc	nc
tractors 201 hp and over	nc	nc	nc	nc	nc	236	280	435	461	539	684	26.9%
4-Wheel drive tractors	21,419	20,379	21,595	22,151	22,941	22,660	26,091	26,661	27,557	25,895	26,438	2.1%

nc Information not collected.

(1) As of 2007 we have changed the groups used to collect tractor power information. There is now a separate category for tractors of 201 hp and over, and the "under 10 hp" and "10 to under 35 hp" groups have been combined.

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Table 7 Machinery for information collected on even years of the December survey 2002 to 2012

	2002	2004	2006	2008	2010	2012	Percentage change between 2010 & 2012
Drying and storage	*number*	*number*	*number*	*number*	*number*	*number*	
Grain driers (complete installations):							
Continuous flow (including mobile driers)	1,168	1,098	1,071	936	928	894	-3.7%
Batch (including mobile driers)	1,959	1,958	1,928	1,960	1,840	1,953	6.1%
On floor or in bins	2,103	1,838	1,467	1,442	1,330	1,086	-18.3%
Mobile engine-driven fan	370	358	327	346	267	209	-21.7%
Transport:							
Lorries, vans and pick-ups:							
Up to 2 tonnes capacity	7,723	7,820	9,206	9,000	9,190	9,110	-0.9%
2 tonnes capacity and over	1,765	1,815	1,793	2,002	2,281	2,483	8.9%
All-terrain vehicles:							
3 and 4 wheeled motorcycles	8,718	9,307	10,053	10,316	10,973	11,427	4.1%
8 wheeler and other types	322	336	457	440	523	782	49.5%
Miscellaneous:							
Feed mills, feed mixers and combined mill/mixers	3,973	3,757	3,515	3,200	3,192	3,023	-5.3%
Field crop or fruit sprayers (mounted or trailed)	5,187	4,750	4,568	4,228	4,293	4,431	3.2%
Drainage and ditching equipment (mounted or self prop	4,024	3,700	3,697	3,556	3,794	3,723	-1.9%
Stand-by generators	4,513	4,725	5,247	5,371	5,436	5,160	-5.1%
General purpose elevators (for bales, sacks, etc)	2,937	2,297	1,861	1,544	1,332	1,125	-15.5%
Moveable augers and pneumatic conveyors	8,565	7,091	6,531	5,741	5,285	5,032	-4.8%
Cultivation:							
Tractor ploughs:							
Reversible	8,137	8,091	7,745	7,474	7,506	7,680	2.3%
Non-reversible	5,380	4,627	4,200	3,445	3,350	3,201	-4.4%
Ridging	4,024	3,778	3,316	2,741	2,818	2,649	-6.0%
Rollers (complete sets)	13,052	12,068	11,200	10,665	10,373	9,911	-4.5%
Planting and fertilizer dist							
Mechanical dung spreaders	9,246	8,023	7,370	6,893	6,660	6,314	-5.2%
Slurry and effluent tankers	4,291	4,148	4,209	4,092	4,077	4,195	2.9%
Fertilizer distributers:							
Solid	13,175	12,173	12,083	10,898	10,948	10,487	-4.2%
Liquid or gaseous	263	216	200	229	188	188	0.0%
Harvesting:							
Forage harvesting:							
Single chop	465	356	341	287	278	264	-5.0%
Double chop	563	424	331	309	296	205	-30.7%
Metered chop	1,607	1,448	1,304	1,168	1,074	985	-8.3%
Pick-up forage wagons	209	174	170	185	196	187	-4.6%
Combine harvesters:							
Under 12 feet (3.66 metres) cut	1,131	1,027	982	880	748	633	-15.4%
12 feet (3.66 metres) and under 16 feet (4.88 metres	2,666	2,452	2,110	1,895	1,715	1,590	-7.3%
16 feet (4.88 metres) cut and over	1,269	1,409	1,425	1,583	1,690	1,987	17.6%
Balers:							
To make bales: under 2 hundredweights (100 kilogra	5,305	4,555	4,099	3,624	3,544	3,077	-13.2%
over 2 hundredweights (100 kilogramm	5,844	6,646	5,708	5,352	5,404	5,307	-1.8%
Bale wrappers	2,422	2,536	2,561	2,739	2,752	2,970	7.9%
Turnip and forage root harvesters	1,662	1,358	1,285	1,094	1,080	884	-18.1%

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Table 8 Machinery for information collected on odd years of the December survey 2001 to 2011

	2001	2003	2005	2007	2009	2011	Percentage change between 2009 & 2011
Load handling:	*number*	*number*	*number*	*number*	*number*	*number*	
Wheeled automatic bale accumulators and packers	1,891	1,542	1,546	1,491	1,273	1,130	-11.2%
Linkage and loader attachment:							
Big bales	10,804	10,611	11,145	10,895	11,323	12,189	7.6%
Conventional bales	3,763	3,200	2,968	2,636	2,473	2,723	10.1%
Fork lift trucks:							
Rough terrain type	1,595	1,379	1,291	1,309	1,188	1,070	-9.9%
Factory type	1,304	1,107	1,165	1,200	1,232	1,244	1.0%
Telescopic	3,242	3,619	3,888	4,299	4,835	5,084	5.1%
General purpose tractor trailers:							
Under 6 tonnes capacity	18,678	16,150	14,808	13,594	12,507	11,214	-10.3%
6 to 12 tonnes capacity	12,785	12,944	12,920	13,093	13,418	13,351	-0.5%
12 tonnes capacity and over	1,519	1,727	1,894	2,254	2,717	3,220	18.5%
Transport:							
Land rover or similar 4-wheel drive vehicles for farm use	8,715	7,814	7,517	7,635	7,902	7,703	-2.5%
Lorries, vans and pick-ups:							
Up to 2 tonnes capacity	nc	3,592	3,640	3,925	3,992	4,557	14.2%
2 tonnes capacity and over	nc	1,368	1,269	1,430	1,587	1,600	0.8%
All-terrain vehicles:							
3 and 4 wheeled motorcycles	nc	7,803	8,214	8,839	9,266	9,891	6.7%
8 wheeler and other types	nc	201	262	392	499	527	5.6%
Miscellaneous:							
Mounted hedge cutters	768	767	1,192	833	843	910	7.9%
Cattle weighing crushes	2,844	2,607	2,604	2,442	2,315	2,491	7.6%
Cultivation:							
Power take off driven:							
Harrows	4,237	4,081	4,318	4,166	4,432	4,380	-1.2%
Rotary diggers and cultivators	2,861	2,577	2,393	2,058	2,081	1,923	-7.6%
Disc harrows:							
Mounted and semi-mounted	4,022	3,600	3,099	2,936	2,911	2,689	-7.6%
Trailed	2,170	2,061	1,655	1,879	1,483	1,386	-6.5%
Other cultivators, harrows and hoes:							
Mounted	10,403	9,604	9,363	9,053	8,786	8,626	-1.8%
Trailed	4,357	3,686	3,227	2,947	2,956	2,461	-16.7%
Stone separators	715	732	637	673	604	615	1.8%
Sowing:							
Direct drills:							
Root and vegetable seeds	2,202	2,059	1,953	1,589	1,496	1,343	-10.2%
Grain drills:							
Seed only	3,043	2,667	2,690	2,634	2,833	2,704	-4.6%
Combined seed and fertiliser	3,119	2,781	2,483	2,122	2,137	1,955	-8.5%
Seedling transplanters	248	227	210	192	140	191	36.4%
Potato planters	1,908	1,510	1,392	1,318	1,197	1,193	-0.3%
Harvesting:							
Mower conditioners	3,464	3,450	3,725	3,915	4,186	4,278	2.2%
Mowers:							
Cutter bar types	1,867	1,686	1,460	1,295	1,091	1,174	7.6%
Drum disc and flail types	7,915	7,108	6,458	6,113	5,764	5,408	-6.2%
Tedders, turners and siderakes	13,639	12,131	11,669	11,469	11,265	11,308	0.4%
Buckrakes	6,826	5,717	5,320	4,957	4,550	4,114	-9.6%
Potato harvesters:							
Spinners, elevator and shaker diggers	1,909	1,741	1,408	1,385	1,019	1,055	3.5%
Complete harvesters	953	833	715	689	700	679	-3.0%
Potato graders	981	818	864	757	666	644	-3.3%

nc - not collected

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