FARM BUSINESS SURVEY: REASONS FOR LEAVING AND POTENTIAL STRUCTURAL CHANGES WITHIN (SECTION Y) AND ON EXITING THE SURVEY

Defra Agricultural Change and Environment Observatory Research Report No. 27

September 2011

Main author: Elizabeth Finch (elizabeth.finch@defra.gsi.gov.uk)

Summary

The Farm Business Survey (FBS) collates information from around 1850 farm businesses in England each year on a range of management accounting aspects. Two elements of the survey that have not been subject to analysis are the exit questionnaire, which all those leaving the survey are required to complete, and Section Y which relates to structural changes, such as changes in a business’ organisation or its material assets (land and buildings), for businesses remaining in the FBS. This short report provides an assessment of these two sections to provide an insight into change, possible biasing within the FBS population, and potential big business changes rather than focusing on National and gradual changes.

• Between 2005/06 and 2008/09, 680 farm businesses were identified as leaving the FBS from the exit questionnaires. Those exiting were significantly more likely to be ‘Very small’ in size. This could imply some bias in the population as ‘Very small’ businesses may be showing a higher turnover, although size may not be cited as the reason for leaving. Those exiting were less likely to receive agri-environment payments; it may be that those leaving the survey are less certain about their business future which could make commitment to agri-environment regimes for 5 or 10 years untenable.

• The majority of businesses (26%) had left the FBS due to being in the survey for 15 years. This was the most common reason in most years. Reasons for leaving which may be indicative of structural changes were amalgamated to make a new category ‘Farm Business Changes’ and overall, this also accounted for around a quarter of exits.

• The ‘Farm Business Changes’ and ‘15 years in survey’ groups differed significantly due to the latter having greater representation of Cereals businesses and little representation of Horticulture, Poultry and Pigs, significantly less ‘Very small’ businesses and ‘Low’ performers and significantly more businesses receiving agri-environment payments when compared with the former. These characteristics may imply greater business stability in the ‘15 years in survey’ group.

• Changes in business organisation/arrangements and material assets may be identified by those leaving the survey (Exit form) and those remaining in the FBS (section Y). Between 2005/06 and 2008/09, 158 businesses (ranging from 0.9% to 2.7% of the total FBS population each year) identified such changes on leaving and between 2005/06 and 2009/10, 348 businesses (ranging from 1% to 7% of the total FBS population each year) identified such changes whilst remaining in the FBS. This implies that such changes are not that prevalent within the FBS.

• Those remaining in the survey were more likely to identify changes in their material assets which were indicative of business stability and potential expansion. Those exiting were more likely to identify organisational changes which generally indicated

1 Up to the 2003/04 accounting year there were 2250 farm businesses surveyed in England.
downsizing/cessation. These two groups were significantly different in terms of their farm characteristics which may indicate that certain characteristics are associated with particular decisions. However the validity of such a conclusion is questionable due to the sample sizes involved.

- Section Y and the Exit form are currently under review to allow for better understanding of the occurrence and types of changes being undertaken within the FBS. This review will also consider the provision of better guidance with regards to the use and application of both the exit and Section Y elements of the survey.

In conclusion, overall there do not appear to be large structural changes occurring within the FBS population or within those exiting the survey. However, certain farm business characteristics may be indicative of particular decision-making by businesses which could influence the FBS population.
Contents

1 Introduction ....................................................................................................................... 4

2 Exit Questionnaires ......................................................................................................... 4
  2.1 Number of farm businesses leaving the FBS per year ............................................. 5
  2.2 Farm characteristics of farm businesses leaving the FBS.................................... 7
  2.3 Reasons for leaving the FBS – all years ................................................................. 12
  2.4 Reasons for leaving the FBS – yearly breakdown.................................................. 13
  2.5 Farm characteristics of those leaving after 15 years in the survey and those making
      Farm Business Changes ........................................................................................... 13
  2.6 Investigation of ‘Other’ ............................................................................................ 16
  2.7 Summary of reasons for leaving the FBS............................................................... 17

3 Structural Changes: Farm Business Organisation and Material Assets .................. 18
  3.1 Number of businesses identifying structural changes ............................................ 18
  3.2 Business organisation changes .............................................................................. 19
  3.3 Changes to material assets .................................................................................... 19
  3.4 Summary ................................................................................................................ 20

4 Characteristics of businesses making Structural Changes....................................... 21
  4.1 Farm type ............................................................................................................... 21
  4.2 SLR Group .............................................................................................................. 21
  4.3 Age ......................................................................................................................... 22
  4.4 Performance Band ................................................................................................. 22
  4.5 Agri-Environment Payments ............................................................................... 23
  4.6 Summary ................................................................................................................ 23

5 Overall conclusions ....................................................................................................... 24

Appendix 1: FBS Farm Characteristics ............................................................................ 26
Appendix 2: Section Y Form.............................................................................................. 28
1 Introduction

The Farm Business Survey (FBS) collates information from around 1850 farm businesses in England each year on a range of physical and financial management accounting aspects. This includes information on the revenues and costs of the farm business, assets and liabilities, land use, areas and sales of crops, sales and purchases of livestock and labour, as well as some information on other sources of income. The design stratum includes part-time and full-time farms with a farm size requirement of 0.5 Standard Labour Requirement (SLR) or above to be eligible. There are nine farm types surveyed over seven regions; Cereals, Dairy and General Cropping are the largest groups sampled whereas specialist Horticulture types are the smallest groups. The survey does not cover spare-time farms and farms between 0.5-1.0 SLR are sampled at a lower rate. Farm size is not explicit in the current design. Once recruited a farm may stay in the sample for several years (usually up to a maximum of 15 years) so turnover is slow. About 90% of farms remain in the sample each year and it has been estimated that around 60% will have been in the sample for 5 years. Rural Business Research (RBR) undertakes the FBS and is made up of a consortium of six Research Centres in England which collect data and recruit new members to the FBS.

Two elements of the survey that have not been subject to analysis are the exit questionnaire, which all those leaving the survey are required to complete, and Section Y which relates to structural changes (changes in the business’ organisation and/or material assets e.g. land and buildings) occurring on businesses remaining in the FBS. This short report investigates these aspects of the FBS to determine the reasons for leaving the survey, in particular whether restructuring is an issue, and whether there are structural changes occurring within the extant survey population. For example, if farms are leaving because their dynamics have changed, rendering them ineligible to continue in the survey, it is useful to ascertain the extent of these changes. It is hoped that this assessment will provide an insight into change. In addition, it may show if there is any possible biasing within the FBS population as well as highlighting potential big business changes rather than focusing on National and gradual changes.

As with other surveys the FBS is subject to confidentiality restrictions. In this particular case data pertaining to less than five businesses is potentially disclosive and can therefore not be published without prior consent.

2 Exit Questionnaires

On leaving the survey, farm businesses are required to complete an exit questionnaire. Reasons for leaving the survey fall into two categories; ‘Out of Scope’, which covers issues surrounding the survey’s eligibility criteria, and ‘Other Reasons’, which is concerned with changes in circumstances/decision making processes made by a business leading to it withdrawing from the survey. Table 1 shows the codes that can be chosen for leaving the FBS:

---

2 Up to the 2003/04 accounting year there were 2250 farm businesses surveyed in England.
3 Standard Labour Requirement (SLR) – calculated using coefficients across all activities on a holding to give a standardised measure of labour activity which gives an indication of the number of full-time workers required to run a holding. 1SLR = 95ha cereals, 50 dairy cows and 400 ewes. For accounting years up to 2003/04 the minimum size threshold was 8 European Size Units (1ESU = 1.3ha crops, 1 dairy cow and 25 ewes)
4 Specialist horticulture includes specialist fruit, specialist glass, specialist hardy nursery stock and other horticulture.
### Table 1: Out of scope and Other reason codes for leaving the FBS

<table>
<thead>
<tr>
<th>Out of scope</th>
<th>Other reason</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Code</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>1</td>
<td>Structural change takes farm out of scope</td>
</tr>
<tr>
<td>2</td>
<td>Farm no longer operating</td>
</tr>
<tr>
<td>3</td>
<td>Ownership problems</td>
</tr>
<tr>
<td>4</td>
<td>Change in accounting year</td>
</tr>
<tr>
<td>7</td>
<td>Business now too small</td>
</tr>
<tr>
<td>8</td>
<td>Fifteen years in survey</td>
</tr>
<tr>
<td>9</td>
<td>Other</td>
</tr>
<tr>
<td><strong>Sub code</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>21</td>
<td>Retired</td>
</tr>
<tr>
<td>22</td>
<td>Sold up (forced)</td>
</tr>
<tr>
<td>23</td>
<td>Sold up (voluntary)</td>
</tr>
<tr>
<td>29</td>
<td>Other</td>
</tr>
<tr>
<td>19</td>
<td>Other</td>
</tr>
</tbody>
</table>

### 2.1 Number of farm businesses leaving the FBS per year

Between 2005/06 and 2008/09, 680 businesses\(^5\) were identified by the exit questionnaire data as leaving the FBS. Of these, 375 businesses had left due to ‘Out of Scope’ reasons and 307 businesses due to ‘Other Reasons’ (Figure 1)\(^7\).

#### Figure 1: Total number of farm businesses leaving FBS each year

<table>
<thead>
<tr>
<th>Survey Year</th>
<th>Number of farm businesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005/06</td>
<td>100</td>
</tr>
<tr>
<td>2006/07</td>
<td>200</td>
</tr>
<tr>
<td>2007/08</td>
<td>200</td>
</tr>
<tr>
<td>2008/09</td>
<td>150</td>
</tr>
</tbody>
</table>

Generally, between 100 and 200 businesses leave the survey each year and slightly more leave due to ‘Out of Scope’ than ‘Other Reasons’ codes. The number leaving the survey each year varies and ranges from 7% to 11.5% of the FBS population\(^8\).

It is possible that farm businesses may leave the survey without completing an exit form, e.g. if a business does not complete the survey for several years and is then dropped. It is also possible that a business may appear to leave the survey and then re-appears when a survey form is subsequently completed in the following year.

---

\(^5\) This includes 2 businesses for which the reasons for leaving are unknown.

\(^7\) Businesses can identify both Out of Scope and Other Reasons and therefore may be included in both categories but are only included once in the total number of businesses leaving.

\(^8\) For 2005/06, 2006/07, 2007/08, 2008/09, the percentage exiting is 7%, 11.5%, 10% and 8%, respectively.
In order to provide some sort of indication as to how much information the exit questionnaires are collecting on the movement of farms out of the survey, farm identification numbers were compared from year to year to determine how many businesses were not appearing in the following year’s data (see Table 2 for details).

Table 2: Number of farms not identified in the following year’s FBS data

<table>
<thead>
<tr>
<th>Years compared</th>
<th>Number of businesses missing</th>
<th>Number of exit questionnaires</th>
<th>Percentage captured</th>
</tr>
</thead>
<tbody>
<tr>
<td>0506 with 0607</td>
<td>228</td>
<td>125</td>
<td>55%</td>
</tr>
<tr>
<td>0607 with 0708</td>
<td>219</td>
<td>215</td>
<td>98%</td>
</tr>
<tr>
<td>0708 with 0809</td>
<td>191</td>
<td>189</td>
<td>99%</td>
</tr>
<tr>
<td>0809 with 0910</td>
<td>212</td>
<td>151</td>
<td>71%</td>
</tr>
<tr>
<td>Total</td>
<td>850</td>
<td>680</td>
<td>80%</td>
</tr>
</tbody>
</table>

Table 2 shows that the percentage of businesses being captured in the exit questionnaires varies from year to year and ranges from only 55% when 2005/06 is compared with 2006/07 to 99% for the comparison between 2007/08 and 2008/09.

---

6 This calculation does not take into account that some businesses may miss out a year in their survey history and then reappear in the survey some time later. In addition, no linking of farm identification numbers between those identified as missing and those for which a questionnaire exists has been undertaken.
2.2 Farm characteristics of farm businesses leaving the FBS

As the number of farm businesses leaving each year is relatively low, data for all years have been amalgamated in order to allow analysis of particular farm characteristics. As a result, year on year changes or any regional differences that may be occurring have not been investigated, e.g. the changes to cropping brought about by the restructuring of the sugar beet industry. In addition, there are some missing values and as a result, the following considers details for around 92% of businesses for which there is an exit questionnaire between 2005/06 and 2008/09. Taking each characteristic in turn:

2.2.1 Farm Type

Figure 2: The number of farm businesses leaving the FBS between 2005/06 and 2008/09 by farm type (top plot) and proportionately compared with the total FBS population (bottom plot)

In total, 120 (18%) businesses leaving the survey are Cereals, 91 (13%) are Dairy, 83 (12%) are LFA Grazing Livestock and 73 (11%) are Lowland Grazing Livestock farm types (top plot). When compared with the FBS population for England, it can be seen that the proportions of different farm types in the total exit population are broadly in line (bottom plot). There is a significant difference (χ²=22.32, df=8, p=0.004) between those leaving due to ‘Out

---

10 The decline in sugar beet may have resulted in General Cropping businesses changing to Cereals.
11 For 57 businesses no information is available as it has not been possible to identify their farm ID data within the FBS population. In addition there are missing data concerning age, SLR group, and performance band for 30 businesses where there is farm ID data.
12 The total FBS population has an extra years data included, however, as there are few changes between years, when converted to a percentage this is unlikely to have a great impact.
13 The standard error bars are based on the formula for the standard error of a binomial proportion.
of Scope’ and those leaving due to ‘Other Reasons’ with significantly more Mixed businesses leaving due to the latter.  

2.2.2 SLR Group

Figure 3: The number of farm businesses leaving the FBS between 2005/06 and 2008/09 by SLR group (left plot) and proportionately compared with the total FBS population (right plot).

Half of the businesses leaving the FBS are classified as ‘Very small’ and ‘Small’. ‘Very large’ and ‘Large’ businesses are more likely to be leaving due to ‘Other Reasons’ whereas the smaller sized businesses are exiting due to ‘Out of Scope’; this is significantly different ($\chi^2=18.68$, df=4, $p<0.001$). When the exit population is compared with the FBS population for England, it can be seen that significantly more ‘Very small’ businesses occur in the exit population ($\chi^2=32.79$, df=4, $p<0.001$) (right plot).

---

14 Although over the period assessed in this report there were no major contractual changes to farm type requirements, the distribution will be influenced to some extent by the RBR sampling management. This may result in some active targeting of certain farm types and dropping of others although it may not be apparent that this is the reason for a business exiting as ‘Farm type not required’ is not an option which can be chosen on the exit form.

15 The total FBS population has an extra years data included, however, as there are few changes between years, when converted to a percentage this is unlikely to have a great impact.

16 The standard error bars are based on the formula for the standard error of a binomial proportion.

17 It is important to note that RBR units will have been dropping those farms that are too small for inclusion in the FBS and therefore the higher numbers of ‘Very small’ businesses exiting the FBS may be an artefact of this sampling management.
2.2.3 Age

Figure 4: The number of farm businesses leaving the FBS between 2005/06 and 2008/09 by age (left plot) and proportionately compared with the total FBS population (right plot).

Almost a third of businesses exiting the FBS have a farmer that is in the 50-59 years old category (left plot). ‘Out of Scope’ reasons dominate most age categories except those at either end of the age range where ‘Other Reasons’ are more prominent. Proportionately, the distribution of age classes is similar to the total FBS population.

2.2.4 Performance band

Figure 5: The number of farm businesses leaving the FBS between 2005/06 and 2008/09 by performance band (left plot) and proportionately compared with the total FBS population (right plot).

Almost half (48%) of businesses fall into the Medium performance band with the rest split relatively evenly between the Low and High performance bands. In the total FBS population:

---

18 The total FBS population has an extra years data included, however, as there are few changes between years, when converted to a percentage this is unlikely to have a great impact.
19 The standard error bars are based on the formula for the standard error of a binomial proportion.
20 The total FBS population has an extra years data included, however, as there are few changes between years, when converted to a percentage this is unlikely to have a great impact.
21 The standard error bars are based on the formula for the standard error of a binomial proportion.
for England the split should be 50% in the Middle band and 25% in each of the others, but because the above is dealing with unweighted values, this is not quite the case (right plot). Overall, there is very little difference between the distributions for those that are exiting compared with the whole FBS population.

2.2.5 Agri-Environment Payments

Just over half (52%) of businesses exiting the FBS receive no agri-environment payments per hectare of utilised agricultural area and 23% receive up to £30/ha. When this is compared with the FBS population for England, it can be seen that those receiving no payments are significantly higher in the exit population ($\chi^2=61.58$, df=5, $p<0.001$).

Figure 6: The number of farm businesses leaving the FBS between 2005/06 and 2008/09 by agri-environment payments (top plot) and proportionately compared with the total FBS population$^{22}$ (bottom plot)$^{23}$

$^{22}$ The total FBS population has an extra years data included, however, as there are few changes between years, when converted to a percentage this is unlikely to have a great impact.

$^{23}$ The standard error bars are based on the formula for the standard error of a binomial proportion.
2.2.7 Summary of farm characteristics

- Between 2005/06 and 2008/09, 680 farm businesses were identified as leaving the FBS from the exit questionnaires; 375 left due to being ‘Out of Scope’ and 307 due to ‘Other Reasons’.
- There are significant differences between those leaving due to ‘Out of Scope’ and ‘Other Reasons’; the latter has more Mixed farms than would be expected and is dominated by ‘Very large’ and ‘Large’ businesses, whereas the former has significantly more ‘Very small’ businesses.
- When compared with the total FBS population for England, the exit population has significantly more businesses which are ‘Very small’ and significantly more businesses that do not receive any agri-environment payments.
- Age and performance band are not significantly different.
2.3 Reasons for leaving the FBS – all years

Figure 7: Reasons for farm businesses leaving the FBS between 2005/06 and 2008/09

Figure 7 shows that the majority of businesses (175 businesses/26%) have left the FBS since 2005/06 due to being in the survey for 15 years, i.e. are ‘Out of Scope’. ‘Other’ is the second most common reason for leaving the FBS (110 businesses (16%) when ‘Out of Scope other’ and ‘Other Reasons other’ are combined)\(^{24}\). Only 17 businesses (2.5%) cite ‘Structural change’ as their exit reason, although it can be argued that some of the other reasons cited also indicate a change to the dynamics of the farm business, e.g. ‘Sold up (voluntary)’, ‘Too small’, ‘Retired’, ‘No longer operating’, ‘Ownership problems’. These have been amalgamated into a category called ‘Farm Business Changes’ which accounts for about a quarter of exits (172 farm businesses). See 2.5 below for further consideration.

It is interesting to note that only 35 businesses stated ‘Too small’ as their reason for leaving the survey, whereas 144 businesses exiting were classified as ‘Very small’ (see Figure 3 for details). This may be an artefact of the RBR sampling management in that ‘Very small’ businesses will have been dropped from the survey due to contractual requirements but this may not necessarily be recorded as the reason for leaving the survey.

\(^{24}\) Other also includes businesses with codes that were too small to be itemised. Actual number stating ‘Other’ (Out of Scope and Other Reason) is 108.
2.4 Reasons for leaving the FBS – yearly breakdown

Figure 8: Percentage of businesses leaving FBS each year by reason

In order to provide some assessment of reasons for exiting by year, similar reasons have been combined into the categories shown in Figure 8. In all years, ‘15 years in survey’ is the most common reason for leaving the FBS, accounting for between 24% and 33% of exits per year, except in 2006/07 when only 17% of businesses left due to this reason. In this year ‘Other’ is more prevalent, accounting for 25% of farm businesses (see 2.6 below for further investigation of ‘Other’). ‘Structural issues’ have been cited by 7-8% of farm businesses in 2006/07 to 2008/09 and by 11% in 2005/06. ‘Not farming’ includes respondents that have voluntarily sold up, retired, or are no longer operating; this fluctuates with 2006/07 and 2008/09 showing higher percentages (21% and 23% of farm businesses, respectively). Those businesses citing ‘Change in circumstances’ make up on average 7% of exits each year, those with ‘Data access issues’ 11%, and those that are ‘Disillusioned’ 16%. ‘Structural issues’ and ‘Not farming’ combined give the ‘Farm Business Changes’ group which shows that this accounts for between 21% and 31% of businesses leaving the survey each year.

2.5 Farm characteristics of those leaving after 15 years in the survey and those leaving due to making Farm Business Changes

The groups of businesses leaving due to being in the survey for 15 years and due to Farm Business Changes have been compared with the total exit population to investigate whether there are any differences in their farm characteristics. Taking each characteristic in turn:

---

25 ‘Other’ combines ‘Other’ for ‘Out of Scope’ and ‘Other Reasons’.
26 Includes structural change, ownership problems and being too small.
27 Covers such issues as divorce, distressing circumstances and those near retirement.
28 This includes Change in accounting year, Not prepared to divulge financial information and Records not available/temporary suspension.
29 This includes categories such as ‘Not interested’, ‘Unconvinced of benefits’ and ‘Disillusioned with government’.
30 Farm characteristics data is available for around 98% of businesses exiting the survey due to the 15 years rule and also for 98% of those making Farm Business Changes.
2.5.1 Farm Type

Figure 9: Comparison of the distribution of farm types between those exiting due to Farm Business Changes, those exiting due to 15 years and the total FBS exit population between 2005 and 2009.

Those exiting the survey due to reaching the 15 years threshold are dominated by Cereals and LFA Grazing Livestock businesses (29% and 20%, respectively). In addition, very few Horticulture, Pigs and Poultry enterprises are evident in this group. This could be due to these farm types having a derogation which allows them to stay in the survey for longer than 15 years and therefore this option may be less relevant. Those leaving due to ‘Farm Business Changes’, show greater representation of Dairy, Pigs and Poultry than may be expected. The two groups are considered to be significantly different ($\chi^2=52.39$, df=16, $p<0.001$) with most of the variation accounted for by the lack of Horticulture and Poultry and greater representation of Cereals in the 15 years group.

2.5.2 SLR Group

Figure 10: Comparison of the distribution of SLR groups between those exiting due to Farm Business Changes, those exiting due to 15 years and the total FBS exit population between 2005 and 2009.

In terms of SLR sizes, in general the 15 years group follows a similar pattern to the overall exit population; there is slightly more representation of ‘Medium’ sized farms and less representation of ‘Very small’ businesses. The groups are significantly different ($\chi^2=52.28$, df=8, $p<0.001$) with the greatest differences attributed to the large number of ‘Very small’ businesses in the ‘Farm Business Change’ group.

---

31 The standard error bars are based on the formula for the standard error of a binomial proportion.
32 The standard error bars are based on the formula for the standard error of a binomial proportion.
2.5.3 Age

Figure 11: Comparison of the distribution of age between those exiting due to Farm Business Changes, those exiting due to 15 years and the total FBS exit population between 2005 and 2009. There are slight differences in the age distributions between the exit, ‘Farm Business Change’ and 15 years in survey groups which are not significant. All groups have around 35% representation of 50 to 59 year olds.

2.5.4 Performance band

Figure 12: Comparison of the distribution of performance bands between those exiting due to Farm Business Changes, exiting due to 15 years and the total FBS exit population between 2005 and 2009. Although all groups are dominated by the Medium performance band, representation in the Low and High performance bands differ. For those leaving due to 15 years in the survey, more businesses are in the High performance band and less in the Low performance band than the total exit population; the reverse is true for those leaving due to a ‘Farm Business Change’ and the differences are significant ($\chi^2=21.27$, df=4, p<0.001).

33 The standard error bars are based on the formula for the standard error of a binomial proportion.
34 The standard error bars are based on the formula for the standard error of a binomial proportion.
2.5.5 Agri-Environment Payments

Figure 13: Comparison of the distribution of agri-environment payments between those exiting due to Farm Business Changes, exiting due to 15 years and the total FBS exit population between 2005 and 2009.35 36

All three groups are dominated by farm businesses that receive no agri-environment payments with this category accounting for 52% of the total exit population, 63% of the ‘Farm Business Change’ group and 44% of the 15 years group. Significantly more of the ‘Farm Business Change’ group do not receive agri-environment payments/ha ($\chi^2=16.34$, df=8, p=0.038).

2.6 Investigation of ‘Other’

Overall, 106 businesses37 (around 16% of businesses) have left the FBS due to ‘Other’ with 51 of these occurring in 2006/07. The comments on the records sheets were used to determine what ‘Other’ may constitute (Figure 14).

Figure 14: Details of comments in ‘Other’ category

Businesses leaving the FBS due to ‘Other’ are likely to cite problems with the availability of records and/or data (34 businesses) and being too busy to continue in the survey (24 businesses). These appear to be the main reasons in all years; in 2006/07 out of 51 businesses, these reasons cover 20 and 11 businesses, respectively. ‘Major change’ covers 14 businesses, i.e. 13% of those leaving due to ‘Other’.

*Major change includes downsizing, ceasing to trade and other structural changes.

---

35 The categories of £61-90/ha and £91-120/ha have been combined to avoid confidentiality issues.
36 The standard error bars are based on the formula for the standard error of a binomial proportion.
37 2 businesses cited both Out of Scope and Other Reason ‘Other’ so have only been considered once in this analysis as only one reason was given to cover both categories.
2.7 Summary of reasons for leaving the FBS

- The majority of businesses (26%) left the FBS between 2005/06 and 2008/09 due to being in the survey for 15 years and this is the most common reason in most years.
- ‘Other’ accounts for 16% of businesses exiting the survey with the availability of records/data and being too busy to continue in the survey most commonly cited.
- ‘Farm Business Changes’, which may be indicative of exits due to structural changes, account for around a quarter of exits.
- The 15 years group has significantly more Cereals and less Horticulture and Poultry businesses and significantly more High performers.
- The Farm Business Changes group shows greater representation of Dairy, Pigs and Poultry than may be expected and has significantly more ‘Very small’ sized businesses, significantly more Low performers and significantly more businesses that do not receive agri-environment payments.
- There was no significant difference in terms of age between groups.
3 Structural Changes: Farm Business Organisation and Material Assets

Structural changes may be identified by businesses remaining in the survey (Section Y) and also by those exiting the survey (as part of their exit questionnaire). Structural changes fall into two categories; changes to the business organisation/arrangements and changes to the material assets (land and building). Business organisation changes include changes to a business’ size, its management, the type of farming, and ceasing to trade. Material asset changes include the addition and reduction of resources, e.g. buildings, land and dwellings. The information recorded regarding these changes include the reasons for the change, the end result of the change, and any outcomes for the farmer/assets (see Appendix 2 for details).

For Section Y, entries are limited to those businesses that have remained in the survey long enough during the accounting year to be eligible to fill in the survey for that year. This could potentially result in a holding filling in both Section Y and the exit questionnaire depending on their duration in the year of their exit. Likewise within the exit questionnaire there could be duplication as a business could state its reason for leaving the survey as being too small and may also indicate this as a structural change issue. A revised format for Section Y is currently under consideration due to the relevance of some of the codes/the purpose of this section.

3.1 Number of businesses identifying structural changes

3.1.1 Section Y

Figure 15: Number of businesses per year identifying structural change (Section Y)

Between 2005/06 and 2009/10, 348 businesses remaining in the FBS highlighted a structural change. Overall, 41 farm businesses identified a business organisational change and 313 businesses identified a change in their material assets; the latter dominates in each year. Changes to the business organisation have remained low but relatively stable whereas material asset changes have declined over time.

---

38 Structural change data for 2009/10 has been suppressed.
39 In terms of the percentage of businesses making a structural change each year, this corresponds to 7%, 5%, 3%, 3% and 1% for years 2005/06, 2006/07, 2007/08, 2008/09 and 2009/10, respectively.
3.1.2 Exit questionnaire

Figure 16: Number of businesses per year identifying structural changes on leaving the FBS

In total, 158 out of 680 businesses leaving the survey between 2005/06 and 2008/09 identified structural changes. For most years this equates to around 28% of businesses exiting the survey. The exception is 2007/08 where only 10% of those leaving identified structural changes. Overall, 156 businesses identified a change in their business organisation and 47 a change in their material assets.

Changes in business organisation and material assets are considered separately below.

3.2 Business organisation changes

3.2.1 Section Y

Only 41 businesses remaining in the FBS identified organisational changes between 2005/06 and 2009/10. The main reason for change was the farmer retiring due to age (17 businesses). The end result was 25 businesses now being managed by another family member; 10 of these businesses gave the farmer retiring as the main reason for changes.

3.2.2 Exit

In total, 156 farm businesses identified a change in their business structure on exiting the FBS from 2005/06 to 2008/09. The main cause of change was the farmer retiring due to age (33 farm businesses) with the end result being 61 businesses continuing as a farm business but not in the FBS, followed by 32 businesses ceasing to trade altogether and 27 businesses being too small.

3.3 Changes to material assets

3.3.1 Section Y

In total, 313 farm businesses remaining in the FBS identified a change in their material assets (buildings and land) between 2005/06 and 2009/10. The main causes for change were the leasing of assets (127 businesses), the purchase of new assets (83 businesses) and the sale of assets (55 businesses). This resulted in 181 businesses adding to their resources and 124 businesses reducing their resources. The majority of businesses (221) transferred land resources and for 135 businesses this was within self-contained farms.

---

40 Structural change data for 2005/06 has been suppressed.
41 For those exiting the percentage making structural changes in 2005/06, 2006/07, 2007/08, 2008/09 are 26%, 30%, 10%, and 28%, respectively. This equates to 0.9% to 2.7% of the total FBS population.
42 54 businesses stated 'No change'.
3.3.2 Exit

In total, 47 farm businesses leaving the FBS highlighted changes in their material assets between 2005/06 and 2008/09; the majority had also identified changes to their business organisation (45 businesses). The main cause of change was the sale of existing assets (27 businesses) which had resulted in 33 businesses reducing their resources/assets, i.e. contraction of the farm business.

3.4 Summary

- Between 10% and 30% of businesses exiting the survey per year between 2005/06 and 2008/09 identified structural changes (158 businesses overall).
- Between 1% and 7% of businesses remaining in the survey per year between 2005/06 and 2009/10 identified structural changes (348 businesses in total).
- Those remaining in the survey were more likely to identify changes in their material assets whereas those exiting the survey were more likely to identify changes in the business organisation/arrangements.
- The main reason for changes in business organisation/arrangements was the farmer retiring due to age. In the case of those remaining in the survey (Section Y), this resulted in other family members now managing the business. For the exit group the end result was likely to imply that the business had a less certain future.
- Changes to material assets were more likely to result in an increase in assets for those remaining in the survey and a decrease in assets for those leaving the FBS.
4 Characteristics of businesses making Structural Changes

4.1 Farm type

Figure 17: Distribution of farm types in the total FBS population, those in Section Y and those identifying structural changes on exiting the survey

Proportionately more Cereals and General Cropping businesses have identified structural changes whilst remaining in the FBS. This is significant when compared with the total FBS population and also shows that Grazing Livestock enterprises are making significantly less structural changes ($\chi^2=104.27$, df=8, $p<0.001$). Section Y is also significantly different from the Exit group identifying such changes (Exit Y) for these reasons ($\chi^2=57.18$, df=8, $p<0.001$).

4.2 SLR Group

Figure 18: Distribution of SLR groups in the total FBS population, those in Section Y and those identifying structural changes on exiting the survey

Significantly more ‘Very large’ businesses are making structural changes whilst remaining in the survey (Section Y) when compared with the total FBS population, ($\chi^2=32.05$, df=4, $p<0.001$). Significantly more businesses in the Exit Y group are ‘Very small’ ($\chi^2=56.26$, df=4, $p<0.001$).

---

43 The standard error bars are based on the formula for the standard error of a binomial proportion.

44 The standard error bars are based on the formula for the standard error of a binomial proportion.
4.3 Age

Figure 19: Distribution of age categories in the total FBS population, those in Section Y and those identifying structural changes on exiting the survey

Overall, the age of farmers in Section Y generally follows a similar distribution to that for the total FBS population, with most falling into the 40 to 49 years old and 50 to 59 years old categories. Although the distributions are similar for all groups there are significantly less farmers under 40 years old in the Exit Y group when compared with the Section Y group ($\chi^2=9.63$, df=4, $p=0.047$).

4.4 Performance Band

Figure 20: Distribution of performance band in the total FBS population, those in Section Y and those identifying structural changes on exiting the survey

There are significantly less Low performers in the Section Y group and significantly more High performers when compared with the total FBS population for England ($\chi^2=23.49$, df=2, $p<0.001$) and the Exit Y group ($\chi^2=21.67$, df=2, $p<0.001$).

45 The standard error bars are based on the formula for the standard error of a binomial proportion.
46 The standard error bars are based on the formula for the standard error of a binomial proportion.
47 As the values being used are unweighted the distribution of the total FBS population does not follow exactly the 50% in band 2 and 25% each in bands 1 and 3 required distribution.
4.5 Agri-Environment Payments

The majority of businesses either receive no agri-environment payments or payments of £1-30/ha. When compared with the total FBS population for England, there are significantly more Section Y farm businesses with payments of up to £30/ha and significantly less with payments over £61/ha ($\chi^2=35.04$, df=5, $p<0.001$). In contrast, proportionately more of the Exit Y group do not receive agri-environment payments and significantly less businesses have payments from £1-30/ha when compared with those in Section Y ($\chi^2=25.14$, df=4, $p<0.001$).

4.6 Summary

- Businesses making structural changes and remaining in the survey are more likely to be Cereals or General Cropping and ‘Very large’.
- Businesses making structural changes and exiting the survey are more likely to be Dairy or LFA Grazing Livestock, they are likely to be ‘Very small’ and less likely to receive agri-environment payments.
- The Section Y group is significantly different from the Exit Y group in terms of farm type, size band, age (significantly more <40 years old in Section Y), performance band (significantly more High performers in Section Y) and agri-environment payments (significantly more receiving £1-30/ha in Section Y).

48 The categories of £61-90/ha and £91-120/ha have been combined to avoid confidentiality issues.
49 The standard error bars are based on the formula for the standard error of a binomial proportion.
5 Overall conclusions

Overall, those businesses leaving the FBS between 2005/06 to 2008/09 were not significantly different from the total FBS population in terms of farm type, age of farmer or performance band. Those exiting were significantly more likely to be ‘Very small’ which could imply some biasing as ‘Very small’ businesses may be showing a higher turnover in the survey than would be expected. However, size is not necessarily the reason cited for leaving the survey. In addition, significantly more businesses on exiting received no agri-environment payments. Those exiting could possibly be less certain about their future and therefore may be less likely to want to commit to agri-environment measures which require a 5 or 10 year sign up period.

Just over a quarter (26%) of businesses leave the survey due to participating for 15 years and another 25% leave due to ‘Farm Business Changes’ (which may be indicative of structural changes) with the remaining 50% tending to cite reasons such as disillusionment, disinterested or too busy to continue in the survey, implying that structural change issues may not be that prominent. Those leaving due to ‘Farm Business Changes’ and those leaving due to being in the survey for 15 years are significantly different in terms of their farm characteristics. The ‘Farm Business Changes’ group shows greater representation of specialist agricultural enterprises, significantly more ‘Very small’ businesses, ‘Low’ performers and those with no agri-environment payments. In contrast, the ‘15 years in survey’ group is dominated by Cereals and LFA Grazing Livestock businesses, contains significantly less ‘Very small’ businesses and significantly more ‘High’ performers and those with agri-environment payments. Age is not a significant factor. As a result, it would appear that certain characteristics may be associated with certain reasons for leaving the survey. In this case those making ‘Farm Business Changes’ may be less certain about their future whereas those leaving due to 15 years may be demonstrating stability.

Changes in business organisation/arrangements and material assets may be identified by those leaving the survey and by those remaining in the FBS (Section Y). Between 2005/06 and 2008/09, 158 businesses (0.9% to 2.7% of the total FBS population each year) identified structural changes as part of their exit form and between 2005/06 and 2009/10, 348 businesses (1% to 7% of the total FBS population each year) identified structural changes whilst remaining in the FBS. This indicates that such changes are not that prevalent within the FBS.

There are differences between those identifying organisational and material asset changes on leaving the survey and those identifying organisational and material asset changes but remaining in the survey. The former were more likely to identify changes in their business organisation/arrangements which implied that the business was generally downsizing / ceasing to trade. In contrast, the latter were more likely to identify changes in their material assets and these tended to imply continuation of the business and possible expansion. In addition, these two groups are significantly different in terms of their farm characteristics, which as above, implies that certain characteristics may be associated with particular decisions within the FBS, however, the validity of such conclusions is questionable due to the sample sizes involved.

At present there is potential duplication between the exit questionnaire and Section Y of the survey form as a business could fill in both forms within the year depending on when they exit the survey. Likewise it is also possible that businesses can exit the survey without filling in an exit questionnaire if they have failed to submit a full FBS return for a couple of years. Section Y and the exit are currently under review; RBR and Defra are working together to

---

50 The lack of representation of specialist agricultural types in the 15 years in survey group may be a consequence of the derogation allowing these holdings to stay in the survey longer than 15 years.
provide a basis for data collection in this area that will more appropriate to capture the relevant data. This should allow for better understanding of the occurrence and types of changes being undertaken within the FBS population. This review will also consider the provision of better guidance/establish protocols with regards to the use and application of the exit form and Section Y elements of the FBS.

In conclusion, overall there do not appear to be large structural changes occurring within the FBS population or within those exiting the survey. However, certain characteristics may be indicative of certain decision-making by businesses in the survey which could influence the FBS population. It needs to be acknowledged that Section Y may not be fully capturing structural change as it is happening and therefore there may be more change occurring than this report implies. Although outside the scope of this work, it may be useful to consider whether analysing these data differently would reveal a different level of structural change, e.g. tracking the same farm identifier over its lifetime in the survey.
Appendix 1: FBS Farm Characteristics

The following gives details of the characteristics of the FBS population for England from 2005/06 to 2009/10. Earlier dates have not been considered as the FBS eligibility criteria changed in 2004/05 which is likely to make comparisons problematic.

2.1 Farm Type

Figure 1: Farm type representation for the whole FBS population (England only)

![Graph showing farm type representation for the whole FBS population (England only)](image)

Each year the FBS population for England is dominated by Cereals and Dairy farm types with specialist farming groups, such as Pigs and Poultry being the least represented in the population (Figure 1). This is proportionate to their prevalence in the total farming population of England.

2.2 Size (Standard Labour Requirement)

Figure 2: Size of farm businesses for the whole FBS population (England only)

![Graph showing size of farm businesses for the whole FBS population (England only)](image)

This shows that more small farm businesses are sampled per year with very large, large and medium all sampled at around the same rate. Very small businesses are the least represented\(^5\).

---

\(^{5}\) Businesses which are too small for inclusion in the FBS will not qualify for FADN or Defra’s requirements and hence will not contribute to meeting the contractual requirements. As a result, “very small” farms are the least represented.
2.3  Age of farmer

Figure 3: Age of farmers within the FBS population (England only)

The majority of farmers fall into the 50-59 years old and 40-49 years old categories each year. Representation in the older age categories has gradually increased over time.

2.4  Performance band

Figure 4: Performance band of farm businesses in the FBS population (England only)

As this is considering unweighted data, the ratio of 50% of farm businesses in the Medium performance band and 25% in both the Low and High performance bands appears to be slightly in favour of High performers at the beginning of the series and Low performers by 2009/10.

2.5  Agri-environment payments

Figure 5: Agri-environment payments per ha to farm businesses in the FBS population (England only)

This shows that whilst a large number of businesses per year do not receive Agri-environment payments, this has declined since 2005/06. Of those receiving payments, these are most likely to be somewhere in the range of £1 to £60 per hectare.
### Appendix 2: Section Y Form

#### Y STRUCTURAL CHANGE

<table>
<thead>
<tr>
<th>Year Code</th>
<th>MDC</th>
<th>Change in Business Structure</th>
<th>Change in Physical Resource Base</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td></td>
<td>11     12   13  14</td>
</tr>
</tbody>
</table>

**First Digit (consequence of change)**

<table>
<thead>
<tr>
<th>First Digit</th>
<th>MDC</th>
<th>Change in Business Structure</th>
<th>Change in Physical Resource Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No change</td>
<td>0</td>
<td>No change</td>
</tr>
<tr>
<td>1</td>
<td>Farm business continuing but being managed by other family member</td>
<td>1</td>
<td>Addition of resources to farm business</td>
</tr>
<tr>
<td>2</td>
<td>Farm business continuing but being managed by another (non-family)</td>
<td>2</td>
<td>Reduction to resources of farm business</td>
</tr>
<tr>
<td>3</td>
<td>Farm business continuing but no longer eligible for FBS as too diversified</td>
<td>3</td>
<td>Other</td>
</tr>
<tr>
<td>4</td>
<td>Farm business continuing but no longer eligible for FBS as too small</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Farm business continuing but no longer in FBS for other reasons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Farm business ceasing to trade as a farm business, but still trading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Farm business ceasing to trade altogether</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Second Digit (primary reason for change)**

<table>
<thead>
<tr>
<th>Second Digit</th>
<th>MDC</th>
<th>Change in Business Structure</th>
<th>Change in Physical Resource Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No change</td>
<td>0</td>
<td>No change</td>
</tr>
<tr>
<td>1</td>
<td>Move to another farm business</td>
<td>1</td>
<td>Inheritance/bequest</td>
</tr>
<tr>
<td>2</td>
<td>Better business/employment opportunity outside agriculture</td>
<td>2</td>
<td>Purchase of new resources</td>
</tr>
<tr>
<td>3</td>
<td>Maternity</td>
<td></td>
<td>Sale of existing resources</td>
</tr>
<tr>
<td>4</td>
<td>Retirement due to age</td>
<td>4</td>
<td>Lease (eg FBT)</td>
</tr>
<tr>
<td>5</td>
<td>Retirement due to ill health</td>
<td>5</td>
<td>License (eg CFA)</td>
</tr>
<tr>
<td>6</td>
<td>Death of farmer</td>
<td></td>
<td>Other</td>
</tr>
<tr>
<td>7</td>
<td>Divorce or other family settlement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Financial failure of business</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Third Digit (secondary reason for change)(assets transferred)**

<table>
<thead>
<tr>
<th>Third Digit</th>
<th>MDC</th>
<th>Change in Business Structure</th>
<th>Change in Physical Resource Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No change</td>
<td>0</td>
<td>No change</td>
</tr>
<tr>
<td>1</td>
<td>Move to another farm business</td>
<td>1</td>
<td>Entire farm</td>
</tr>
<tr>
<td>2</td>
<td>Better business/employment opportunity outside agriculture</td>
<td>2</td>
<td>Buildings only</td>
</tr>
<tr>
<td>3</td>
<td>Maternity</td>
<td></td>
<td>Land only</td>
</tr>
<tr>
<td>4</td>
<td>Retirement due to age</td>
<td>4</td>
<td>Dwellings only</td>
</tr>
<tr>
<td>5</td>
<td>Retirement due to ill health</td>
<td>5</td>
<td>Land and buildings</td>
</tr>
<tr>
<td>6</td>
<td>Death of farmer</td>
<td></td>
<td>Other</td>
</tr>
<tr>
<td>7</td>
<td>Divorce or other family settlement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Financial failure of business</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Fourth Digit (destination of farmer)(destination of assets)**

<table>
<thead>
<tr>
<th>Fourth Digit</th>
<th>MDC</th>
<th>Change in Business Structure</th>
<th>Change in Physical Resource Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No change</td>
<td>0</td>
<td>No change</td>
</tr>
<tr>
<td>1</td>
<td>Physically active on farm but no longer main manager</td>
<td>1</td>
<td>Within self-contained farm</td>
</tr>
<tr>
<td>2</td>
<td>Moved to different farm</td>
<td>2</td>
<td>Amalgamation with another unit</td>
</tr>
<tr>
<td>3</td>
<td>Living on farm but no longer physically active</td>
<td>3</td>
<td>Break up into more than one unit</td>
</tr>
<tr>
<td>4</td>
<td>Living off farm within local area</td>
<td>4</td>
<td>Non-agricultural use</td>
</tr>
<tr>
<td>5</td>
<td>Living off farm out with local area</td>
<td>5</td>
<td>Other</td>
</tr>
<tr>
<td>6</td>
<td>Emigration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>