

Baseline practices of Scottish farmers

from the Farmer Intention Survey

Martinat, S. 1,Sutherland, L-A.1 Barnes, A2, McMillan, J. 2, Hopkins, J.1

*1 Social, Economic and Geographical Sciences Department, James Hutton Institute, Aberdeen, UK*

*2 Department for Rural Economy, Environment and Society,* *Scotland’s Rural College*

Summary:

To assess how farms are changing – and responding to contemporary challenges such as the twin climate and biodiversity crises and post-covid recovery - we need to establish **the baseline practices as a clear point of reference that is useable for comparison purposes.** In this briefing note we present analysis from the 2018 Farmer Intentions Survey (FIS): Farm economy, Diversification, and Sources of advice, identifying 21 questions which can be used as baseline practices. These questions will be repeated in the 2023 survey.

It was ascertained that:

**Farm economy**:

* more than two fifths of farmers (42.1%) declared that over 75% of their income comes from the farm,
* more than three quarters of farmers (77.1%) aim to make profit from their farm,
* the most frequently reported on-farm changes in the last 5 years were increases in:
  + i) investment in tourism (53.3%),
  + ii) the area of forestry (47%),
  + iii) the area of small-scale farm woodland (43.6%), and
  + iv) renewable energy production (41.9%),
* a small percentage of farms revealed a decrease in the past 5 years in the amount of agri-environmental activities (4.5%) and in the level of capital investment (4.1%).

**Diversification**:

* 31.7% of farmers reported that diversification enterprises are operated on their farm,
* the most frequent on-farm renewable energy production was wind (7.1%), followed by solar (6.1%), biomass and other bio-methane (5.3%),
* on every sixth farm (16.7%) agri-tourism is offered,
* only 13.1% of farmers claim that their diversification activities make an overall profit,
* for more than three fifths of farmers (60.9%), off-farm employment is more important than farm profits.

**Source of advice**:

* the highest evaluated as helpful source of advice are family and friends (more than third of our respondents assigned 9 or 10 points to this category). Agricultural consultants, farm advisory service and business advisors, accountants and lawyers are also evaluated as very helpful. The lowest ranking and hence the least helpful source of advice were social media and the internet.

1. **Introduction**

Climate change, biodiversity loss, animal welfare, land availability, changes in food preferences, post-covid recovery and population growth are among the challenges that have enormous potential to vastly influence the farming sector in Scotland in the near future (Barnes et al., 2022). Agriculture is an important part of Scottish economy (with 67 thousand jobs which make circa 2.5% of working population, and 0.8% of the total Gross Value Added (GVA) economic output). Some 85% of Scotland is classified as the Less Favoured Area, which means that agricultural development needs to be carefully considered. Almost a quarter of Scotland´s total greenhouse emissions come from agriculture and moreover, the sector is among the worst affected by the growing impacts of climate change and extreme events (Reay, 2020).

Scottish Government replies to the current challenges affecting agriculture with their policy documents. [The Vision for Agriculture](https://www.gov.scot/publications/delivering-vision-scottish-agriculture-proposals-new-agriculture-bill/documents/) (Scottish Government, 2022) for example highlights that land management in Scotland will change as we tackle the twin biodiversity and climate crises which will present challenges and opportunities for farmers and crofters, building on their traditional leadership role in land management and stewardship. Sustainable and regenerative farming has been identified as the way forward.

There is no question that a roadmap to address the Global Climate Emergency requires major changes in the way how land in Scotland is managed.But we need to be clear in highlighting that the necessary changes will bear the costs across society including farmers and these costs will be unequally distributed. This issue was reflected in the [Scottish Government’s Climate Change Plan Update Report](https://www.gov.scot/publications/update-climate-change-plan-2018-2032-draft-strategic-environmental-assessment/) (December 2020), the [Implementation Plan for the Scottish Forestry Strategy](https://forestry.gov.scot/publications/793-scotland-s-forestry-strategy-implementation-plan-2020-2022) (February 2019) and [Scotland’s Third Land Use Strategy](https://www.gov.scot/publications/scotlands-third-land-use-strategy-2021-2026-getting-best-land/) (March 2021). The land use sector is similarly recognising the importance of these objectives, through initiatives like [Farming for a Better Climate](https://www.farmingforabetterclimate.org/), and the [Farming for 1.5°C Independent Inquiry](https://www.farming1point5.org/) on farming and climate change in Scotland.

Land-based businesses tend to be ‘path dependent’, following a steady trajectory (Sutherland et al., 2012, Barnes et al., 2016). The Farmer Intention Survey (FIS) is repeated every five years and it provides us with data on farmer´s practices. In this policy brief, we will briefly discuss the relevance the concept of baseline practices and its importance for our understanding future processes in Scottish agriculture.

**2.0 Methodology**

**The Farmer Intentions Survey is a telephone-based survey of Scottish farmers, crofters and smallholders which was conducted over the summer of 2018.** A spatially representative **sample of 11,000 businesses** was selected using information from the Scottish Government’s June Agricultural Census (JAC) stratified by region, business size and farm type. The JAC sampling framework was the most appropriate as it gave national coverage and detailed information on agricultural activity, and it meant that background information requirements from farmers and crofters were minimised. As the JAC is conducted at an agricultural holding level the data was aggregated (where appropriate) to business level, in order to ensure the sampling framework was as representative of Scottish agriculture as possible. A total of 2,494 farmers, crofters and smallholders engaged with the survey.

**We identified in total 21 questions in the Farmer Intention Survey** concerning domains i) Farm economy (12 questions), ii) Diversification (8 questions), and iii) Sources of advice (1 question). Please see the list of question in the Annex.

**3.0 Key findings**

**3.1 Farm Economy**

***3.1.1 Approximately what percentage of your household income comes from the farm business?***

**Figure 1: What percentage of your household income comes from the farm business?**

Data: Farmer Intention Survey (2018).

As can be seen in figure 1, **more than two fifths of Scottish farmers (42.1%) declared that over 75% of their household income comes from the farm business** (see Figure 1). Some 13.6% of farmers claim that their farm business does not contribute to their household income at all (i.e. these are ‘non-commercial farmers’, see Sutherland et al. 2019). More than 50% of farmers’ household income is covered from the farm business in 54.4% of our replies, which signals a large share of off-farm income and diversification into non-agricultural activities among Scottish farmers.

***3.1.2 How much of your total income from this farm is from agricultural production on this farm?***

**Almost half of Scottish farmers (49.3%) claim that over 75% of their total income from this farm is from agricultural production on their farm**. 11.1% of farmer claim that agricultural production doesn´t contribute to the income from farm. In case of another 12.3% of farms, this is less than a quarter of the total income.

***3.1.3 Taking all your sources of income into account, do you aim to make a profit from this farm?***

**More than three quarters of farmers (77.1%) claim that they aim to make profit from their farm.** In case of 16.6% of farmer replies we see that they do not make a profit, but it is important that it breaks even. Altogether, 157 farmers (6.4%) answered that they expect to make a loss (see Figure 2).

**Figure 2: Do you aim to make a profit from this farm?**

Data: Farmer Intention Survey (2018)

***3.1.4 Do you have off-farm employment (not including agricultural contracting)?***

**Figure 3: If you have off-farm employment, do you work full-time or part-time?**

Source of data: Farmer Intention Survey (2018).

**A quarter of farmers (616 farmers) have off-farm employment.** From those who have off-farm employment 35% work full-time (215 farmers), 14.7% works more than half time (90 farmers) and more than half of farmers (50.3%) works half time or less (see Figure 3).

***3.1.5. How important is off-farm employment (including agricultural contracting) relative to the profit of the farm, for your household?***

We found that **for more than three fifths of farmers (60.9%), off-farm employment is more important than farm profits** (see Figure 4). Almost similar share of farmers claims that that this is not important (19.7%) or is about equal (19.4%).

**Figure 4: How important is off-farm employment (including agricultural contracting) relative to the profit of the farm, for your household?**

Source of data: Farmer Intention Survey (2018).

***3.1.6 What have you changed in your farm operations in the last 5 years?***

**The most frequently reported change within the last 5 years was the increase of the level of investment in tourism or other recreation (53.3%).**

Also, **more than 40% of farmers reported the increase in the area of forestry (47%), the increase in the area of small-scale farm woodland (43.6%) and the increase in the area of renewable energy production (41.9%)** (Figure 5)**.** On the other hand, only 9.1% of farms from our sample claimed that the level of capital investment was increased, which is the lowest share reported among individual options by far. **More than a third of farmers (37.7%) mentioned no changes as for the level of capital investment in the last 5 year (which is the highest share of no-change responses).**

Overall, only a small share of farms reported significant decreases in any of the activities in the last 5 years. However, surprisingly amongst these changes was **a decrease in the amount of agri-environmental activities (4.5%)**. Another decrease was detected in the level of capital investment (4.1% of farms).

**Figure 5: What have you changed in your farm operations in the last 5 years?**

Graphical user interface, application

Description automatically generated

Source: Farmer Intention Survey (2018).

**3.2 Diversification**

***3.2.1 Are there diversification enterprises operated on the farm?***

Altogether **31.7% of farms** **(792) reported that diversification enterprises are operated on the farm.** Only in total 26 farmers claimed (1.0%) that they rent land to others for renewable energy production.

***3.2.2 Does this enterprise produce renewable energy?***

**The most frequent renewable energy production in our sample of farms was from wind (177 farms, 7.1%), followed by solar (152 farms, 6.1%), biomass and other bio-methane (131 farms, 5.3%).** The less represented was hydro (1.9%) and bio-methane (0.8%). Additionally, 29 farms (1.2%) indicated that they produce other renewable energy (see Figure 6).

**Figure 6: Does this enterprise produce renewable energy? Number of farms.**

Source of data: Farmer Intention Survey (2018).

**Table 1: Diversification activities**

|  |  |  |
| --- | --- | --- |
|  | Yes | No |
| Is agri-tourism operated on the farm? | 16.7% (416 farms) | 41.6% (1,038 farms) |
| Are diversification enterprises other than renewable energy or agri-tourism operated on the farm? | 26.7% (666 farms) | 31.7% (792 farms) |
| Do your diversification activities make an overall profit? | 13.1% (186 farms) | 83.1% (1,182 farms) |

Source of data: Farmer Intention Survey (2018).

As is evident in Table 1, altogether 416 farms **(16.7%) declared that agri-tourism is operated in their farm.** 41.6% of farmers (1,038) declared no agri-tourism. 666 farms (**26.7% of the sample) also operated other diversification activity than renewable energy or agri-tourism**. Diversification activities seems to be well represented at Scottish farms, **however only 13.1% of farmers claimed that their diversification activities make an overall profit.** It is surprising that for 83.1% of farms diversification makes a loss.

**3.3 Source of advice**

***3.3.1 On a scale from 0 to 10 (where 0 is no help), how helpful to you are the following sources of advice for developing your farm?***

**The highest evaluated as helpful source of advice are family and friends** (more than third of our respondents assigned 9 or 10 points to this category – please see Figure 7). We know from the academic literature that other farmers are typically farmers’ best source of advice (Beedel et al., 1999, Fabregas et al., 2019, Sutherland et al., 2022), which seems to confirm this finding to some extent. **Agricultural consultants, farm advisory service and business advisors, accountants and lawyers are also evaluated as very helpful.** On the other hand, surprisingly, the press was evaluated the least helpful among farmers (only 12.6% of farmers assigned 9 or 10 points to this category). Bank managers, press and social media and the internet are found slightly better evaluated than the press, however almost quarter of our respondents assessed all the three categories as not helpful at all (0 points).

**Figure 7: On a scale from 0 to 10 (where 0 is no help), how helpful to you are the following sources of advice for developing your farm? Shares of replies.**

Source of data: Farmer Intention Survey (2018).

If we sum-up the points assigned by farmers into three groups (0-3 points, 4-6 points, 7-10 points, where 0 is no help – see Table 2), our analysis demonstrates that bank managers, press, and social media and the internet are perceived as less helpful source of advice. The lowest ranking and hence the least helpful source of advice received social media and the internet. However, these sources may be helpful in specific situations.

**Table 2: On a scale from 0 to 10 (where 0 is no help), how helpful to you are the following sources of advice for developing your farm?**

|  |  |  |  |
| --- | --- | --- | --- |
|  | 0-3*1* | 4-6*1* | 7-10*1* |
| Family and friends | 23.50% | 28.99% | **47.51%** |
| Agricultural consultant or farm advisory service | 25.19% | 27.03% | **47.78%** |
| Business adviser, accountant, lawyer | 23.23% | 29.35% | **47.42%** |
| Bank manager | **42.59%** | 30.86% | 26.55% |
| Press | 36.53% | **40.24%** | 23.23% |
| Social media and the internet | **38.71%** | 36.14% | 25.15% |

*1* A scale from 0 to 10 was grouped into 3 groups (0-3, 4-6, 7-10 points) and the highest values were highlighted in bold.

Source of data: Farmer Intention Survey (2018).

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**Acknowledgements**

This work was funded by the Rural & Environment Science & Analytical Services Division of the Scottish Government, as part of the Strategic Research Programme 2022-2027 (B3 - Co-designing and implementing best-fit farming practices (‘COMBINE’)). The interpretations expressed in this report are derived by the authors and do not necessarily reflect those of the Scottish Government or RESAS.

**For further information, please contact:**

**Stan Martinat** ([stan.martinat@hutton.ac.uk](mailto:stan.martinat@hutton.ac.uk))

**Annex: The list of baseline practices from the Farmer Intention Survey**

|  |  |  |
| --- | --- | --- |
| **Farm economy** | **Diversification** | **Source of advice** |
| Approximately what percentage of your household income comes from the farm? | Are there diversification enterprises operated on the farm? | On a scale from 0 to 10 (where 0 is no help), how helpful to you are the following sources of advice for developing your farm? |
| Taking all your sources of income into account, do you aim to make a profit from this farm? | Does this enterprise produce renewable energy? |  |
| How much of your total income from this farm is from agricultural production on this farm? | Wind, Bio-methane, Biomass other than bio-methane, Solar, Hydro, Other |  |
| In the last 5 years, have you changed: The level of diversification | Is agri-tourism operated on the farm? |  |
| In the last 5 years, have you changed: The amount of renewable energy | Are diversification enterprises other than renewable energy or agri-tourism operated on the farm? |  |
| In the last 5 years, have you changed: The level of investment in tourism / other recreation | Do your diversification activities make an overall profit? |  |
| In the last 5 years, have you changed: The amount invested in new technologies | Do you have off-farm employment (not including agricultural contracting)? |  |
| In the last 5 years, have you changed: The level of off-farm investment / activity | How important is off-farm employment (including agricultural contracting) relative to the profit of the farm, for your household? |  |
| In the last 5 years, have you changed: The area of forestry |  |  |
| In the last 5 years, have you changed: The area of small-scale farm |  |  |
| In the last 5 years, have you changed: The amount of agri-environmental activity |  |  |
| In the last 5 years, have you changed: The level of capital investment |  |  |