

Review of organic farm business incomes in England 2013- 2019

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Summary

The area of land farmed organically across the whole of Europe has increased by seventy percent in the last ten years whilst organic retail sales have reached around £30 billion. There are now over 250,000 organic farms in Europe, representing 7% of farmland. (DG Agriculture, 2020). Strong growth rates in both consumption and production indicate that the market is still growing strongly.

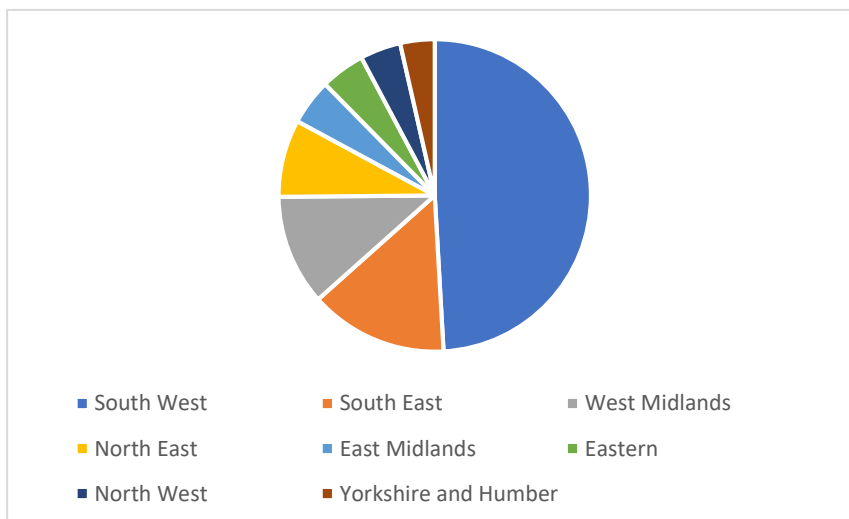
There are 474,000 hectares of land farmed organically in the UK. This represents 2.7% of UK farmland. Seventy percent of this is accounted for by permanent pasture, 7% is used to grow cereals with the remainder predominantly in temporary grass.

A further 32,900ha entered conversion in 2018, this was the

fourth year in a row that we have seen an increase in the amount of land converting to organic. The Soil Association Organic Market Report claims a further 12% increase in land converting to organic in 2019.

There is a concentration of organic land in the southwest of England, with 7.5% of land certified organic. This is in line with the European average of 7%, other regions in the country are yet to catch up. (Defra, 2018)

Farm business output is generally similar on all farm types (organic and non – organic), but net farm income is often higher on organic farms. This is mainly explained by environmental support payments, with organic farms having higher average payments per farm and lower costs of production.



Organic land by region within England. Showing nearly as much organic land in the South West of England as in the rest of England.

1. Introduction

This report summarises the financial performance of organic farms compared to non-organic, over the period 2013-2018. The results are based on Organic farming in England, a Rural Business Research (RBR) publication using data from the Farm Business Survey. This information also supports the national benchmarking service which is available on-line (Defra, 2020).

Organic farming is supported by Defra through the Stewardship Schemes. Applications for the mid-tier opened on February 11th to start on 1st January 2021. Application packs must be requested by 31st May 2020.

2. Dairy Farming

Organic market

Dairy farming is the largest sector in the UK organic market, worth around £350m and representing 3.9% of total dairy sales. 8% of all yoghurt sales are now organic. Organic milk exports are a major part of total sales. 10% more households are now buying organic milk.

Globally the organic market for milk is worth \$18bn with an annual growth rate of 8%. European organic milk production has doubled since 2007 to 4.4bn Litres. Most of the production is sold as liquid milk, but the share of organic milk used for cheese production has grown from 32% to 36% in this period.

Organic milk production in the UK grew steadily over the period, in line with rising cattle numbers. There are over 500 organic dairy farms and 76,300 dairy cows in the UK.

System differences

Organic systems are generally more reliant on forage for feed, the organic standard requires 60% forage in the diet. On average, non-organic cows produce less than one third of their milk from forage (Kingshay, 2019). The use of concentrate feeds in non-organic herds has increased by 14% in the last decade to 2,683Kg per cow, although the yield increase has meant that this has remained the same at 0.32Kg/Lt. Figures for last year showed that a typical organic cow uses just 1,869Kg of concentrate, but due to lower yield on organic farms, concentrate use per litre is similar at 0.27Kg/Lt.

Whilst non-organic farms can be based on in-door systems, organic farms must include full access to grazing whenever weather conditions allow. In practice this can be for at least 200

days per year. Organic stocking rates are typically 20% lower than non-organic dairy farms, driven by non-use of synthetic sources of artificial nitrogen.

Producing crops organically for home feeding within the dairy sector is at lower cost than non-organic. This is possibly because organic farms tend to have a wider mix of enterprises allowing the cost of machinery to be spread between the dairy and cropping enterprises. Having a mix of enterprises is of further benefit within the farm, capitalising on the fertility provided from livestock manures and creating an opportunity to incorporate grassland as part of the rotation with fertility building leys.

Profitability

Total costs of production per litre are slightly higher on organic farms. This is due to organic purchased feed costs being higher per litre of milk than for their non-organic counterparts.

For the first time, non-organic dairy farms achieved higher net farm incomes in 2017-18, this was due to a recovery in milk price, though high costs of production limited this considerably and those costs have continued to rise. Feed costs rose in 2018 due to the drought causing a lack of forage and poor crop yields.

In 2017/18 dairy farms saw an increase of 36% in Farm Business Income. Total organic farm business output was £2,743, an increase of 8%. This is in marked contrast to non-organic farms which posted an exceptional result in this year of £3,603/ha. Despite this, additional costs limited net farm income to £642 on non – organic farms, exceeding that of organic (£481) for the first time since 2013.

Results from the 2018/19 survey show that average income decreased by 33% due to higher feed costs, though this was compensated for by a 7% increase in output from milk. (Defra, 2019).

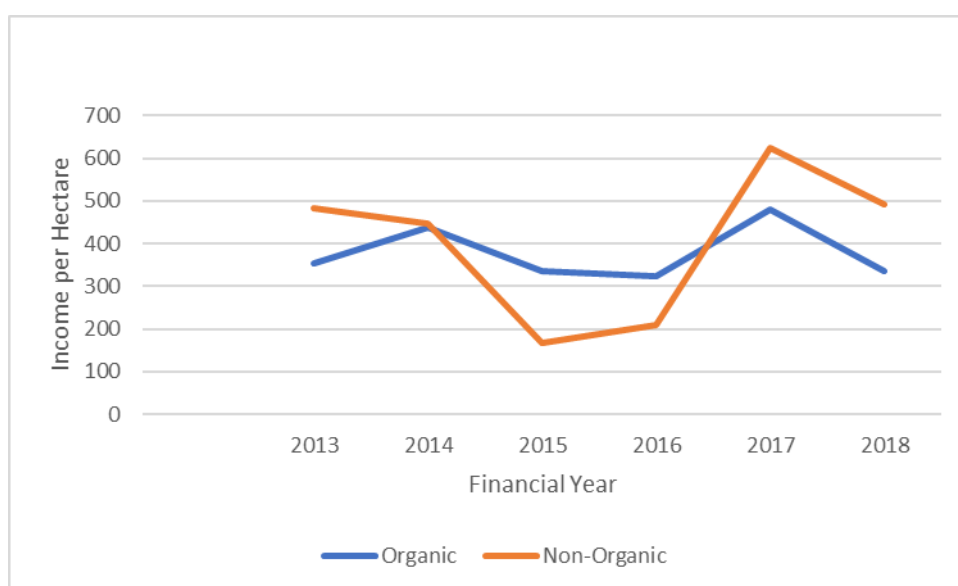


Table 1: Net Farm Income on organic and non-organic dairy farms 2013-19

3. Lowland Grazing Farms

The Organic Market

The market has been challenging for all beef and sheep producers, both organic and non-organic. Beef prices have since declined to one of the lowest levels seen for several years. (Andersons, 2020) However, as above, organic farmers are to some extent insulated from variable cost increases.

Total beef production in the UK stands at 6.7 million tonnes (National Beef Association, 2019). There is strong demand within the home market with over 80% of beef sold under the British logo. Organic meat is under-represented in this market at present, with only 2.7% of the organic market and only 1.4% of total meat sales. (Statistica, 2017) There is clearly potential to improve this, given the consumer demand for organic.

A study commissioned by AHDB suggests that price is the barrier, with customers often being asked to pay more than the premium expected. It also suggests that organic marketing should make more of the animal welfare aspects of production, such as access to grazing. They estimate there is a £26m fair share opportunity based on expected sales. (Malley, 2018) The report provides the example of mince beef at a 29% premium on the shelf, yet market research indicates that a 24% premium is the amount the organic consumer is prepared to pay. Closing that gap may be the answer to seeing a significant improvement in organic meat sales. Better marketing of the biodiversity benefit of organic farming would also help to increase sales.

System Differences

Both organic and non-organic lowland grazing farms are similar in size at around 95 Ha, organic farms are more lightly stocked (0.78 LU/ha compared to 0.97 LU/ha for their non – organic counterparts). The Newcastle based research takes full account of available grazing. Organic farms make full use of clover based grass leys to fix atmospheric nitrogen, artificial nitrogen fertilisers are not permitted. Lambing and calving is often later and more seasonal, to coincide with natural feed availability. Stocking rates are more likely to reflect the carrying capacity of the farm, than to depend on purchased feed.

Profitability

Farm Business Income and Net Farm Income are not significantly different. Both saw significant increases in 2017/18 of around 45%. Total outputs are similar but for organic farms half of the income is from agri-environment schemes, direct payment support and diversification. On non-organic farms, direct farm income accounts for 65% of the total.

Variable costs are much lower on organic farms, £139/ha compared to £335/ha, this represents just 18% of total costs compared to 35% on non – organic farms. Less purchased feed is used, and total purchased feed costs are less than a third that of non-organic farms. Fixed costs are broadly similar.

Total costs per hectare were similar for organic farms in 2016 and 2017. The difference in 2015 where non-organic

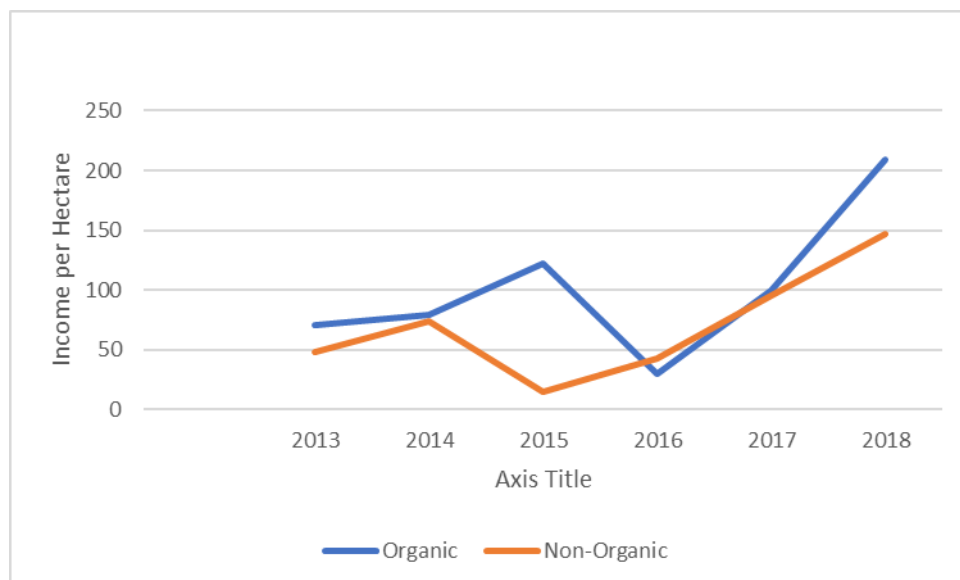


Table 2: Net Farm Income for Lowland Organic and Non-Organic Farms 2013-19

4. Upland grazing farms

Organic Market

The market for organic upland and less-favoured-area grazing farms follow many of the traits of lowland farms. Though seasonality is likely to be even tighter with calving and lambing highly dependent on narrow windows of opportunity to build condition and provide essential grazing. Upland farms are less likely to run livestock through to their final market and often depend on selling as “stores” to be brought into final condition for market by lowland farms, though the boundaries are more blurred than previously. The Organic Livestock Marketing Cooperative can

assist in finding markets for both store and finished livestock. The Soil Association also provide a “Market Place” to sign post sales and requests for livestock.

System Differences

The average organic LFA grazing farm is 150 Ha and carries 126 grazing livestock units. This is a slightly higher stocking density than non-organic farms, this includes common or shared grazing. Of the farms used in the analysis, six were organic hill flocks and ten were upland with a further 15 suckler herds.

Profitability

The profitability of organic LFA grazing farms rose considerably in 2017 and 2018, this was due to increased output, despite increased costs. Only half of the increased output was down to agriculture. Increases in diversification revenues and basic payment scheme payments contributed the rest.

The difference in financial performance is consistent with the report on hill and

marginal grazing "Less is More," recently published by a consortium of the National Trust, Wildlife Trust and the RSPB: Increasing productivity through significant investment in additional inputs does not necessarily increase profitability. "If there isn't enough naturally available grass, no amount of corrective economic action can make the farming any more profitable." (Chris Clarke, 2019)

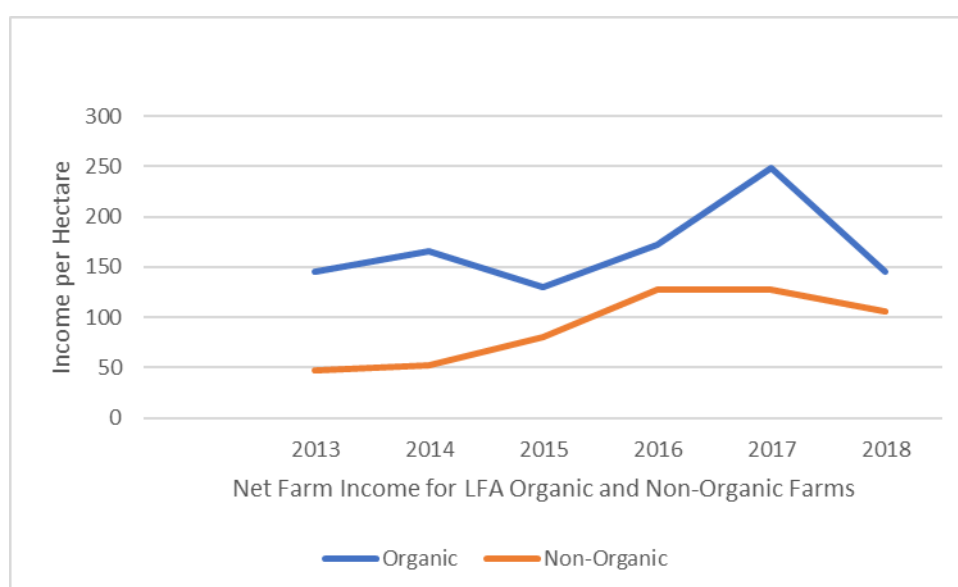


Table 3: Net Farm Income for Less Favoured Area Organic and Non-organic Farms 2013-18

The difference in net farm income for LFA farms is significant. Agri-environment scheme payments were higher for organic farms, but agricultural output was also slightly higher in the final year of comparison, £600/ha as opposed to £523 for non-organic LFA farms. Overall the farm business outputs have been similar over the period of comparison.

5. Cropping Farms

Data for this group includes both cereal and “general cropping farms” where cropping is the main enterprise, with some livestock. There were insufficient farms to allow a separate analysis. Demand for organic cereals is continuing to grow, with a high and growing reliance on imported crops at the moment. The market is expected to grow by at least six percent per year over the next five years. (Market Research Future, 2020). However, the area of organic cereals has remained relatively stable over the last five years at around 40,000 ha compared with a high of 60,000 ha in 2009.

Technical Improvements

Organic farming is equally the beneficiary of machinery innovation and the pace of this change continues to gather. Hydrostatically powered tractors able to balance the power to each wheel, continuously variable speeds, not constrained by conventional gears and variable tyre pressure to name just a few changes.

Potential component failure can now be notified to the driver, as part of a predictive in-cab maintenance package. The tractor driver is often part of a sophisticated field operation, carefully timed to match ideal soil conditions, responding to electronic feedback from all aspects of performance.

Improvements in machinery, crop management and technical innovation on organic farms allow more timely and appropriate completion. Variable width ploughs are used to make the most of soil conditions, whilst other cultivations are tracked to reduce over-lap and improve efficiency.

Seed planting and inter-row weeding can now be assisted by robotic technology and driven by satellite steered tractors. This can place weed control within 6mm of the crop and provide for two or even three passes between emergence and full establishment. Some seed drills double up for both drilling and inter-row weeding.



“Robocrop” inter-row cultivator,
guided by robotic ‘eye’.

Garford Farm Machinery

Combcut. Manufactured by LyckeGard. Providing a check on post establishment weed growth.



The Combcut provides a post-emergent check on weed growth, invented by a farmer who recognised the potential to exploit the physical difference between young cereals (monocots) and the broad-leaved weeds (dicots) with their stronger stems.

Crops from land more than twelve months into conversion, so called "in-conversion" crops, have been generating a significant premium over non-organic crops, reaching within £50/t of organic crops. This provides a considerable incentive to convert to organic as well as improving a much-needed cash boost during conversion.

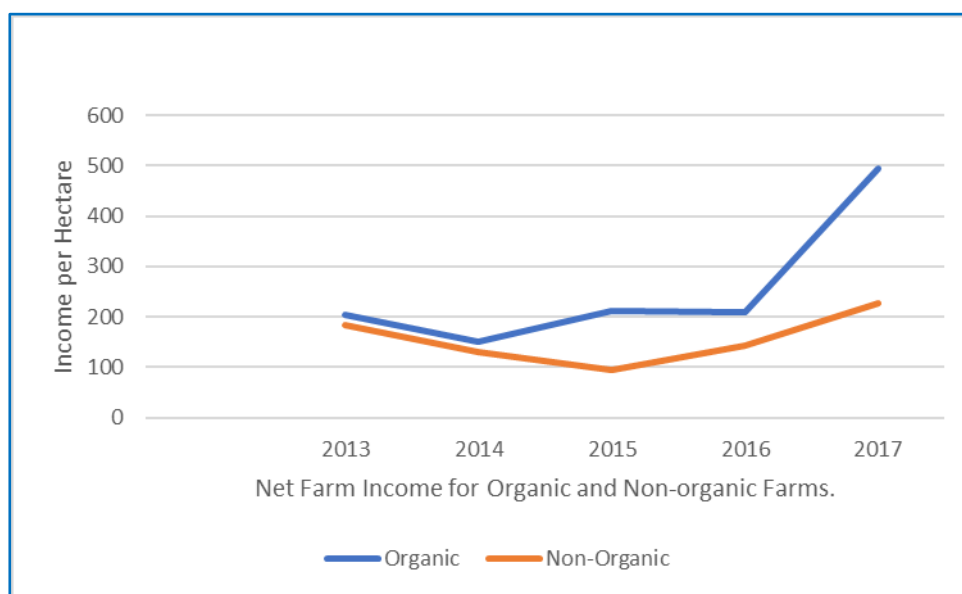


Table 4: Net farm income for Organic and Non-Organic Cropping Farms 2013-18

Net farm income has continued to rise for organic farms, despite output for both farm types being similar; this was significantly higher in the last two years of comparison as a result of high crop values, this is due to crops meeting the specification for human consumption. As well as higher crop value, fertiliser and crop protection costs are much lower on organic farms, this results in higher overall gross margin, but machinery costs were similar for both farm types.

Agri-environment schemes accounted for £92/ha on organic farms compared to £29/ha on non-organic farms.

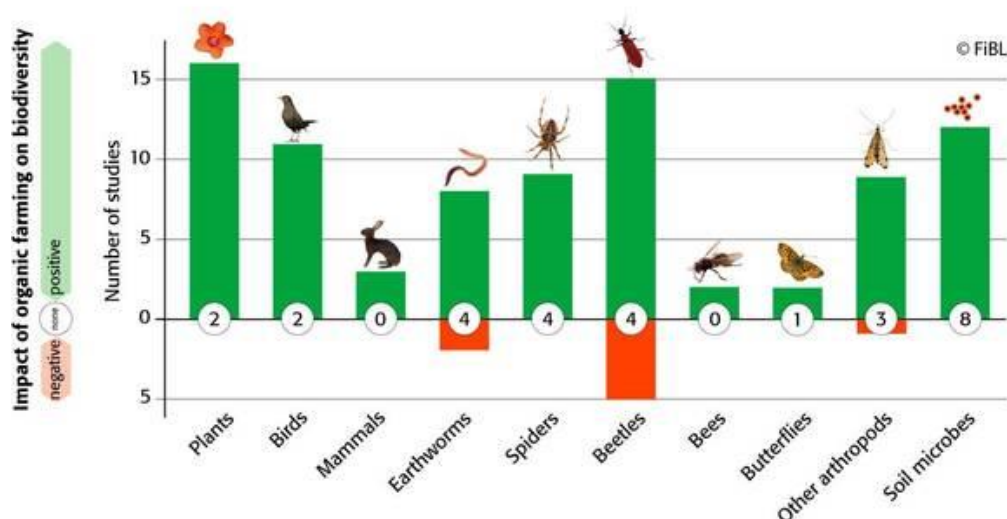
Biodiversity Benefit of Organic Farms

Organic farms are based on the principle of living ecological systems and cycles, working with them, emulating them and helping to sustain them. By definition organic farms do not use herbicides, no chemically synthesised pesticides or fertilisers are

used. They have fewer livestock per hectare and have more diversified crop rotations with a higher grass-clover percentage. Organic standards require that production activities: "Must contribute to high levels of biodiversity and the protection of ecologically significant habitats. You must take into account the local or regional ecological balance when taking production decisions."

It is no surprise therefore that the majority of scientific literature concludes that organic farming is good for the environment:

They have a higher percentage of semi-natural areas and operate a more diversified farm structure. (Gibson, R. H. et al. 2007) "Organic farms demonstrate features that are now rare elsewhere in UK farming systems, such as crop rotations incorporating grass leys, exclusion of synthetic pesticides and fertilizers, and reliance on animal and green manures." Ruth Feber, Wildlife Conservation Research Unit, Oxford University.



Number of studies showing a positive benefit to wildlife species. (Fibl Organic Agriculture Promotes Biodiversity. Summary of 95 scientific studies.)

Does this mean there is an economic benefit to farming organically? Yes, in one study aimed at this question, organic fields had five times the plant species richness and about twenty times higher pollinator species richness compared to conventional fields. Abundance of pollinators was more than one-hundred times higher on organic fields. In contrast, the abundance of

times lower in organic fields, while predator abundances were three times higher and predator-prey ratios twenty times higher in organic fields. (Krauss 2011).

Hedgerow, grass margins and Beetle banks can be established to encourage predatory insects and spiders these can significantly reduce pest species in crops.

6. Organic Horticulture

The figures available on organic horticulture are of limited value as they represent such diverse business types and only a small sample size. Hence we have not included a business comparison in this report.

According to the Organic Market Report 2020, the on-line and home delivery market has grown by 11% whilst independent retail sales grew by 6%. Total organic sales have grown by 8%. Organic horticultural sales are often linked to direct retail sales, providing a significant improvement to field margins. Growers have been quick to focus on the higher value lines that can justify the additional time and investment required, whilst using field scale production to produce the basics, buying in from larger field-scale producers.

Tim Lang, Professor of Food Policy at City University points out in his new book "Feeding Britain" that of the six

land in Britain, only 168,000 hectares are used for fruit and vegetables. Fruit and vegetables are the largest import value category with over £11b of imports. (National Statistics, 2018) Much of this cannot be grown in the UK, but the potential to meet some of this demand is considerable, particularly under protected cropping structures.

The shift in market demand towards locally produced direct sales is perhaps a sign that the public is prepared to back this move. We would encourage anyone considering a new or expanding organic horticultural business to get in touch with our Producer Support team to find out how to take the next step. [Soil Association Producer Support](#) Tel. 0300 330 0100

In recognition of the potential benefit and demand for organic produce, Defra's Stewardship conversion payment is £400/ha, whilst top fruit is £450/ha.

7. Organic Poultry

Although not part of our farm comparison, there are no figures available from Defra, the number of total poultry farmed organically in the United Kingdom increased by 10% between 2017 and 2018, rising to almost 3.4 million birds. Although only 1.8% of the total UK poultry population, this is a promising development and we look forward to increasing this over the next few years.

Acknowledgements

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The annual reports are available on-line. www.ncl.ac.uk/ncl

Full address: <https://www.ncl.ac.uk/ncl/business/agriculture/survey/#publications>

An on-line service is also provided by the Farm Business Survey which supports benchmarking and projection of farm business income. Regional reports are also available, and the data builder service provides more in-depth analysis for research. <http://www.farmbusinesssurvey.co.uk/>

The Soil Association Market Report provided data on the organic market <https://www.soilassociation.org/certification/market-research-and-data/download-the-organic-market-report/>. The data includes the Farm Business Survey 2017/18 which was officially published in September 2019.

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