



Rising Demand for Organic Cereals

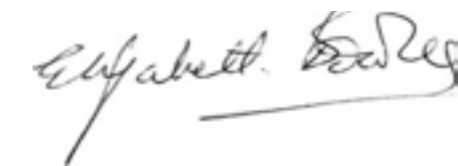
2018 HANDBOOK
FOR ARABLE FARMERS & ADVISORS

Strong prospects for organic arable

There is much uncertainty facing UK cereal farmers. Post-Brexit, Government has indicated that the basic payment scheme will be phased out, but here is one significant opportunity, conversion to organic arable production. This leaflet sets out the current opportunities and challenges of organic arable farming, and makes the financial case for considering this route.

Demand for organic food is growing much faster than supply of organic input materials. The UK is facing an increasing deficit of arable crops for animal feedstuffs at a time when other countries, especially the USA, are increasing demand at an unprecedented rate. In 2015, the UK imported close to 80% of its organic animal feedstuffs. Year on year reliance on imported feeds is increasing. Current estimates¹ suggest that at least 160,000 tonnes of organic animal feedstuffs are now being imported annually and some livestock are now routinely wholly reliant on imported feed. To underpin the UK organic sector the area of organic arable crops produced in the UK could easily double to 80,000 ha. At the same time, processors and retailers are increasingly searching for UK sourced ingredients for organic food - including organic livestock feeds - to be certain of their products integrity.

A common misconception of organic production is that lower yields must equal lower profits, but Farm Business Survey annual benchmarking figures show this is generally not the case. Lower input costs and increased support mean that often organic farms are just as, if not more, profitable than their non-organic counterparts. The organic market is certainly smaller but increasingly, innovative partnerships between farmers and their customers are shortening supply chains and increasing price stability.



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Now is a good time to
consider organic arable

Demand for Organic

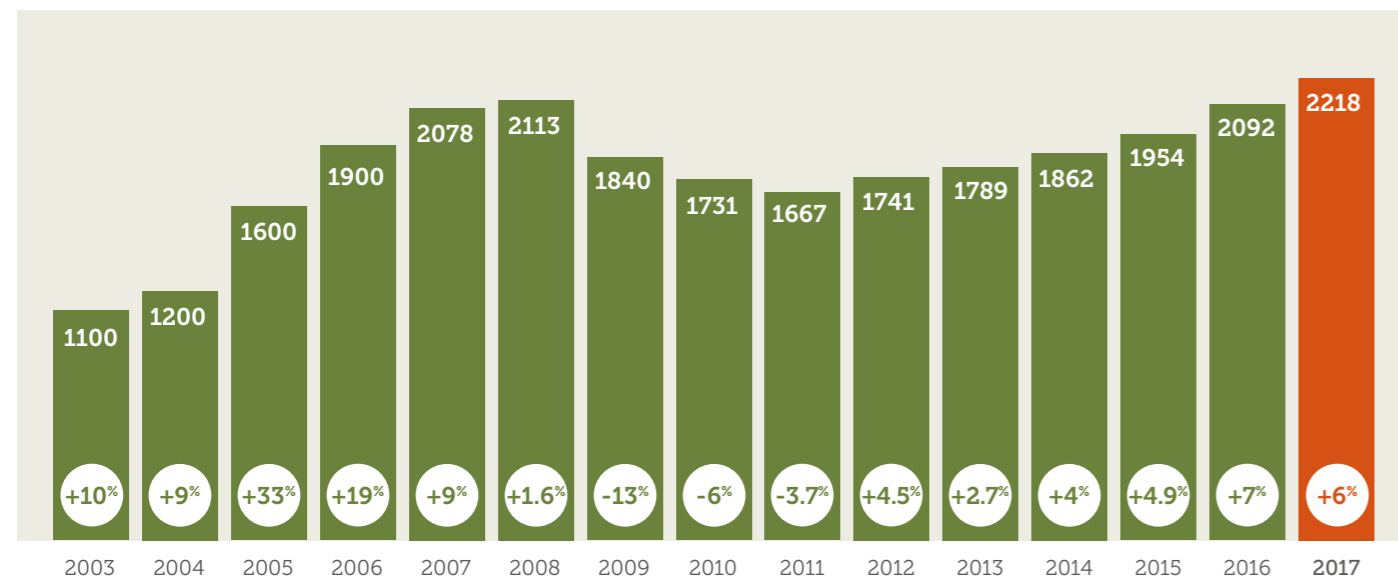
How the Global Organic Market is Affecting UK Farmers

Demand for organic products has risen year on year in the UK for the past five years and now stands at over £2 billion. Across the EU the rise in demand for organic food has risen an average of 13% in the past year with Denmark's organic food sales now close to 10% of all food sales.

The global market for organic food and drink stood at over £66 billion in 2015. The USA has the largest market for organic food (£34.7 billion in 2015)² with 5.5% of all food sales being organic. This indicates that organic food is now "normal" in many countries, with total organic food and drink consumption up 400% between 2000 and 2015.

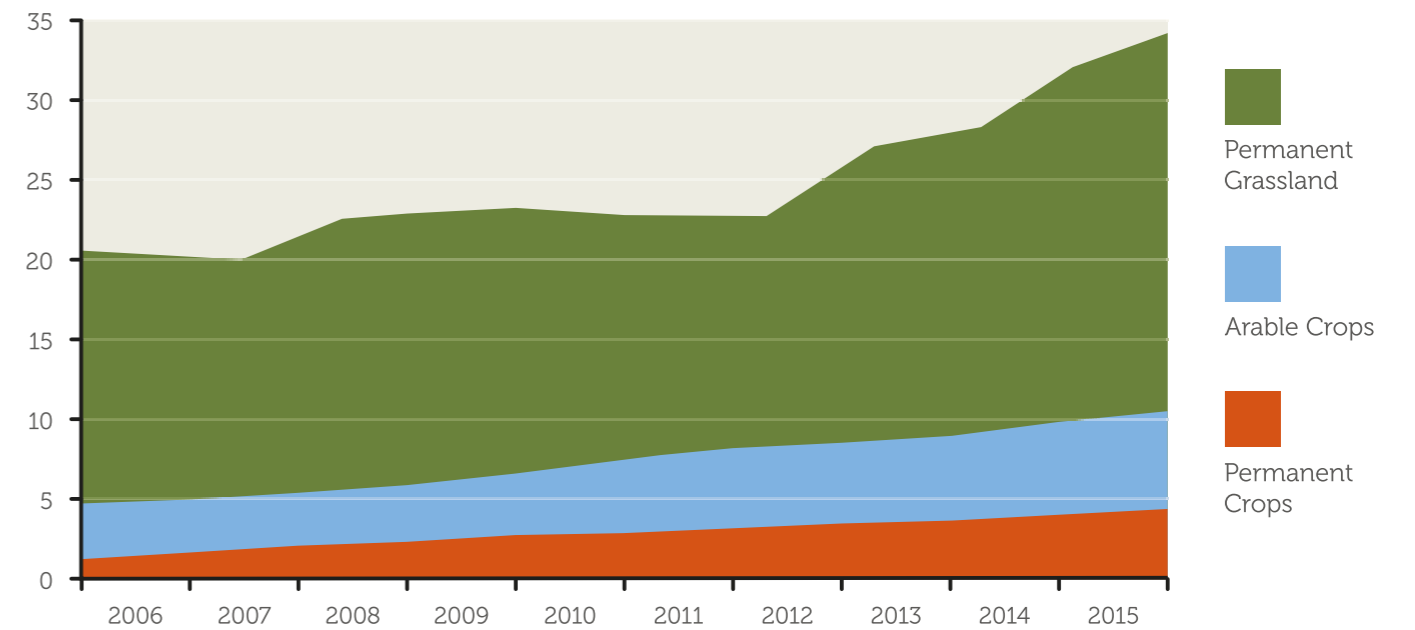
Globally, organic land represents just 1.1% of all agricultural land (51 million ha). In the EU, organic farming accounts for 6.2% (12.72 million ha), the highest of any region in the world. In the UK, around 3% of agricultural land is organic.

2003 – 2017 UK sales of organic products in GBP (£) millions



Source: Organic Market Report, Soil Association, March 2018

Trends in world areas of organic land 2006 – 2015 by land use (million hectares)



Source FiBL -IFOAM SOEL – Survey 1999-2017

Although the area of arable land has increased by 5.5 million ha between 2006 and 2015 this is a much smaller increase than for permanent grassland (up 12.7 million ha in the same period). In the UK, the area of organic land has been in decline since 2008. By 2016 the total area under organic management in the UK was 508,000 ha (down nearly 32% from the peak) with only 37,000 ha in arable crops⁵.

In many cases, organic permanent grassland is unsuitable for arable crops, whilst the fastest growing categories for organic food sales in the UK include dairy and poultry - the sectors with the highest demand for animal feedstuffs. This imbalance means that the UK is increasingly dependent on imports of organic animal feedstuffs. Alongside this, global demand is rising, leading to increased prices for feedstuffs. This presents a significant opportunity for arable farmers to convert to organic production to supply this growing market.

Organic egg sales grew by 7.6% in 2017, leading to increased demand for feed

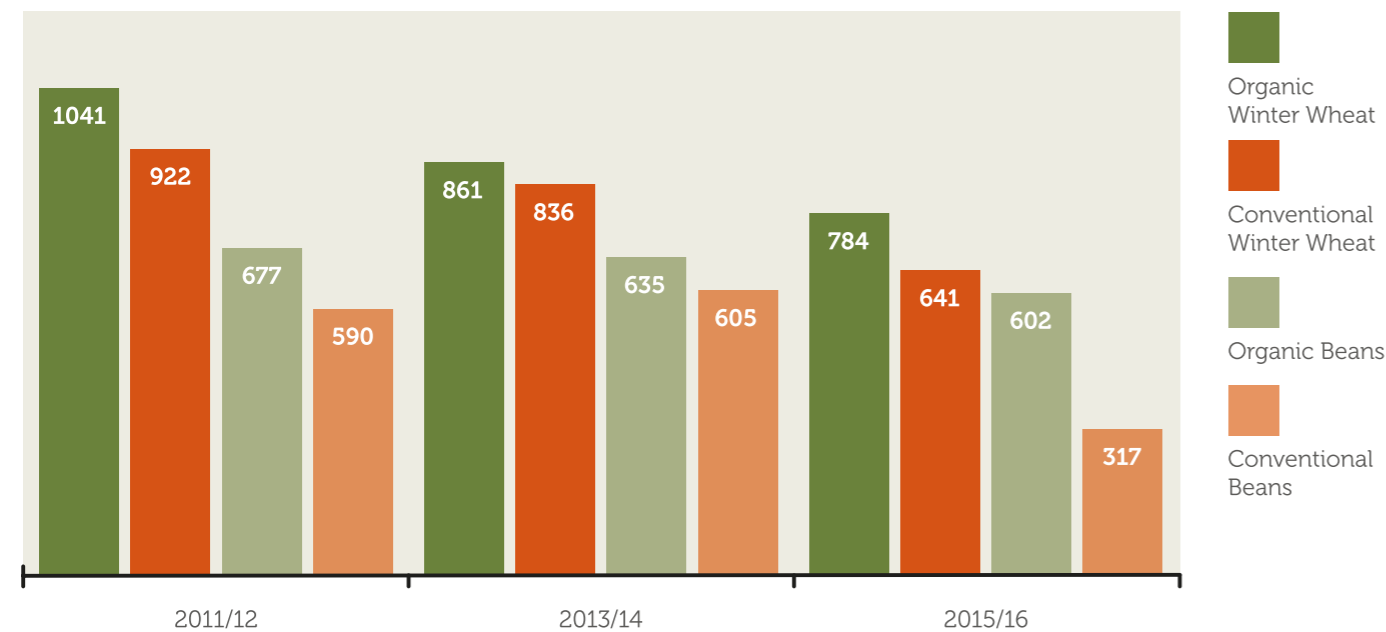
Organic sales are highest ever at **£2.2 BN**

Does Organic Arable Stack Up?

Comparing financial performance of organic and non-organic arable farming

The easiest way to compare organic and non-organic performance is to look at gross margins based on a single year's crop costs and yields. The assumption is usually made that non-organic will easily out-perform organic because there are more inputs available to maximise yield, and therefore profitability. But figures from the Rural Business Network do not support this assumption.

Gross margin analysis of organic and non-organic crops (£/hectare)



Source Rural Business Survey 2015/16 Organic Farming in England

This simple analysis is misleading because on organic farms it is the importance of rotations, fertility breaks and interactions between enterprises that generates profitability, not one individual crop. Organic farms are often mixed, or have a high value niche crop as part of their rotation, with that crop or the livestock enterprise adding to whole farm profitability. In a stockless system,

a fertility building crop is a cost but on a mixed farm it is a feed source, with livestock contributing to overall farm gross margin. Another difference between organic and non-organic farms is the replacement of crop management tools such as chemicals and fertiliser with mechanical weeders, in other words replacing variable with fixed costs. Fixed costs can also

be reduced under organic with less machinery and crop storage needed. In addition, more spring cropping and longer rotations reduce the size and cost of the machinery needed on organic farms, as well as significantly reducing total working capital requirements.

As a benchmarking tool, Net Farm Income (NFI), is a measure which allows individual farms of different tenure, business organisation and indebtedness to be compared directly with one another on a consistent basis. Using this methodology, which includes imputed rent but excludes ownership costs and interest payments, the table below compares organic and non-organic farm types in the year ending March 2016.

Comparative income figures (£/hectare) for organic and non-organic farm types

NFI/HA (£) 2015/16	ORGANIC MEAN	NON-ORGANIC MEAN	DIFFERENCE
Cropping	211	96	115
Horticulture	1052	1171	-119
Dairy	366	168	198
LFA grazing	130	80	50
Lowland grazing	122	0	122
Mixed	187	122	65

Source: Rural Business Survey 2015/16 Organic Farming in England

These benchmarking figures show that organic farms generate 90% of the total output per hectare of a non-organic farm. Agricultural output accounts for 79% of this, the difference being due to environmental payments which are higher on average for organic farms. Overall costs are 16% less due to no fertiliser and crop protection costs, although overheads are slightly higher. Overall the Net Farm Income of £211/ha is significantly higher than the non-organic figure of £96/ha.

Organic farms tend to have significantly lower working capital requirements

Organic cropping Net Farm Income is **£211/ha**

compared to the non-organic figure of £96/ha

Selling Organic

Opportunities and developments in the organic supply chain

Provenance is a key driver for the organic market. Often, the market for crops grown for human consumption is local, or is based much more on a contract and supply approach, with close relationships between growers and processors. Here are some examples of organic supply chains and opportunities:

The farmer controlled business, Organic Arable, has worked with White's Oats to broker an arrangement which rewards growers for producing better quality oats. Oats are a popular crop to grow organically because they provide good weed suppression, and are more resilient to disease. Plus, there is high demand for organic porridge oats, both in the UK and Ireland. Organic Arable members commit to supply what they grow, and are working with White's to improve grain quality in line with their customer's requirements. Bonuses are paid for the better-quality oats and because of this arrangement oats are often grown as a first cereal in the rotation, as the bonuses make the crop more profitable than wheat which would normally be the first crop in a non-organic rotation.

Niche crops are a common feature of organic cereal production. Hodmedods, the speciality pulse marketing company, are an example of a company pushing the boundaries of organic crop growing, winning the Best Food Producer in the 2017 BBC Food and Farming Awards. Working with a small group of progressive organic farmers, they sell UK sourced organic pea and bean snacks and quinoa whilst investigating the possibility of lentils and even chai as new crops to the UK. Currently sales are relatively small with less than 500 tonnes of legumes and pulses sold to retailers and wholesalers, but the business is growing fast and for many consumers the products fit with their lifestyle and food choices.

Pig producer BQP has an ambition to maximise UK grown cereals and pulses in their pig rations. For the last six years they have been working with Organic Arable to do just that. Through discussion, a pricing mechanism was developed to provide long-term stability to both buyer and seller. This linking of arable and livestock producers provides a blueprint for other schemes in pig, poultry and the dairy feed markets.

For **organic farmers** with lighter soils, fodder beet is an option that is in demand from organic dairy farmers looking for energy dense food. OMSCo, the organic dairy co-operative, has developed a scheme supporting organic arable farmers by offering a guaranteed price for cleaned, harvested beets. Yields of up to 38.5t/ha have been obtained, offering a good margin and a representing a valuable break crop. There is also interest in producing a corn-cob mix product from organic maize using the same principle of industry supported guaranteed price structures.



The bottom line: price data for organic cereals

Despite the high level of imports, organic farmers are enjoying sustained prices significantly above those for non-organic cereals with premiums over conventional prices during 2018 for some organic crops being more than 150%.

More normally, premiums of 50-100% over conventional ex-farmgate prices can be expected.

Prices for organic cereals in 2018

CROP	£/TONNE
Wheat, feed	280
Wheat, milling	315
Barley, feed	285
Barley, malting	320
Oats, feed	245
Oats, milling	328
Beans, feed	385

Source: Saxon Agriculture : March, 2018

Premiums of **50-100%** over conventional prices can be expected

Organic Perspective:



Sophie Alexander,
Hemsworth Farm ,
410ha, Dorset

"First and foremost, my decision to convert the whole farm to organic was financial. It made good business sense. Part of the farm had already converted to organic when I joined in 2011 but 250 acres was still being farmed non-organically.

This gave me the valuable opportunity to benchmark the two systems side by side. **Over the three years of comparison I found that the organic crop margins were consistently higher.**

Not always the highest net return but the bigger margins were very attractive in mitigating risk. Also, I would have needed to find three times the sum of working capital to revert the whole farm back to conventional methods. Instead I was able to allocate funds for diversification and asset enhancement, rather than buying inputs in order to grow non-organic commodities and sell into the vagaries of global markets.

When I first started marketing organic grain I explored as many trading options as possible.

Now I sell almost exclusively through Organic Arable. I value the fact they are run by farmers with the express purpose of maximising price and developing markets for their members. They charge a fixed transparent commission and have the interest of the organic sector at heart.

Over the three years of benchmarking I realised how much I was enjoying the learning curve of managing an organic system. It was interesting, challenging and very rewarding. I agonised over the decision, but I was very pleased and relieved that in the end the financial arguments correlated with my own preferences and instincts."

Growing Organic

Answering some common questions about organic arable production

Rotations: Do you need livestock to farm organically?

Unlike non-organic farms, organic arable farming is dependent on nutrients in the soil. As a result, legumes, green manures, cover crops and fertility building periods are essential to the success of organic cereal growing. The simplest rotations are 2 to 3 years of grass/clover followed by a cereal, a legume and an under-sown spring cereal with green manures grown in the overwinter gaps. Longer rotations are possible, with hungry crops like vegetables following a legume and competitive crops like oats following a weedy crop.

It is most common for organic arable farmers to introduce livestock to graze the grass/ clover leys and to produce farmyard manure to support soil fertility but there are organic farmers running "stockless arable" systems. This is becoming more feasible with increasing availability of anaerobic digestate alongside more traditional methods of building fertility such as fertility building leys, green manures and in some cases composted green waste materials. Organic farm gross margins tend to be higher from mixed farms than from stockless arable farms, but once labour costs and capital costs associated with livestock production are included especially where new infrastructure is required, stockless systems can outperform mixed farms.

Cultivation: Do all organic farmers rely on the plough?

Most organic farmers use ploughs as the main cultivation tool although discs and non-inversion techniques do have a role. Stale seedbeds are a technique used to create a weed free seedbed and this can be done using shallow cultivations without ploughing. The simple rotation mentioned above would involve ploughing at most 3 times in 6 years. Innovative Farmers are running trials on terminating cover-crops with crimper rollers. These would provide a mulch and soil improver, without disturbing the soil, prior to spring drilling.

Weeds: Are all organic crops full of weeds?

Weed control is the largest challenge for organic farming. There are now increasingly sophisticated mechanical options such as interrow cultivators, weed harrows, weed surfers and comb cutters. It is common to use higher seed rates to produce a more competitive crop to suppress weeds early in the growing season, and generally to select varieties on growth characteristics as much as yield data. Another weed control technique is drilling later in the autumn than on non-organic farms, meaning the crop is more competitive in the spring when weeds start germinating. The weed spectrum is different in organic cereals, weeds like cleavers and wild oats are less competitive because there are no fertiliser applications. Crop rotations, spring cropping and ploughing all reduce the influence of blackgrass but it can still be found on organic farms.



Pests and Diseases: How can you tackle pests and diseases without sprays?

Diseases are less of an issue with organic crops, often considered to be due to lower nitrate levels in the plant making it less susceptible. Selecting more resistant varieties is a good strategy. The diverse nature of organic farms and the lack of insecticidal treatments leads to an increase in the number of beneficial insects reducing the problems associated with pests, although Ferric Sulphate is approved for slug control. No seed treatments are allowed in organic systems, but later drilling reduces the risks. Variety mixes are more common in organic systems, giving some possible extra protection against disease.

Crop Varieties: What varieties are available organically, can I use any seed?

The AHDB's 'Recommended Lists' can give some guidance on a variety's potential, but the 'untreated' figures relate to a crop where every input other than pesticides have been used. However, many researchers state that such trials are unhelpful for organic farmers giving false rankings. Innovative Farmers are currently running a variety trial on an organic farm to test the most suitable cereal varieties for organic systems. Where organic seed is not available, cleaned non-organic seeds can be used but permission must be obtained first to get a derogation. A database www.organicxseeds.co.uk shows what organic seeds and varieties are available.

Crop Nutrition: How do you get decent yields without artificial fertilisers?

No artificial fertilisers are allowed in organic systems, only ones from a natural source. Where there is a deficiency found, control bodies will give permission to use lime, phosphorus and potassium fertilisers from a list of approved products. Livestock manures can be used, but must be composted for 12 months if from a non-organic source. Anaerobic Digestate from some sources is approved, but this must be checked first. The use of deep rooting crops like Sainfoin, Chicory and fodder radish has been found to bring nutrients up from lower soil strata and there is some evidence that the absence of artificial fertiliser can improve the supply from the soils reserves, perhaps by triggering improved soil bacterial function.

Supporting Organic

Organic farmers in England can claim non-competitive payments

In England, the Government has confirmed that it will guarantee support for converting and organic farms entering the Countryside Stewardship Scheme, if agreed and signed before the UK leaves the EU⁴. There are currently no application windows open in Scotland, Northern Ireland or Wales but when this changes you will find details at the Soil Association website. Organic conversion and management options are not subject to competition. The remainder of the scheme is competitive and applicants must make their case for payment support.

Countryside Stewardship Organic Options

	ORGANIC MANAGEMENT		ORGANIC CONVERSION	
	Code	£/Ha/Year	Code	£/Ha/Year
Improved permanent grassland	OT1	40	OR1	75
Unimproved permanent grassland	OT2	20	OR2	50
Rotational land	OT3	65	OR3	175
Horticultural land	OT4	200	OR4	400
Top fruit	OT5	300	OR5	450
Enclosed rough grazing	OT6	8	N/A	N/A

“Most of all, seeing the long-term improvement in our soil is what keeps us organic”

Charles Hunter-Smart

Organic conversion is normally paid for two years, and for permanent crops such as fruit trees, this support is for three years. It is also possible to phase the conversion, by agreeing a plan with the Soil Association, though payment is delayed until the conversion begins. In addition to the basic organic payments, you can claim other additional, non-competitive, organic options on the same land.

	Code	£/Ha/Year	Can be claimed on the same land as:
Overwintered stubble	OP1	116	OR3, OT3
Wild bird seed mixture	OP2	640	OR3, OT3
Feed for farmland birds	OP3	£494/tonne	OR3, OT3
Multi species ley	OP4	115	OR3, OT3
Undersown cereal	OP5	86	HS3, HS9, OR3, OT3

Additional Stewardship Options

Organic farmers can add additional options from the scheme to their application. This can add up to a significant return for measures that enhance the natural environment. These options are competitive but you can opt to retain your organic support payments if your additional options are not accepted.

The scheme does not allow for management options to run on the same land, but a selection of different options is encouraged where they best meet the environmental management objectives of the area and the priority habitats and species.

Rotational land in conversion is eligible for **£175/ha**

Organic Perspective:



Charles Hunter-Smart
Bradwell Grove Estate
1,214ha Oxfordshire.

“We started converting the farm in 2005. Back then the single farm payment and entry level stewardship were just starting, and corn prices had been at rock bottom, £80.00 per tonne, for a few years and were showing little sign of improvement. Primarily, **we saw going organic as a way to reduce risk**. We had low yielding soil that was susceptible to drought, and with organic we could significantly cut our input costs. But I was also concerned about blackgrass resistance and the growing trend and encouragement to use pre-harvest Roundup on food-grade crops. We saw going organic as an opportunity to build a better ecosystem. I didn’t really have any reservations, we just knew we had to do something to improve our diminishing bottom line.

I’d recommend that anyone interested in conversion reads Sir Albert Howard’s “A Testament to Agriculture”. Written in 1932, it really changed my thinking. I have a firm belief that what we are doing here is right. I’ve seen an increase in moths, butterflies, and insects, and we’ve had bird species returning that hadn’t been seen here for years. Most of all, seeing the long-term improvement in our soils is what keeps us organic. I wish I’d known more about the soil food web when we started, about the microbes and fungi and their requirements – there’s lots of information available now, but not even the Soil Association was talking about it in 2005! Farming organically is a challenge, it means looking at the whole picture all of the time, but I’ve been surprised by how fun and worthwhile it is. Financially it has certainly been the right move, although the lower prices recently have been a challenge. With Brexit on the horizon, we won’t be altering the way we farm.”

Going Organic

What is involved in conversion and certification

Standards and inspections

Organic farming is governed by European law (The EU organic Regulation) and in the UK, Defra oversee organic certification bodies, to provide organic certification and inspection services to organic farms. The Soil Association maintains its own organic standards which incorporate the EU regulation rules.

Organic certification is required for crops to be sold with reference to having organic status and to claim organic grant funding under government land management schemes.

Organic certification includes a physical inspection of the farm business at least every year to look at land, livestock, crops and records to verify that all organic production rules have been met. Samples of soil, crops and organic produce may be taken for testing.

Each Soil Association licensee is assigned an experienced Certification Officer who is responsible for managing their organic certification and signposting to business support.

Land and crop conversion

The standard conversion period for land is two years, this can potentially be reduced if land has been managed to organic standards prior to going into conversion. To qualify for a reduced conversion period, farm records and a field assessment must demonstrate that no prohibited inputs, such as prohibited fertilisers, herbicides or pesticides, have been applied to the land for at least four months prior to the start of conversion. During the two-year conversion period the land must be managed to the organic standards.

To produce an organic annual crop, seed must be sown into and harvested from land that has completed its conversion period and has organic status. Annual crops harvested during the second year of conversion can be sold as 'in conversion'. It makes sense to start land converting from before a farm's typical drilling date in autumn or spring to ensure there will be an organic crop to sell as quickly as possible at the end of the conversion period.

It is possible to convert only part of a farm to organic status, or to go through a phased conversion period. Your certification officer will work with you to agree a conversion plan that works best for your farm business.



Find out more

At the Soil Association, there is technical knowledge and advice available to support arable farmers through the transition to organic farming.

For more information please call us on **0117 914 2412**, or email our producer certification team: **prod.cert@soilassociation.org**

Useful contacts

Soil Association

T: 0117 314 5100 E: producersupport@soilassociation.org

Soil Association Certification

T: 0117 914 24124 E: prod.cert@soilassociation.org

Defra Organic Team

E: organic.standards@defra.gsi.gov.uk

Innovative Farmers

T: 0117 987 4572 E: info@innovativefarmers.org

Natural England

T: 0300 060 3900 E: enquiries@naturalengland.org.uk

Organic Arable

T: 08456 521 706 E: enquiries@organicarable.co.uk

Organic Research Centre

T: +44 (0)1488 658298 E: elmfarm@organicresearchcentre.com

Organic Trade Board

E: info@organictradeboard.co.uk

Useful information

Visit www.soilassociation.org/arable-report for links to the following:

[Defra guidance on organic farming support](#)

[Organic agriculture statistics](#)

[UK Organic market report](#)

[Worldwide organic agriculture and food statistics](#)

[Technical information on organic arable farming](#)

References:

- 1 Based on data from the Agriculture Industries Confederation
 - 2 *FiBL – AMI survey 2017*
 - 3 *Defra Organic Statistics 2016*
 - 4 Defra, 2018. Countryside Stewardship: Mid-Tier and New CS Offers for Wildlife Manual.
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Get in touch

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